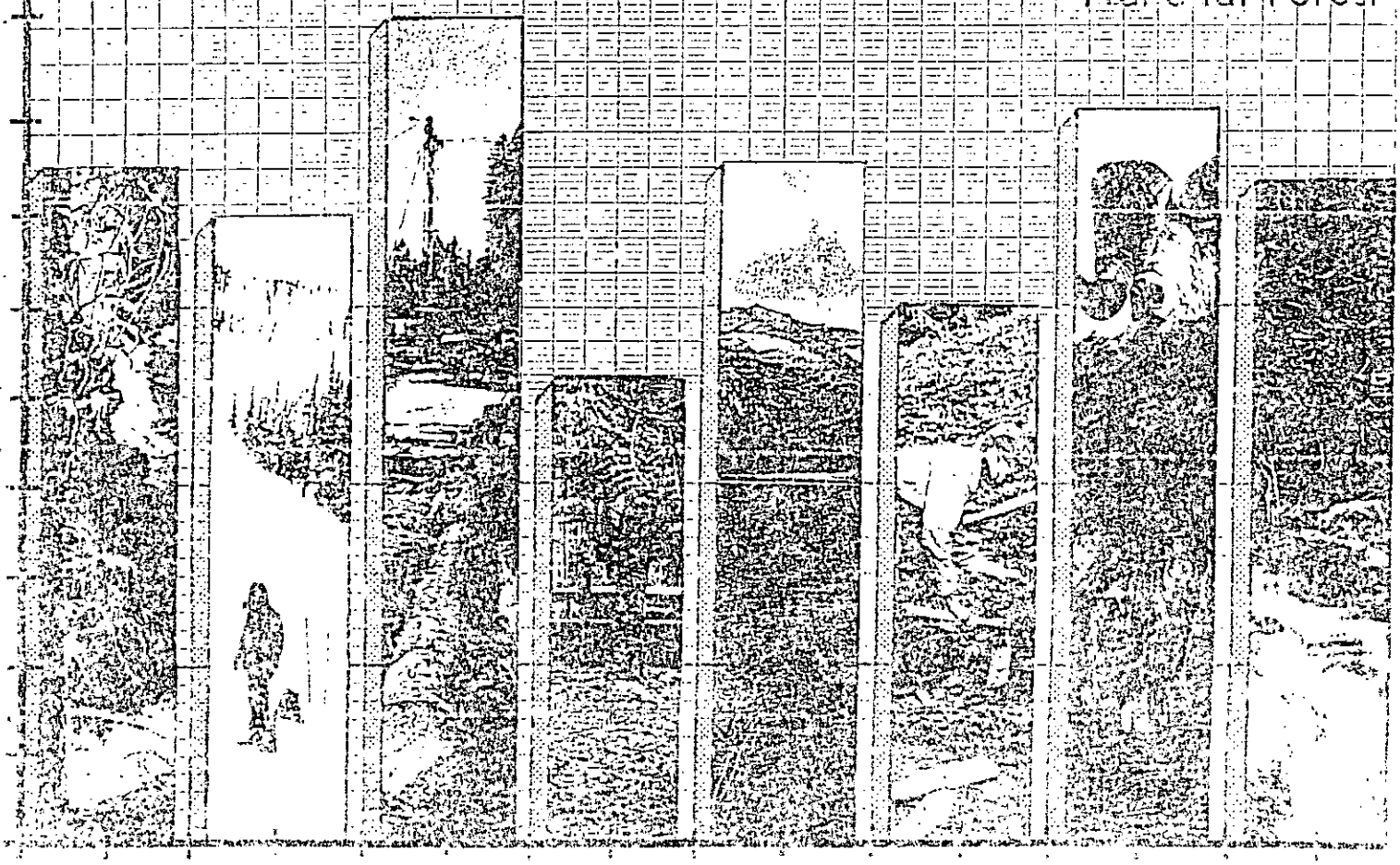
Kootenai National Forest Plan
Final Environmental Impact Statement

Appendix A - Issues, Concerns, Opportunities
Appendix D - Grizzly Bear Management

United States
Department
of Agriculture

Forest Service

Kootenai
National Forest



FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KOOTENAI NATIONAL FOREST PLAN

APPENDIX A

THE IDENTIFICATION OF

ISSUES, CONCERNS

AND

OPPORTUNITIES

Appendix A

Identification of Issues, Concerns and Opportunities

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*** Denotes No Change Between the Draft and Final EIS

IDENTIFICATION OF ISSUES, CONCERNS, AND OPPORTUNITIES

Summary of Changes between the Draft and Final EIS

This Appendix described how the Issues, Concerns and Opportunities were identified and formulated, and what the procedure would be to attempt to resolve them for presentation in the Draft EIS. Since the Public Review of the Draft EIS, the resolution of the issues has been further analyzed and presented in Chapter VI of this Final EIS - Consultation with Others. There is no change in this appendix from the Draft EIS.

I. Introduction

A preliminary scoping of issues and concerns was completed by March 1979. Past planning actions and public involvement activities, along with current management concerns, led to the original listing of tentative issues.

A letter was mailed September 1979 to persons who previously 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. Those who could not attend the workshops were asked to write in with their proposed issues.

A news release announcing Forest Plan workshops was distributed to local media. Public workshops were held in Eureka, Libby, Trout Creek, and Troy on October 29, 30, and November 1 and 5, 1979, and also for Kootenai employees on October 29, 1979. Planning team members and District staff conducted the workshops using the nominal group process. A total of 134 people attended the workshops and over 500 issues were identified and ranked.

Forty-three recipients of the letter mailed in September 1979, which included adjacent private landowners, responded. Together with the workshop participants, 182 people contributed directly to the formulation of the public issues.

A letter containing information on Forest Planning and tentative issues, was sent to the Montana State Clearinghouse, the Confederated Kootenai-Salish Tribe, and the Lincoln, Sanders, and Flathead County Commissioners, and to the Bonner and Boundary County, Idaho, Commissioners.

A Notice of Intent to prepare a Forest Plan and Environmental Impact Statement was published in the Federal Register in August 1979.

The 500+ issues identified at workshops and in letters were initially grouped by similarity and placed into 74 "issue categories." These categories were evaluated by an interdisciplinary team to determine which issues were appropriate for resolution by the Forest Plan. The criteria used to evaluate the issues were:

Does the Forest Service have the authority to resolve the issue?

Can the issue be influenced by Forest Service programs?

Can the issue be dealt with more quickly through another program or process outside the Forest Plan process?

Does the issue deal with land designations, scheduling, or management guidance?

What is the geographic distribution of the issue? Forestwide or on one District, area, or in one workshop?

Some issues raised by the public were determined to be more appropriately addressed and resolved outside the Forest planning process. These issues included:

What is the validity of the Timber Management Plan?

Trails should be maintained for horse use.

What is the role of the Forest Service in determining water rights and use permits?

Are fire control measures adequate?

Cost share program should be made more efficient and "quicker."

The Forest Service should take a more active role in law enforcement.

Special use issuing process should be revised.

Availability of firewood.

Issues meeting the criteria became the public issues, subject to final review by the Forest Management Team and the Regional Forester. In addition, management concerns identified in Spring 1979 which met the criteria, became the management concerns to be resolved by the Forest Plan.

Issue statements describing the nature of the issues as expressed by the public, were prepared and sent to the public in the Spring of 1980, for review and comment.

During the public review period of the November 1982 Draft EIS, which ran until April 1983, over 550 people responded with questions and concerns. The responses were analyzed using a response analysis technique which identified the major issues being raised by the public. The issues addressed by the public during their review of the EIS were compared to the initial list of public issues identified in Fall of 1979. It was found that most issues addressed initially were also addressed by the public three years later. Some issues were not addressed with the same intensity as in the beginning and some were addressed hardly at all. There were no new issues raised with any intensity.

The public's comments on the November 1982 DEIS served to modify the initial list of issues, concerns, and opportunities somewhat and helped to determine the method of resolving the issue. (See Section III, Issues, Concerns, and Opportunities).

In September 1983, the public was notified of the inventoried roadless area re-evaluation to be undertaken in the Forest Planning process, as a result of the Revised Regulations to NFMA dealing with roadless areas. Thirty two people responded with concerns about specific roadless areas or about the evaluation process.

II. Consultation With Others

A. Agencies and Indian Tribes

1. Contacts

The following agencies and Indian tribes are on the Forest Plan mailing list. They received Forest Plan mailers which provide information on status of the plan, as well as copies of the EIS released in November 1982.

Bonner County Commissioners
Boundary County Commissioners
Confederated Kootenai-Salish Tribal Council
Environmental Protection Agency, Region 10
Flathead County Commissioners
Lincoln County Commissioners
Lincoln County Extension Agent
Lincoln County Planner
Montana Bureau of Mines and Geology
Montana State Clearinghouse
Montana State Department of State Lands
Montana State Department of Fish, Wildlife, and Parks
Montana State Department of Natural Resources and Conservation
Montana State Division of Forestry
Montana State Historical Society
Montana State Office of the Governor
Sanders County Commissioners
U.S. Department of Commerce, National Oceanic-Atmosphere Administration,Ecology and Conservation Division
U.S. Department of Agriculture, Rural Electrification Administration
U.S. Department of Agriculture, Soil Conservation Service
U.S. Department of Energy - Bonneville Power Administration
U.S. Department of Interior, Bureau of Indian Affairs
U.S. Department of Interior, Bureau of Land Management
U.S. Department of Interior, Bureau of Mines
U.S. Department of Interior, Office of Environmental Project Review
U.S. Department of Interior, U.S. Fish and Wildlife Service

2. Review of Plans

Montana State Department of Fish, Wildlife, and Parks, Montana Outdoors Recreation Plan, 1982 (SCORP)
-Discusses the uses and expected demands in recreation, including fishing and hunting harvests. Formed the basis for demand estimates.

U.S. Department of the Army, Corps of Engineers, Lake Koocanusa Recreation Management Plan
-Pertaining to the management of Koocanusa Reservoir.
Designations made along the reservoir corresponded to this Plan.

USDA Forest Service, Kootenai National Forest, Visual Management
- Used to develop viewing coefficients and viewing management guides.

Montana State Department of Water Quality Bureau, "305B Report", Montana Water Quality, 1982.
-Lists and describes watersheds experiencing hydrologic problems.
Enabled Plan to focus on potential watershed problems.

USDA Forest Service (for Montana State Department of Health and Environmental Sciences), Water Pollution Problems on the National Forests in Montana
-Source for watershed management practices and guidelines.

U.S. Fish and Wildlife Service, Grizzly Bear Recovery Plan, 1982.
-Sets population goals for grizzly bears to ensure recovery of the species; site specific to ecosystems.

Lincoln County Commissioners, Comprehensive Land Use Plan, 1980.
-Details current and projected land use patterns in the County.
Used to help formulate landownership adjustment plan.

Bonneville Power Administration, Phase 1, Part A, Long Range East-West Energy Corridor Study, 1977.
-Lists and describes corridor windows; addressed in terms of impacts on these windows in the EIS.

St. Regis Paper Company (now part of Champion Timberlands), Champion Timberlands, and Burlington Timberlands (now part of Plum Creek Timberlands) were asked to provide timber volume estimates (1981). This information was used in transportation planning.

The Confederated Kootenai-Salish Indian Tribe has been kept informed throughout the process and requested to provide information and concerns if appropriate. No information has been received nor concerns expressed.

B. Other Consultations

Timber Industry - Primary industry group is Inland Forest Resource Council representing Champion Timberlands (includes the former St. Regis Paper Company in Libby), Louisiana Pacific, F.H. Stoltze Lumber Company, Plum Creek Timber Incorporated, and Burlington Northern Timberlands (now a part of Plum Creek Timber Incorporated). Numerous formal and informal contacts were made throughout the planning process.

Mineral, Oil, and Gas Interests - Groups include American Smelting and Refining Company (ASARCO), American Mining Congress, AMOCO, Atlantic Richfield Company (ARCO), Champlin Petroleum Company, Cominco American Company, CONOCO, Meridian Land and Mineral Company, Montana Mining

Association, Rocky Mountain Oil and Gas Association, TEXACO, and NORANDA. Notification to the groups have been made through mailers and through the November 1982 EIS. Responses have been numerous and detailed throughout the process.

Local Wildlife and Recreation Interests - Groups include Libby Rod and Gun Club, Tobacco Valley Rod and Gun Club, Noxon Rod and Gun Club, Flathead Snowmobile Association, Backcountry Horsemen, and Libby Sno-Kats. Contacts have included presentations to the groups at key points in the process.

Western Environmental Trade Association (WETA) - An industry coalition group representing (among others) Inland Forest Resource Council, Montana Cattleman's Association, Montana Petroleum Association, Montana Mining Association, Montana Power Company, Montana Coal Council, and Montana Snowmobile Association. Visits with board members have occurred both at the Forest and at the WETA offices in Helena.

Northwest Energy and Economic Development (NEED) - A local group affiliated with WETA. Several formal and informal contacts were made with groups' officers.

Montana Wilderness Association - Interest group representing wilderness interests. Formal and informal contacts were made both on the Forest and at MWA offices in Helena.

National and Regional Wildlife Interests - Primarily two groups; National Wildlife Federation and Defenders of Wildlife. Close contact throughout the process were made including formal presentations to group members in Missoula.

National and Regional Environmental Groups - Includes Last Chance and National Audubon Societies, the Bitterroot-Mission Group and Northern Great Plains Region of the Sierra Club, and the Great Bear Foundation. Contacts, formal and informal, have been made with the regional chapters of these National organizations.

Libby Chamber of Commerce - Contacts were made with the Forestry Committee and Economic Development Committee throughout the process.

III. Selected Issues, Concerns, and Opportunities Resolution

This section discusses the public issues selected through the scoping process conducted during the Fall of 1979. The process used to arrive at this list of issues, concerns, and opportunities is discussed in Section I above.

Comments received by the public during the review period of the November 1982 DEIS, served, in some cases, to modify the original issues, concerns, and opportunities. No new issues arose during the comment period but some issues aroused more interest than was previously indicated during the initial public workshops. Some issues raised in 1979 did not receive as much mention by the public in their comments on the DEIS.

The following discusses the resource situation, describes the public's perception of the issues, and states the Forest's potential to respond to the issues.

1. Timber Volume - How much timber should the Kootenai National Forest provide for sustained yield purposes?

Situation - Timber harvest, processing, and related manufacturing, is the largest industry in and around the Kootenai National Forest. Over half of the economy is directly related to the timber industry. The Kootenai National Forest has traditionally provided more than half of the total volume necessary to sustain the industry located within the working circle. (Kootenai National Forest)

Timber and the effects of timber harvesting relate to almost every other issue dealing with Forest management; wildlife, recreation, water and soil, viewing, fisheries, roads, and local economic impacts.

Public View - At workshops and in public comments to the November 1982 DEIS, polarized opinions have been expressed about the amount and rate of timber harvest on the Kootenai. Some comments indicated that timber harvest goals were high and unrealistic while other comments indicated that too little emphasis was being placed on timber harvest.

The public's concerns were expressed in terms of the effect of timber harvesting on recreation (including the view), the effects of associated road construction on wildlife, and the effects of increased sedimentation on fish and water quality. Of major concern also was the need to maintain present or increased timber volumes to support the local economy.

Procedure to Resolve - Suitable timberland on the Kootenai (land that is biologically capable of producing timber and harvestable with present technology, and is otherwise not restricted but available for harvest) is 1,788,000 acres. Alternatives have varying amounts of suitable timberlands, depending on the amount of roadless or other nondevelopmental designations, which would prohibit regulated timber harvest. The suitable acres also determined (along with harvest scheduling) the amount of timber volume expected to be harvested in each alternative.

The range of alternatives considered varying amounts of timber volumes to resolve the timber issue as well as resolve potential resource conflicts. The maximum 1st decade average annual timber harvest volume achievable, while still meeting legal and environmental constraints, is 262 MMBF. The minimum 1st decade average annual timber harvest volume is 150 MMBF.

These two items (amount of suitable timberland and the level of timber harvest) will be used as indicators to define how this issue is resolved.

2. Transportation Facilities (Roads) - How should roads be designed, constructed, and managed and what are the attendant costs on other resources?

Situation - There is a major Forest-wide concern relating to the location, construction, and ultimate uses to be made of many of the roads on the Kootenai National Forest. The issue relates to the miles of road that are being built and the economic costs involved in their construction and operation.

The issue is closely related to the timber issue because roads are built for timber harvesting; road mileage projections are based on the amount of timber expected to be harvested. Roads also relate to recreation, both in terms of providing motorized recreation opportunities and, conversely, taking away roadless recreation opportunities. Wildlife is another resource affected by roads; specifically the effects on wildlife security and the effects of increased sedimentation on fisheries as a result of road building.

Public View - During the October-November 1979 public workshops, many thoughts were expressed by the public concerning road closures; both more closures (for wildlife protection, etc.) and less closures (to enable the gathering of Forest products, etc.). Concern was also expressed about the method of closure such as the use of gates versus earthen barriers. Many roads on the Forest have been designated for closure in previous land use planning efforts.

Recent comments have focused on the amount of roads proposed to be built and their effect on resources, primarily wildlife and fish. Concerns were also voiced about the high standards proposed and the lack of alternative roading methods (temporary versus permanent roads).

Procedure to Resolve - The amount of road construction is generally proportional to the amount of land allocated to timber production. Road mileage varies by alternative, based upon the amount of timber harvest projected. The alternatives propose road mileage ranging from 9,840 (Alternative I) to 12,360 (Alternative L), most of which would be in place by 2010.

As a result of the public comments received concerning the November 1982 DEIS, the road mileage issue was reexamined with the view to reduce the projected road miles in the Proposed Plan. Examined were the assumptions used to arrive at the road mileage including economic and technological. The Team assigned for this review concluded that the methods used to determine road densities could be improved and that more cost effective road systems could be used. However, in terms of actual miles on the ground, there did not appear to be a realistic method to significantly reduce miles of road without significantly reducing the acres allocated for timber harvest.

Currently, about 1% of the annual timber harvest is done by advanced logging systems such as longspan skyline and helicopter. The use of these systems is not expected to increase at a rate that would significantly reduce the

road mileage, largely because the topography and the value of timber on the Forest make the systems uneconomical.

Among the Team's recommendations was that a strong emphasis be placed on road management, i.e. road closures. The adverse effects of roads and road densities can be offset by strict closures once the road is no longer needed. The methods and policies regarding road closures for each management area would be the same for all alternatives.

These two items (the amount of new road construction needed and the level of road restrictions required) will be used as indicators to define how this issue is resolved.

3. Roadless Recreation - How many roadless recreation opportunities should the Kootenai National Forest provide and where should they be located?

Situation - Prior to development of the Forest Plan, about 11% of the Forest (250,000 acres) was devoted to primitive or roadless recreation, much of it along ridgetops above the major commercial timber areas. During the planning effort, opportunities were identified to expand several of the existing primitive recreation areas in order to create some more complete and cohesive recreation areas.

Unroaded management can conflict with timber (where roadless areas contain suitable timberlands), wildlife habitat management, and mineral, oil and gas exploration.

Public View - Unroaded management has been a major local concern with polarized opinions often expressed. The issue is related to wilderness, recreation, and to the impacts of timber harvesting and road building. Recreation is a concern of local businesses who desire a variety of recreation opportunities to attract tourists. Some publics have an expressed preference for roadless forms of recreation and are concerned that demands will eventually exceed the supply. Others are concerned that roadless management will impede the timber harvest and that reduced volumes will result.

Procedure to Resolve - Alternatives propose varying amounts of roadless designations, ranging from 364,000 (Alternative O) acres to 54,000 (Alternative H) acres. (Note that Alternative H is the maximum wilderness alternative and that all inventoried roadless areas are recommended for wilderness in that alternative).

Demand projections indicate that with less than 341,000 acres, the quality of the roadless recreation experience would decline as the demand begins to exceed comfortable capacity. At that point, wilderness areas would begin to feel the pressure as use diverts to those areas. Comments received during the review period of the November,1982 DEIS indicated a strong public concern for this inadequacy. Only Alternative O, with its combined designated roadless acres from the roadless inventory plus other roadless designations in areas that did not meet the criteria for the inventory, is expected to provide the sufficient supply of roadless acres to meet expected demand. This is because most alternatives designate portions of the

roadless inventory to wilderness which is not counted in the roadless recreation use total.

The indicator to be used to define how the issue is resolved will be the total acres of roadless resource available which includes existing wilderness, proposed wilderness, wilderness study areas, and designated roadless recreation areas.

4. Threatened and Endangered Species - How can the Kootenai National Forest provide and maintain identified habitat for the threatened and endangered species, especially grizzly bear?

Situation - At present, the Kootenai has identified essential habitat for three endangered and one threatened species. They are the gray wolf, bald eagle, peregrine falcon, and the grizzly bear respectively. Grizzlies are yearlong residents, eagles are predominantly winter residents, and wolves are primarily transients from Canada. Peregrine falcons are migrants; there are no known nesting or eyrie sites on the Forest. All four species are sensitive to Forest management practices and their habitat can be benefited or damaged by Forest management activities.

Protection and recovery of threatened and endangered species are mandated by the Endangered Species Act and the regulations of the U.S. Fish and Wildlife Service, the agency responsible for evaluating the effects of management on grizzly habitat.

Public View - The public issue has centered around the grizzly bear. When the public issues were first identified, the primary concern was for the effect of Forest management on grizzly habitat. Many recent concerns have been expressed for the effects of grizzly management on other Forest uses and on the local economy. The issue has intensified as grizzly management practices are becoming more refined and their effects realized. The issue has become polarized between those who view grizzly management and compensation as detrimental to Forest management and the local economy, and those who feel that the grizzly bear should be protected in accordance with the Endangered Species Act.

Procedure to Resolve - In accordance with agreements reached with the U.S. Fish and Wildlife Service, following the jeopardy opinion rendered on the November 1982 Draft Forest Plan, all grizzly habitat management situations 1 and 2 (Yellowstone Guidelines) have been allocated to supportive or compatible designations. This involves 1,036,000 acres deemed necessary to meet the requirements of the Endangered Species Act. Consequently, all alternatives are projected to meet the recovery goals for the grizzly bear. All other threatened and endangered species are protected in all alternatives.

The indicator to be used to define how well this issue is resolved is the amount of grizzly habitat that is not developed.

5. Special Wildlife Habitat - How should special wildlife habitats, such as riparian areas, old growth timber areas, and snags be managed and where should they be located?

Situation - Approximately 64 species of wildlife find optimum breeding conditions in old growth timber habitat on the Kootenai. Of these, 6 are considered dependent on old growth timber for their existence. In addition to dependent species, old growth timber provides habitat of seasonal importance to big game, migratory wildlife, and those species needing tall, stout, nesting platforms such as osprey and eagles. Old growth timber habitat reaches optimum wildlife conditions when in conjunction with riparian areas. Wildlife biologists have determined that about 8% of the Forest, or 177,000 acres, is the minimum amount of old growth habitat needed to maintain dependent wildlife species when distributed throughout the Forest.

While riparian habitat is a small portion of overall, available habitats, it is disproportionately important to fish and wildlife. Riparian areas, (the boundary between water and land), are rich in diversity and support the highest densities and abundance of wildlife species. Land management activities can jeopardize many resource values which are inherent on the same site and the public has stated their concern for the protection of these values.

Public View - Concerns for special wildlife habitats arose at the public issues workshops in 1979 and were reiterated in public comments to the November, 1982 EIS. Most comments express concern for the degradation of special habitats because of management activities and stress the need for more protection.

This is countered by concerns expressed for the effect of managing for old growth, especially the effect of extended harvest rotations on the flow of timber.

Procedure to Resolve - The alternatives were constructed to meet at least the minimum acreage and spacial requirements for old growth dependent species. Thus, all alternatives can be said to resolve the old growth issue. *The indicator to be used to define this issue is the amount of* old-growth timber that will be provided in 100 years.

The riparian area management guidelines in the Forest Plan have been rewritten to provide stronger guidance and protection to riparian areas.

6. Local Economic Impacts - How will changes in the Kootenai National Forest Plan affect the local communities' economies?

Situation - The local economies are highly dependent on the level and composition of Forest outputs. In Lincoln County, for example, the wood products sector (primarily logging and sawmills) directly represents over 50 percent of the economy's total output and personal income receipts, and over one-third of the County's employment.

Public View - This issue, probably more than any other, has sparked the most public comments. The issue is expressed in many ways ("Set aside more small timber sales to help the small local businessman") and is often related to other resource issues ("Provide more recreation opportunities in order to attract tourism to aid the local economy"). The issue has also arisen in connection with grizzly management and the proposal for an alpine ski area at Great Northern. The public's perception of the issue stresses the diversity of Forest uses and their effect on the local economy, not just the timber resource.

Procedure to Resolve - The intensity of the public's response and the variety of their concerns regarding the effects of Forest management on the local economy, reaffirms the necessity to insure that radical changes to the local economy do not result from activities on the Forest.

The alternatives present varying amounts of changes in employment and income, and return receipts to the Treasury (25% of which is returned to the State). No alternatives are considered to contribute to a radical change (plus or minus) in the local economy.

The indicator to be used to define how the issue is resolved is the number of forest-related jobs generated in the private sector.

7. Wilderness - Which, if any, of the identified roadless areas on the Kootenai should be recommended to Congress for wilderness designation?

Situation - Recent NFMA regulation changes have necessitated a re-evaluation of the roadless areas on National Forest lands for possible wilderness designation. As a result, the Kootenai has identified 32 roadless areas meeting the evaluation criteria for wilderness study, involving 403,700 acres. There are 11 areas that border adjacent Forests which also contain a portion of the roadless area.

Prior to the revision of the NFMA regulations, regulations did not provide for wilderness study; in fact, the regulations expressly stated that wilderness would be evaluated only in the 10-year revision. Therefore, initially, wilderness was not considered a public issue, except in the case of the Ten Lakes Montana Wilderness Study Act (MWSA) area, a special study area of approximately 34,000 acres.

The Ten Lakes MWSA area was evaluated for wilderness under the provisions of Public Law 95-150 in the November 1982 DEIS. That evaluation, along with a proposed recommendation, was contained in a separate Report and Proposal. The recommendation for Ten Lakes was nonwilderness with most of the area allocated to semiprimitive nonmotorized recreation.

Public View - Despite the fact that wilderness was not an issue for consideration, wilderness did arise in the public issues workshops and in the public comments to the November, 1982 EIS.

Opinion is sharply divided on the issue of wilderness. Comments to the November, 1982 Ten Lakes MWSA Report and Proposal reveal the split between

those desiring Wilderness designation and those preferring less restrictions on use in the area.

Procedure to Resolve - The final recommendation for the Ten Lakes MWSA is for a 26,000 acre wilderness classification with the remainder designated for nonmotorized recreation or for developmental activities favoring wildlife. Some additional acreage outside the MWSA area is also being recommended for wilderness. Details of the recommendation are contained in the Final Ten Lakes Report and Proposal.

This EIS presents 15 alternatives with varying amounts of wilderness. The purpose is to display the effects of wilderness management on Forest management and the effects of Forest management on wilderness suitability. The alternatives range in wilderness acres from 94,000 (current situation) to 403,700, the maximum amount available on the Forest (excluding the Ten Lakes MWSA area).

The indicators to be used to define the wilderness issue are the amount of area recommended for wilderness and the amount of potential wilderness left undeveloped.

8. Minerals, Gas and Oil - How should conflicts between mineral exploration and development and other resource values be resolved and where, and under what conditions, should the Kootenai accommodate potential gas and oil development?

Situation - Prospecting and exploration for new mineral deposits have increased on the Kootenai. New geologic concepts, a dependence on foreign imports and changed economic conditions have spurred the search for large, low grade deposits. The Forest Service manages the lands beneath which these deposits are, or may be, found and to a large extent controls their availability and access. Concurrently, the right of the minerals industry to go upon these lands to prospect for and develop mineral deposits must be recognized in the land management process.

There are areas with high mineral potential which coincide with areas of other high resource use, such as timber, water, recreation, wildlife, and visual. The Forest Service has a responsibility to weigh these values, identify adverse effects of one resource on the other, and provide for their mitigation.

Gas and oil companies are presently interested in the area known as the "overthrust belt," a gas and oil-bearing rock formation that extends from Utah, north into Canada. The Eureka-Fortine area, located in the northeast corner of the Forest, is located in the western edge of this "overthrust belt." Gas and oil lease applications covering virtually the entire Forest have been received. The Ten Lakes MWSA is located within the "overthrust belt" and should favorable results be obtained in the adjacent areas, Ten Lakes could receive industry interest.

Public View - Outside of direct responses from industry, there has been little recently expressed general public concern about minerals, and oil/gas in the context of the Forest Plan. Mineral, oil and gas activities do,

however, receive much attention as they occur and are considered an ongoing management concern.

Response from industry indicated concern for the amount of land that could be made inaccessible for mineral, gas/oil exploration and development because of use restrictions such as wilderness or roadless recreation. Responses from the public show concern for the effects of mineral, oil, and gas activities on other resources.

Procedure to Resolve - Generally, roadless management has low compatibility with future mineral exploration activities, especially when roads are needed to facilitate the operating plans. Identified grizzly habitat also provides potential conflict that has to be resolved by compensation measures. These measures can include scheduling of activities during periods of nonuse, providing buffer zones for security, prohibiting roads or, if roads are needed, limiting use of the road.

It is the policy of the Kootenai to facilitate the exploration for oil and gas in a manner consistent with the intent of each management area as long as the other resource values of the land are not permanently or irreparably compromised. As alternatives were developed, acres of high mineral/oil and gas potential were identified that occurred in areas where prohibitions on access for mineral/oil and gas exploration could be expected, such as wilderness and recommended wilderness areas. These acres of restricted access in areas of high potential range from 185,000 to 579,000 for minerals and from 148,000 to 540,000 for oil and gas, depending on the alternative.

The indicator to be used to define how this issue is resolved is the amount of area that will be projected for eventual withdrawal from mineral and oil/gas exploration.

9. Wildlife and Fish - Where and how much wildlife and fish habitat should the Kootenai provide, how should that habitat be managed, and how can adverse impacts be mitigated?

Situation - The Kootenai supports huntable populations of elk, moose, bighorn sheep, mountain goats, whitetail and mule deer, black bear, and mountain lion. The Clark Fork elk herd on the Cabinet Ranger District is a herd of Statewide prominence.

Prior to development of the Forest Plan and during the public issue identification phase of the planning process, much concern was expressed over the ability of the Kootenai to provide habitat to support big game in sufficient numbers. The public's concern was for maintenance of hunting populations.

The analysis accompanying the development of the Plan revealed that the Kootenai has the potential to provide elk in excess of amounts deemed minimum for viable populations. This proved true for all alternatives, including highly developmental management scenarios.

The rivers, streams and lakes support a significant and popular fisheries resource. Species include populations of rainbow, westslope cutthroat, bull

and brook trout and mountain whitefish. A sturgeon and ling fishery also exists.

The productivity of most of the streams and lakes is low compared to waters found in the remainder of the Northern Region.

The analysis done during the development of the plan revealed that the existing fish population in the streams is on a declining trend as a result of the timber harvest and road building done to date. No alternatives were able to reverse this decline except the Minimum Level Benchmark.

Public View - Concerns have been, and are, expressed about the effects of management on all wildlife, both big game and nongame species and fisheries. Maintenance of the area's wildlife and fisheries is of major importance to the local publics.

Procedure to Resolve - Recent public comments have indicated little concern for the potential of the Kootenai to provide elk; concern has been expressed, however, for wildlife management techniques that appear inadequate to assure protection for all wildlife.

All alternatives provide habitat sufficient enough to accommodate an estimated elk population of 7,200 to 9,900 elk. This increases the current population of approximately 5500 elk.

Concern has been expressed about the potential effects on the fishery resource. All alternatives project a continued decline in the existing fish population ranging from 4% to 7%.

The indicators used to define the resolution of this issue are the projected elk and fish populations.

10. Esthetics (Viewing Resource) - How much change from the natural appearing landscape is acceptable or desirable?

Situation - Timber harvesting and road building and their effects on the landscape, is a recurring issue. In an attempt to evaluate the visual impacts of Forest management and, in turn, help direct how much visual disruption is acceptable from a viewing standpoint, "Visual Quality Objectives" (VQOs) are used. VQOs measure visual quality and are standards that indicate how much sensitivity to the view should be applied while conducting Forest management activities.

The VQOs considered most sensitive in terms of retaining the view are "retention" and "partial retention." The inventoried acres for these two VQO's are 434,000 acres of "retention" and 904,000 acres of "partial retention." These acres generally occur within view of major highways and other travel corridors or from towns. The acres form a base against which alternative designations of "retention" and "partial retention" can be compared.

Public View - The viewing issue arose during the initial public workshops when issues were identified. Few recent comments have been received which

directly expressed concern for the view. Some concern for the size of clearcuts has been expressed which is often associated with the viewing issue.

The viewing issue remains as a management concern to be addressed and resolved by the Forest Plan.

Procedure to Resolve - Generally, attempts to produce a more aesthetically pleasing view produce less timber volumes than could otherwise be generated. With careful sale planning and application of visual management principles, this reduction can be minimized while still attaining an acceptable view. Various alternatives were analyzed with differing amounts of "retention" and "partial retention" acres. This results in varying degrees of protection of the view, depending on the thrust of the alternative. No alternative allows the view to reach unacceptable viewing standards, especially along major roads and highways or within the vicinity of towns.

The indicator used to define the aesthetics issue is the amount of land designated to provide a high degree of protection for the Visual Resource.

11. Landownership Adjustment - How can intermingled ownership patterns be improved to facilitate Forest Service and private land management objectives? (Includes both large and small landowners.)

Situation -The landownership pattern on the Kootenai National Forest varies with location. The pattern can be characterized as (1) large blocks of uninterrupted, contiguous National Forest lands, (2) checkerboard situations with alternate sections of private and public lands, (3) isolated tracts of private lands surrounded by National Forest lands, (4) isolated tracts of National Forest lands surrounded by private lands, and (5) large blocks of lands owned by major corporate landowners.

The large blocks of major corporate lands and checkerboard situations are generally located in the southeastern quarter of the Forest. The largest concentration of noncorporate private lands is in the Eureka - Fortine area, the northeastern part of the Forest.

The other concentrations of private lands occur in the areas of Libby, Troy, Yaak River, Bull Lake valley, and the Clark Fork River valley.

Isolated tracts of private lands surrounded by National Forest lands occur in various locations on the Forest. While there are other instances of National Forest lands surrounded by private lands, the majority of these situations are in the Eureka-Fortine area.

Public View - Landownership adjustment and adjacent land management objectives are "specialized" issues of most importance to adjacent landowners and the Forest Service; the issue did not surface as a significant issue during the initial public workshops or during the comment period for the November 1982 DEIS. Because of the importance as a management concern, the issue is addressed and resolved in the Forest Plan.

Procedure to Resolve - The Kootenai has identified about 88,000 acres, valued at $86 million, that would be desirable to acquire and 70,000 acres valued at $87 million desirable to dispose of. All alternatives propose the same amount of land desirable to acquire or dispose of because of the emphasis to enhance recovery of the grizzly and to provide roadless recreation opportunities.

The Kootenai National Forest and Plum Creek Timberlands Incorporated are currently conducting negotiations for a large potential land exchange in the Silver Butte-Vermilion portion of the Forest, immediately southeast of the Cabinet Mountains Wilderness. The purpose of the exchange is to aid in grizzly bear management by adding more habitat to the Forest, provide more opportunities for primitive recreation, and correct the checkerboard ownership pattern in the area.

12. Disease and Pests - What is the level of protection necessary to protect the timber resource from unacceptable insect and disease damage, especially from the mountain pine beetle?

Situation -The major pest on the Kootenai is the mountain pine beetle. About 119,000 acres of infestation existed in 1982 and the infestation has been increasing in size each year. This is approximately 21% of all the lodgepole on the Forest and, coupled with the large amount of high risk lodgepole pine timber (2,070 MMBF), represents a significant potential for timber volume loss.

The assumption is that all of this timber will be affected by the mountain pine beetle in the 1st decade. Approximately one half of this volume will not be salvageable even under the most optimum conditions. This is an average of approximately 109 MMBF/year.

Public View - The timber industry is most interested in the resolution of this issue both because of the economic undesirability of lodgepole pine timber and the potential timber harvest reductions because of the loss of growing stock. The general public, as a rule, did not respond intensely to the insect and disease situation. Because of the ongoing concern for the effects of insect and disease activity, the issue is a management concern to be addressed and resolved in the Forest Plan.

Procedure to Resolve - The amount of lodgepole pine harvested ranges from 51 MMBF to 93 MMBF annually in the 1st decade'

The indicator used to define the issue is the level of lodgepole pine timber harvested.

13. Fire Management - What role should fire management play in the protection and improvement of resources on the Kootenai National Forest, including management fires?

Situation -The Kootenai National Forest protects almost 2,000,000 acres of Federal, State, and private land from fire, and experiences an average of 65 lightning-caused fires and 53 person-caused fires per year. These "unplanned" lightning-caused and person-caused fires cause an average of 4,100 acres of burned-over area per year.

The majority of the person-caused fires occur in high-volume timber areas that are usually in the stream drainage bottoms or along main travel routes. In addition to "unplanned" fires, the Kootenai National Forest uses "planned" fires to reduce the amount of heavy fuels (slash) that occur as a result of timber harvesting.

In 1979 changes in fire management policy allowed for the prescribed use of "unplanned" fires if they met specific criteria. These "unplanned" fires that fell into this category were called "management fires" and during the 1979 fire season, three of these management fires were allowed to burn under a specific set of prescriptions. The largest of these fires, Smith Mountain, reached 542 acres in size before being extinguished by the fall rains.

Public View - The public issue identification workshops were conducted just following the Smith Mountain management fire when opinions were the most polarized over the use of management fires. Because the issue arose at the workshops with intensity, it was carried forward as a public issue.

Few recent comments have been received concerning fire management. It is assumed that fire management no longer arouses the same intense public reaction that it did 5 years ago. However, because of the ongoing concern over the use of fire in Forest management, fire management is carried forward as a management concern and addressed and resolved in the Forest Plan.

Procedure to Resolve - Recent changes in fire management deal primarily with the use of planned and unplanned ignitions and their use as management tools. A broader application of planned ignitions is being used to accomplish goals and unplanned ignitions are being confined to specific designations, subject to fire management plans. All wildfires are to be suppressed.

Designations in which unplanned ignitions may be used include Wilderness, Proposed Wilderness, primitive recreation, semi-primitive nonmotorized recreation, and most other nondevelopmental designations. Management fires in other designations are confined to planned ignitions.

FINAL

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KOOTENAI NATIONAL FOREST PLAN

APPENDIX D

GRIZZLY BEAR SITUATION AND MANAGEMENT GUIDELINES

KOOTENAI NATIONAL FOREST

This appendix discusses the grizzly bear situation on the Kootenai, the management guidelines that will be implemented in the Forest Plan, and the issue of grizzly bear augmentation (the transplanting of bears from one location to another to increase the probability of reproductive success with the goal of assisting in population recovery).

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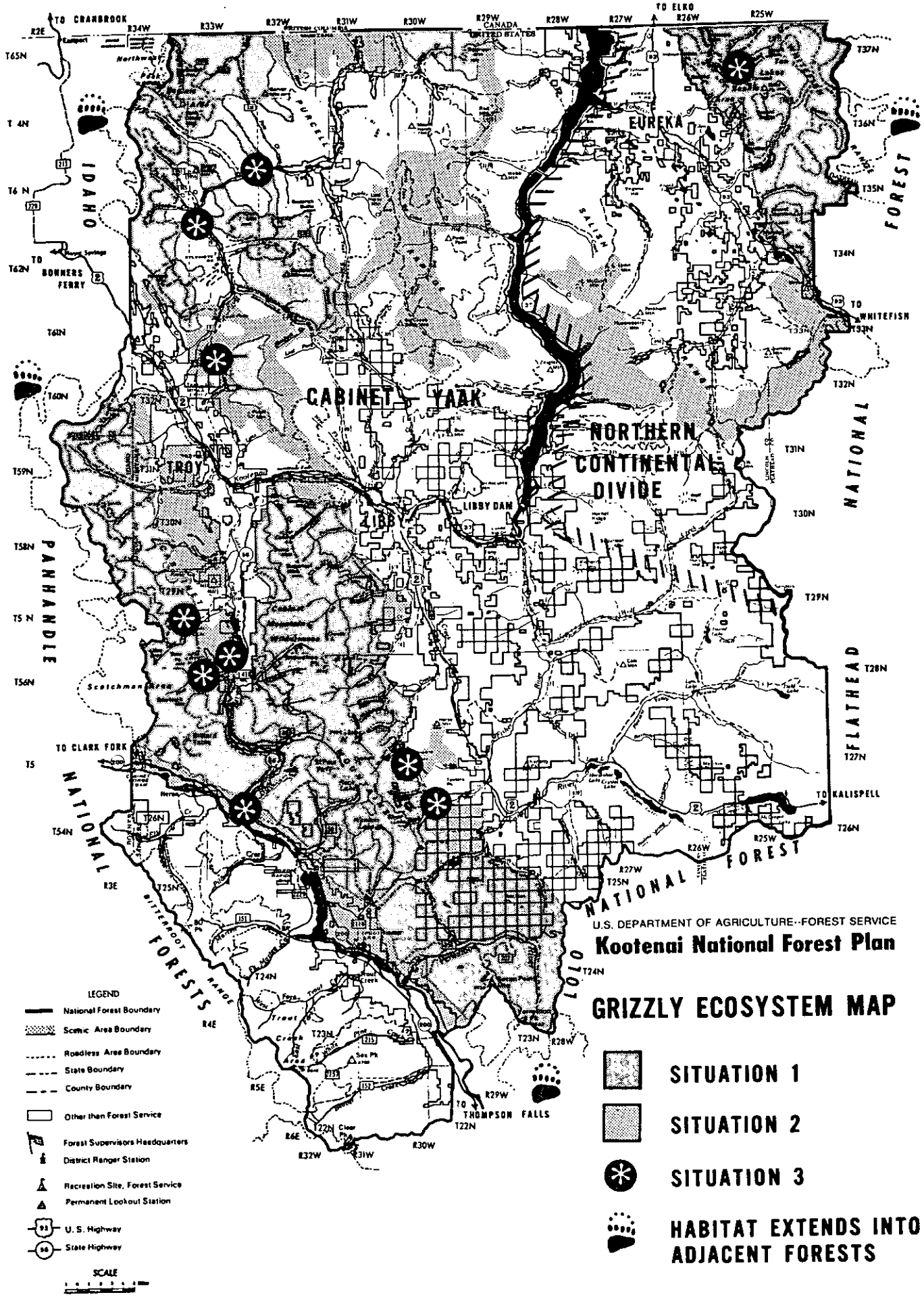
*** Denotes No Changes occurred between the Draft and Final EIS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TO CLARK FORK
TO KALISPELL
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FLATHEAD
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APPENDIX D

GRIZZLY BEAR SITUATION AND MANAGEMENT GUIDELINES

Summary of Changes between the Draft and Final EIS

Overview: The Proposed Action and the Final Forest Plan have both received a non-jeopardy opinion from the U.S. Fish and Wildlife Service (See Letter #1 in Appendix E - Letters received from the Public and Forest Service Responses). They have concluded that the grizzly bear's recovery will not be adversely affected if the Forest Plan prescriptions are carried out as presented in the Final Forest Plan document which includes grizzly management guidelines (Appendix 8). They have also made suggestions for improvement in land designations to lessen the risk of causing additional human/bear confrontations which were incorporated into the Final Forest Plan (See the Final Forest Plan Map in the Forest Plan document).

Specific Changes:

1. A change has been made in the name of the reference document for stratification of habitat and for the definitions of management situations. The "Yellowstone Guidelines" are now referred to as the "Interagency Guidelines" in all cases.

2. Some clarification in the definition of Management Situation 2 has been incorporated into the Management Guidelines to insure that activities in Situation 2 do not diminish the quality of adjacent Situation 1 areas. See section III, B, "Definitions".

3. Several Guidelines have been strengthened to Standards to insure a more consistent application of the Management Guidelines on-the-ground. More specifically, item 3a, under Timber/Fire Management on page D-22 in the Draft EIS; and item 3a, 3c, 3d and 3e, under Minerals, Special Uses and Watershed Management on page D-26 of the Draft EIS.

4. Two additional references have been added in section III, E, "Applicable Documents". They are entitled "Interagency Grizzly Bear Guidelines", and "Charting the Course - The Forest Service Grizzly Bear Conservation Program".

The entire Grizzly Management Guidelines (section III) as presented in this appendix including the discussion on Augmentation are a part of the Final Forest Plan document (Appendix 8).

APPENDIX D

I. General Description, Background, and Current Situation

It has been estimated that at one time grizzly bears numbered about 100,000 and that their range extended west from the Missouri River and from Canada south to Mexico. In 1975, the grizzly bear was listed as a threatened species, reduced in number to less than 1,000 and found only in the last vestiges of high mountain wilderness and National Parks. Since the Endangered Species Act (ESA) was so new and the funding and mechanisms not immediately in place to implement the law, it was not until 1977 that specific habitat for grizzly bears was delineated. At that time, Forests in Region 1, including the Kootenai, delineated "essential" habitat, an in-house term applied to areas needing special management consideration for grizzly bears.

Historically, grizzly bears have been residents of the Kootenai, and until 1974 could be hunted in the Cabinet Mountains and the Yaak area. The bear remained under the sole management of the State until 1975 when it was listed as a threatened species. Since then, the State and Federal agencies have become partners in grizzly bear management, with the State concerned with bear numbers (determining hunting seasons and bag limits in areas where the bear is still hunted) and the Forest Service with bear habitat.

During the late 1970's, the Forest Service gave emphasis to the mapping of essential habitat and the development of land management practices which combined grizzly habitat protection with the accomplishment of other multiple use objectives. Also during this time the Fish and Wildlife Service (FWS) began to fulfill other requirements of the Act, in particular Section 7 which gives direction for the consultation process between the FWS and other Federal agencies.

Relatively little was known about grizzly behavior, habitat needs, and responses to man-related activities until the advent of radio collars which could be attached to individual animals. As information from radio-collared bears became more abundant, it was used to direct management activities and the consultation process. During the late 1970's, as recognition of the status of the grizzly bear became widely appreciated and as new information about habitat became known, the subject of grizzly recovery came into focus.

The major causes for decline in grizzly numbers have been man-caused mortality and destruction of habitat. To increase numbers (the goal of the ESA), these two causes must be addressed in land management practices. Man-caused mortality can be handled in several ways: (1) remove bears from the area so contact is never made; (2) reduce man's presence in an area to cut down on the number of contacts, and (3) modify activities to minimize contact. Historically, grizzly bears have been forced to move as people settled and developed the vast majority of grizzly habitat. Only in designated wilderness areas or areas with similar attributes or in National Parks has a conscious effort been made to reduce man's presence for the benefit of grizzly bears. Outside of wild areas and parks, if bears are to survive, man's activities must be modified to retain sufficient grizzly bear habitat and provide seclusion. This third option is the hardest to accomplish and the most controversial.

Grizzly bears are only active about six months out of the year, remaining in their dens from late October or early November until April or May of the following spring. During the active time of the year grizzlies must eat enough food to build sufficient fat reserves for the coming winter. Consequently, they spend over 90 percent of their time feeding or seeking food. Through the identification of grizzly foods and their delineation in the field, a map can be produced which identifies where grizzly bears must go during the active time of the year to feed. It is in these areas and the connecting land between that man's activities must be carefully coordinated to protect grizzly food sources and to allow sufficient solitude for bears to take advantage of those sources.

Most grizzly foods are not found in heavy forest, but rather in open areas where berry bushes and shrubs are growing. In that sense, little direct conflict exists between managing for grizzly bear food and managing for trees. The problems that develop are generally associated with the construction of new access roads, during which cover is removed and noise from heavy equipment causes bears to leave the area. After road construction, man's continued presence in the area will inhibit reoccupation of the area by the grizzly. Research shows that grizzly bears are generally found within large tracts of wildland, but can live in relatively close proximity to man if the proper conditions exist. One main factor necessary to accomplish this, is that the number of access roads planned for areas known to have essential grizzly bear habitat must be limited, and those constructed must be controlled through seasonal or year-long closures. Road construction and timber harvest activities must be limited by season or length, thereby protecting food sources and perpetuating established bear habitat. The net result is accomplishment of both goals, i.e., protecting grizzly bear habitat and managing for timber, but in a modified and, admittedly, more complicated way.

Unless efforts of this kind are made, bears will have a difficult time surviving. If bears are not allowed to feed and build fat reserves, or if food sources are damaged or destroyed, bears will go into their dens in very poor condition and may not survive the winter. If they are female, they may not produce young even though they may have been pregnant upon entering the den.

Denning is the other critical component of grizzly habitat. For a period of about six months, grizzlies remain in one special place to avoid winter's inclement weather and the lack of food. They also give birth during this period. Disturbance during the denning period could result in death as food is not easily available during winter and snow cover would make excavation of another den difficult. Therefore, den sites and denning habitat must be protected from disturbance during the winter period. This is generally no problem as grizzlies tend to den at high elevations in deep snow zones and in areas of little human activity.

Special guidelines which consider grizzly bear needs are now being used as land managers define multiple use objectives. Those guidelines identify many important ways to reduce man's impact in essential grizzly bear habitat, including when and how land management activities will take place. For example, several special timber sale contract clauses and a special prescription were written which direct land managers in how to accomplish timber harvest in grizzly habitat without major conflicts. In addition to responding to special management guidelines, the Kootenai National Forest has developed a procedure that assesses the cumulative effect of many different activities on grizzly bear habitat, allowing managers to view the "big picture" when making land management decisions.

The goal of listing any species is recovery. Implementation of specific grizzly guidelines will lead to better management of grizzly and the chance for grizzlies to increase in number and "recover". Other techniques may help toward recovery. Techniques such as augmentation which assist in recovery are consistent with the spirit and intent of the ESA. As proven in other areas, the "delisting" of a species also reduces constraints on other activities and can even result in the controlled harvest of some species.

II. Ecosystem Descriptions

Two major grizzly ecosystems are found on the Kootenai Forest: The Cabinet-Yaak (CYE) and the Northern Continental Divide (NCDE).

A. Northern Contintental Divide Grizzly Bear Ecosystem (NCDE)

The Kootenai is a small shareholder in the NCDE, contributing roughly 3 percent to the total acreage of about 5,700,000 acres. Grizzly bears in this ecosystem are felt to be more stable in number than in any other ecosystem and a limited amount of hunting is allowed. In the last five years two grizzlies have been shot on lands in this ecosystem managed by the Kootenai.

In addition to the Kootenai, the NCDE includes Glacier National Park, parts of the Blackfeet and Flathead Indian Reservations, parts of 4 additional National Forests (Helena, Flathead, Lewis & Clark, and Lolo), Bureau of Land Management parcels, and a significant amount of state and private lands. Four wilderness areas (Bob Marshall, Mission Mountains, Great Bear, and Scapegoat) and two wilderness study areas (Deep Creek Reservoir North and Ten Lakes Montana Wilderness Study Act Area) are included. Population estimates for this ecosystem vary from 440-680 bears. The area is contiguous to Canadian grizzly bear populations and an interchange of bears is assumed.

One very important aspect of this ecosystem is that it embraces the only part of the Great Plains where grizzly bears can still be found. Descendants of the plains grizzly bears have been reduced to this last narrow strip of plains habitat bordering the eastern slopes of the Rocky Mountains, commonly called the Rocky Mountain Front.

B. Cabinet-Yaak Ecosystem (CYE)

Unlike the NCDE, the Kootenai is the major landowner in the CYE, contributing roughly 70 percent to the 1.2 million acre landbase (the rest contributed by the Lolo and Idaho Panhandle National Forests). Bears have not been hunted in this area since 1974, and the population is the lowest of the three primary ecosystems identified in the grizzly bear recovery plan.

Management of grizzly habitat in the CYE has been controversial in recent years. The grizzly bear recovery plan calls for a population of 70 grizzly bears within the CYE, and roughly 45 bears within the Kootenai portion. No accurate figure exists for the current population, but experience gained in component mapping during the last four years and through the grizzly study the past two years suggests the habitat is capable of supporting a recovered population (see Interagency Guidelines in Part B of this Appendix.)

Grizzly bear numbers in the Cabinet-Yaak are very low, but researchers with the Montana Department of Fish, Wildlife, and Parks have been able to trap 3 in the Cabinet Mountains and 2 in the Yaak drainage during the course of their study. In addition, several verified and unverified observations are reported each year.

With such a low population, maintenance of links or movement corridors between core grizzly areas is important. These corridors prevent the development of isolated islands which ultimately would prove to be unsuitable for long-term maintenance of grizzly bears.

Known mortality of native bears within the CYE in the last decade consists of two bears since 1974. However, because grizzly bears have an extremely low reproductive rate, recovery will take many more years unless bear numbers are supplemented. Supplementing the native population, known as "augmentation", can theoretically speed recovery by many years and offers the benefit of introducing new genetic material. (See section on augmentation at the end of this appendix).

C. Relationship of the Kootenai National Forest Habitat to the Total Grizzly Bear Ecosystems

1. Northern Contintental Divide Ecosystem

The Kootenai National Forest contains only a small portion of NCDGBE ecosystem (3%). The following table describes the relationship of the Kootenai to the total ecosystem. All land ownerships are included.

AREA SUMMARY of the NORTHERN CONTINENTAL DIVIDE GRIZZLY BEAR ECOSYSTEM

CURRENT OCCUPIED HABITAT ACRES (thousands)

UNIT	MGMT. SIT. 1	MGMT. SIT. 2	MGMT. SIT. 3	TOTAL
Glacier National Park	1007	-	7	1014
Indian Reservations	116*	107*	0	392
Private and State Land	NA	NA	NA	642
Bureau Of Land Mgmt.	NA	NA	NA	24
National Forest	2883	592	14	3489
Flathead	(1694)	(355)	(7)	(2056)
Helena	(96)	(84)	(0)	(180)
Lewis & Clark	(764)	(5)	(7)	(776)
Lolo	(213)	(58)	(0)	(271)
Kootenai	(116)	(90)	(.4)	(207)
Totals				5780

*Flathead Reservation Only

SUMMARY of the CAPACITY (Expressed in Number of Bears)
for the
NORTHERN CONTINENTAL DIVIDE GRIZZLY BEAR ECOSYSTEM*

National Park		100
Indian Reservation**		35
Private**		84
National Forest***		341
Flathead	(207)	
Helena	(18)	
Lewis & Clark	(81)	
Lolo	(22)	
Kootenai	(13)	
Totals		560

* The capacity estimate is based upon three sets of numbers:

1. The recovery goal stated in the Recovery Plan.
2. An extrapolation of current bear densities from research.
3. Applied to each ownership according to percent control of the total ecosystem.

** The capacity estimate for State, private and other Federal ownership is only an assessment of resource potential based on their percent ownership of the grizzly bear ecosystem. It does not constitute a management decision of how these lands should be managed.

*** The Recovery Goal pertains to the National Forest share of the goal stated in the Grizzly Bear Recovery Plan. The disaggregation to Forests is an estimate of each Forest's share of the goal as stated in the Regional Guide. This goal may be adjusted slightly between Forests as more site-specific information and tradeoff analysis is done in the Forest planning process.

2. Cabinet-Yaak Ecosystem

The Kootenai contains about 70% of the CYE (828,000 acres). The following table shows the relationship of the Kootenai to the CYE ecosystem. All lands are included.

AREA SUMMARY of the CABINET-YAAK GRIZZLY BEAR ECOSYSTEM

CURRENT OCCUPIED HABITAT ACRES (thousands)

UNIT	MGMT SIT. 1	MGMT SIT. 2	MGMT SIT. 3	TOTAL
National Forest				1132
Kootenai	628	200	0.8	(828)
Idaho Panhandle	280	0	0	(280)
Lolo	63	32	12	(107)
Private & State Land	NA	NA	NA	108
Bureau of Land Mgmt.	NA	NA	NA	2
Totals				1220

SUMMARY of the CAPACITY (Expressed in Number of Bears) for the CABINET-YAAK GRIZZLY BEAR ECOSYSTEM*

Private**	7
National Forest***	63
Kootenai	(45)
Idaho Panhandle	(12)
Lolo	(6)
Totals	70

* The capacity estimate is based upon three sets of numbers:

1. The recovery goal stated in the Recovery Plan.
2. An extrapolation of current bear densities from research.
3. Applied to each ownership according to percent control of the total ecosystem.

** The capacity estimate for State, private and other Federal ownership is only an assessment of resource potential based on their percent ownership of the grizzly bear ecosystem. It does not constitute a management decision of how these lands should be managed.

*** The Recovery Goal pertains to the National Forest share of the goal stated in the Grizzly Bear Recovery Plan. The disaggregation to Forests is an estimate of each Forest's share of the goal as stated in the Regional Guide. This goal may be adjusted slightly between Forests as more site-specific information and tradeoff analysis is done in the Forest planning process.

D. Limiting Factors and Management Opportunities

Excessive human-caused mortality of grizzly bears and reduction in suitability and/or availability of grizzly habitat are the major factors which can limit grizzly bear recovery.

Land and resource management can influence these primary factors in several ways. Activities such as timber management and grazing can change the composition, distribution, and abundance of plant communities. Such changes affect the quantity and quality of food and cover for grizzlies. Human activity associated with uses such as timber management, recreation, mineral exploration and development can alter availability of habitat (space) to grizzly bears. Finally, various land uses with potential for grizzly/human conflicts can make grizzly bears vulnerable to human-caused mortality.

Land and resource uses may have positive, neutral, or negative effects upon grizzly bears and their habitat. The effect depends upon the type, location, and season of use relative to the desired ecological condition of the habitat and human activity in the area. Although individual uses may be well planned and not affect the grizzly bear or its habitat, the combined effect of several activities (over time and space) may be negative.

Habitat mapping and cumulative effects assessment are tools the land manager can use to identify conflicts and opportunities for grizzly bear recovery actions.

E. Forest Relationship to Mortality Objectives for the Ecosystem

In order to facilitate recovery, all Forests have a target of no (zero) preventable grizzly bear mortalities. A preventable mortality is one which could have reasonably been avoided by management actions, and is not a legal hunting mortality.

The mortality target includes actions to describe the measures to prevent mortality and to display the causes of mortality from records kept for the last several decades. The following table displays the various causes of mortality over time.

GRIZZLY BEAR MORTALITY FROM 1950 THRU 1986,
Cabinet-Yaak Ecosystem*

MORTALITY FACTOR	LOCATION	CIRCUM-STANCES	1950-1959	1960 1969-s	1970-1979	1980-1986
Hunter Kill	Point	AP	2	0	0	0
Hunter Kill	Point	ANP	0	0	0	0
Hunter Kill	Linear	AP	0	0	0	0
Hunter Kill	Linear	ANP	0	0	0	0
Hunter Kill	Dispersed	AP	0	0	0	0
Hunter Kill	Dispersed	ANP	5	2	1	0
All Other	Point	AP	9	5	5	0
All Other	Point	ANP	0	0	0	0
All Other	Linear	AP	0	0	0	0
All Other	Linear	ANP	2	0	0	0
All Other	Dispersed	AP	0	1	1	0
All Other	Dispersed	ANP	2	1	1	1

PREVENTABLE GOAL				0
Preventable	9	5	5	0
Nonpreventable	25**	4	3	1
TOTAL	34	9	8	1

Definitions:

Hunter kill - Legal kills not incidental to other big game hunting.
All other - Includes illegal kills, depredations, control actions, chance occurrence, defensive actions, and poisoning.

Point - A specific location associated with human activities, e.g. camp, lookout, cabin.
Linear - Associated with a road or trail.
Dispersed - No association with roads, trails, or point sources - a random location.

AP- Attractant Present (see Attractant)
ANP- Attractant Not Present (see Attractant)
Attractant - Food, garbage, livestock (dead or alive), big game carcasses, stock feed.

Totals do not include three known mortalities of relocated bears. Some older data is sketchy and subjective interpretations of occurrence were made.

* Figures are for Montana only, no Idaho figures included.
** Includes 14 hunter kills for which no specific information is known.

III. Grizzly Management Situation Guidelines

The following grizzly bear management guidelines have been established as part of the Kootenai Forest Plan management direction and are included in this EIS to demonstrate the Forest's method and intent to meet the grizzly bear recovery goals.

A. Introduction

This policy and guideline statement was developed for three major reasons;

1. to promote the unification of grizzly bear management in the Northern Region through a consistent set of guidelines applied by all Forests, and

2. to clearly establish a policy for the management of grizzly bears and their habitat on the Kootenai National Forest.

3. to pull together, in one document, the numerous guidance and procedural directions that have been in existence on the Kootenai but are located in many different documents. In this context, this set of guidelines contains little new information or direction.

As a federal entity, the Kootenai National Forest is clearly responsible for ensuring that any action funded, authorized or carried out be done in a manner which does not jeopardize the continued existence of grizzly bears or adversely modify their habitat. This responsibility under Section 7 of the Endangered Species Act is fulfilled through the development of biological evaluations or assessments which examine the proposed actions with respect to their potential for influencing grizzly bears or their habitat. If this objective analysis, conducted by qualified personnel (generally operational wildlife biologists), cannot clearly determine that the action will not affect grizzly bears or their habitat then formal consultation with the Fish and Wildlife Service will be initiated. This formal step provides for an interagency exchange of information and ideas and significantly strengthens the application of the Endangered Species Act.

Grizzly bears on the Kootenai occupy portions of two primary ecosystems. In the northeast portion of the Forest grizzly bears occupy about 3 percent of the Northern Continental Divide Ecosystem (NCDE), roughly 207,000 acres. In this area, though listed as a threatened species, grizzlies can be legally hunted. An apparent extension of this ecosystem southwest of Highway 93 contains 90,000 acres within which grizzlies may not be hunted.

The other ecosystem on the Kootenai is the Cabinet-Yaak Ecosystem (CYE), of which the Kootenai manages about 70 percent or roughly 828,000 acres. Grizzly bears have not been legally hunted in this area since 1974 and only two mortalities of native bears have been known to occur since that date.

Grizzly bears were listed as a threatened species in 1975 and numerous actions have been taken since to stabilize their decline and to assist in recovery. Among these actions on the Kootenai are:

1. The delineation of essential habitat in coordination with other Forests in Region One.

2. The development and publication of guidelines for harvesting timber in grizzly bear habitat.

3. Participation in the development of the recovery plan.

4. The stratification of essential habitat into management situations specific to the Kootenai National Forest.

5. The development and implementation of a relocation plan in conjunction with other responsible agencies.

6. The development and application of habitat component mapping and cumulative effects analysis.

7. The inclusion of grizzly habitat and specific management prescriptions in Forest level planning.

Most of the management emphasis on the Kootenai has focused on habitat. Over most of the Forest an accurate data base has been developed down to the habitat component level. It is agreed by all responsible agencies that suitable habitat exists in the CYE but that a low density, small population of grizzlies is present. On the other hand, that portion of the NCDE that exists on the Kootenai supports a relatively high density of grizzlies and is intrinsically bound to populations of bears in the Flathead drainage, which have been relatively well studied in the past 10 years.

Initiation of a grizzly study and the trapping of a native female grizzly in the Cabinets in 1983 was a first step in gaining information on grizzly bears native to the CYE. To date 3 native grizzly bears have been trapped and radio-collared in the Cabinets. Two grizzlies have also been captured and radio=collared in conjunction with a black bear study in the Yaak. Study of these bears will focus on habitat use, movement patterns, and home range sizes for native grizzly bears.

Data collected in the study will be used to update or modify current management guidance which is predominantly based on data extrapolated from other studies. The management guidance contained in this document is dynamic and will be updated as needed.

The precise population of grizzlies in the CYE will probably never be known. As the extent and accuracy of grizzly data develops, population estimates will be established using criteria identified in the Recovery Plan. Until better population information exists, management emphasis will focus on the maintenance of desirable conditions in occupied grizzly habitat. The target population density for the CYE identified in the Recovery Plan is 1:26 square miles which would result in a grizzly population on the Kootenai of about 49 bears.

In contrast, relatively good data exists for parts of the NCDE relative to the Kootenai's portion. It is felt the area supports a density of about 1:15 square miles or about 14 bears. Sightings and sign substantiate the presence of a good population of bears and the area is open to legal hunting for grizzlies. In general, it is felt the area supports a viable population of grizzlies.

B. Definitions

All Forests in the Northern Region (R-1) have been directed to stratify their grizzly habitat according to definitions in the "Interagency Grizzly Bear Guidelines" (formerly the "Yellowstone Guidelines"). Through application of a common set of situation descriptions, all Forests will have a common basis from which to operate.

Prior to the use of the Interagency Guidelines the Kootenai developed a habitat stratification similar in concept and has applied that mapping to management activities for the past 6 years. The Kootenai stratification emphasized habitat condition, season of use, and history of use. Mapping of the Kootenai situations was done at a much smaller scale than the Interagency Guideline situations and functions essentially as a substratification within the various Interagency Guideline situations. The Kootenai stratification has served well and will be absorbed into the current guidelines and defined as a "mode," or particular form of habitat within the various situations. Incorporation of the Interagency Guideline situation descriptions by the Kootenai will help achieve uniformity among Forests in R-1 but, recognition of the various "modes" within the situations will allow the Kootenai to retain an effective management tool. In addition, habitat component mapping will serve as another level of refinement as illustrated below:

Occupied Habitat (Recovery Plan)	Interagency Guidelines Situations	Kootenai Management Modes	Habitat Component Mapping

>-------->--------> Increasing Level of Resolution >--------->---------->

Interagency Guideline Descriptions

Management Situation 1

1. Population and Habitat Conditions. The area contains grizzly population centers (areas key to the survival of grizzlies where seasonal or year-long grizzly activity under natural, free-ranging conditions is common) and habitat components needed for the survival and recovery of the species or a segment of its population. The probability is very great that major federal activities or programs may affect (have direct or indirect relationships to the conservation and recovery of) the grizzly.

2. Management Direction. Grizzly habitat maintenance and improvement and grizzly/human conflict minimization will receive the highest management priority (FSM 2603). Management decisions will favor the needs of the grizzly bear when grizzly habitat and other land use values compete. Land uses which can affect grizzlies and/or their habitat will be made compatible with grizzly needs or such uses will be disallowed or eliminated. Grizzly/human conflicts will be resolved in favor of grizzlies unless the bear involved is determined to be a nuisance. Nuisance bears may be controlled through either relocation or removal, but only if such control would result in a more natural, free-ranging grizzly population and all reasonable measures have been taken to protect the bear and/or its habitat (including area closures and/or activity curtailments).

Management Situation 2

1. Population and Habitat Conditions. Current information indicates that the area lacks distinct population centers; highly suitable habitat does not generally occur, although some grizzly habitat components exist and grizzlies may be present occasionally. Habitat resources in Management Situation 2 either are unnecessary for survival and recovery of the species, or the need has not yet been determined but habitat resources may be necessary. Certain management actions are necessary. The status of such areas is subject to review and change according to demonstrated grizzly population and habitat needs. Major Federal activities may affect the conservation of the grizzly bear primarily in that they may contribute toward (a) human-caused bear mortalities or (b) long-term displacement where the zone of influence could affect habitat use in Management Situation 1.

2. Management Direction. The grizzly bear is an important, but not the primary, use on the area. In some cases, habitat maintenance and improvement may be important management considerations. Minimization of grizzly-human conflict potential that could lead to human-caused mortalities is a high management priority. In this management situation, managers would accommodate demonstrated grizzly populations and/or grizzly habitat use in other land use activities if feasible, but not to the extent of exclusion of other uses. A feasible accommodation is one which is compatible with (does not make unobtainable) the major goals and/or objectives of other uses. Management will at least maintain those habitat conditions which resulted in the area being stratified Management Situation 2. When grizzly population and/or grizzly habitat use and other land use needs are mutually exclusive, the other land use needs may prevail in management considerations. In cases where the need of the habitat resources for recovery has not yet been determined, other land uses may prevail to the extent that they do not result in irretrievable/irreversible resource commitments which would preclude the possibility of eventual restratification to Management Situation 1. If grizzly population and/or habitat use represents demonstrated needs that are so great (necessary to the normal needs or survival of the species or a segment of its population) that they should prevail in management considerations, then the area should be reclassified under Management Situation 1. Managers would control nuisance grizzlies.

Management Situation 3

1. Population and Habitat Conditions. Grizzly presence is possible but infrequent. Developments, such as campgrounds, resorts or other high human use associated facilities, and human presence result in conditions which make grizzly presence untenable for humans and/or grizzlies. There is a high probability that major Federal activities or programs may effect the species conservation and recovery.

2. Management Direction. Grizzly habitat maintenance and improvement are not management considerations. Grizzly/human conflict minimization is a high priority management consideration. Grizzly bear presence and factors contributing to their presence will be actively discouraged. Any grizzly involved in a grizzly/human conflict will be controlled. Any grizzly frequenting an area will be controlled.

Kootenai Management Mode Descriptions

Each of the management situations may have substratifications, or modes, which reflect of the former Kootenai management situations. The four modes defined will assist primarily at the project level and be related to habitat conditions, habitat component information, and season of use. Decisions and policy will be influenced by the Yellowstone situation within which the modes fall. The modes are defined as follows:

Mode A - These areas contain population centers and a complexity of grizzly habitat components which provide essentially for yearlong needs, with the possible exception of spring range. Denning habitat is generally found in these areas. Generally, there is a history of bear occupancy and use that is well established through sightings or sign. These areas are often the most rugged, secluded, and remote areas on the Forest with a high component of nonforested or sparsely forested habitat.

Mode B - These areas are often proximate to Mode A areas but may have less complexity of grizzly habitat components, may lack denning habitat, and often have a high component of forested habitat. Habitat and cover types are often those which offer a high potential for enhancing bear foods through vegetative manipulation or which may currently provide grizzly foods. Generally some recognized and historical bear use has been documented.

Mode C - These are high value seasonal ranges upon which grizzly bears may depend for short, yet critical, periods of time. Most frequently these are spring and late fall ranges which meet pre and post denning needs. These areas are often at lower elevations and may be disjunct from Mode A or B areas.

Mode D - These areas generally provide little actual or potential for grizzly foods but serve predominantly as movement corridors, buffers, or connectors between areas of higher value and use. Cover needs are predominant and the ability for free movement through the area is a primary management consideration. Often there may be limited documentation of bear use.

C. Policy and Objectives

It is the policy of the Kootenai National Forest to conduct programs and activities in a manner which promotes the conservation of grizzly bears. This includes adherence to responsibilities outlined in Section 7 (ESA), and furtherance of the goals identified in the grizzly bear recovery plan. Inherent in this program will be coordination with all agencies responsible for grizzly management strategies. The following objective statements will assist in achieving this stated goal:

1. In partnership with cooperating agencies, strive to avoid human-induced mortalities on the Kootenai National Forest by;

   a. increasing public awareness of grizzly bear behavior and habitat needs and by informing and educating the general public in back country behavior in grizzly habitat.

   b. recognizing potentially hazardous situations and modifying management activities or public use to reduce conflicts.

2. On all Situation 1 acreage on the Kootenai, resolve conflicts in favor of grizzly bears and emphasize their welfare in management activities. Activities will be made compatible or they will be foregone.

3. Management direction for Interagency Guideline Situation 2 was initially developed in an ecosystem over five times larger than the Cabinet-Yaak and with a population of over 200 grizzly bears (Yellowstone). In view of these differences and with the consultation of the Fish and Wildlife Service, the Kootenai has elected to avoid, as much as possible, mutually exclusive resource activities by placing all Interagency Situation 2 areas into compatible management emphasis (prescription). Thus, multiple use activities will be designed and coordinated in a manner which is compatible with grizzly bear behavior and habitat needs.

4. In Situation 3 areas manage to avoid attracting grizzly bears or creating situations which bring bears into contact with humans. Actively discourage grizzly presence in these areas.

5. In all situations, strive to develop a grizzly management program which maintains and enhances identified grizzly bear habitat, incorporates relevant research and management information into all applicable activities, and supports the conservation and recovery of the species.

Acreages

Ecosystem	Sit 1 (M Acres)	Sit 2 (M Acres)	Sit 3 (M Acres)
Cabinet-Yaak	628	200	.8
Northern Cont. Divide	116	90*	.4

*Extension SW of Highway 93

D. Management Guidelines and Standards

The following guidelines and standards will provide for a more consistent interpretation and implementation of the Interagency Guidelines on the Kootenai:

Guidelines provide broad direction that should be sought in all management activities but may be altered on the basis of site specific needs as determined in a biological evaluation. Standards provide specific direction in management areas. Forest Supervisor approval is mandatory for deviation from standards.

At least annually the Kootenai will confer with the Fish and Wildlife Service on any changes that are needed in standards and guidelines. Historically, the Kootenai has had frequent informal and formal consultations with the Fish and Wildlife Service. These guidelines may reduce the number of formal consultations needed but continuation of the informal consultations is important. The need for consultation will be determined on the basis of a biological evaluation, the development of which will be consistent with FSM 2670.

The grizzly bear recovery plan will be used as a reference document in identifying activities and steps that can be incorporated into Forest management to promote the recovery of the species.

Wildlife Management	Std	Guide	S1	S2	S3
1. Keep abreast of current research activities and data relating to grizzly bears and their habitat. Ensure that current, applicable data is incorporated in management activities. Initiate consultation with the Fish and Wildlife Service as necessary.	X		X	X	X
2. Utilize biological evaluations to determine project compatibility. On the basis of biological evaluations ensure that only projects which are compatible or which enhance grizzly habitat are initiated in Situation 1. Proposed projects or land uses in Situation 1 areas which are not compatible will be modified or foregone.	X		X		
3. On the basis of biological evaluations projects are made as fully compatible as possible, consistent with the other resource goals of the area. If a proposal causes an unresolvable conflict and the evaluation indicates that the activity will affect species survival and recovery (jeopardy) then the area should be reconsidered for Situation 1 status. If resolution of the conflict and resultant use of the area by grizzly bears does not constitute need for species survival and recovery then the project shall proceed as modified.	X			X	
4. Measures taken to protect, maintain or enhance grizzly bear habitat will be documented in biological evaluations and specified in project design. Project level environmental assessments or decision documents will clearly reflect consideration of grizzly habitat management recommendations.	X		X	X	X
5. Develop a public information and education program with the assistance of other responsible agencies. Emphasize bear habitat needs, bear behavior, minimization of grizzly/human conflicts, and the need for a comprehensive management program which will lead to recovery of the species.	X		X	X	X

	Std	Guide	S1	S2	S3
6. Develop a long range grizzly management program which includes at least the following: 1) identification of management information needs, 2) updating of grizzly habitat maps, 3) maintenance of sighting records and evidence of grizzly use and occupation, 4) refinement of situation mapping on the basis of changes in habitat suitability, population and distribution, 5) modification of standards and guidelines in management prescriptions on the basis of new data, 6) identification of direct habitat management activities which will protect or enhance grizzly habitat, and 7) identification of potential relocation or population augmentation areas.	X		X	X	X
7. Identify and strive to make unavailable food sources which may draw grizzly bears into potential conflict with humans. These food sources may include the carcasses of livestock or wildlife, garbage dumps, food caches in backcountry areas, or roadside seeding of succulent grasses and legumes. Cooperate with federal, state, county, and private entities in achieving this guideline.	X		X	X	X
8. Utilize a cumulative effects perspective in developing management guidelines and constraints at the project level.	X		X	X	X
9. Monitor the application of these standards and guidelines to assure they are properly and effectively used. Modify standards and guidelines as needed and with the cooperation of the Fish and Wildlife Service.	X		X	X	X
Timber/Fire Management					
1. All proposed timber and fire management activities will be evaluated for their effects on grizzly bears and their habitat. A cumulative effects perspective will be used in the evaluation. Employment of habitat component information and grizzly use data will be part of the evaluation. Proposals will be evaluated with respect to how they affect grizzly bear management objectives on the Kootenai National Forest. Applicable contracts will include specific clauses to achieve management goals and objectives and, in Situation 1, a clause which provides for a suspension or temporary cessation of activities if such is needed to resolve a grizzly/human conflict situation. Both contractual stipulations and administration will be used to ensure that contractors cooperate in meeting grizzly management objectives.	X		X	X	

	Std	Guide	S1	S2	S3
2. Grizzly habitat may be improved through vegetative manipulation. Techniques which may cause improvement are silvicultural treatments, prescribed burning and sale area improvement activities,					
a. on the basis of a biological evaluation, grizzly habitat components will be identified and included in the consideration of the project. This may include protection or enhancement of a particular component and provision for their use by bears.	X		X	X	
b. Timing constraints, scheduling, maintenance of movement corridors, shortened contract periods, provision of displacement areas, and access management will be considered and implemented as needed in project design.	X		X	X	
c. Silvicultural treatment in some habitat types can significantly improve available bear foods. Identification of these habitat types and provision for the improvement of bear foods will be incorporated in project design consistent with other considerations such as;	X		X	X	
1. design of regeneration units should stress irregular edges where consistent with site preparation capabilities (e.g., prescribed fire).		X	X	X	
2. adequate cover, movement corridors, leave islands and spacing between units will be incorporated in project design to facilitate bear movement into and through project areas so that existing components and new food sources can be utilized.		X	X	X	
3. favor site preparation techniques which protect or enhance known bear foods. Use prescribed burning where dozer scarification results in the destruction or adverse modification of bear foods such as huckleberries.	X		X	X	
4. road locations will be placed to avoid the destruction of known habitat components unless the biological evaluation indicates the component loss is tolerable with respect to other results of the project.	X		X	X	
5. small sale activities will be coordinated with large sale activities and will be equally responsive to grizzly management goals and objectives and Kootenai standards and guidelines.	X		X	X	

	Std	Guide	S1	S2	S3
6. riparian zone treatments will follow policy established by the Forest Plan.	X		X	X	
d. Sale area improvement projects funded from timber sale receipts collected for post treatment activities (KV funds) should receive high priority where there is potential for improvement of grizzly habitat in sale areas. Such activities may include the following:	X		X	X	
1. revegetation with grasses and legumes in those areas where bears can safely feed and would benefit from increased foods (especially spring ranges)					
2. improvement or reestablishment of cover conditions in important feeding or movement areas					
3. implementation of road management where open road densities are at higher levels than desirable					
4. prescribed burning in those habitat situations where increased succulence or improved fruit production will result or grizzly foods will be improved or made available.					
e. Prescribed burning both as a direct habitat improvement technique and as a site preparation technique will be used to enhance grizzly habitat where vegetative or habitat type conditions indicate. Specific instances where prescribed burning is an important technique include;	X		X	X	
1. burning of identified shrub fields to enhance fruit production					
2. recognition of the value and incorporation of wildfire in wilderness and nonwilderness situations where fire has been an important factor in maintaining grizzly habitat.					
3. Roads associated with project proposals will be an integral part of the analysis conducted in the biological evaluation. This will include existing roads and new road proposals. Grizzly bear management and Kootenai grizzly objectives will be included in the development of area transportation plans or any similar comprehensive access planning document. Specific consideration will be given to the following:	X		X	X	

	Std	Guide	S1	S2	S3
a. Consistent with standards and guidelines in Plan prescriptions, open road densities will be reduced as determined in biological evaluations for project activities. Generally, this includes closure of all local roads and an average open road density not to exceed .75 mile/section.	X		X	X	
b. Road closures may be facilitated by physical barriers, gates, or other means as specified in biological evaluations. Timing and duration of closures will be identified in biological evaluations.		X	X	X	X
c. Road design and standards should be those which minimize conflict with wildlife values yet meet safety and environmental considerations. Criteria generally include:		X	X	X	
1. minimum number of miles to achieve project objectives					
2. minimum clearing widths, low cuts and fills, and high diversity in vertical and horizontal alignment					
3. roads which "lay on the land"					
4. maximum use of local roads, minimize arterials and collectors.					
4. Facilities such as camps or equipment storage areas will be located away from known grizzly use areas or identified habitat components. For those camps which are allowed in proximity to grizzly habitat there will be strict regulation of garbage, pets, and human waste to minimize grizzly/human conflict.	X		X	X	X
5. Development of Forest level fire management plans will include information about grizzly habitat and incorporation of prescribed fire where it can benefit grizzly habitat and not conflict with other resource values (e.g., municipal watersheds, old growth, regulated timberlands).	X		X	X	

	Std	Guide	S1	S2	S3
Range Management					
1. All livestock use on allotments will be analyzed in a biological evaluation to determine the effect on grizzly habitat and the potential for conflict with grizzly bears. This evaluation will be accomplished as part of the preparation or revision of allotment management plans unless specific problems dictate immediate action.	X		X	X	
2. Grazing activities with the potential for conflict with grizzly management objectives will be modified to be compatible with grizzly habitat needs. Disposal of carcasses will be done in a manner which minimizes the potential for grizzly/human conflicts.	X		X	X	
3. Regional grizzly bear protection clauses will be included in annual permittee operating plans.	X		X	X	
Recreation Management					
1. The following examples of uses, developments, or activities will be evaluated to determine their compatibility with grizzly bear objectives;	X		X	X	X
a. proposed roads and trails (foot, trail, vehicle)					
b. proposed campgrounds, designated campsites, picnic areas, trail heads, visitor information facilities, and other structures or facilities for recreation and administrative use					
c. proposed special use resorts, cabins, base camp sites, outfitter stock grazing areas, and areas used for grazing by noncommercial recreation stock					
Any of the above which currently exist and which may be in conflict with grizzly management objectives should be evaluated in a cumulative effects/biological evaluation process.					
2. All recreation oriented environmental analyses will incorporate grizzly management objectives and specify measures or clauses necessary to meet them. All contracts, permits, and operating plans will include provisions specifically addressing Region 1 grizzly bear protection measures (2670 memo of 11/3/83).	X		X	X	X

		Std	Guide	S1	S2	S3
3.	Attractants					
a.	Garbage containers will be of a bear-proof design or existing facilities will be modified and made bear proof. Garbage pickup will be scheduled to minimize the potential of developing a bear attractant at container locations	X		X	X	X
b.	Existing and proposed garbage dump sites will be evaluated to determine if problems exist. The Forest will coordinate with county officials in the location and management of dump sites and dumpsters.		X	X	X	X
c.	Operators with special use permits will be required to make garbage unavailable to bears through the use of bear-proof containers and regular collection and offsite disposal in approved locations. Permit clauses or stipulations will reflect these standards.	X		X	X	X
d.	Outfitter/guide permits will specify measures to be taken in terms of food storage, refuse disposal and wild meat storage. Work with Montana Department of Fish, Wildlife, and Parks on enforcement of the permit regulations.	X		X	X	X
e.	Use of established nondeveloped campsites will be adjusted as necessary to prevent a buildup of odors or improperly handled garbage which could attract grizzlies.		X	X	X	X
f.	An information brochure summarizing human conduct in grizzly country will be made available to the public. A supply of the brochure will be made available to local offices of the Montana Department of Fish, Wildlife, and Parks.		X	X	X	X
g.	Trails, roads, and areas with histories of grizzly human encounters or areas where grizzly use increases grizzly encounter potential, may be closed to human use either temporarily in Situation 1 and 2 or permanently in Situation 1 to reduce conflict potential.	X		X	X	
h.	If backcountry recreational use is determined to exceed grizzly tolerance levels, some means of restriction or reduction of human use should be implemented (i.e., permit system or reevaluation of commercial use) to avoid displacement of grizzlies from suitable habitat.		X	X	X	

	Std	Guide	S1	S2	S3
i. Reduce grizzly mortality illegally occurring during big game hunting seasons by:		X	X	X	
1. Assisting Montana Department of Fish, Wildlife, and Parks in making information available to all hunters to assist them in distinguishing between black and grizzly bear.					
2. Assisting Montana Department of Fish, Wildlife, and Parks in issuing special warnings to hunters using areas frequented by grizzly bear.					
3. Recommending that black bear hunting regulations be modified as appropriate to reduce or avoid areas or time periods of significant conflicts.					
4. Road closures in key grizzly bear habitat.					
<u>Land Adjustment</u>					
1. All land adjustment proposals will be analyzed in a biological evaluation to determine the effect on grizzly bears and their habitat. On that basis;	X		X	X	
a. consummate exchanges which contribute habitat or improve the opportunity to manage grizzly bears toward recovery levels					
b. emphasize the acquisition of critical habitat components or important seasonal ranges (especially spring range)					
<u>Minerals, Special Uses, and Watershed Management</u>					
1. Proposed activities for a) minerals, oil and gas, microhydro, and geothermal exploration and development; b) special use permits such as powerlines, pipelines, and water developments; c) all uses which require no special use permit (FSM 2708) will be analyzed in a biological evaluation to determine their effect on grizzly bears and their habitat. In Situation 1 these activities will be made compatible with grizzly bear management objectives. In Situation 2 they will be made as compatible as possible consistent with other resource uses and statutory rights and implementation will be monitored if remaining conflicts are judged to be potentially important in a biological evaluation. If significant conflicts develop, further modification of activities or restratification of the habitat may be necessary.	X		X	X	X

	Std	Guide	S1	S2	S3
2. Oil and gas leasing on the Kootenai will be in accordance with current Kootenai EA's on the subject, Forest grizzly habitat stratification, and Forest management objectives.	X		X	X	
3. All operating plans and special use permits will reflect Forest grizzly bear objectives and contain appropriate clauses or stipulations needed to meet the objectives. Provisions specifically identified in Region 1 grizzly bear protection measures (2670 memo of 11/3/83) will be incorporated in all operating plans and permits. Of specific concern are at least the following:	X		X	X	X
a. Food, garbage and human waste will be handled in a manner which minimizes or eliminates them as bear attractants.	X		X	X	
b. Firearms and pets will not be allowed where the biological evaluation identifies them as problems.	X		X	X	
c. Temporary living facilities will be located away from known bear use areas, away from habitat components or not allowed as determined by a biological evaluation.	X		X	X	
d. Development of new access or access routes that are incompatible with Forest management objectives will be discouraged within legal bounds.	X		X	X	
e. Periods of operation will be modified to eliminate or minimize conflicts with grizzly bears as determined in a biological evaluation.	X		X	X	

E. Applicable Documents

In addition to these policy, objective, standard, and guideline statements, there are numerous other documents which clarify and support the items addressed herein. They include, but are not limited to, the following:

1. Grizzly Bear Recovery Plan
2. Habitat Component Mapping/Cumulative Effects Process, Kootenai National Forest
3. Cabinet-Yaak Ecosystem Data Sheet
4. Region One Grizzly Action Plan
5. Region One Grizzly Bear Clauses
6. Kootenai National Forest Integrated Plan as revised
7. Prescriptions, standards, and guidelines in Kootenai Integrated Plan
8. Criteria for Nuisance Bears and Relocation of Grizzly Bears in the Cabinet-Yaak and Northern Continental Divide Ecosystems
9. Guidelines for Timber Harvest in Grizzly Bear Habitat
10. Interagency Grizzly Bear Guidelines
11. Charting the Course - The Forest Service Grizzly Bear Conservation Program

IV. Augmentation

Augmentation, basically an effort to increase the numbers of a species when used in a wildlife context, is a well accepted and routine wildlife management practice. Over the past 30 years on the Kootenai National Forest, elk, bighorn sheep, mountain goats, fisher, and grizzly bears have been brought in to increase native populations. The augmentation of elk and bighorn sheep has been very successful while success with the other species has ranged from moderate to poor.

With specific regard to grizzly bears, seven different bears have been added to the Cabinet-Yaak grizzly population between 1979-1983 (none during the last four years). None of the seven bears are currently known to remain on the Forest. These bears were moved under a relocation agreement pertaining to bears which were determined to be problems or nuisance bears in other locations. Participants in this effort included the Montana Department of Fish, Wildlife, and Parks, the Fish and Wildlife Service, other National Forests, and Glacier National Park. This relocation agreement helped expedite the movement of grizzly bears into areas where conflicts with humans could be reduced or eliminated. Grizzlies moved under this relocation agreement were not selected for either the greatest chance for survival or for their capability to best contribute to the population into which they were relocated. Rather, they got into various circumstances that necessitated their removal and were accepted into new locations on the basis of their potential as risks in further human/bear conflicts. Thus, relocation efforts are significantly different in their intent and in the candidate grizzly bears than what would occur in an augmentation effort.

While the population of grizzly bears in the Cabinet-Yaak Ecosystem is unknown, there is solid evidence and agreement among managing agencies that the existing population is very low in number. The habitat for grizzlies in the Cabinet-Yaak Ecosystem is capable of supporting additional grizzly bears, as evidenced by the historical population and the abundance and diversity of bear foods identified through component mapping. When sufficient habitat exists and a native population is at low numbers, augmentation becomes an option for increasing a species numbers through placement of selected individuals of the most desirable sex and age into the best habitat conditions and at the most advantageous time. Because grizzly bears have such a naturally low rate of reproduction and the fact that when populations become very low in number they may not be capable of recovery on their own, augmentation of grizzly bears in the Cabinet-Yaak Ecosystem may, in fact, be necessary to ensure the survival of this population in the future. Left to their own, the Cabinet-Yaak grizzly bear population would likely not reach recovery and would remain extremely sensitive to any mortality or major habitat disturbances. Successful augmentation would give the population more resiliency toward mortality or habitat disturbance, as well as ensure their future survival. With or without augmentation the identified grizzly habitat on the Kootenai National Forest will be managed according to the guidance contained in the proposed Forest Plan and supporting documents to ensure the opportunity for the existing grizzly bears to prosper.

Planned augmentation could occur under several distinct alternatives or as a mix of several alternatives. A range of augmentation alternatives that could be described and evaluated are:

1. No Action: continue to manage the native population within the guidance identified in the proposed action.

2. Augmentation with grizzly bears acceptable under existing relocation agreements; basically a continuation of past relocation efforts as has occurred since 1977.

3. Augmentation with specific bears of a predetermined sex and age placed into specific habitat conditions at the most opportune times. Essentially the type of augmentation practiced with other wildlife species.

4. Augmentation by means of cross-fostering grizzly bear cubs with black bear mothers. This procedure has been successful with raptors and cranes and groundwork has been laid working with black bears.

5. A mix of alternatives 2, 3, and 4 dictated by grizzly bear availability, knowledge of potential surrogate black bear mothers, and the condition and availability of nuisance bears.

In the Kootenai National Forest planning process, all alternatives analyzed were designed to provide the habitat and management conditions which offer the potential for the grizzly bear population to recover. Recovery is the goal which can be reached through the means of various tools. Specific allocations of Forest land and management guidelines which direct activities that affect grizzly habitat are two such tools. Augmentation should be viewed as another tool that can contribute significantly to the effort to recover grizzly bears on the Kootenai National Forest.

Kootenai National Forest Plan

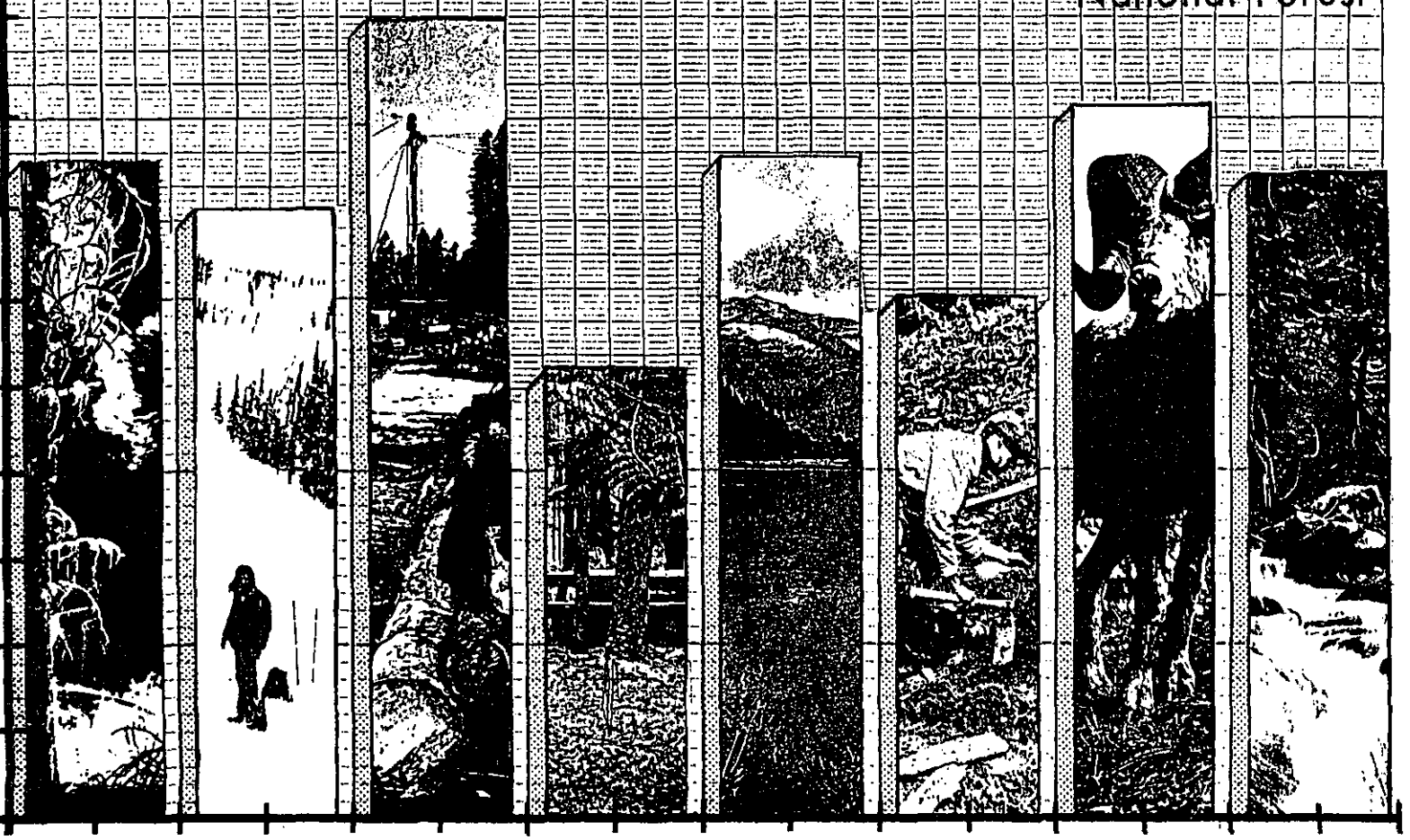
Final Environmental Impact Statement

Appendix B - Analysis Process

United States
Department
of Agriculture

Forest Service

Kootenai
National Forest



D. Thompson

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KOOTENAI NATIONAL FOREST PLAN

APPENDIX B

DESCRIPTION OF THE ANALYSIS PROCESS

Prepared By:

Jerry Haugen
Operations Research Analyst

June 1987

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APPENDIX B

DESCRIPTION OF THE ANALYSIS PROCESS

* Indicates new or revised item.

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LIST OF TABLES

* Indicates new or revised item.

LIST OF FIGURES

* Indicates new or revised item.

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APPENDIX B

DESCRIPTION OF THE ANALYSIS PROCESS

I. Introduction

Significant Changes from Draft to Final EIS

There were no significant changes in this section of Appendix B.

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 Kootenai National Forest to respond to public desires is influenced by its terrain, weather, and soils along with the current condition of its resources. Four percent of the Forest is currently wilderness. The remainder of the Forest supports a variety of roaded and roadless recreation activities including big-game hunting, fishing, viewing scenery, camping, hiking, skiing, snowmobiling, horseback riding and pleasure driving. In addition a variety of commercial activities such as timber harvesting and livestock grazing take place. It is the interface between these activities which generates many forest management questions. This analysis addresses the sometimes complementary and sometimes conflicting relationships between these activities and management for the traditional forest resources of wood, water, wildlife, range, recreation and wilderness.

Public interest includes divergent viewpoints about the use of commodities such as timber, grazing and minerals and non-commodities such as wilderness, unroaded recreation, scenery, wildlife, old growth and diversity. Additional concerns center on the management and control of Forest users. (e.g. Road closures). The Forest's major planning goal is to provide enough information to help decisionmakers determine which combination of goods, services and multiple use land designations will maximize net public benefit. (Defined as 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 Forest lands). See Section IV of this Appendix for more discussion of Net Public Benefit (NPB).

The National Forest Management Act (NFMA) and the regulations developed under NFMA (36 CFR 219) provide the analytical framework to address this objective, 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 designation problem including identifying the most cost efficient pattern of multiple-use land management.

The 10-step planning process is discussed in the NFMA regulations and in Chapter I of this document. Appendix B describes the analysis phase of this process including steps 3, 4, 5 and 6. The judgement phase, steps 1, 2, 7 and 8, is described in Chapters I, II, and in Appendix A. The execution phase, steps 9 and 10, is presented in the Proposed Forest Plan.

1. Inventory Data and Collect Information (Planning Step 3)

The interdisciplinary team determined what data was necessary based on public issues and management concerns. The analysis of the management situation, formulation of alternatives and monitoring require data on resource capabilities and conditions, 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 (Planning Step 4)

This analysis examines resource supply and market conditions and determines suitability and feasibility for resolving issues. A multiple-use land analysis 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.

3. Formulation of Alternatives (Planning 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 (Miller, 1982).

4. Estimation of Effects of Alternatives (Planning 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) relationships with other Federal, State, local and Indian tribe land use plans; (d) other environmental effects; (e) energy requirements and conservation potential; (f) natural or depletable resource requirements and conservation potential; (g) historic and cultural resources; and (h) means of mitigation.

II. Inventory Data and Information Collection

Significant Changes from Draft to Final EIS

No further analysis of timber suitability was performed, however additional documentation of the process was developed and included in the planning records: "An Analysis of Timber Resource Land Suitability", Haugen, June 10, 1986 (with a map). Portions of section II.A.4., below, were revised and expanded to clarify the distinction between Stage I and Stage II analysis and provide details of the process.

A. Forest Data Base

1. Capability Areas

The basic resource data storage unit is the capability area. Capability areas are lands delineated for the purpose of estimating their response to various management practices, resource values, output coefficients, and multi-resource or joint production functions (FSM 1920.5). There are approximately 6421 capability areas on the Forest with an average size of about 350 acres. Forest capability areas were developed using the following basic components:

a. Land Types

A land type is a unit of land with similarly designated soil, vegetation, geology, topography, climate and drainage. A complete description of the land types identified on the Forest is contained in Kuennen and Gerhardt, 1984.

b. Habitat Types

A habitat type is a land area potentially capable of producing similar plant communities at climax. A detailed discussion of habitat typing is contained in Pfister et al, 1977. Information on the habitat types of the Kootenai National Forest is available in the Forest planning records.

c. Slope, Elevation and Aspect

As well as being linked to land type, slope has important consequences with regard to the types of activities and equipment which can be used in an area. This, in turn, directly affects management costs and constraints. Slope is also an important factor in determining the capability of a particular piece of land to provide certain types of wildlife habitat. Slopes were defined as ranging from zero to twenty percent, twenty-one to forty percent, forty-one to fifty-five percent and over fifty-five percent. Maps based upon USGS topographic quadrangles are among the Forest planning records.

Elevation and aspect are also important indicators of suitability for wildlife use during particular seasons of the year. This information is contained on the USGS quadrangle maps.

d. Known Wildlife Use

Capability areas are defined in part by known wildlife use. This is particularly critical in defining capability to support grizzly and elk.

e. Seen Area and Visual Sensitivity

The "seen area" is the total area which is observed from major travel corridors or from specific user areas. Visual sensitivity is a measure of people's concern for the quality of the view of the seen area. Both concepts are useful in defining the capability of an area to be managed for visual quality. Seen area and visual sensitivity maps are among the planning records.

The land type and habitat type components are combined to produce ecological land units which are, in turn, combined with slope groups to define timber capability. Habitat type in combination with elevation, aspect and known wildlife use combine to define wildlife capability. Seen area and visual sensitivity combine to produce visual capability. All of these factors were combined to produce the management units used in the Unit Planning Process. These management units were further modified by Ranger District boundaries, State and County lines, watershed boundaries, recreation experience units, wilderness study area boundaries and water to produce capability areas. Professional judgement was used in defining capability area boundaries where, for example, a watershed boundary almost matched a recreation experience unit. These sorts of judgement calls prevented generation of a large number of tiny capability areas with essentially identical characteristics.

2. Analysis Areas

Analysis areas are one or more 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 grizzly habitat situations then aggregated into analysis areas based on similarities in capability, timber types, and economic effects. There are 389 analysis areas. These Analysis Areas are critical components of the FORPLAN model. They are discussed in detail in Section III of this Appendix.

3. Production Coefficients

Resource outputs were developed for each analysis area by linking resource suitability and economics to analysis areas. Analysis areas suitable for timber production were linked to timber type maps which were linked to timber outputs. Cattle grazing outputs were related to analysis areas by habitat type, slope and cutting practice. Outputs of elk are a factor of inherent habitat potential as modified by management emphasis and the timing of management activities. Recreation coefficients were tied to population trends and the capacity of the land base to support recreationists. Water coefficients were developed for both naturally occurring and management induced runoff. Other resource data including costs, benefits, slope, geology, roadless situation, clearcut equivalents, grizzly bear habitat and riparian areas were utilized to further refine or constrain outputs.

Production coefficients used on the Forest were expressed in the following units:

Timber	Thousand cubic feet/acre
Dispersed recreation	Rec. visitor days/acre/year
Elk population	Elk/acre
Livestock	Animal Unit Months/acre/year
Water	Acre-feet/year
Road construction	Miles/decade
Road reconstruction	Miles/decade
Clear cut equivalents	Clear cut acres/cut type
Visual quality objective	VQO/management emphasis

Note that the timber coefficient used throughout the discussions in this Appendix sums to the live green component and is sometimes referred to as the "regulated" volume. This is the component that is modeled in FORPLAN. To determine the allowable sale quantity, the non-interchangeable component (salvage from suitable lands) must be added.

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 summer and winter range. The Yellowstone Guidelines as modified for local situations were used to identify suitable grizzly bear habitat.

Stage I Timber Suitability Analysis. The Stage I analysis was designed to identify lands not suited for timber production because of their physical characteristics. The lands of the Kootenai National Forest were categorized as required by the regulations. The following table describes the acreage in each category. There were 1,788,000 acres of land determined to be tentatively suitable for timber production.

Table B-1

Identification of Tentatively Suitable Timberland (Acres)

Total net Forest area	2,245,000
Water	37,000
Nonforest land	45,000
Forest land (at least 10% stocked with trees)	2,163 000
Forest land not capable of industrial wood prdctn	291,000
Productive Forest land	1,872,000
Land withdrawn from timber prod. by congress	32,000
Land withdrawn from timber prod. by Chief FS	3,000
Available productive Forest land	1,837,000
Technologically unsuited for timber prod.	0
Irreversible resource damage	49,000
Restocking not assured	0
Tentatively suitable for timber prod.	1,788,000

The above categories were identified from land use classes developed for previous timber management planning efforts.

There are 13,565 acres of productive forest land in the Cabinet Mountains Wilderness area (94,360 acres total) so that area is included as productive timber land withdrawn from production by Congress. The remaining acres in the Cabinet Mountains Wilderness are shown as not capable of producing industrial wood.

The Ten Lakes Wilderness Study Area has 18,390 productive acres which are also shown as withdrawn by congress and 15,840 shown as not capable.

The acres of available productive forest land which are not tentatively suitable due to irreversible resource damage were those acres which could not be harvested if all the minimum management requirements are satisfied. The 3000 acres shown as withdrawn by the Chief include administrative and other developed sites.

Lands not capable of producing industrial wood were determined before September 30, 1982, and a breaking point of 20 cubic feet/acre/year was one of the criteria used (36 CFR 219.29b).

Stage II Timber Suitability Analysis. The tentatively suitable timber lands were further analyzed with the help of the Forest Planning Model (FORPLAN). A detailed analysis of the maximum PNV per acre generated by various timber management intensities is provided in a planning record entitled "Established Market Prices vs Assigned Monetary Values in FORPLAN" (Haugen, December 21, 1984).

Intensities of timber management were modeled as different management areas. Several management areas provide for no harvest and can be said to be the least intensive management schemes. The no harvest management areas include 1, 2, 3, 5, 6, 7, 8, 9, 10, 18, 19, 20, 21, 22, 23, 24, 27, 28, and 29. The various timber harvest management intensities are described by management areas 11, 12, 13, 14, 15, 16, and 17 (note that as a result of public comment MA 13 was moved to the no harvest category in the Final plan).

FORPLAN run 114A09 was used for this analysis. This run is described in section VI.C. of this Appendix. The run has few constraints. Harvest levels are allowed to fluctuate without limits, no minimum management requirements are in effect, and all available productive forest lands have the option to be harvested (note from Table B-1, above, that the "available productive" land acreage is greater than the "tentatively suitable" acreage). The option for no harvest at all also exists on all available productive forest lands. This configuration allows the model to freely select prescriptions based upon economic considerations.

Of the timber harvest management areas available for selection, only MA-12 (oriented toward development of big game summer range) and MA-15 (focusing on timber production) were ever selected. The no harvest option was selected in certain analysis areas, indicating that management without timber harvest made the largest contribution to PNV. Of the 1,837,000 acres of available productive land on the Kootenai, about 6 percent fell into the "no harvest" category while 17 percent fell into MA 12 and 77 percent into MA 15.

It is important to note that each alternative in the DEIS operates under a different set of constraints which affect the ultimate suitability of any piece of ground. Once the minimum management requirements are applied certain acres become unsuitable because they can not be scheduled for harvest without violating these constraints. A paper entitled "The Effects of Updated Economics on the Suitable Timber Land Base and A Comparison of the Final Forest Plan to Suitabilities When PNV is Maximized" (Haugen, June 10, 1986) provides more insight on how this works in practice. The lands identified as "not capable" in the Stage I analysis were carried forward, with refinements as necessary, to the Proposed and Final Plan. Each alternative in the DEIS includes specific acres ultimately defined as suitable and unsuitable to meet the objectives of the alternative.

5. Allocation and Scheduling

The condition classes of existing vegetation were used as a basis to schedule management activities over 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.

B. Sources of Data

Sources of existing inventory data used in the analysis are as follows (also see the reference list at the end of this Appendix):

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

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

3. Land types for the Kootenai National Forest are rigorously described in A Soil Resource Inventory and Analysis for Land-Use Planning and Proposed Project Work by Kuennen and Gerhardt, 1984.

4. The national watershed identification system was used to identify regions and subwatersheds on the Forest. Maps are among the Forest Planning records.

5. Compartments are the timber compartments identified in the timber inventory system and are subdivisions of the subwatersheds. Maps are among the Forest Planning records.

6. Administrative boundaries are delineated on the Kootenai National Forest Map, 1981.

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

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

9. U.S. Geological Survey maps, 1962-1978, and infrared aerial photos, 1975, were utilized to delineate streams, lakes, and riparian areas.

10. The recreation opportunity spectrum was utilized to map opportunities and develop capacity coefficients. The Recreation Information Management System was utilized to develop recreation visitor days. Hunting recreation was developed from success ratios and related information in the Montana Statewide Comprehensive Outdoor Recreation Program , Montana Department of Fish and Game, 1978 and is linked to estimated elk populations over time.

11. Livestock forage information was developed as described in Criteria for the Analysis of the Management Situation - Coefficients, Kootenai National Forest, 1981 (Dillon, 1980)

12. Elk population coefficients were based upon available habitat acres and the effectiveness of that habitat. Background information is contained in the "Western Montana Elk Habitat Timber Relations Guidelines"; the Montana Cooperative Elk-Logging Studies 1976-1979 ; Schoen,1977; Knight, 1970; and Irwin, 1978.

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

14. Background sediment and sediment from management activities were predicted from Guide For Predicting Sediment Yields from Forested Watersheds, Cline et al, 1981, as modified for use on the Kootenai National Forest.

15. Background water yields and yields from management activities were predicted from A Computer Model for Determining Water Yield from Forest Activities, Isaacson, 1977, as modified for use on the Kootenai National Forest.

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

17. Economics. Stumpage value (except as noted) was based on bidder transaction evidence for 1974 to 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, Miller, 1982.

III. The Forest Planning Model (Including FORPLAN)

Significant Changes from Draft to Final EIS

All timber harvest was removed from MA-13 in part of the analysis leading to the Final Forest Plan (Alt. JF), timber yield tables were reviewed, and another approach to recreation projections was explored. Appropriate references have been added to this section. Note that throughout this Appendix all timber volumes mentioned are the live green component only. To arrive at the allowable sale quantity, the non-interchangeable component (salvage from suitable lands) must be added. The FORPLAN models include only the live green component. All commercial thinning was removed in Alternative JF.

A. Overview

The planning model consists of information and various analytic techniques combined to address planning questions and issues. The major analytic model is called FORPLAN.

FORPLAN is a computer program which provides the tools needed to construct and use large scale linear programing computer models. These models are designed to analyze thousands of possible management activities, practices, and resource outputs on specific land areas in order to select an optimal set capable of meeting various management constraints and goals (objective functions). For simplicity, these models will be referred to as 'FORPLAN' in this Appendix.

The specific land areas, analysis areas, were delineated by characteristics which have a fairly uniform response to management activities, costs, and benefits. Management activities and practices were assigned to analysis areas based on their suitability (see Part C of this section). Specific combinations of activities and outputs were assigned to analysis areas to represent various multiple use prescriptions called management prescriptions. Each of the 389 analysis areas has from 1 to 13 management prescriptions assigned to it. Resource outputs or production coefficients were developed for each combination of analysis area and management prescription. FORPLAN assigns those management prescriptions to analysis areas which produce the goods and services that maximize the objective function, after meeting all constraints. The objective function is said to be optimized when its value is as large as possible after all constraints are satisfied.

Alternatives are generated by constraining management prescriptions available to analysis areas, constraining the access to analysis areas for timber harvest in a particular decade, or constraining the outputs from analysis areas or groups of analysis areas. These constraints were designed to achieve the goals of an alternative. The conditions set by the constraints must be satisfied before the objective function is optimized. The analysis of the benchmarks and alternatives utilized the same objective function, to maximize present net value (See Section IV). In other words, after meeting all constraints the FORPLAN model assigned the remaining opportunities to produce the most economic value.

B. Analysis Process and Analytical Tools

Analyses leading up to the use of FORPLAN included designing management prescriptions (Planning Record: Management Prescriptions,Jan.27,1981), assigning practices to prescriptions (Planning Record: Management Area Prescriptions file), developing management costs and benefits (Miller, 1982),methods for determining practices (Planning Record: Management Prescriptions,Jan.27,1981) and predicting resource outputs (Planning Record: Criteria For the Analysis Of The Management Situation,Vol.4,Feb.,1981). Outputs predicted include timber yield, elk population, range forage, water yield, sediment, grizzly population, recreation potential, clearcut equivalents, road closures, visual quality objective and road construction and reconstruction. Certain outputs are calculated by the FORPLAN model and others are calculated using other models.

Cost efficiency was considered by the interdisciplinary team while they were developing a realistic and flexible set of management prescriptions. Professional judgment played a major role. FORPLAN was used to examine the comparative cost efficiencies of prescriptions. This is discussed further in section II.D.4., below.

Practices which required analysis included road closures, road construction, road density, and timber management guidelines for reforestation, silvicultural systems, logging method and rotation age. The growth prognosis model was used to develop existing and regenerated managed and unmanaged timber yield tables (Wykoff et al, 1981).

Major decisions that resulted from the preliminary analysis include the following that apply to all prescriptions:

1. all roads will be built and maintained to Forest-wide standards and guidelines. Variations occur by land types. Local road costs range from $27,500 to $84,000/mile depending on slope and soil stability (ELU group). (recent real cost reductions in road construction are discussed in Section VI.D.6.g. of this Appendix)

2. Timber sales are planned and administered to Forest-wide standards and guidelines, including coordination with cultural, visual, wildlife, soil, and water resources. This is to ensure meeting prescription objectives, including minimum management requirements.

3. Timber slash disposal and reforestation activities will take place in all timber harvest prescriptions.

4. Access controls to protect and/or enhance wildlife and recreation values were also included.

FORPLAN was utilized to provide the basis for optimal land designation and management prescription selection and scheduling for each analysis area. This process results in selection of the most cost-efficient management prescriptions and land designations that meet a given set of constraints and an objective function of maximizing present net value.

A social impact assessment and the identification of baseline socio-economic conditions were developed for the local area. Developed and dispersed recreation (including wilderness, big game and elk hunting, semi-primitive non-motorized recreation, semi-primitive motorized recreation, roaded recreation and primitive recreation) benefits and costs, were analyzed outside of FORPLAN. Budgets for recreation and wildlife programs, part of the range budget and "other" costs were also developed and analyzed. Receipts from mineral leases and special use permits were also projected outside FORPLAN.

C. Identification of Analysis Areas

Analysis Areas are the means used to tie multiple-use management prescriptions to the land. An analysis area is one or more capability areas grouped for purposes of analysis. They are grouped together on the basis of common physical, biological and economic characteristics. Analysis area delineation plays an integral role in resolving issues, management concerns, and identifying opportunities. Each analysis area was assigned one or more multiple use management prescriptions which were examined in the FORPLAN model. The combinations most effective in meeting the goals of each alternative were then selected by the FORPLAN model (Planning Record: Analysis Areas file).

The following general criteria were used during the development of Analysis Areas:

1. Analysis areas need not be contiguous. This means that one analysis area may be located at various places all across the Forest.

2. Analysis areas will be the same for all alternatives. This is essential in order for comparisons to be made among the alternatives. It provides a common base for the analyses.

3. The number of Analysis Areas will be kept at a practical level so that the FORPLAN models can function properly. As in any mathematical system calculations take time. If an unduly large number of Analysis Areas were used, the number of calculations and the time involved to perform them would exceed available computing resources.

The process used to identify analysis areas began with the determination of which items were needed to examine the issues and concerns and to identify critical effects. Several iterations were used to arrive at the final set of analysis areas. The final number of analysis areas is 389. The stratification is based on the following characteristics:

1. Wilderness, inventoried roadless area or some special status.
2. Interagency Grizzly Management Situations and major ecosystem
3. Working Group (timber).
4. Ecological Land Unit Group
5. Age class of the timber.

The following are the specific criteria used to aggregate capability areas into analysis areas according to the five listed characteristics.

1. **Level 1 Criteria - Wilderness, inventoried roadless area or Some Other Special Status**

This category includes the following areas:

a. Existing wilderness - Cabinet Mountains.
b. All water bodies
c. Ten Lakes Wilderness Study Area (S393) Roadless area 683.
d. Scotchman Peaks Roadless area (662)
e. Trout Creek roadless area (664)
f. Cabinet Face West roadless area (670)
g. Cabinet Face East roadless area (671)
h. Government Mountain roadless area (673)
i. McKay roadless area (676)
j. Chippewa roadless area (682)
k. Rock Creek roadless area (693)
l. Roderick roadless area (684)
m. Galena roadless area (677)
n. Cataract roadless area (665)
o. Buckhorn roadless area (661)
p. N.W. Peaks roadless area (663)
q. North Fork of Elk Creek roadless area (692)
r. Gold Hill roadless area (668)
s. Gold Hill West roadless area (176)
t. Berray Mountain roadless area (672)
u. East Fork of Elk Creek roadless area (678)
v. Lone Cliff-Smeads roadless area (674)
w. McNeeley roadless area (675)
x. Flagstaff roadless area (690)
y. Roberts Mountain roadless area (691)
z. Grizzly Peak roadless area (667)
aa. Zulu roadless area (166)
bb. Marston roadless area (172)
cc. Willard Lake-Estelle roadless area (173)
dd. Cube-Iron roadless area (784)
ee. Thompson-Seton roadless area (483)
ff. Administrative Sites
gg. Developed Recreation Sites
hh. General Forest lands

Existing wilderness is split out because designation changes are not allowed. The inventoried roadless areas and the congressionally designated wilderness study areas are kept separate for analysis purposes.

2. **Level 2 Criteria - Unused**

3. Level 3 Criteria - Grizzly Management Situation and Major Ecosystem

As an endangered species the grizzly bear requires special consideration (Rare and Endangered Species Act of 1973). This analysis area identifier level is used to subdivide the forest into the Cabinet/Yaak ecosystem and the Northern Continental ecosystem because they represent relatively independent populations of grizzly bear. These two ecosystems are further divided into Grizzly Management Situations which were based upon those developed for the Yellowstone area and modified for use on the Kootenai National Forest (Brooks, 1984). These guidelines involve differing management requirements to satisfy the requirements of the Act.

a. Cabinet/Yaak Ecosystem - Grizzly situation 1
b. Cabinet/Yaak Ecosystem - Grizzly situation 2
c. Cabinet/Yaak Ecosystem - Grizzly situation 3
d. Northern Continental Ecosystem - Grizzly situation 1
e. Northern Continental Ecosystem - Grizzly situation 2
f. Northern Continental Ecosystem - Grizzly situation 3
g. non-grizzly habitat

4. Level 4 Criteria - Working Group

Each analysis area is identified by a working group. These working groups are used to specify the type of timber that can be produced on the analysis area and the relative productivity of the land:

a. Mixed Conifer - High Productivity
b. Mixed Conifer - Low Productivity
c. Lodgepole Pine
d. Non-forest Land
e. reserved (Water, Cabinet Mountains Wilderness, Administrative Sites and Developed recreation sites)

5. Level 5 Criteria - Ecological Land Unit Group

Each analysis area is defined by an ecological land unit group. These groups are generally defined by the physical characteristics of the soil and geology. They strongly relate to slope and are indicative of costs of management including road costs.

a. Erosional - generally moderately steep slopes 41-60% slope
b. Depositonal - generally flat or sloping valley bottoms 0-40% slope
c. Breaklands - steep, often rocky slopes over 60% slope

6. Level 6 Criteria - Condition Class

This criteria was used to identify existing timber conditions on the Forest. This information is used to predict response coefficients for timber, cover/forage relationships, old growth, grazing, and management costs. It is also responsive to the timber, wildlife and grazing issues. The condition classes used are:

a.	NONSTK	Nonstocked
b.	SEESAP	Seedlings and saplings
c.	POLIMS	Poles and immature sawtimber
d.	MATSAW	Mature sawtimber
e.	STAGLP	Stagnated lodgepole pine

7. Analysis Areas and Timber Suitability

Table B-2 summarizes how the analysis areas are classified according to timber productivity. Differences between the following table and Table B-1 are a result of rounding and the separation of the Cabinet Mountains Wilderness into a separate Analysis Area. All lands listed below as productive are considered to be tentatively suitable except for about 18,000 acres of productive land in the Ten Lakes Wilderness Study Area which has been withdrawn by Congress, 3,000 acres of developed and administrative sites withdrawn by the Chief of the Forest Service and 49,000 acres which could never be managed for timber within the 200 year time horizon of the FORPLAN model without violating some minimum management requirement.

Table B-2

Number of Analysis Areas and Acres by Timber Productivity Class

	Analysis Areas	Thousand Acres
Productive Land (except Cab)	321	1,860
Non-Productive Area (except Cab)	67	292
Cabinet Mountain Wilderness	1	94
Total	389	2,246

The following special areas were included in the suitable and unsuitable timberlands; however, the acreage of each, by analysis area, has been determined to facilitate adjustments in analysis area acreage and the distribution of outputs:

Ten Lakes Montana Wilderness Study Area
Research Natural Areas
Developed Recreation Sites
Administrative Sites

D. 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 used to develop and/or protect some combination of resources on a particular land type.

2. Design of Management Prescriptions

The interdisciplinary team reviewed the public issues and management concerns, used professional judgment, consulted existing policy and legislative direction and research for guidance in developing twenty-nine cost efficient, multiple-use management prescriptions which were eventually narrowed to twenty-two as displayed in the Forest Plan document. This set of management prescriptions portrays a broad range of management emphasis, intensities, practices, standards and guidelines. The management standards and guidelines needed to accomplish the goals of a prescription include the necessary mitigation and resource coordination measures that are required by existing laws, policies and regulations. The management standards and guidelines are contained in the Forest Plan, and are also available in the Forest Planning Records. Management practices, standards and guidelines were then developed and assigned to each goal statement by 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 prescriptions were designed to:
- Project the current program to evaluate implications
- Explore resource potentials
- Explore opportunities to improve efficiency
- Explore opportunities to resolve issues and concerns
- Explore opportunities to meet national goals (RPA)

Prescriptions were also created to help explore the cost efficiency of alternatives.

Development of management prescriptions began with the "Consolidated Unit Plans", broad categories of resource emphasis (e.g., timber, wildlife, recreation and wilderness) further broken down by differences within each broad category (e.g. big game winter range, big game winter range/timber, grizzly, grizzly/timber).

During the week of September 15 - 19, 1980, the ID team wrote management prescriptions to describe the current situation, using the unit plans as a basis.

The following guidelines and criteria were used to develop the management prescriptions for the current situation:

a. prescriptions will be used to describe as closely as possible what is actually happening now, not what we might wish were happening. This implies both an emphasis and an intensity or level of expenditure. Note that this is constrained a bit due to the need for generalization.

b. in some cases the Unit Plans are silent as to an activity which we know is occurring under some guidelines (e.g. off road vehicle management). These should be stated in the prescription only if they are not mandated elsewhere. When doubt existed, the guidance was included in the prescription.

c. specialists were thinking "what operating standards are necessary to meet laws and regulations and the intent of the management emphasis" and "which of these standards are we currently using?" In addition, specialists were acutely aware of interactions with other specialties.

d. the specialists know what level of detail is necessary to be reasonably sure that the results that are achieved are the desired results. The intent is to delineate the range of activities that can occur while attaining the desired outputs without squelching creative or innovative approaches developed later.

The set of evaluation criteria used in developing the management prescriptions were as follows:

A management prescription must:

a. provide enough information so it is possible to identify the unique features within a prescription that distinguish it from all other prescriptions. This makes the development of FORPLAN coefficients more concise and less redundant.

b. be applicable in a practical manner to the situation where it is to be applied. Don't, for example, develop a prescription for primitive recreation on fully developed timber areas.

c. be a reasonably accurate description of the existing situation.

d. supply sufficient information so that all the analysis areas to which the prescription may be applied can be identified.

e. allow for alternative intensities of management while aiming toward the same goal.

f. provide sufficient guidance so that, when managers are operating within the standards and guidelines, the goal of the prescription will be consistently approached.

The sum of all the prescriptions must:

allow full consideration in FORPLAN of a wide range of options, for any particular area.

A management prescription should:

a. supply sufficient information so that realistic assumptions about the results of the prescription can be made by specialists when analyzing the effects of an alternative Forest Plan.

b. not restate requirements of law or regulations.

c. not be oriented toward specific projects.

d. be realistically achievable.

e. be sufficiently descriptive so that the public and Forest Service have a common understanding of what will be occurring on any area managed under the prescription.

f. allow sufficient latitude to land managers to use innovative approaches to achieve the goals of the prescriptions.

g. not restate general guidance.

h. not force a practice to occur on a portion of an analysis area where it is not applicable.

The current situation prescriptions were completed and distributed for internal review on September 24, 1980. During the week of October 13-17, 1980, the ID team met to develop an updated set of prescriptions that could be applied to the development of alternatives other than the current situation. The same criteria were used except that the intent was to develop prescriptions with different intensities or emphases as needed to describe other situations which could occur. This second set of prescriptions were distributed for internal review on October 26, 1980. The ID team met again on November 20, 1980 to revise the prescriptions based upon input derived from the internal review. Since 1980, various minor revisions have been made to the prescriptions with the consent of the ID team.

Forest-wide standards and guidelines were developed to cover practices which are common to all prescriptions which apply the practice. The major Forest-wide standards and guidelines are related to road construction, recovery of the grizzly population and protection of soil and water.

Some of the prescriptions emphasize (within a multiple-use context) a specific resource such as the timber, wildlife, range, riparian, and visual prescriptions. Originally intensities of management were allowed to vary within prescriptions increasing the range of choices available to the FORPLAN model. The series of FORPLAN analyses which were developed for the EIS released in 1982 demonstrated that these intensities had little affect upon the results produced by the model. For this reason alternative intensities within a given prescription were not applied in the analyses described in this document. Other prescriptions serve a single purpose such as the administrative site prescription. Cost efficiency was considered by the team during the development of these prescriptions. A variety of research was used in the development of the prescriptions. This research is documented in the references listed in Section II-B and in the reference list at the end of this Appendix.

Completed prescriptions were reviewed, discussed and revised as necessary by the management team, the interdisciplinary team and the core team. From the basic set of prescriptions appropriate yield and cost tables were developed for use in FORPLAN. These prescriptions were used for the development of both benchmarks and alternatives, after additional screening, to ensure that they were cost efficient. Alternatives having similar outputs for some resources may differ widely in how the land is designated (assigned) to various prescriptions. These differences are apparent when comparing the alternative maps. The review criteria used by the management team included:

> "Determine if all applicable practices have been included that are necessary to accomplish the prescription goal statement."
>
> "Test the standards and guidelines for accuracy and completeness."
>
> "If a piece of ground is allocated to this prescription, are these the things we would do to efficiently emphasize this resource?"

3. Purpose, Criteria, and Assumptions for Prescription Categories

The purposes of specific prescriptions are to portray a management activity presently being practiced on the Forest, to respond to a particular issue or group of issues, and to provide a range of management options that could be applied to various land areas.

Comparative outputs between prescriptions were also examined. This information is useful in the explanation of trade-offs that occur when numerous prescriptions interact within individual alternatives. Forest planning records contain detailed information.

The prescriptions used in FORPLAN can be grouped into general categories by major resource element or application. The categories are timber, wildlife, recreation, visual and special.

a. Timber and Visual Category

(1) Purpose

This set of prescriptions was developed to provide an option for timber management on every acre of tentatively suitable timberland. In addition a range of silvicultural techniques is used to explore the desirability of providing various levels of scenic beauty while trading off outputs from other resources.

(2) Criteria and Assumptions

Provide an option for maximum production of timber using a range of economical and viable logging systems and silvicultural techniques.

Recognize and provide for other resource uses compatible with timber harvest production at full yields.

Develop standards, guidelines and costs using commonly accepted management practices currently in use.

Use the basic concepts of the Forest Service visual management system in concert with available silvicultural techniques to provide a range of visual quality objective options.

b. Wildlife Category

(1) Purpose

This category of prescriptions was developed to address the issues of big game management, grizzly bear recovery and the retention of viable populations of all vertebrate species distributed across the Forest.

(2) Criteria and Assumptions

Design the prescriptions for use in high and regular elk summer range habitat and important winter range.

Provide for other uses which are compatible with or complimentary to management for big game habitat.

Provide for recovery of the grizzly bear population.

Provide a diversity of habitats and habitat components to insure survival of all native vertebrate species.

Design standards, guidelines, and costs using commonly accepted management practices currently in use.

c. Recreation Category

(1) Purpose

This set of prescriptions was developed to address the issues surrounding the various sorts of recreation experiences including the potential for the Kootenai National Forest to supply varying amounts of wilderness recreation.

(2) Criteria and Assumptions

Design the prescriptions for roadless recreation so that they can be applied to areas that are currently essentially roadless.

Each inventoried roadless area has an option to remain in a roadless condition to support non-motorized recreation. Non-commercial analysis areas and portions of partly roaded analysis areas may be assigned the non-motorized recreation prescription if suitability for that sort of recreation exists.

In accordance with the Regional Guide, developed recreation will be retained on the acres currently assigned that use.

Assign prescriptions for the various kinds of recreation experiences only on areas where appropriate suitabilities exist.

Develop standards, guidelines and costs using commonly accepted management practices currently in use.

d. Special Area Category

(1) Purpose

This category includes those prescriptions designed to model special situations which exist across the Forest.

(2) Criteria and Assumption

Where existing uses are in effect, and no change in management is contemplated, pattern the management after the current approved direction.

Develop standards, guidelines and costs using commonly accepted management practices currently in use.

e. Custodial Category

(1) Purpose

These prescriptions were developed for application to nonforest lands and lands not suitable for timber production due to unstable soils, regeneration problems or low productivity. Included in this category is the Minimum Management prescription involving maintenance of productivity but deference of timber harvest activities beyond the 200 year horizon.

(2) Criteria and Assumptions

Provide for a mix of uses compatible with adjacent areas, excluding timber management, which preserves management options for an extended period.

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. Additional detail on the analyses of prescriptions and their use in FORPLAN is provided in "Established Market prices vs assigned Monetary Values in FORPLAN" (Haugen, 1984) and "The Effects of Updated Economics on the Suitable Timber Land Base and a Comparison of the Final Forest Plan to Suitabilities When PNV is Maximized" (Haugen, 1986). Both documents are in the Forest Planning records. The second document is summarized in section VI.D.6.g. of this Appendix. FORPLAN Objective Function diagnoses 9 and 10 provide an analysis of the costs and benefits of the various management prescriptions assigned to an analysis area. We also used a computer program called XMAS to examine the PNV of every possible managment prescription for each category of land and for each possible decade of implementation. For more on this subject refer to section II.A.4 of this Appendix. 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.

5. List of Prescriptions

Following are the prescriptions used in FORPLAN. Additional details are available in the Forest Plan and among the Planning Records.

TIMBER AND VIEWING CATEGORY:

TMBOPT - Timber Optimization (MA-15)
Manage timber for a high level of production using primarily a clearcut harvest type and precommercial thinning along with two commercial thins on the most productive lands and one commercial thin elsewhere.

TMVIEW - Timber/Viewing (MA 16)
Manage timber for fairly high levels of production while maintaining a modification Visual Quality Objective (VQO) through the use of about 50% shelterwood cuts along with thinning as described for TMBOPT.

VIEWTM - Viewing/Timber (MA 17)
Manage for a partial retention VQO while producing a moderate level of timber. Use shelterwood cuts 75% of the time (modeled as 100%) and precommercial thins along with a single commercial thin.

VEWING - Viewing (MA 5)
Manage to maintain or enhance the landscape to provide a retention VQO without scheduled timber harvest.

WILDLIFE CATEGORY:

BGWRGE - Big Game Winter Range (MA 10)
Maintain or enhance the habitat for winter use by big game species without scheduled timber harvest.

BGWRTM - Big Game Winter Range/Timber (MA 11)
Maintain or enhance the habitat for winter use by big game species by means of cover/forage ratio manipulation accomplished through programmed timber harvest using clearcuts.

BGSRTM - Big Game Summer Range/Timber (MA 12)
Maintain or enhance non-winter habitat for big game species while producing a programmed flow of timber using 20% shelterwoods and 80% clearcuts (modeled as 100% clearcuts to keep the size of the model within reasonable limits) and no thinning.

GRIZTM - Grizzly/Timber (MA 14)
Maintain or enhance grizzly bear habitat, reduce grizzly/human conflicts and assist in the recovery of the grizzly bear population while producing a programmed flow of timber using silvicultural techniques as described for BGSRTM.

WLDTIM - Wildlife/Timber (MA 13)
Provide the special habitat necessary for old growth dependent species by using 20% shelterwood and 80% clearcut (modeled as 100% clearcut to keep the size of the model within reasonable limits) harvests and thinning, on the most productive sites, with a rotation extended beyond 240 years. In much of the analysis used to develop Alternative JF, all timber harvest options were removed from this prescription (see sections VI.C.3. and VI.D.6 of this Appendix).

RECREATION CATEGORY:

WILDER - Wilderness (MA 7)
Manage to allow natural processes to continue without interference by humanity.

PWLDER - Proposed Wilderness (MA 8)
Manage to retain wilderness characteristics and values pending action by Congress.

WLDSTD - Wilderness Study (MA 9)
Ten Lakes Montana Wilderness Study Act area managed to retain wilderness characteristics pending a recommendation by the Forest Service and action by Congress.

PRIMRC - Primitive Recreation (MA 29)
Manage to maintain a natural condition free from the evidence of humanity with maintenance an enhancement of wildlife habit.

SPNMRC - Semi-Primitive Non-Motorized Recreation (MA 2)
Manage to provide for the protection and enhancement of roadless recreation use in concert with wildlife without programmed timber harvest.

SPMREC - Semi-Primitive Motorized Recreation (MA 3)
Manage to provide opportunities for dispersed recreation activities in a naturally appearing setting using trails and primitive roads for motorized access. No programmed timber harvest.

DEVREC - Developed Recreation (MA 6)
Manage to provide safe and sanitary developed recreation in a setting that is pleasant and visually attractive.

SPECNT - Special Interest (MA 21)
Manage to preserve and protect the qualities from which a special interest is derived while providing access and interpretation to users.

SPECIAL CATEGORY:

ADMSIT - Administrative Sites (MA 20)
Maintain sites for the administration of the Forest in a safe and efficient manner.

LNDEXG - Land Exchange (MA 27)
Manage to retain the basic land value for possible exchange.

WATERS - Water Bodies (MA 28)
Manage to provide water based recreation experiences.

CORDOR - Corridors (MA 23)
Provide for the safe and efficient transmission of electricity while protecting the character of adjacent land designations.

CUSTODIAL CATEGORY:

MINREG - Minimum Use Due To Regeneration Problems (MA 18)
Maintain existing vegetation until techniques are available to insure that timber can be harvested and regenerated within five years then reevaluate the designation.

MINSLO - Minimum Use Due To Unstable Slopes (MA 19)
Insure soil stability and water quality by maintaining the vegetation in a healthy condition and by minimizing surface disturbance.

MINYUK - Minimum Use Due To No Suitability For Use (MA 24)
Insure soil stability and water quality by minimizing soil disturbance.

6. References

Management prescription practices, standards, and guidelines are documented in Planning Record: Management Prescriptions, January 27, 1981. The prescription intensity details are documented in the same Planning Record. Table B-3 compares the prescriptions to the standards and guidelines. See the list of references at the end of this Appendix for more items.

TABLE B-3
Comparison of Prescriptions to Standards and Guidelines

MANAGEMENT PRE-SCRIPTION	Road Density Mi/SqMi	Regulated Harvests	Reforest in 5 years	Rotation Period Years	Opening Size Acres	VQO	ROS Class	Road Sedmnt Mtgate Percent
TMBOPT	1.1-5.8	YES	YES	80-130+	<40	MM	Rural	25-75
TMVIEW	1.1-5.8	YES	YES	80-130+	<40	M	RNA	25-75
VIEWTM	1.1-5.8	YES	YES	80-140+	<40	PR	RNA	25-75
VEWING	NA	NO	NA	NA	NA	R	RNA	NA
BGWRGE	NA	NO	NA	NA	NA	vary	RNA	NA
BGWRTM	1.1-5.8	YES	YES	70-130+	<40	vary	RNA	25-75
BGSRTM	1.1-5.8	YES	YES	80-140+	<40	vary	RNA	25-75
GRIZTM	1.1-5.8	YES	YES	80-140+	<40	vary	RNA	25-75
WLDTIM	1.1-5.8	YES	YES	240-260+	<40	vary	RNA	25-75
WLDTIM**	NA	NO	NA	NA	NA	vary	RNA	NA
WILDER	NA	NO	NA	NA	NA	P	Prim	NA
PWLDER	NA	NO	NA	NA	NA	P	Prim	NA
WLDSTD	NA	NO	NA	NA	NA	P	Prim	NA
PRIMRC	NA	NO	NA	NA	NA	R	Prim	NA
SPNMRC	NA	NO	NA	NA	NA	R	SPNM	NA
SPMREC	NA	NO	NA	NA	NA	R-M	SPM	50-60
DEVREC	NA	NO	NA	NA	NA	R	RNA	75
SPECNT	NA	NO	NA	NA	NA	R	RNA	75
ADMSIT	NA	NO	NA	NA	NA	R	RNA	75
LNDEXG	NA	NO	NA	NA	NA	vary	RNA	25-75
WATERS	NA	NA	NA	NA	NA	NA	NA	NA
CORDOR	NA	NA	NA	NA	NA	MM	Rural	70
MINREG	NA	NO	NA	NA	NA	vary	RNA	25-75
MINSLO	NA	NO	NA	NA	NA	vary	RNA	25-75
MINYUK	NA	NO	NA	NA	NA	vary	RNA	25-75

* Road sediment mitigation percent varies because variable miles of road are closed

** Indicates the WLDTIM prescription with no timber harvest as used in development of Alternative JF.

E. Development of Timber Harvest Intensities

Timber management regimes were developed for the various management prescriptions by considering the types of silvicultural practices that are feasible and sound for each working group for each condition class. The growth prognosis model (Wykoff and others, 1981) was utilized to predict timber yield for various silvicultural systems and intensities within each combination of working group and condition class. Several reviewers of the DEIS commented on the timber yield tables. As a result, the tables were carefully reviewed and determined to be reasonable. For more details on this analysis, refer to letter #301 in Appendix E. Costs and benefits were developed for practices and outputs associated with each regime.

Yield tables for each combination of working group (productivity class) and condition class (age) were developed for the following regimes:

No management

Precommercial thinning at age 20 to 30

Precommercial thinning at age 20 to 30 with commercial thinning at age 70 to 80

Precommercial thinning at age 20 to 30 with commercial thinning at age 40 to 50 and again at age 70 to 80. This is only used on highly productive sites (MIXCON I) under intensive management in Management Area 17 and 18 and under moderate intensities in Management Area 15 (TMBOPT prescription). The FORPLAN diagnoses used in the analysis described here did not use the intensive level of management on Management Areas 17 and 18 as discussed earlier.

Regeneration harvest ages were established for combinations of working group and condition classes depending upon the management prescription involved. As an example the timber yield tables assigned to management area 17 were based upon shelterwood harvest at a rotation of 110 to 140 years.

The next step was to analyze these practices and regimes both from a timber yield and economic standpoint to see if there were opportunities to eliminate intensities which didn't contribute to an adequate range. The details of this process are documented in: Criteria for the Analysis of the Management Situation, Volume 4, Coefficients, February 1981.

The assignment of silvicultural regimes to analysis areas varies by working group and management prescription. Shelterwood cutting was used in FORPLAN only with management prescriptions with a viewing emphasis. The use of two commercial thins was originally permitted on highly productive sites where regeneration difficulties were expected or viewing was intensively emphasized. Experience with modeling two commercial thins in these areas showed that they were not cost effective and generally impractical thus this regime is not used in the current set of diagnoses except under the TMBOPT prescription.

Rotation ages were expanded to reflect the requirements of each management prescription. For example, the wildlife timber prescription as used in the development of most of the alternatives requires a rotation of about 240 to 260 years; therefore, the harvest entry periods in FORPLAN must allow trees to grow to this age. In order to meet certain minimum management requirements, it was also necessary to allow harvest beyond the rotations noted in the above table which, in turn, allowed more flexibility to schedule harvest.

Detailed analysis of assignment logic is found in Planning Record: Management Prescriptions, January 27, 1981.

F. Development of Yield Tables and Coefficients

1. Overview

This section describes how the yields for each resource, road construction and sediment production were developed. Some yields were developed for analysis in FORPLAN and some were analyzed outside of FORPLAN.

2. Timber

Yield tables for existing and regenerated analysis areas were developed from 1972-78 timber inventory data using the growth prognosis model (Wykoff and others, 1981). The timber inventory data was updated to 1980 prior to the growth projections. The growth prognosis model was modified to reflect Forest stocking capacities and to provide yields based on the utilization standards projected in the Regional Guide. Several reviewers of the DEIS commented on the timber yield tables. As a result, the tables were carefully reviewed and determined to be reasonable. For more details on this analysis, refer to letter #301 in Appendix E. The Regional Guide identifies the preferred utilization standard as 6 inch d.b.h. for lodgepole pine and 7 inch d.b.h. for all other species.

The results of individual stand projections were summarized by working group and condition class using a program developed by Northern Region personnel. Each stand in a group was weighed by a factor based on the sampling procedure used in the timber inventory. The process resulted in yield tables based on more than one stand. These yield tables were adjusted by form and defect factors developed by destructive sampling in the timber inventory. Both cubic foot and board foot tables were developed. See Planning Record: Criteria for the Analysis of the Management Situation, Volume 4, Coefficients, February 1981, for a detailed description of the timber yield table construction.

Timber yields vary by condition class, working group, silvicultural system, and time. First decade (1988) existing stand board foot/cubic foot volumes and regenerated yields at age 140 are shown in Table B-4.

Table B-4
First Decade Timber Yield
(MBF/MCF per Acre)

Condition Class	Productivity Class MIXCON I	MIXCON II	LPP
Existing timber			
High Risk Sawtimber (LPP)	NA	NA	12.57/3.93
Mature Sawtimber	21.60/4.32	12.77/2.78	NA
Poles and Immature Sawtimber (combined with LPP mature)	9.73/2.78	8.12/2.46	5.69/1.90
Existing seed/sap regen regen at 140 yrs	25.76/5.60	26.14/5.68	23.18/5.39

Shelterwood seed cut removal volumes range from 60 to 75 percent of the above volumes depending on working group and prescription.

3. Recreation

Recreation visitor day capacities by management emphasis are in FORPLAN. These capacity estimates were adjusted with updated RVD per acre values as documented in Planning Record: Haugen, 1984. Demand for the various sorts of recreation is based upon area population growth projections and historic use levels. Demand was developed outside of FORPLAN. Projections of demand are independent of the capacity supplied by the Forest. The demand projections are documented in Planning Record: Haugen, 1984b.

As a result of comments received on the DEIS (#305), a different demand projection was developed based upon Montana population trends and non-resident visitor projections. A model as described in the 1983 Montana Statewide Comprehensive Outdoor Recreation Plan (SCORP) was tested. This model projected use levels 2% higher in the second decade and 4% higher by the fifth decade than the projections used in developing the DEIS. The original demand projections were retained in the FEIS for two reasons: (1) a difference of 2% to 4% is minor considering a projection of this sort, and (2) the SCORP model is based upon a 3% per year increase in non-resident use projected for the Flathead Valley (Glacier National Park), an area which has a greater diversity of recreational opportunity and is thus likely to experience a larger increase in non-resident use than the Kootenai National Forest. More details are provided in "Development of a Response to State of Montana Comments on the Kootenai National Forest Plan and DEIS - Recreation Use Projections" (Haugen, 1986), in the Planning Records.

Elk hunter recreation estimates were based upon herd populations, a 15% harvest and hunter success ratios. The 1978 Montana Statewide Comprehensive Outdoor Recreation Plan (SCORP) estimates that forty percent of total big game hunting RVD's are associated with elk. The other big game hunting RVD's are therefore estimated at 1.5 times the elk hunter RVD's.

4. Elk

Elk outputs are determined from habitat potential as modified by management emphasis. Actual elk numbers are based on the acres of habitat available and the effectiveness of that habitat to supply the needs of elk as measured by the "Western Montana Elk Habitat Timber Relations Guidelines". The Kootenai FORPLAN model calculates the potential elk capacity based upon the types of activities which occur in individual management areas over the long run. This number is adjusted outside the model to account for the actual amount of timber harvest in MA 12 and MA 14 in each decade. (Planning Records include more discussion on elk habitat requirements).

5. Range

The forage production estimated within FORPLAN is based upon the following assumptions:

1. All livestock range on the Kootenai National Forest is transitory in nature and is classified as commercial forest land
2. Guidelines governing proper use of forage plants are followed
3. Suitable forage production varies by habitat type group, slope, average forage value and timber cutting practices

The Forest was broken into four habitat type groups as follows:

Douglas-fir I (dry sites)
- Habitat types: 130, 160, 140, 210, 350, 320, 340, 230
- Total Acres: 226,372

Douglas-fir II (wetter sites)
- Habitat types: 250, 260, 270, 280, 290, 420, 450
- Total Acres: 298,294

Grand Fir
- Habitat types: 520
- Total Acres: 149,617

Subalpine Fir (low)
- Habitat types: 620,670, 730, 740
- Total Acres: 558,096

Production tables in pounds of forage production by habitat type group and cutting practice were developed. These values were converted to AUM's and adjusted for 50% proper use (FSM 2210). In addition a slope factor was used to reduce the useful AUM's on steeper slopes. The reduction was 30% on slopes from 20 to 40 %, 90% on slopes between 40 and 60%, and 100% on slopes over 60%.

For details on the process used, refer to Forest Planning Record: Dillon, 1980.

Demand for AUM's has been relatively constant on the Forest at about 13,000 AUM's per year. This is primarily related to problems of winter weather and costs of using the sort of transitory range available on the Forest. It is assumed that this demand will remain constant so only AUM outputs up to this level are valued and reported. FORPLAN outputs were adjusted accordingly.

6. Water Yield

Impacts from timber harvesting and road construction on Forestwide water yield were estimated using the Equivalent Clearcut Area (ECA) concept (USDA, 1975). This concept was developed from field observations, research and data from the Northern Rockies on streamflow responses to Forest management activities. The analysis produced reasonable indications of water yield trends, relative differences between alternative actions, and approximate, quantified, expected outputs for water yield.

To perform the water yield computations, acres of timber harvest by silvicultural treatment from FORPLAN were obtained by decade. The existing, baseline, and outputs by alternative were determined by a computerized version of Forest Hydrology, Part II: Hydrologic Effects of Vegetation Manipulation (USDA, 1975) that estimated the water yield situations for all third to fifth order watersheds on the Forest.

Even though water yield was not a public issue or management concern, a minimum management requirement in the form of a scheduled output constraint on clear cut equivalents was used in FORPLAN to model the legal considerations for the hydrologic integrity of stream channels.

7. Roads

The FORPLAN road output is millions of feet of local road construction and local road reconstruction per decade during the planning period. Roads are modeled as built during the first entry of the existing stand. Since FORPLAN can only calculate those roads built within any particular cutting unit and not those roads necessary to get to the unit, the FORPLAN output was adjusted outside the model. The total length of roads constructed over the planning horizon was converted to miles and used as calculated. The construction schedule was adjusted based upon observed trends of the miles of road work (construction and reconstruction) per MMBF of harvest. The ratio of construction to reconstruction was initially determined from FORPLAN and gradually decreased to conform to observed trends. The result is a schedule of road construction which builds all needed local roads within a two to three decade period and a schedule of continuing reconstruction.

The miles of road needed per acre within each analysis area varies by ELU group which is indicative of logging system (tractor, mixed or aerial) and the miles of road which currently exist within each analysis area. Reconstruction miles needed per acre vary by the existing miles of road and the miles of road yet to be built.

Roads are reconstructed periodically in the model using a scheduled output for reconstruction of roads in existence prior to decade one and another output for reconstruction of roads that are built later. These outputs were summed and adjusted outside FORPLAN to account for the same situation as was described above for road construction.

The costs vary by ELU group and were adjusted outside FORPLAN to properly account for the revised construction and reconstruction schedules.

8. Sediment

The sediment yield production procedure used on the Kootenai National Forest was developed by a work group composed of soil scientists, hydrologists, and watershed specialists of the Northern Region, Intermountain Region, and the Intermountain Forest and Range Experiment Station. The procedure is applicable to the Northern and Intermountain Region's forested watersheds. Entitled "Guidelines for Predicting Sediment Yields," draft 1980, the procedure was developed principally for watersheds in or generally associated with the Idaho Batholith, but was modified for use on the Kootenai.

The model is applied on watersheds that are stratified using land systems inventory map units. For individual land types or groups of land types, the model produces quantified estimates of sediment yields prior to any management (natural sediment yield) and sediment yields in response to four management activities for any number of years. The types of management activities modeled on the Kootenai were roading, logging, fire, and crawler tractor site preparation. The model, as designed, estimates on site erosion for a given management activity, modifies the amount of erosion according to general land unit characteristics, and delivers the eroded material to the stream system. The model has the additional capacity to route the sediment through the watershed to a critical stream reach where interpretations are made and where monitoring for achievement of planning objectives should take place.

The model simplifies, for analysis, an extremely complex physical system and is developed from a limited data base and scientific knowledge pool. Although it provides specific quantitative values for sediment yield, the results should be treated as rather broad estimates of how real systems may respond. The validity of this model is best when the results are used to compare alternatives, not for predicting specific quantities of sediment yields.

9. Fisheries

Fish yields are calculated in smolts, resident fish and their sum outside of the FORPLAN model. Primary input to the fish yield model comes in the form of sediment production by subdrainage from the sediment yield model described above. This model has the same inherent limitations as the sediment yield model and is thus primarily useful for comparison of alternatives and identification of general trends. The model considers the following: (1) spawning suitability of particular stream reaches in each subdrainage,(2) the percentage change in sediment yield over the base level, (3) data on current populations collected from stream surveys, and (4) estimated fish per stream acre by spawning suitability and sediment concentration. This data is then used to generate estimates of smolt and resident fish population by stream reach. Resident fish populations were then adjusted upward to account for mitigation for direct habitat improvement carried out with KV funding. Further information is contained in the Planning Record: Criteria for the Analysis of the Management Situation, Volume 4 - Coefficients, February 1981.

G. Analysis Done Outside FORPLAN

1. Overview

The preceding section briefly indicates the processes used to generate the yields displayed elsewhere in this appendix and the body of the EIS. As noted, some of these analyses were developed within the FORPLAN model and others were generated outside the FORPLAN model. In most cases those generated outside of FORPLAN used information generated by FORPLAN as input to other models. Where outputs from FORPLAN were valued in that model or had their values calculated outside the model it was necessary to externally adjust benefits, costs and PNV. This section will describe how the various outputs were developed and used to adjust the PNV from FORPLAN.

2. Developed Recreation

The Northern Regional Guide, June 10, 1983, notes that increases in developed site capacity will occur only in locations where use presently exceeds capacity or will exceed capacity by 1990. Under the assumption that users can be accommodated up to a level of 75% of theoretical site capacity, the Forest should have adequate capacity through decade 15. On this basis it was assumed that there would be no increase in developed recreation capacity in any of the alternatives. Demand levels were developed based upon population projections and 1984 use. For each decade the lessor of demand or capacity was valued at $3.00 per RVD and appropriately discounted outside the model. There were no recreation values included in the model so constraints were used to achieve desired capacity levels.

3. Other Recreation

Recreation benefits for roaded recreation, semi-primitive motorized recreation, semi-primitive non-motorized recreation, and wilderness recreation were developed similarly to those calculated for developed recreation. The capacity available for these sorts of recreation varies by alternative based upon designated uses of the Forest land base. Demand estimates were developed for each type of recreation and the lessor of demand or capacity was valued at $3.00 per RVD except wilderness which was valued at $8.00 per RVD. Since developed recreation is defined here as a subset of roaded recreation, the developed recreation adjustment was subtracted from the roaded recreation adjustment before being applied to PNV. Only the roaded recreation capacity value was calculated by FORPLAN. It was in the model as a non-scheduled output and thus had no associated dollar value.

4. Elk

Elk was valued in terms of elk hunter recreation at the rate of $21.00 per RVD. The RVD use and capacity are based upon elk populations over time, harvest ratios and estimated success ratios. In this situation demand was assumed to be equal to capacity. The FORPLAN model generated elk capacity numbers which were adjusted outside the model to account for timber activities in elk habitat that would tend to reduce the effectiveness of the habitat. The costs associated with elk hunter recreation from the Forest Service perspective are based upon actual past expenditures and amount to $3.27 per RVD. Total values and costs were developed for each decade and appropriately discounted and subtracted to provide the adjustment to overall PNV.

5. Other Big Game

Other big game was also valued in terms of hunter RVD's. The level of other big game hunting RVD's was based upon an estimate from the Montana Statewide Comprehensive Outdoor Recreation Plan that 40% of all big game hunting is for elk. A factor was applied to the elk hunter RVD's to arrive at the other big game hunter RVD's. Values and costs were the same as used for elk hunting and the PNV adjustment procedure was identical to that for elk.

6. Roads

As discussed above, road related outputs were calculated in FORPLAN and then adjusted outside the model to account for the need to gain access to stands as well as build or reconstruct roads within a stand. Since road construction and reconstruction were scheduled outputs in FORPLAN, their costs show up in the PNV calculated by the model. The costs in FORPLAN related to road construction and reconstruction were removed from the PNV calculation and the new schedule of costs were appropriately discounted and placed back into the PNV calculation. In addition major collector and arterial road construction mileages and costs were developed outside of FORPLAN based upon an analysis of overall access needs on the Forest. A Forest-wide MINCOST model was developed and used for this analysis. Costs per mile for the construction and reconstruction of the roads originally calculated by FORPLAN were carried forward because they reflect the mix of construction conditions encountered in the land designation scheme generated by the model.

7. Fixed Costs

Fixed costs amounting to $5 million per year were included in the adjustment to overall PNV. Included are program management and general administration costs for a range of activities (see section IV.B.2.a.(1)(e) of this appendix). Details on the sources of these costs are discussed in Planning Record: Economic Information Used in the Forest Plan, October 20, 1981.

8. Grazing

The FORPLAN model included a scheduled output for grazing AUM's and an associated value. This output included a total potential AUM number associated with transitory range. In general the demand for this type of grazing is very low. It was thus assumed that current use was representative of demand and would be constant over time for all alternatives. Since the FORPLAN model valued all the potential AUM's, the initial PNV was inflated. The FORPLAN PNV was adjusted to remove the values associated with potential AUM's and add the values associated with the demand level. The assumptions were that 13,000 AUM's would be used each year under all alternatives. A cost of $6.07, as developed by Miller in Economic Information Used in the Forest Plan, October 20, 1981, and a value of $8.67 per AUM, from the 1980 RPA analysis were used. In the FORPLAN diagnoses developed for the FEIS, the grazing output was dropped and the constant use level and value was added to the PNV that these models generated.

9. Energy

The calculation of energy consumed by Forest activities was performed outside the FORPLAN model. It has no economic implications. Energy consumption for each alternative was calculated on the basis of the level of road construction, timber administration, other administration, logging, road reconstruction, road maintenance, and recreation. The energy needed to operate administrative buildings is also included. Energy use in BTU's was calculated by a model developed by Brickell of the Region One office based upon energy consumption coefficients developed by Olsen in Forest Planning Record: Criteria for the Analysis of the Management Situation, Volume 4, Coefficients, February 1981.

IV. Cost-Efficiency and Net Public Benefit

Significant Changes from Draft to Final EIS

Additional discussion about the demand curve that was used for timber has been added to section IV.B.2.b.(1).

This section describes cost-efficiency criteria and explains how net public benefits are 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. The following diagram conceptually displays the factors included in net public benefit:

PRESENT NET VALUE (PNV)			= Total PNV ($)
Priced Outputs			
Nonmarket (e.g. Recreation)	+	Market (e.g. Timber)	

= NET PUBLIC BENEFIT (Non-numeric)

NET SUBJECTIVE VALUE (NSV)			= Total NSV (Non $)
Nonpriced Outputs			
Nonquantitative (e.g. Recreation Quality)	+	Quantitative (e.g. no. of jobs)	

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. Thus, net public benefit conceptually represents the sum of priced outputs (PNV) plus the net subjective value of nonpriced outputs. Net public benefit cannot be expressed as a numeric quantity because PNV cannot be added to qualitatively valued nonpriced outputs. In addition, not all resource outputs have been assigned monetary values and costs.

B. Present Net Value (PNV) and Priced Outputs

PNV represents the dollar difference between the discounted value of all priced outputs and all Forest costs over the 200-year planning period. Two discount rates, 4 percent and 7 1/8 percent were used to represent the real cost of money over time. Priced outputs include those outputs with market values (timber, forage, mineral leases, developed recreation, and special use permits) and those outputs with assigned nonmarket prices (dispersed recreation).

Each benchmark and alternative was designed to achieve its goals and objectives in a manner that produces the greatest PNV. This was accomplished by solving FORPLAN with the objective function of maximizing PNV while meeting the specified constraint of the benchmark or alternative. The PNV calculated in FORPLAN is modified by including benefits and costs not modeled in FORPLAN. The modified values were used to evalute the benchmarks and alternatives. The benefits and costs not included in FORPLAN were those which do not influence and are not significantly influenced by land designation 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 real cost of money over time were used to solve FORPLAN and to calculate the economic consequences of the benchmarks and alternatives. The 4 percent rate approximates the real return on long-range corporate investments, above the rate of inflation (Row and others, 1981). 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. Four percent was used to solve FORPLAN and is the primary rate used to evaluate benchmarks and alternatives. The PNV of all Benchmarks and Alternatives was recalculated (using the 4 percent FORPLAN solution) at 7-1/8 percent for comparison purposes. In addition, the Proposed Action was re-optimized using the 7-1/8 percent rate. All costs and benefits are discounted from the midpoint of each planning period (decade).

b. Timber Demand Curve

No local demand curve for timber was used in the FORPLAN model. None of the available techniques for developing Forest level demand functions has a strong enough theoretical basis that it can be suggested for use in Region One. Available evidence also indicates that if a reliable Forest level demand function could be calculated, the elasticity would be such that the use in FORPLAN would not be significant. As specified by the Washington Office (1920 letter to the Regional Forester, "Downward Sloping Demand Curves," dated 2/3/81), the demand curve is assumed to be horizontal.

c. Real Dollar Adjustments

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. Benefits and Costs Used in PNV

Priced outputs determine the dollar benefits used in the PNV calculations. Priced outputs include only those resources that are or could be exchanged in the market place. On the Kootenai National Forest only timber prices were based on locally estimated market values. Grazing values are derived from the 1980 RPA analysis. Recreation prices are national level estimates of willingness to pay. Willingness to pay values were derived in the 1980 RPA analysis and represent what consumers would be willing to pay (above and beyond the direct costs of participation) for a recreational experience rather than to forego the opportunity. Only the timber and grazing values along with baseline prices and costs (as an output called "other resources prices and costs") and various costs to be discussed later were included in the FORPLAN model. The recreation and related values were added to PNV outside the FORPLAN model.

Costs used in PNV include both the costs necessary to produce the priced benefits and the dollar costs necessary to produce non-priced outputs. PNV does not contain the value of all benefits or costs because some are non-priced.

The compilation and analysis of data used to determine cost and benefit information for the alternatives and benchmarks involved two procedures. First, those costs and benefits which contributed to land designation and scheduling of prescriptions in the FORPLAN model were compiled and entered into the model through the use of economic yield tables. These tables relate costs and priced output values to management practices and production levels. The tables were assigned to individual analysis area prescriptions and allowed FORPLAN to assign the most cost efficient prescription to any given analysis area to maximize overall PNV subject to the constraints built into the model. Second, the prices and costs not associated with land designation or prescription assignment but associated with alternative formulation were compiled. These include the benefits of recreation and other items which could not compete with market-priced resources on a prescription-by-prescription basis but which play a role in the overall PNV when their outputs are generated through constraints on the model.

A more detailed analysis of the benefits and costs used to determine PNV can be found in the Forest Planning Records: Economic Information Used in the Forest Plan, November 1, 1982, and "Adjustments to PNV at 4%", various dates.

a. Costs

Agency costs were estimated for the 200 year planning period for all benchmarks and alternatives. This section discusses how costs were developed and the major expenditure categories. Costs were developed by Forest Service personnel in conjunction with developing standards and guidelines for the management prescriptions. Agency cost estimates were determined for all activities and classified according to FSH 1309.11 Management Information Handbook (MIH) codes. These individual MIH codes were further combined to define management practices for the various resource categories. Management practices were used to define the primary unit costs associated both with the FORPLAN and external analyses. Unit costs were based upon actual 1980 activity and were expressed in 1978 dollars.
Many costs include expenditures necessary to produce both priced and non-priced outputs. The costs are based upon historical data and professional judgement and are the minimum funds needed to achieve the standards and guidelines in the management prescriptions. Cost data was used in developing feasible and cost efficient prescriptions, consistent with FSM 1970.2, "Economic and Social Analysis Objectives." The costs which are dependent on land designation and timber harvest schedule were modeled in FORPLAN. These costs were entered in the economics tables in FORPLAN. By solving FORPLAN to maximize PNV, the cost efficient level of agency expenditures was estimated for 200 years of management of the Forest as a whole. Other costs which were not modeled in FORPLAN were developed by the planning team to meet the objectives of each benchmark and alternative. The actual cost data is discussed later in this section. More detailed information is in the Forest Planning Records.

Costs can be divided into four major categories:

Fixed Costs represent the inescapable costs of managing the Forest in the absence of producing controllable outputs. These are costs associated with meeting minimum management requirements and legal standards, avoiding undue environmental damage, and providing for the safety of incidental users. Fixed costs are assumed to be constant and are calculated outside FORPLAN for all alternatives and benchmarks. These costs do not contribute to the FORPLAN objective function that maximized PNV nor do they affect land designation. Fixed costs are added to the Forest costs, present value costs and PNV outside the model. An average annual fixed cost of $5.159 Million was added to each alternative.

Variable Costs are associated with activities that vary in amount and timing from one prescription to another and from one alternative to another. These costs are calculated in FORPLAN. Each management prescription has a set of variable costs which depend upon the timing and application of the prescription to a particular analysis area. Variable costs directly influence the land designation and activity scheduling processes in the FORPLAN model. They are listed in the FORPLAN reports (FORPLAN output) for each run of the model. The costs reported include the following: roads, site preparation, precommercial thinning, reforestation, sale preparation, silvicultural exam, and grazing.

Other Resource Costs are the costs of non-timber activities described in the prescription guidelines. They are included in the FORPLAN model, vary by management prescription (but not timing), and influence the land designation process in the FORPLAN model. These costs are included in the FORPLAN reports and vary by alternative.

Production Costs are referred to as logging costs in the FORPLAN report. These costs actually include non-Forest Service logging and manufacturing costs. They are calculated as the difference between lumber price and stumpage value:

(production cost)=(lumber selling price, log scale)-(stumpage value)

The Kootenai stumpage evaluation equation was used to develop these costs. Production costs vary with timber yield, species mix, logging method, harvest type, and diameter class. They are included in FORPLAN and influence the land designation and scheduling processes, but they are not included as Forest Service costs because they are borne by the timber purchaser.

Adjustments were made to the local road construction miles needed per decade. This required adjustments in the associated costs. FORPLAN schedules road work only for the acres actually harvested even though it is often necessary to build or rebuild additional roads just to get to the cutting unit. The result is an underestimate of the road work needed in the early decades and an overestimate in the later decades. Adjustments to account for this were performed outside of the model. The FORPLAN model calculated grazing values and costs based upon potential outputs rather than actual outputs. This necessitated another adjustment outside of the model so that the situation would be properly depicted. In the FORPLAN diagnoses developed for the FEIS, grazing was deleted. The value of expected grazing use was added to the PNV generated by FORPLAN for each diagnosis to assure consistent comparisons between these and earlier diagnoses.

(1) Cost Data by Resource Component

Costs were associated with each resource output component for timber, roads, range, recreation/wildlife, and other joint costs. The joint costs such as fire and general administration are not separated into resource categories. Costs are reported as annual averages for each alternative and benchmark for 20 decades.

It is important to note that some costs which are required to carry out a management prescription may contribute to more than one resource. For example, slash disposal is carried as a timber related cost even though that disposal may be mitigating damages to visual quality and wildlife mobility. The cost is inseparable and is included here as a timber cost. This illustrates that the costs by resource output do not always relate directly to the benefits by resource. In general, calculating PNV by individual resource is misleading.

(a) Timber

Most timber related costs are considered variable and were calculated in the FORPLAN model. These costs include only those which would be needed in a Forest Service budget to carry out the timber portion of Forest Service activities. The following costs are included:

- site preparation
- precommercial thinning
- reforestation
- sale preparation and administration
- timber road preconstruction

These costs were entered in the FORPLAN model via the economics tables which assign costs to specific management prescriptions. They are calculated for all alternatives and benchmarks and are listed in FORPLAN Economic Reports 2, 3, 4, and 7.

In addition to the above costs, the following timber related costs were included among the fixed costs and show up in the "other" category described later:

- timber management planning and inventories
- silvicultural examination and prescription
- genetic tree improvement program
- management of sale preparation
- right-of-way cost-share agreements
- transportation system planning and inventory
- road operation

These costs are a minor portion of the total timber related costs. They total $321,897 per year as calculated outside of FORPLAN.

(b) Roads

The costs of road preconstruction, local road construction, local road reconstruction and purchaser road credits were considered variable costs and were entered into the FORPLAN model in the economic yield tables. They are reported by decade in FORPLAN Economic Reports 1, 5, and 7. The local road construction and reconstruction costs which include both purchaser credits and appropriated funds were adjusted outside FORPLAN as noted earlier. In addition a schedule for collector construction and arterial and collector reconstruction was developed outside FORPLAN and added to the road costs. Construction engineering costs based upon the miles of road constructed and reconstructed was also calculated outside FORPLAN and added to these costs.

The total miles of road constructed and their total cost were calculated in FORPLAN. The adjustments retained these totals, but developed a more realistic schedule as discussed earlier. In summary the road preconstruction costs are carried in the timber costs. Road maintenance is among the "Other" costs. The costs for local road construction, local road reconstruction, collector construction, collector reconstruction and arterial reconstruction (all arterials have already been built) plus construction engineering are shown as road costs. These costs are further broken out by purchaser credit and appropriated (capital investment) dollars based upon an estimate of maximum available purchaser credits. This breakdown was developed outside the FORPLAN model.

(c) Range

Range costs were included in the FORPLAN model as variable costs by linking the range scheduled output to the economics tables. The costs include the following:

range resource management
range structural improvements

This cost is $6.07 per animal unit month (AUM). The unit cost used in FORPLAN was applied to the total potential forage that could be produced from transitory range. It did not take into account the fact that the use of and demand for this range is constrained by the lack of opportunity for and high costs associated with over wintering facilities and other factors outside of Forest Service control. It was thus assumed that, based on historical evidence, the Forest is likely to supply 13,000 AUM's per year under all alternatives and benchmarks except the minimum management level benchmark. The range costs of $78,910 per year reflect this level of use. To simplify the FORPLAN model, the grazing output was removed from models used in developing the FEIS. The value of the 13,000 AUM's of grazing was added outside the FORPLAN model.

(d)Recreation/Wildlife

Motorized recreation (RVDMOT), non-motorized recreation (RVDHIK) and elk population (ELK) were included in FORPLAN as non-scheduled outputs, but they had no costs or prices directly associated with them. The costs for these resources were calculated outside the FORPLAN model based upon the following per RVD unit costs:

roaded recreation: $1.12
semi-primitive motorized recreation: $1.05
semi-primitive non-motorized recreation: $1.14
wilderness recreation: $2.15
elk hunter recreation: $3.27
other big game hunter recreation: $3.27

The RVD outputs were also developed externally to the model based upon the lessor of demand or capacity. Capacity was based upon the set of land designations developed for each alternative. Demand was linked to projected population change and current (1984) use levels. The cost of supplying developed recreation was assumed constant at $1.17 million per year for each alternative. The following activities are included in the unit costs noted above:

visual resource improvement
recreation or VIS site construction
recreation or VIS site rehabilitation
visitor information services - planning
visitor information services - full service management
installation or construction of VIS facilities not on VIS sites
developed recreation sites - full service management
dispersed recreation - full service management
wilderness area - full service management
trail preconstruction
trail system management
non-structural wildlife habitat improvement
structural wildlife habitat improvement
habitat access controlled by closures

(e) Other Costs

Other costs constitute the balance of activities required to carry out the resource programs already described. Some of these costs are built into the model as scheduled output 4 and are linked to land designation through the economic tables. The remainder are contained in the fixed costs. Those in the FORPLAN model are the following:

water resource monitoring
water resource improvement
special use management (non-recreation)
property boundary location
land exchange
rights-of-way acquisition
soil monitoring
cooperative law enforcement
insect and disease management
arterial road preconstruction
collector road preconstruction
treatment of activity fuels
fuelbreak construction
program management
fire management
road management

These costs are shown on FORPLAN economic report 5 for each alternative and benchmark. Those "Other" costs included in the fixed costs as developed outside the FORPLAN model are program management and general administration costs for the following:

recreation planning and inventory
cultural resource management
visual resource inventory and planning
visitor information services - reduced service management
developed recreation sites reduced service management (public sector)
dispersed recreation reduced service management
recreation management (private and other public sector)
visual resource monitoring
visual resource planning
wilderness area - planning and inventory
wilderness area reduced service management
fish and wildlife prescriptions
fish and wildlife impact surveys
wildlife habitat maintenance
fish habitat maintenance
wildlife and fish cooperation with other agencies
range resource planning and inventory
range forage improvement
maintenance of range structural improvements
timber resource management planning and inventories
silvicultural examination and prescription
timber sale preparation
genetic tree improvement program
water resource planning
water resource inventory
water resource monitoring
mining law compliance and administration
minerals management - oil and gas
minerals management - non-energy
geological planning and inventory
Senior community service employment program
special use management (non-recreation)
rights-of-way cost-share agreements
forest land and resource planning
soil resource inventory
soil resource planning
transportation system planning and inventory
road operation
Forest administration and other facility maintenance.
trail system management
trail inventory and planning
insect and disease management
Forest-wide general administration

The total of the fixed costs is $5.16 million per year. The "Other" costs included in the FORPLAN model vary from alternative to alternative.

(2) Budget Costs

Budget costs are derived from the costs described above. Here those costs are broken into the following resource components:

Purchaser Credit Road Costs -	further broken out by construction and reconstruction
Capital Investment Road Costs -	further broken out by construction and reconstruction
Operations and Maintenance Costs	

Purchaser credit road costs are not appropriated dollars in the same sense as are the other costs. They are included here since they are an accountable budget item.

Purchaser Credit Road Costs are defined as the portion of total road costs which can be expected to be paid via purchaser credits. The components of total road costs were discussed in the preceding section. Precise estimates of purchaser credit costs are difficult to develop because they are dependent upon the way in which individual timber sale packages are put together. From the perspective of the Forest Plan, which does not include the development of specific sale packages, it was necessary to grossly estimate this component of road costs. The estimate is based upon the assumption, using historic data, that about $24,000 per MMBF would be available for purchaser credit construction and reconstruction of local roads. If the local road costs exceeded this amount it was assumed to be necessary to use appropriated (capital investment) funds to cover the remaining costs.

Capital Investment Road Costs are defined as that portion of the total road costs which can be expected to be paid via appropriated dollars. This is simply the total road costs minus the purchaser credit road costs. It consists of local road construction and reconstruction for which it is estimated that there will be insufficient purchaser credit plus all collector construction and reconstruction and arterial road reconstruction. The collector and arterial road work is considered to be a capital investment cost because these are the major access routes for all resource users and can not be entirely linked to timber sales. Other capital investment costs such as range improvements and administrative building construction as considered to be so small as to be inconsequential in relation to the road costs.

Operations and maintenance costs are those costs associated with Forest Service support of all resource activities except road related work.

The sum of these three cost categories equals the total Forest Service costs discussed earlier.

b. Priced Benefits Used In PNV

All priced benefits were estimated for the 200-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 all resources, i.e., the value of the resource on the Forest. The values are consistent with cost estimates for activities which produce onsite resources. Priced benefits are classified as market values (timber and range) or nonmarket values (recreation and wildlife). Furthermore, a portion of the benefits are actual receipts or in-kind payments to the government. These receipts serve as a base for 25 percent fund payments to local governments. Finally, some of the benefits accrue even without active Forest Service management. These benefits are associated with recreational activities which would occur on the Forest even if most other operations were closed down.

(1) Timber Benefits

The value assigned to timber reflects the onsite value of stumpage to the Forest Service. Stumpage is a variable benefit. The value is the difference between the lumber price and production costs of logging and milling. The price varies by species mix, median dbh, net volume per acre, and logging systems. The values are:

Bid value/mbf = -178.88
+ (0.447) X (Lumber Price Log Scale)
- (0.3902) X (Percentage volume jammer logged)
+ (39.81) X Ln(median dbh)
+ (1.465) X (volume per acre harvested)
- (0.6426) X (percentage volume skyline logged)

The values were developed from data on 44 sales sold on the Forest between 1974 and 1980. The sample was selected from sales exceeding one million board feet in volume. This type of sale represents ninety percent of the sawtimber volume sold on the Forest during the five year period. This five year period was chosen because it represents one full cycle in the lumber market. The stumpage prices are modeled in FORPLAN. Lumber prices vary by working group (MIXCON I, MIXCON II and LPP). Logging systems vary by land class (Erosional, Depositional and Breaklands). Volume per acre and dbh varies by working group, condition class (age), and treatment as specified in the management prescriptions (precommercial thinning, commercial thinning and so on).

Stumpage values represent both the benefit value to the taxpayer as well as the actual gross receipts to the US Treasury. All timber outputs from the forest are expected to be consumed.

Projections of real increases in stumpage prices were made for the 1980 RPA program and are used in this analysis (Adams and Haynes, 1980). These projections are based, in turn, on separate projections of lumber prices and production costs (logging and manufacturing costs plus profit). Using the residual value formula, the relationship between these factors is:

SV = LP - PC
where:
SV = stumpage value/mbf
LP = lumber price log scale (end product value)
PC = production costs

An assumption of a 10 percent increase in milling efficiency (from 1980 to 2030) was built into the lumber price projections. The stumpage value formula used in FORPLAN is:

$$SV_t = LP_t - PC_t$$

where
SV_t = stumpage price/mbf at time "t"
LP_t = projected lumber prices at time "t"
PC_t = projected production costs plus profit at time "t"

The following table shows these projections as applied to Regional average values (based on 1975 - 1984 data). The variables LPI and PCI represent the proportionate increase in value from the present for lumber prices and production costs, respectively.

Table B-5

1980 RPA
Lumber Price, Production Cost and Stumpage Value Projections
(1978$/MBF)

YEAR	LUMBER PRICE	LPI	PRODUCTION COSTS	PCI	STUMPAGE PRICE
1980	308.98	1.000	243.73	1.000	65.25
1985	353.78	1.145	272.49	1.118	81.29
1995	440.30	1.425	332.69	1.365	107.61
2005	510.74	1.653	367.79	1.509	142.95
2015	575.63	1.863	377.05	1.547	198.58
2025	640.52	2.073	385.34	1.581	255.18
2030+	676.05	2.188	388.75	1.595	287.30

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. This assumption means that fluctuations in timber volume from this Forest between zero and the maximum possible will not significantly affect prices. This Forest contributes a small percentage of the nation's lumber. The lumber produced here competes in national markets where prices are established without regard to production levels on this National Forest. See Downward Sloping Demand Curves (Reid, 1981 February 12) and section IV.B.1.b. of this Appendix. For a discussion of the sensitivity of the analysis to changing base timber prices and real price increases, see sections VI.B.4.b. and VI.D.6.g. of this Appendix.

(2) 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 $8.61/AUM from the 1980 RPA analysis. Due to the small demand for the grazing output on this Forest, there was assumed to be no real price increase.

As noted earlier, the FORPLAN model calculated the total value of all potential forage outputs even though demand is expected to stay relatively constant at a level much below the potential for forage production. Demand is expected to stay low due to the high costs associated with using the transitory range (access, overwintering and so on) on this Forest. An adjustment outside of the FORPLAN model reduced the total value to account for only those forage outputs which are expected to be used (13,000 AUM's per year). As noted above, grazing was removed from FORPLAN for development of the Final Plan thus the values described here were added to the results of those FORPLAN diagnoses.

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 assumed constant based upon the $8.61/AUM value and the 13,000 AUM annual use level.

(3) Recreation/Wildlife Benefits

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 estimated as remaining constant in the future. The values for the Forest are displayed in Table B-6.

Table B-6
Prices for Recreation
(1978 Dollars, $/recreation visitor day)

Big-game hunting	$21.00
Wilderness	$ 8.00
Semi-Primitive Non-Motorized	$ 3.00
Semi-Primitive Motorized	$ 3.00
Rural and Roaded Natural	$ 3.00
Developed	$ 3.00

Source: 1980 RPA Program Values (FSM 1971.4)

Recreation use is projected to increase on the Forest as the population in Western Montana increases. In some decades in some alternatives certain types of recreation demand (projections of use) are less than the available capacity and in some decades they exceed capacity. Only the recreation that can actually be expected to occur is valued. This level of use is always the lessor of capacity or demand. Capacity is based upon the way in which land uses are designated on the Forest so the amount of recreation which is valued varies by alternative.

The exception to this process is big game hunting which is linked to estimated elk herd size and harvest ratios over time. Big game hunting is all valued because demand, as constrained by hunting license sales, is assumed to be always equal to supply (at a given license price).

Receipts from developed recreation and special use programs consist of fees paid at campgrounds and fees paid for special uses. Fees are projected to continue at $80,000/year, which is the value for 1980.

The value of recreation was calculated outside FORPLAN.

Much of the recreation value is fixed, i.e., it will occur, even in the absence of Forest Service management, once lands are designated for the various uses.

3. Present Net Value (PNV) Calculations

PNV was calculated to determine the relative cost efficiency of each alternative and benchmark. PNV is the difference between the discounted values of all outputs to which monetary values or established market values were assigned, and the total discounted costs of all management activities necessary to produce those outputs. PNV was calculated over the entire 200 year horizon for each alternative and benchmark.

In order to determine PNV, the present value of costs and the present value of benefits were calculated for each of the following resource components:

COST	BENEFITS
Timber	Timber
Roads	
Range	Range
Recreation and Wildlife	Recreation and Wildlife
Other	

Recreation and wildlife benefits were calculated outside of FORPLAN for each decade of the planning horizon. The associated costs were extracted from the FORPLAN reports by a manual calculation. Range costs were assumed constant based upon 1980 costs. Range benefits were assumed constant based upon a constant use level and RPA benefit values. Road costs were FORPLAN costs with schedules adjusted to account for construction needed to get to harvested stands in addition to the roads actually in the stands that FORPLAN calculated. Timber costs and benefits were calculated within the FORPLAN model. Other costs are those which could not be associated with a single resource.

The present value of each resource component was derived by discounting decade total costs and benefits for each of the 20 decades from the midpoint of the decade to the present. The sum of these discounted values is the present value of costs or benefits as appropriate. The sum of all resource component costs was subtracted from the sum of all resource component benefits to produce the present net value for each alternative and benchmark. The discounting process was done once with a 4% and once with a 7-1/8% discount rate. The benefit/cost ratio was calculated for each alternative at the 4% discount rate by simply dividing the discounted benefits by the discounted costs.

4. Opportunity Costs

In order to determine the relative cost efficiency of the various alternatives and benchmarks, opportunity costs were derived to show the difference in PNV between the alternatives. Opportunity costs are defined as the value of a resource's foregone net benefit in its most economically efficient alternative use (FSM 1970.5). An opportunity cost is considered acceptable only if the assumed, subjectively measured, value of what is gained is equal to or more than the value of the opportunity cost required to achieve it. In relation to this analysis, the opportunity cost is the difference in PNV between the alternative under consideration and the benchmark with the highest possible PNV (Alternative M - 114GG1 for the comparison of alternatives).

5. Other

In addition to the various parameters and categories of economic information described above, the priced resource benefits were broken into the categories of market and non-market benefits. The market benefits include timber and range; the non-market benefits include recreation and wildlife.

Returns to the U.S. Treasury were also calculated for each decade. These returns are the sum of the following:

Timber returns calculated as stumpage value of timber within FORPLAN

Range returns calculated as collected grazing fees in 1980 and assumed constant

Special use returns based on total collected in 1980 and assumed constant. This includes all special use permit receipts as well as user fees collected at developed recreation sites

Purchaser credits are included in returns to the treasury because they are included in the calculations for returns to the states. To determine actual cash flow to the treasury, purchaser credits can be subtracted from the returns to the treasury shown on Table B-21 at the end of this appendix.

Returns to the states were calculated as 25% of the returns to the treasury.

C. Net Subjective Value

1. Definition

Net subjective value is the total qualitative value of all resources or outputs whose value cannot be measured in dollars. Market transaction evidence is not available for these outputs and therefore no basis exists for making market value estimates comparable with priced outputs. Nonpriced outputs are valued subjectively. In general, as the subjective value of nonpriced outputs increases, the monetary value of priced outputs as measured by PNV decreases. The magnitude of the monetary value foregone is measured and displayed as an opportunity cost. "Net" implies that both nonpriced benefits and costs can occur.
The most important nonpriced outputs in this analysis are associated with the outputs of:

Jobs and community stability
Visual quality protection in sensitive areas
Wilderness and roadless quality
Mineral accessibility
Grizzly recovery
Lodgepole pine risk management
Miles of road needed for management (access)
First decade appropriated budget

Different levels of nonpriced outputs can be produced by applying management prescriptions to specific areas and/or by applying output and inventory constraints. Any dollar costs associated with nonpriced outputs are included in PNV calculations. How well an alternative resolves issues is a general measure of its net subjective value.

2. Nonpriced Outputs

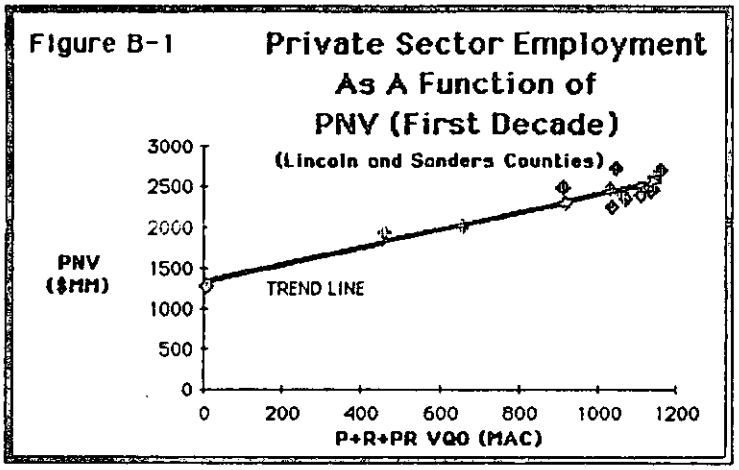
This section summarizes major nonpriced outputs, who is affected by changes in output levels, what indicators were used to measure output changes, and how the changes in the output levels affect present net value. Nonpriced outputs, as issues, are discussed in Appendix A.

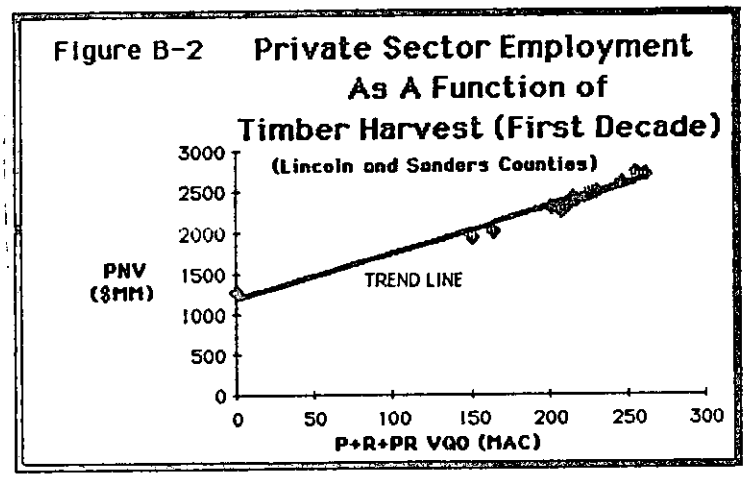
a. Jobs and Community Stability

Jobs and community stability, which are linked,are major nonpriced benefits. Their value is associated with the value of life satisfaction to individuals. Life satisfaction of individuals is, in turn, linked to satisfaction with work and standard of living ("The Prediction of Perceived Well Being", Bharadwaj and Wilkening in Social Indicators Research 4(1977)). The ability to have a job is, of course, directly related to these elements of life satisfaction.

In January of 1984, the total number of people working in Lincoln County in logging related businesses totaled 1,339 or 31.5 % of the workforce. In addition government employees involved in work relating to logging numbered 443 thus bringing the total percentage of people involved in this sort of work to 41.9 % (Libby Office - Montana Job Service). About 75% of the Kootenai National Forest is in Lincoln County and the most direct impacts of Forest activities can be seen in Lincoln County, but Sanders County is in a similar situation.

The forest products sector is largely dependent on the Forest for raw materials. Changes in the timber harvest program on the Forest will influence jobs, incomes, and lifestyles directly in the forest products industry as well as indirectly in all sectors. In general, the PNV of the Forest increases as the level of private sector Forest related employment in the first decade increases, because more timber is harvested. One exception to this rule occurs when harvests are forced to occur on lands which do not have a positive return, thus causing a decline in PNV, a relatively high harvest level and more jobs. Another exception occurs when lands with differing, but positive, cash flows associated with harvest are added to or taken from the suitable base by constraining particular acres to non-harvest management prescriptions. In the latter case the lands available for harvest allow a lower PNV even though more timber is harvested and more jobs can be expected. Figures B-1 and B-2 display the situation:





As the level of harvest decreases it is generally the case that roadless types of recreation opportunity increase thus to some extent timber related jobs are replaced by jobs in industries which service the increased number of recreation users. The relationship between the decline in timber harvest and increase in roadless sorts of recreation is such that a net decline in jobs occurs as timber harvest declines.

Community stability is best served when drastic and rapid changes in population is avoided. The number of available jobs is a fair predictor of population. Thus, a gradual increase in jobs is seen as most desirable because this would allow at least a portion of new job hunters (both new comers and young adults just entering the job market) to stay in the area. A constant or gradually declining number of jobs would be preferable to a rapid decline because lifestyles could be gradually adjusted causing less of an overall impact on community services and allowing time to develop plans to deal with foreseen difficulties. Likewise a gradual increase provides more opportunity for mitigation than would a rapid increase.

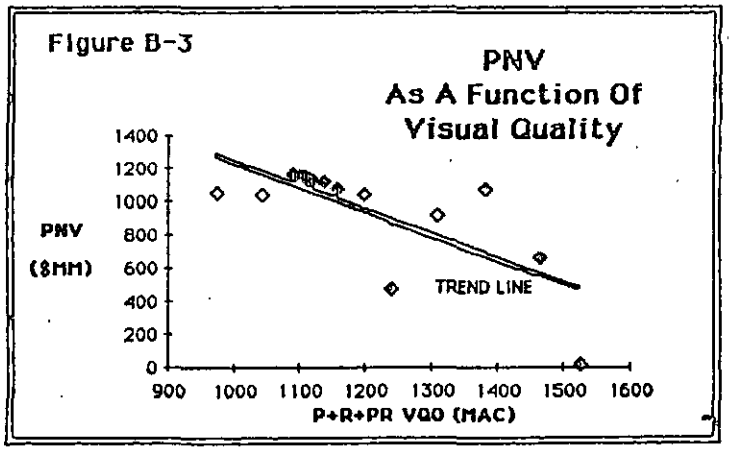
The measurable indicator of stability in the local community is the number of Forest related jobs in the private sector for the two county Lincoln and Sanders area. It is assumed that a change in the number of jobs of more than 20% in a decade would produce social disruption. This rate of change can be compared to the 44% increase from 1950 to 1960 and from 1960 to 1970 caused by the spruce logging activities and the Libby Dam construction respectively. Both of these decades saw rapid expansion and associated community growing pains which could be avoided with a slower rate of change.

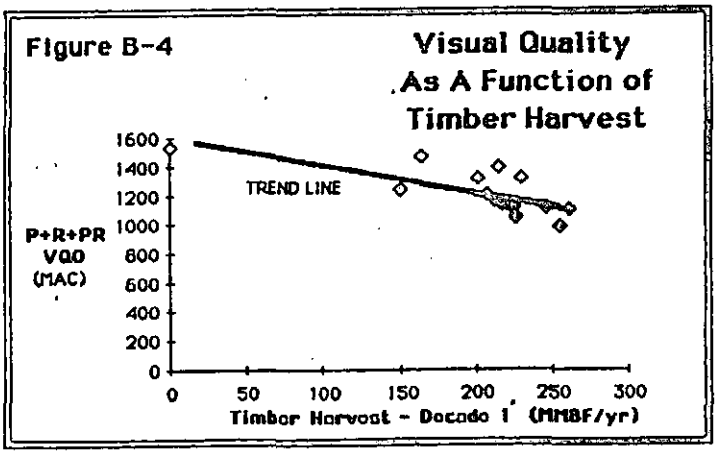
b. Visual Quality Protection in Sensitive Areas

Visual quality is a major issue because over 50 percent of the nonwilderness area is visible from major travel corridors and population centers. Changes in the visual quality of the Forest may affect the people who live in or visit the area as well as those who travel through the Forest. The dollar value of visual quality to people who hike and drive in the Forest is partially included in the value assigned to recreation. However, these assigned prices do not

reflect the total value of scenery on the Forest. The value of visual quality to the people who live in the area, as well as the people who visit the area was not assigned a monetary value in the planning process.

Visual quality is maintained or enhanced as more of the Forest is managed to satisfy recommended visual quality objectives (VQO's). As the level of visual quality is increased from maximum modification to preservation, the PNV tends to decrease because cost-efficient timber management activities are replaced with more costly practices. Visual quality generally increases or is maintained as the timber cut is decreased and the acres of roadless management and wilderness increases. The PNV relationship is sometimes masked when a low PNV is coupled with a high timber cut and the associated lower quality visual situation. The following figures display the situation with PNV as a function of visual situation and Visual Situation as a function of timber harvest:





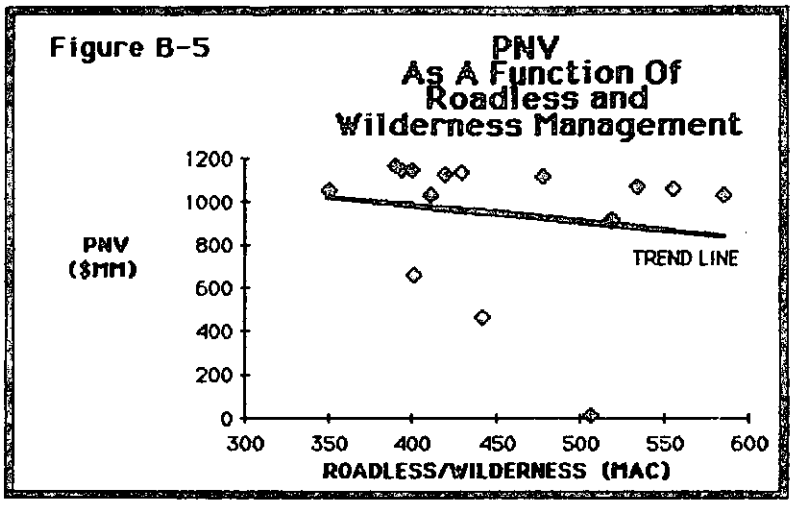
The indicator of visual quality is the area in the VQO categories of preservation, retention and partial retention in visually sensitive areas on the Forest.

c. Wilderness and Roadless Quality

A major issue on the Forest is how to allocate 403,700 acres of roadless area made up of 32 areas on the Forest. While an average monetary value has been assigned to wilderness and dispersed recreation, these prices do not account for the total value of an above average quality wilderness and roadless recreation experience on the Forest. The benefactors are recreationists who desire undeveloped, roadless recreation even though they may never use it and those that want areas reserved for the future or just to know they are there.

The measurable indicator is acres of wilderness and/or roadless land. Present net value decreases as the availability of cost-efficient timberlands decreases and the recreation budget increases.

Visual quality, wildlife diversity, water quality, old growth, and non-motorized recreation related employment increase with an increase in wilderness and/or roadless areas. Timber harvest, forests products industry employment, and motorized recreation related employment will normally decrease as wilderness and roadless increase. The following figure displays PNV as a function of Roadless and Wilderness management:

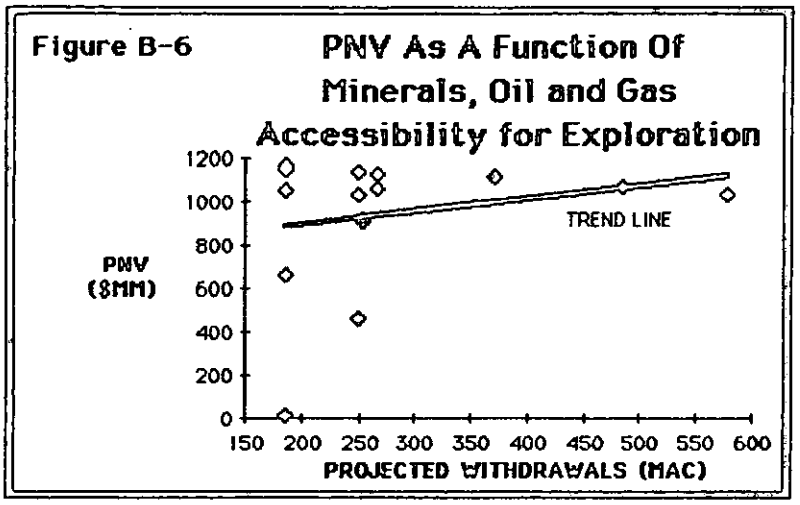


d. Accessibility for Minerals, Oil and Gas Exploration

The preservation of the option to explore for minerals, oil and gas deposits has a social value even though it was not assigned a monetary value in the analysis. This value can be forgone by designating land to management prescriptions which preclude such exploration. These prescriptions include Wilderness, recommended wilderness, wilderness study, developed recreation and administrative sites (management areas 7, 8, 9, 6 and 20 respectively) which would be withdrawn from entry. Existing withdrawals include 16,000 acres for oil and gas and 53,000 acres for locatable minerals. The existing withdrawals include portions of some of the management areas noted above plus some special withdrawals for items such as the railroad tunnel and Koocanusa Reservoir. Accessibility for exploration decreases with increases in lands designated to the noted management prescriptions. The figure below shows that there is a trend toward slightly increasing PNV associated with increases in withdrawals. It also shows that the entire range of PNV can be developed with a given acreage of withdrawals. On a site by site basis, as the land which would be withdrawn increases, commercial timberland is eventually withdrawn. As commercial timberland is withdrawn the PNV will decrease. This situation is masked in the figure by other relationships which increase PNV even though there are more acres withdrawn. The declining trend can be seen on the figure if only those points associated with the maximum PNV for a given withdrawal acreage are studied. One technical point, such exploration is not precluded for minerals until and unless the area actually receives Congressional designation as Wilderness. The analysis here addresses the situation under the assumption that the noted acres will become official Wilderness under the respective alternative.

The unit of measure for the accessibility concern is total acres that will be withdrawn if the alternative is implemented. This includes both the specified management areas and the existing withdrawals outside those areas.

The following Figure displays PNV as a function of projected withdrawals:

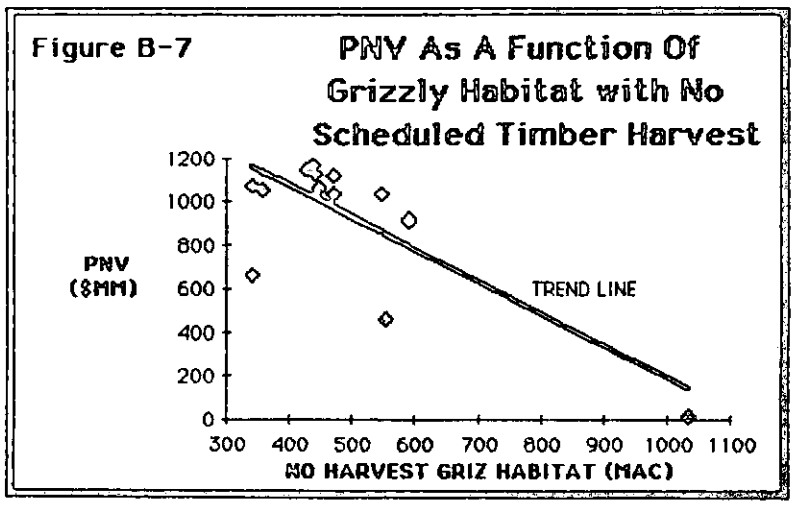


e. Grizzly Recovery

All alternatives and benchmarks have been designed to include a minimum management requirement intended to assure recovery of the grizzly population. This is a minimum requirement that will satisfy the letter of the Endangered Species Act of 1973. Any effort to retain a dynamic yet irreplaceable asset such as a grizzly population entails some level of risk. There are many factors which can affect the grizzly population and many of these are beyond the control of any manager. Some may be beyond the level of knowledge defined as the current state-of-the-art. Any effort to accommodate the known needs of the grizzly bear beyond those that will minimally satisfy the requirements of law reduces the risk of losing the population. The existence of the Endangered Species Act is evidence that retaining the population has value. The opportunity cost of the minimum management requirement is one way of monetarily valuing the population. Any other effort which reduces the risk of losing the population has additional value. It is this additional value, which is not quantified, that is of concern here.

The minimum management requirement that is modeled in FORPLAN involves removing timber harvest options from grizzly habitat unless due consideration is given to grizzly habitat needs. In addition the model is constrained so that only a limited amount of acreage in grizzly habitat is harvested each decade. Beyond this minimum management requirement the alternatives provide varying amounts of land designated to uses with no scheduled timber harvest in grizzly habitat. These designations provide reduced potential for human/grizzly encounters and reduced potential for grizzly (and human) mortality. As more land in grizzly habitat is designated to uses with no scheduled harvest, the risk of losing the population is decreased as is the PNV. The relationship between PNV and land designations is direct on an acre by acre basis, but may be obscured by other factors in the FORPLAN model which involve unrelated lands and issues. The following Figure displays PNV as a function of grizzly habitat which is not harvested:

Figure B-7



f. Lodgepole Pine Risk Management

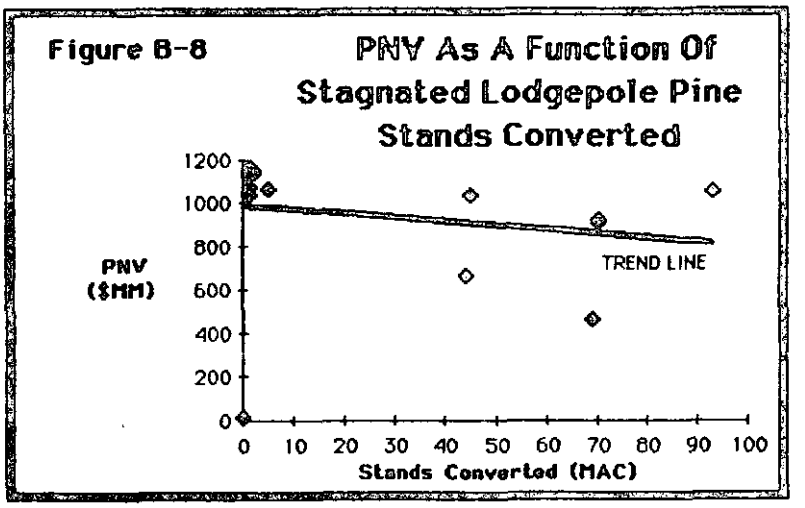
The costs and values associated with managing lodgepole pine are included in the FORPLAN model. There are other values associated with managing lodgepole pine stands which are not quantified in the model, but which are addressed here.

(1) Stagnated Lodgepole Pine

A stagnated stand is a stand which, due to excessive stocking, has essentially stopped growing at a size that is not merchantable. Lodgepole pine is associated with conditions that result in stagnation more than other species. The typical way of returning these stands to a condition where merchantable timber can be produced is to remove the existing trees then start a new stand, usually with a mix of species, and manage the new stand through precommercial and/or commercial thinning to prevent stagnation. Thinning in a stand which has already stagnated usually does not help much because it usually is permanently stunted. The PNV associated with management of a stagnated stand is very low, and usually negative, because of the high costs associated with removing the existing trees and starting a new stand and the long delay before the trees are large enough to be sold. For this reason the FORPLAN model will not usually convert these stands unless forced to by other resource objectives (maximizing timber or wildlife).

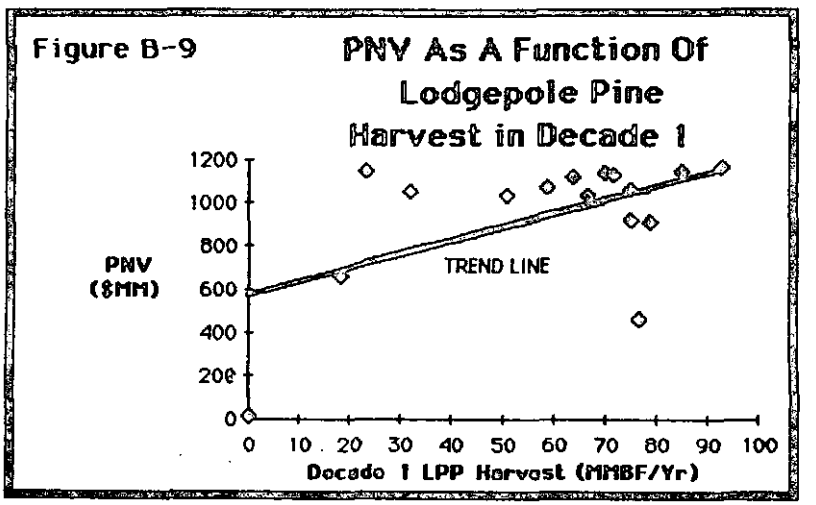
There is a non-priced value in converting these stands. This value derives from the improvement in big game and grizzly bear habitat quality along with reductions in fire hazards and potential for lodgepole pine beetle infestation. Elk and other big game are often restricted from even travelling through these stands because of the quantity of dead and down material and the density of the stand. A stagnated lodgepole pine stand will provide no forage and only low quality cover to these species. The dead materials in these stands are generally associated with blowdown and lodgepole pine beetle activity. This dead material provides excellent fuel and increases the risk of forest fire. Removing the stand would reduce this risk. A stagnated stand is generally less healthy than a similar but non-stagnated stand and thus can not survive a pine beetle attack as well. The question of lodgepole pine beetle will be discussed in the next section.

As the acres of stagnated lodgepole pine converted increases, the PNV tends to decrease but the unquantified values discussed above tend to increase. The situation is depicted in the following figure:



(2) Mountain Pine Beetle

Mountain pine beetles are endemic to the Forest and there is no reasonable way to eliminate them. Losses related to infestation of this beetle are considered in the FORPLAN model to some extent because the LPP timber yield tables take into account the associated mortality. The primary non-priced value associated with harvesting dead or high risk lodgepole pine is the reduced risk of catastrophic fire. Fires destroy much of the value of standing timber and are generally expensive to fight. Harvesting lodgepole pine directly reduces the risk of fire by removing those trees which are likely to die and produce fuel concentrations. Indirectly, the harvest of mature lodgepole pine removes the food source for the beetles and tends to slow their impacts upon adjacent stands. The lodgepole pine that is merchantable now provides the largest element of risk. The indicator of reduced risk is the volume harvested in the first decade. As the volume harvested goes up the PNV tends to increase because more stands are brought into solution and most have a positive contribution to PNV. The following figure displays the situation:



g. Miles of Road (Access)

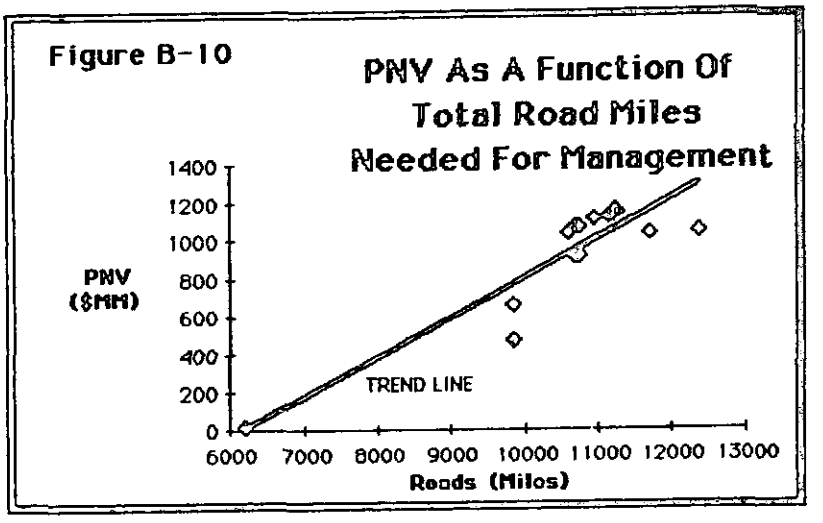
Roads are considered in the FORPLAN model in terms of their construction, reconstruction and maintenance costs, but there is a value to having fewer roads beyond the reduced costs associated with fewer roads. The unquantified values associated with fewer roads come from several sources.

First, roads impact the soils upon which they are built and contribute, to at least some degree, to potential increased sedimentation and reduced water quality. In addition, the alterations of drainage patterns and runoff rates may all have negative impacts.

Second, the construction of roads effectively removes options for future non-roaded management. Primitive, semi-primitive and wilderness recreation categories are most directly affected.

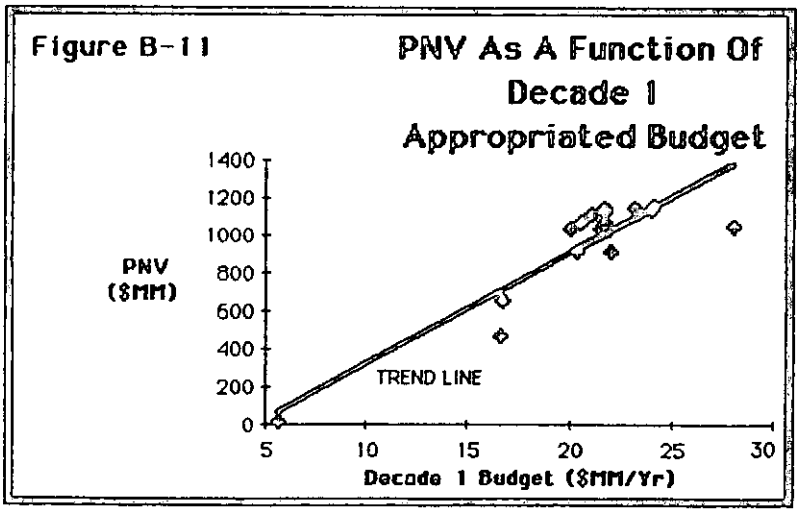
Third, fewer roads implies greater assurance of improved security for wildlife. The assurance is greater because access is non-existent rather than simply closed to use.

Road construction is directly linked to timber volume harvested, so, as noted earlier, when PNV increases with increased harvest - road miles also increase. The situation is displayed in the following figure:



h. First Decade Appropriated Budget

The first decade appropriated budget is a direct function of the activities which are necessary to produce the outputs from any alternative. As discussed above most of the budget costs are included in the FORPLAN model. In as much as a lower budget involves lower costs it can be seen as a benefit and can be quantified. The unquantified benefit of a lower budget is associated with the added options that the Federal government has when deciding how to allocate funds to competing agency needs, to debt reduction, to tax decreases or to other uses. At issue is not the increase in funds that would be available for other uses, because that can be quantified, but rather the added value in being able to divide the total funds differently. The indicator of this value is the first decade appropriated budget. This excludes purchaser credit because unused purchaser credit is essentially trees that are left to grow and this value is quantified in the FORPLAN model. The following figure shows that PNV tends to decrease with decreases in budget except where activities which do not contribute to increased PNV are pursued:



V. Social and Economic Impact Analysis

Significant Changes from the Draft to Final EIS

An analysis of historic and potential future timber supply from all ownerships in the secondary impact area (five counties) was completed. That analysis is summarized in Section V.H.

A. Overview

Social and economic impact analysis estimates the relationship of Forest activities to people. Short-term impacts are of primary concern with consideration given to longer term effects (over 10 years) occurring within the impact area of the Forest.

Issues and concerns (Chapter I of the EIS and Appendix A) include areas for which social and economic information can provide useful insights. For instance, many resource outputs (recreation, timber, and minerals) cause economic effects on people in the impact area.

Forest-related economic impacts on employment, income, and state and local government revenues are directly related to the social well-being of people in the impact area. Additionally, the population's lifestyles, attitudes, beliefs, values, and social organization are linked to Forest management activities.

Prior to the development of alternatives, information was gathered on the existing social and economic situation of the impact area.

B. Impact Analysis Area

The Forest's primary impact area is Lincoln and Sanders Counties in Montana. The secondary impact area also includes Flathead County, Montana, and Bonner and Boundary Counties, Idaho. This impact area is based upon economic influences that exist and is assumed to capture most of the area within which social and economic effects would occur. Table B-7 shows the percent of resource flows to the impact area.

TABLE B-7
Resource Flows
(percent of total use)

POLITICAL SUB-DIVISION	Forest Area	Tmb Vol Under Contract 1984	Disp Rec Users 1984	Dev Rec Users 1984	Wlder &Prim Acres	Min-erals 1984	Out-fitters 1984	Gra-zing 1984
Lincoln Co.	77	31	45	40	60	67	43	85
Sanders Co.	19	2	15	20	40	33	46	15
Flathead Co.	2	47	10	10	0	0	0	0
Bonner Co.	1	5	1	1	0	0	0	0
Boundary Co.	1	15	1	1	0	0	0	0
Idaho Other	0	0	13	10	0	0	0	0
Washington	0	0	13	10	0	0	0	0
Canada	0	0	1	7	0	0	0	0
Other	0	0	1	1	0	0	11	0
TOTAL	100	100	100	100	100	100	100	100

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. Industries must purchase inputs from other industries, as well as primary sources like natural resources, for use in the production of outputs which are sold either to other industries or to final consumers.

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. The assumptions are related to the basis for the data that went into the model. The model is, in effect, a snapshot of the interrelationships in the economy that occurred on a national basis in 1977 projected to the local area based upon local area activities. This assumes that the national relationships hold for the local area and will be unchanged over time. One corollary assumption that holds particular significance is that technology will remain

constant. If new technology is applied that alters the relationship between outputs (e.g. lumber) and inputs (e.g. labor), the estimates of jobs and income will prove incorrect. 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. Background information on the I-O process can be found in Miernyk, 1965.

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-8 contains 1980 outputs levels, employment and income amounts associated with 1980 outputs, and the response coefficients per unit of output. Table B-9 shows employment and income for alternatives and benchmarks.

Table B-8
Forest Outputs and Impacts in 1980
Lincoln and Sanders Counties - Private Sector Only

Output	1980 Production	Employment: Direct Jobs	Employment: Total Jobs	Employment: Jobs/Unit	Income ($MM): Direct	Income ($MM): Total	Income ($MM): Income/Unit
Softwood sawtimber	156 MMBF	500	925	5.9/MMBF	10.63	19.07	$122/MBF
Picknicking	38.1 MRVD	15	20	0.5/MRVD	0.16	0.28	$ 7/RVD
Camping	139.4 MRVD	14	19	0.1/MRVD	0.12	0.27	$ 2/RVD
Skiing	2.6 MRVD	6	8	3.1/MRVD	0.06	0.12	$ 46/RVD
Water-based rec	119.6 MRVD	32	42	0.4/MRVD	0.32	0.54	$ 5/RVD
Dispersed nonmotorized recreation	47.3 MRVD	29	39	0.8/MRVD	0.28	0.47	$ 10/RVD
Dispersed motorized recreation	220.3 MRVD	140	185	0.8/MRVD	1.26	2.10	$ 10/RVD
Big-game hunting	61.0 MRVD	59	78	1.3/MRVD	0.64	1.01	$ 17/RVD
Small-game hunting	18.8 MRVD	8	10	0.5/MRVD	0.09	0.15	$ 8/RVD
Nongame wildlife	18.7 MRVD	9	12	0.6/MRVD	0.09	0.15	$ 8/RVD
Fishing	56.8 MRVD	15	20	0.4/MRVD	0.15	0.27	$ 5/RVD
Livestock	13.0 MAUM	2	10	0.8/MAUM	0.05	0.13	$ 10/AUM
Forest operations maintenance and capital investment	2.36 MM$	10	15	6.4/MM$	0.21	0.31	$.13/$
Forest salaries	14.50 MM$	210	282	19.5/MM$	3.60	4.97	$.34/$
Total		1049	1666		17.66	29.84	

$\frac{29.84}{17.66} = 1.7$

Table B-9
Private Sector Forest Related
Jobs and Income by Alternative *

Alternatives	Jobs Decade 1	Jobs Decade 2	Income (MM$) Decade 1	Income (MM$) Decade 2
A	2457	2666	43.20	46.93
B	2436	2685	42.77	47.01
C	2447	2703	43.02	47.40
D - RPA	2457	2727	43.21	47.75
E	2391	2616	41.92	45.68
F	2006	2273	34.08	38.60
G	2343	2559	41.04	44.59
H	2237	2399	39.48	42.04
I - Current	1931	2047	32.44	33.91
J - Proposed	2299	2584	39.91	44.87
JF - Final	2299	2584	39.91	44.87
K - Departure	2492	2644	43.83	46.06
L	2727	2680	48.53	46.90
M - Max PNV	2706	2498	48.29	43.28
N	2608	2619	46.23	45.64
O	2401	2706	41.94	47.25

* 1980 Base year Employment = 1666 jobs
1980 Base Year Income = $29.84 Million

E. Returns to the U.S. Treasury and Local Government

Predicted returns to the U.S. Treasury and local governments for each alternative and benchmark were calculated in the analysis to show the effects on revenue programs administered by the Kootenai National Forest. These returns illustrate the impact of management on both Federal Government receipts collected as a result of revenue producing programs on the Forest, and the resultant change in revenues passed on to local government. Comparisons were made between the average annual returns per period for each alternative and benchmark, and the base year (1980).

Returns to the U.S. Treasury were calculated by deriving the revenue of income producing programs on the Forest which correspond to FSM 6531.12b "Annual Collections Statement," or the National Forest Fund, including purchaser credit and K-V funds. Total Treasury returns were broken down into three categories: timber, grazing, and special uses (includes recreation, land use, power, and mineral fees). Timber returns were calculated for each FORPLAN run from the value of timber revenues (Economics Report 6). Grazing returns were assumed equal for all alternatives based upon 1980 use levels as discussed in section III of this Appendix. Other returns were calculated as the sum of fees collected for recreation, land use, power, and minerals in 1980 and were

assumed constant for all alternatives. Table B-10 summarizes the base year returns to the U.S. Treasury.

Table B-10
Base Year Estimates - Returns to the U.S. Treasury 1980

Resource	U.S. Treasury Returns (1978$)
1. Timber	10,700,000
2. Range	20,000
3. Recreation, Special Uses	80,000
Total	10,800,000

Returns to local governments are Treasury funds paid to the State of Montana and eventually passed to local governments resulting from revenue producing programs on the Forest. The basis of this fund, Returns to the U.S. Treasury, is discussed above. Calculation of returns to local governments is defined as 25% of the returns to the treasury discussed above.

F. Work Force

Forest Service work force for each alternative and benchmark was based on the ratio of work year equivalent jobs to total budget in 1983. This figure (24.43 WYE/$MM budget) was applied to the first decade budget in each case. Note that the coefficient used does not equate to the inverse of average salary because the total budget includes many items other than salary.

G. Social Measures

Social impact analysis estimates how Forest policies and actions affect the quality of life or social well-being. The analysis is done by projecting future social conditions in an area influenced by Forest Service actions if current management were unchanged, then comparing this projection with conditions likely to occur as a result of implementing management alternatives.

Social impacts were measured by social variables and social groups. Social groups are those affected by Forest Service activities, and social variables define how people are affected and the relationship between people and the natural environment. The following describes the social measures and how they were used.

1. Social Zones of Influence

The following is a description of the groups of people or communities within the impact analysis area.

a. Local Zone

The local zone of influence is defined as Lincoln and Sanders County, Montana. The secondary zone of influence is defined as Flathead County, Montana, and Bonner and Boundary Counties, Idaho.

The economies within this zone of influence are closely tied to resource extraction, primarily timber and minerals. The minerals and mining industry sparked the early migration to the region where gold and silver were prospected and mined in the 1890's. The fluctuation and eventual decline in gold and silver prices, coupled with the playing out of the more easily extracted ore bodies, led to a falling off of mining activity in the 1930's. A revival of mining interest has occurred in the last ten years with the discovery of lead and silver in the Bull River valley and the construction of ASARCO's Troy mine.

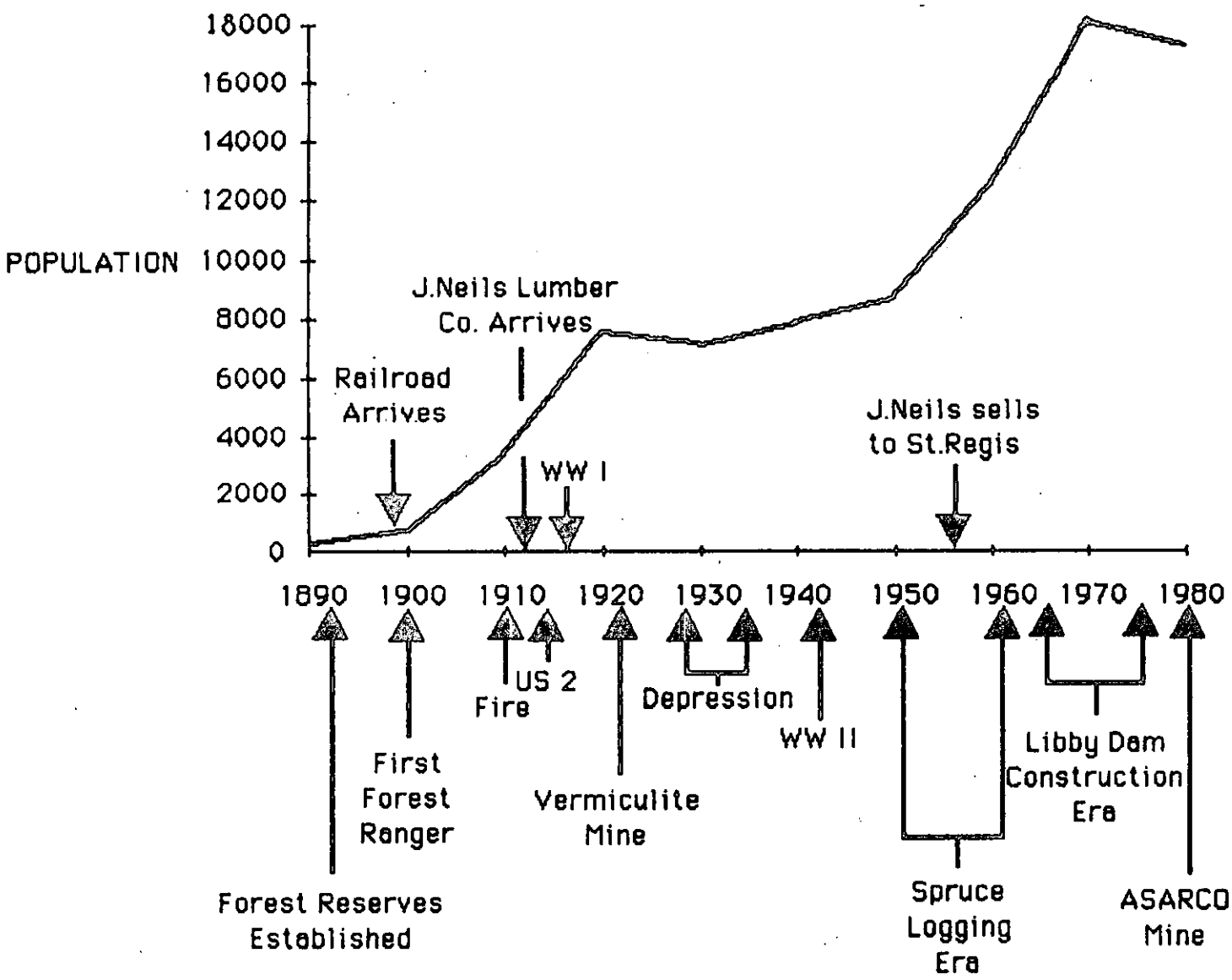
The timber industry has traditionally been the major employer in the impact area. The fluctuations in the housing market and the effect on the demand for timber, has led to periods of instability and chronic high unemployment, particularly during the winter months. The following figure illustrates the various activities which have impacted Lincoln County, and by extension much of the area, by comparing population over time to those factors:

The presence of the Kootenai National Forest is a major factor in the economies of Lincoln and Sanders Counties. About 72% of Lincoln County is Kootenai National Forest land while about 22% of Sanders County is Kootenai Forest land. In addition, portions of the Lolo National Forest are located in Sanders County making the total National Forest land 58% of the County total. Timber from Kootenai Forest timber sales is an important part of the local mill operations. The Kootenai usually employs 300-400 seasonal employees in addition to a permanent workforce of 400 people. This, added to the special manpower programs, makes the Kootenai a major employer.

People who have elected to live in the area, despite the economic uncertainty of the major industries, have done so because of the natural environment and small town atmosphere. Based on past opinion surveys and on the Social Impact Assessment prepared as part of the Forest Plan, people characterize themselves as independent and self-reliant and admire those traits in others. Outdoor recreation is considered an important aspect of living in the area with hunting, skiing, fishing, hiking, and camping being popular activities. Thus, National Forest management is of major interest and concern to the local public.

Figure B-12

LINCOLN COUNTY POPULATION IN AN HISTORICAL PERSPECTIVE 1890 - 1980



The local zone can be divided into four sub-areas as follows:

Libby - This area contains the town of Libby, the county seat of Lincoln County, and the immediate environs. About 67% of the population of Lincoln County, or 12,000 people live in the area. The timber industry, represented by the St. Regis operation and several independent "gyppo" loggers, W.R. Grace vermiculite mine, and the Kootenai National Forest represent the major employers in the area. The ASARCO mine in the Bull River Valley also employs people from this area but most ASARCO employees live either in Troy or in the Bull River Valley area. Because of the concentration of people, Forest activities are very apparent and concerns are often expressed for protection of the municipal watershed and over access-related issues (more or less road closures).

Troy-Yaak-Bull River Valley - This area contains the town of Troy (population 1,100), the sparsely settled Yaak River Valley, and the expanding Bull River Valley. The ASARCO's Mt. Vernon mine has become a major impact on the economy of this area, reflected primarily in the increase in the population of the Bull River Valley. Bull Lake is a popular recreation area, attracting much use in the summer. Forest management is a concern to the recreation oriented population around Bull Lake.

Independent logging is the primary occupation in the Troy-Yaak area. The Yaak valley is populated by a variety of people; retirees, Forest Service employees, and homesteaders. Most who live in the area are seeking a country living situation which relies on Forest resources. Troy residents characterize themselves as small town, closeknit, and cohesive. Issues most commonly heard concern timber harvest and the local economy.

Eureka-Fortine - This area is located in the Tobacco Valley area of Lincoln County. The flavor of this area includes more grazing and farming because of the suitability of the Tobacco Valley for these activities. Timber harvest is also important, especially Christmas tree production. There are about 1,000 people in Eureka. The area can be categorized as rural. The Eureka-Fortine area receives substantial recreation use from the Kalispell area, a large part focused in the Ten Lakes Scenic Area. Issues commonly voiced concern timber, recreation, and wilderness/nonwilderness for Ten Lakes.

Noxon-Trout Creek - This area is located in Sanders County, along the Clark Fork River. Towns and communities situated in this band along the river include Heron, Noxon, and Trout Creek. Also included is the area in the southern Bull River Valley. The population is primarily employed in the timber industry. There is much concern for environmental issues and with wildlife management; the elk herd in the area has State-wide significance and attracts heavy use in the Fall.

b. Regional Zone

The regional zone is defined roughly as the area between the Forest boundary and the nearest large urban areas. This includes the Kalispell - Missoula area (the Flathead Valley) and the Sandpoint-Coeur d'Alene-Spokane area.

Contributions from the Forest to the economies of this general area are minimal in terms of commodity outputs. Timber, for the most part, is processed within

the local zones or secondary impact areas, i.e. Libby, Troy, Eureka, Trout Creek, Columbia Falls, and Moyie Springs, Idaho.

The primary importance of the Forest in the regional area is for recreation. Areas such as the Cabinet Mountains Wilderness, Koocanusa Reservoir, the Ten Lakes Scenic Area, and the Yaak River Valley attract a large share of regional recreation use, approximately 413,700 RVD's per year. This represents 30% of the Forest use. Most of the use is for hiking, hunting, and fishing.

Individuals in the regional area who use the Forest have shown a strong attachment to and interest in, how it is managed. A number of public interest groups, as well as individuals, have taken an active part in helping shape Forest management priorities. This is often expressed in the form of appreciation for amenity or aesthetic values. Except for aesthetics, however, even dramatic changes in Kootenai Forest outputs are perceived as having only limited effect on the regional economy as a whole and almost no effect on the personal lifestyles of most of its residents.

c. National Zone

The national zone of influence is not significantly affected in terms of response to changes in Forest outputs for a given level of management. For instance, a change in timber outputs would not significantly vary supply or demand on a national scale. However, changes in policy affecting amenity values such as scenic quality, water quality, wildlife and fisheries management, and similar values will continue to draw attention from special interest groups at the state and national levels. This is evidenced in the past, by these interest groups' involvement in issues regarding designations of roadless areas.

2. Social Variables

In order to quantify the impacts of social factors in each zone of influence with regard to the varying outputs of the different alternatives, it was necessary to define five variables to conduct the quantification or measurement. These are defined as:

a. Population Changes

Population change is an occurrence that can be measured. However, a very significant facet of this sociological variable is people's perception of change. For most people, increases in population are seen in a negative sense, as an erosion of one of the qualities that make living in the area attractive; namely, low density population. Public opinion surveys performed in the area have consistently revealed that the small area population is one reason those surveyed have chosen to remain in the area.

Some people fear that the changes are already occurring and wish to limit developments that might attract further increases. In fact, census records reveal that the population has remained relatively stable during the last ten years.

Population changes have distinct impacts on community cohesion - newcomers with lifestyles, values, and experiences different from long time residents do not necessarily feel the communal links with the whole community - they more often tend to communicate and interact among themselves. Population changes have diversified the Libby/Troy area; are changing the Trout Creek/Noxon/Heron area and less obviously causing an impact in the Eureka/Fortine area. A wider variety of lifestyles and land use ethics now characterize the area than 10 years ago, but employment opportunities have not significantly increased resulting in high unemployment, lack of job security, and high mobility.

Any alternative which did not result in rapid and drastic population changes would be acceptable.

b. Community Cohesion

"The quality of adherence to a particular community cause; a zealous collective support of community; community pride and loyalty; people working together for mutual benefit; a sense of belonging that is associated with mutual community interests and goals; the regard and respect people hold for their community and each other" (Bowen, et al., 1978). This variable speaks directly to the degree to which individuals and groups support or denounce broadbased social issues. It is important only at the local level.

In general, the local area can be categorized as being in agreement over what the land resource issues are, but polarization has occurred as to the method to resolve the issues. In terms of community cohesion, the polarization is most pronounced in Libby due to its relatively large changing population and less marked in Eureka-Fortine, and Troy.

Throughout the local area, there is a high level of community pride and a strong sense of association within the local area. An alternative which promotes or maintains this cohesiveness would be acceptable.

c. Lifestyles

This variable pertains to preserving the traditional way of living commonly associated with the local zone and the subareas within it. It is important to note that most of the local people view their traditional level as being centered around individuality, freedom, permanency, and a strong identification with the area. Although moderate change in this lifestyle is not viewed as detrimental, most individuals would prefer to see little or no change.

By far, the majority of local uses of Forest lands and resources involve motor vehicles and consumptive activities. Extractive recreational use is most prevalent, such as hunting, fishing, firewood gathering, berrypicking, etc. The local population closely identifies with the Forest, considered by many to be their backyard. Restrictions on use or access are not generally acceptable. Any alternative which minimizes change to people's traditional use of the forest would be most acceptable.

d. Attitudes, Beliefs, and Values

Attitudes, beliefs, and values are reflected in people's likes, dislikes, perceptions, hopes, aspirations, and fears. Changes in Forest Service policy may result in practices that affect people's feelings about and understandings of the Forest.

First, this variable refers to the symbolic meaning people attach to the places and resources on, or from, the Forest. Although people may not be economically dependent upon the Forest, they may receive rational psychological benefit or symbolic meaning from resources.

A second component is a sense of freedom from control by others, such as outside or government interference. People often view the lack of local control over resource decisions as a problem. Local control over programs or proposals is often perceived as limited or nonexistent because policies come from Washington.

Third is self-sufficiency or the ability to live one's life in one's own way and use whatever resources are necessary to get along without any, or a minimum of, outside help. Certain quantities and qualities of Forest resources may be necessary for people to be independent.

Certainty and uncertainty, a fourth component, refers to the probability that certain things can be counted on in living a desired way. It refers to the lack of confidence (uncertainty) or confidence (certainty) people may have about being able to stay in a community because of the changes in use of resources, or because the resources are in limited supply. Loggers, guides and outfitters, ranchers, and recreational businesses are often quite dependent upon the natural resources for their livelihood.

e. Aesthetics

"Feelings of attachment" characterize this variable with regard to the perception of local individuals and their attitudes. Residents have close attachments to the area, but their reasons differ. Many people consider aesthetic values (preservation of wilderness, clean air, clean water, unblemished appearance) as the most important factors, while others maintain that use of the Forest for timber harvest and other extractive uses are more important issues. Alternatives can be analyzed as to what the emphasis of the management is perceived to be and what values are best satisfied within each.

H. Local Timber Supply Analysis

Several comments received in response to the DEIS and Proposed Forest Plan indicated concern as to future supplies of timber in the local area. In general, there seemed to be some concern that even if the National Forests made more timber available for purchase, an anticipated decline in private supplies would offset these increases. This has implications with regard to anticipated social and economic impacts in the area.

A representative of Louisiana-Pacific, a large timber processing firm, described the situation as follows:

> "Louisiana-Pacific is almost totally dependent on federal timber for the plants in north Idaho. As with most companies, we speculated too much in the late '70s and early '80's and consequently we have a lot of expensive timber under contract. Our plans are to deplete this expensive timber over the next few years by mixing it with feasibly priced timber that we are currently acquiring on today's market. This has forced us to depend heavily on the open log market which is composed of a high percentage of private timber. The results of most companies being in this position is that the private lands, including industrial fee lands, are being overcut and cannot support their harvest indefinitely. As time goes on, this will create much more demand for federal timber than we have seen in the past. This situation will be compounded if the proposed reduced cuts materialize on the Panhandle and Flathead Forests. The companies dependent on the timber supply from those Forests will be forced to depend more on the Kootenai's supply."

If the amount of timber being processed by mills in the area were to remain constant into the future, we could expect that the dynamics of the past would continue. In general this would include gradually decreasing numbers of jobs associated with increased mill efficiencies. In the past this trend has been very difficult for those directly affected, but the community has absorbed the changes without serious disruption. Higher volumes of timber being processed would result in more jobs and generally more economic activity in the area. Lower volumes of timber would result in fewer jobs and lower levels of economic activity.

The volume of timber processed is not under the control of the Forest Service. Since most of the lumber that is produced is exported from the impact area, national market dynamics play heavily on production levels. Interest rates and associated housing construction levels are critical factors.

The Forest Service does control much of the standing timber that is available for sale to processors. In the extreme situation, if no Forest Service timber were available, the volume of timber processed would have to be lower. If the Forest Service were to increase the amount of timber available, the industry may elect to process the volume or not; depending upon market conditions at the time. Under these conditions, predictions of future impacts upon local communities is quite difficult.

In order to determine the Forest Service role in the area of community stability, a study of past and future supply of timber in the five-county impact area (Lincoln, Sanders and Flathead, Montana; Bonner and Boundary, Idaho) was completed. Details of the study are provided in the planning records "Development of Response to Public Comments - Timber Supply Situation", (Haugen, July 24, 1986).

The following table displays the actual timber volume harvested from all major ownerships in the five-county area over the last ten years. This is used as a basis for comparison of impacts due to anticipated supply level changes in the future.

Table B-11
VOLUME HARVESTED FROM STATE, PRIVATE and FOREST SERVICE LANDS
IN THE FIVE-COUNTY SECONDARY IMPACT AREA
1976 TO 1985
MMBF

COUNTY	76*	77	78	79	80	81	82	83	84	85	AVG
Lincoln	314.5	317.3	284.7	265.4	219.0	255.0	231.6	301.3	314.1	269.8	273.1
Sanders	135.6	112.9	122.8	121.6	81.5	77.4	78.9	107.3	84.2	94.8	101.0
Flathead	217.3	197.3	157.3	175.0	184.9	195.7	156.0	183.4	196.6	188.0	183.0
Bonner	126.9	156.8	114.1	137.9	117.2	106.0	103.1	105.9	129.1	124.8	120.9
Boundary	80.2	83.9	71.7	82.9	82.0	44.2	68.6	78.7	72.7	105.5	76.0
TOTAL:	874.5	868.4	750.6	782.8	684.6	678.3	638.2	776.6	796.7	782.9	754.0

* The Forest Service portion includes the transition quarter
The National Forests that contribute volume are the Kootenai, Flathead, Lolo and Idaho Panhandle.

The above table displays the actual volumes harvested over the past ten years as closely as they can now be determined. This is the raw material that was used from the five-county area. It can also be equated to the supply actually available and used in those years.

In order to estimate the future situation, several assumptions are necessary:

1. From a National Forest perspective we shall assume that over a ten-year period, with the absence of a "buy-back" bill, that timber offered will actually be sold and harvested. The Forest Plans display the total volume available for sale as the "Timber Sale Program Quantity". These volumes can be prorated out to the counties on the same basis as the historic cut volumes. Inherent, here, is the assumption that Forest Service budget levels will allow implementation of this timber program.

2. In general, state lands are managed for a continuous yield so future volumes from those lands will be assumed to be equal to the 1976 through 1985 average.

3. No specific information is available about private logging plans, but some in the industry have suggested that those lands will be severely depleted in 20 years. We will assume that the average volume available from private lands over the next decade will be half of what was cut in the last decade. The following discussion will address four scenarios ranging from no reduction to 75% reduction in harvest on private lands compared to the last decade of harvest.

Under these assumptions, the volumes expected to be available by county are as follows:

Table B-12
TIMBER VOLUMES EXPECTED TO BE AVAILABLE IN THE NEXT DECADE
(* Scenarios Described below)
MMBF Average Annual

SOURCE	LINCOLN	SANDERS	FLATHEAD	BONNER	BOUNDARY	TOTAL
Kootenai NF	211.4	11.1	6.2	1.4	0.9	231.0
Flathead NF	2.0	0.0	88.7	0.0	0.0	90.7
Lolo NF	0.0	31.2	0.8	0.0	0.0	32.0
Panhandle NF	0.6	0.0	0.0	58.3	48.4	107.3
State	3.8	2.2	9.8	6.6	6.1	28.5
Private:						
Scenario I	103.3	71.4	88.2	62.6	27.4	352.9
Scenario II	77.5	53.6	66.2	47.0	20.6	264.9
Scenario III	51.6	35.7	44.1	31.3	13.7	176.4
Scenario IV	25.8	17.9	22.0	15.6	6.8	88.1
TOTALS:						
Scenario I	320.9	115.9	193.7	128.9	82.8	842.2
Scenario II	295.1	98.1	171.7	113.3	76.0	754.4
Scenario III	269.4	80.2	149.6	97.6	69.1	665.9
Scenario IV	243.4	62.4	127.5	81.9	62.2	577.6

Definitions:
- Scenario I - No decline in private harvest from last decade.
- Scenario II - 25% decline in private harvest from last decade.
- Scenario III - 50% decline in private harvest from last decade. This is the assumed situation for the Final Plan.
- Scenario IV - 75% decline in private harvest from last decade.

The following table displays the past as compared to the future in terms of total timber volume available for harvest:

Table B-13
AVERAGE TIMBER VOLUME HARVESTED IN THE PAST TEN YEARS
AND
AVERAGE TIMBER VOLUME AVAILABLE FOR HARVEST IN THE NEXT TEN YEARS
(all volumes are average annual in MMBF)

COUNTY	PAST CUT 1976-1985	POTENTIAL FUTURE CUT: VOLUME AND % CHANGE FROM PAST SCENARIO I	SCENARIO II	SCENARIO III	SCENARIO IV
Lincoln	273.1	320.9 +18%	295.1 +8%	269.2 - 1%	243.4 -11%
Sanders	101.0	115.9 +15%	98.1 -3%	80.2 -21%	62.4 -38%
Flathead	183.0	193.7 + 6%	171.7 -6%	149.6 -18%	127.5 -30%
Bonner	120.9	128.9 + 7%	113.3 -6%	97.6 -19%	81.9 -32%
Boundary	76.0	82.8 + 9%	76.0 0%	69.1 - 9%	62.2 -18%
TOTAL	754.0	842.2 +12%	754.2 0%	665.7 -12%	577.4 -23%

This data is displayed in the following graphs:

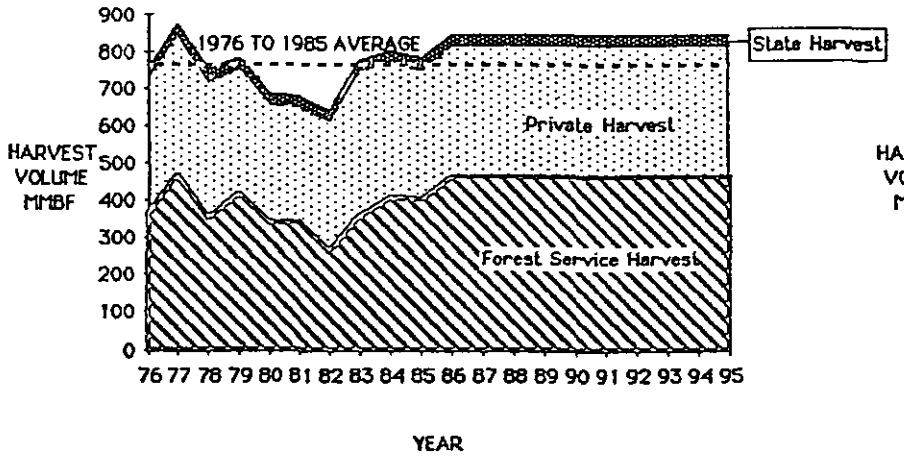
FIGURE B-13

FIVE COUNTY* TIMBER SUPPLY SITUATION PAST AND FUTURE

SCENARIO I: The future harvest from private lands will be the same as the last decade harvest level.

SCENARIO II: The future harvest from private lands will be three fourths of the last decade harvest level.

CUMULATIVE AREA CHART



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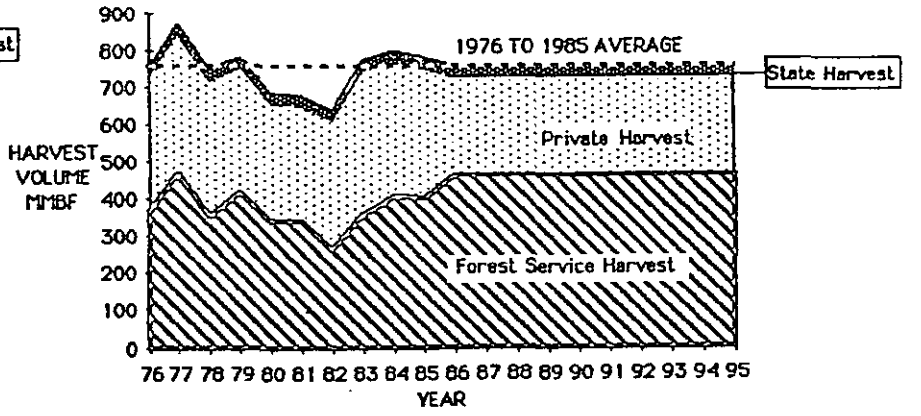

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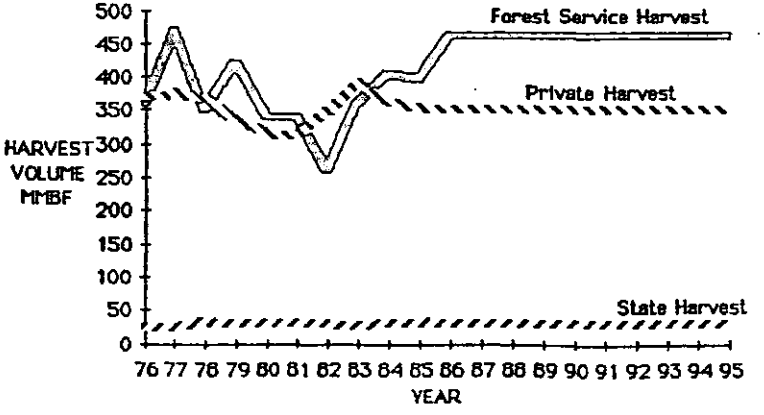

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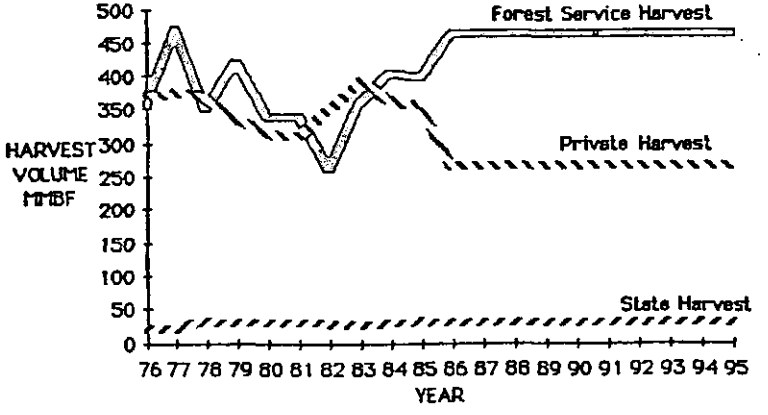


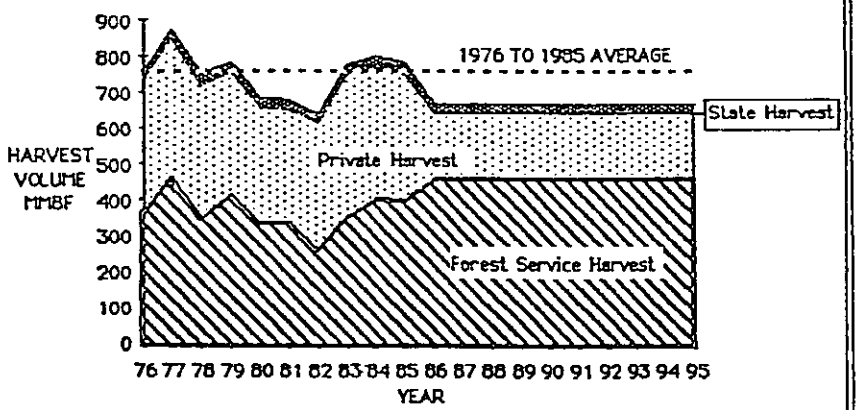
* Montana: Lincoln, Sanders, Flathead Counties
Idaho: Boundary and Bonner Counties

FIGURE B-13
(CONTINUED)

FIVE COUNTY* TIMBER SUPPLY SITUATION PAST AND FUTURE

SCENARIO III: The future harvest from private lands will be one half of the last decade harvest level. Assumption for the Final Plan.

CUMULATIVE AREA CHART



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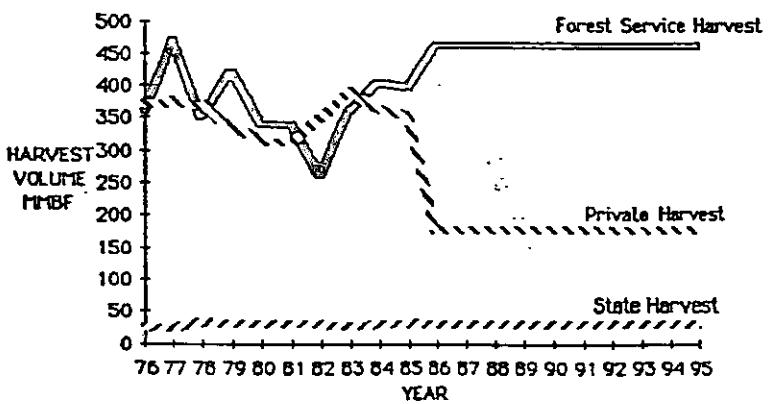
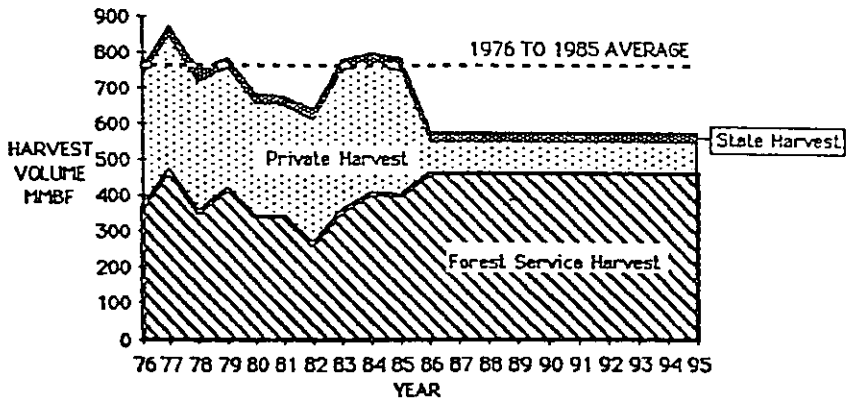


SCENARIO IV: The future harvest from private lands will be one fourth of the last decade harvest level.

CUMULATIVE AREA CHART



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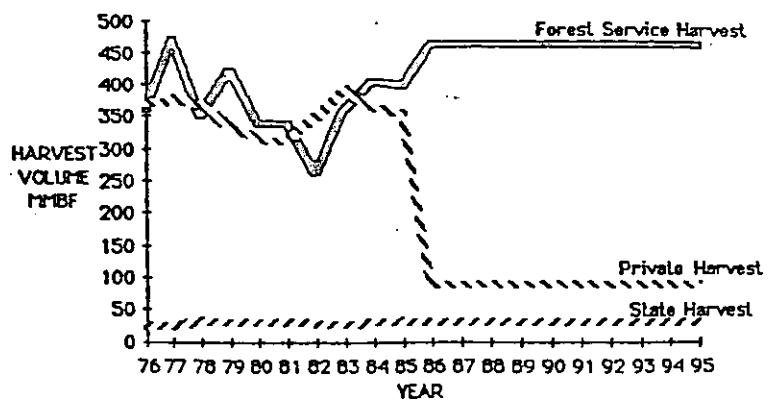


FS 1976 cut does not include the transition quarter

* Montana: Lincoln, Sanders, Flathead Counties
Idaho: Boundary and Bonner Counties

The assumption of Scenario III indicates that the total supply of timber in the five-county area will decline over the next decade compared to supplies available over the last ten years. This occurs because projected increases in harvest from all four National Forests in the area are offset by anticipated declines in harvest levels on private lands. The reduction in total timber supplies linked with increases in processing efficiency is estimated to cause a loss of 1,400 jobs in the five-county area over the next decade. This is about a three percent decline in total jobs and a five percent decline in total income. The overall economy will be adversely affected by this situation. Restructuring of supply sources is expected as relative efficiencies among the mills in the area change. In general the mills in the area will turn to Lincoln County, which should experience a smaller drop in total supply than the other counties, for more wood. They will be successful in competing with the Lincoln County mills to the extent that they can improve relative efficiencies and offset the haul advantage of the local mills.

The social impact described above can not be satisfactorily mitigated by increasing timber supplies from the National Forest lands. The decline in private harvest levels is estimated at 176 MMBF per year over the next decade for the five-county area. The Kootenai National Forest can not offset a decrease of that magnitude under the minimum management requirements. To come close to such an increase would involve a departure schedule with significant reductions in harvest levels before it is expected that private lands would be able to increase their contribution. Thus a short-term reduction in social impacts would likely be followed by even more severe future impacts.

As can be seen in Table B-12, above, the Kootenai National Forest is expected to contribute about 78% of the next decade's volume in Lincoln County. Since this percentage is so high, a non-declining harvest schedule from the Kootenai National Forest can contribute to community stability. Supplying the highest possible volumes in the near future without a future decline would be most stabilizing because it is unlikely that a future decline in National Forest cut could be balanced by an increased cut from other ownerships. This would be the most stabilizing option available to the Kootenai National Forest regardless of the scenario used to describe private harvest.

Note that if expanded mining activities occur, as now seems probable, a significant portion (about 2/3) of the jobs lost in the timber industry could be replaced by jobs in mining and secondary activities although some relocation within the five-county area would occur. Recreation activities would have to increase by a factor of about four (four times as much recreation as now exists) to offset the anticipated decline in timber related jobs. Recreation use is projected to increase at about 10 percent per decade (vs 400% needed), so it is unlikely that increased activity in the recreation sector can significantly mitigate the impacts in the timber sectors.

The employment and income impacts described in previous sections of this Appendix and in the body of the EIS are those associated with Forest Service activities. Since increased harvests are anticipated from Kootenai National Forest lands, increased jobs and income are displayed. This is the impact of the Final Plan for which the EIS was developed. The above discussion puts those impacts in the context of the total economy, but does not change the essentially positive impacts that the Forest Plan will have in the area of social and economic impact.

I. Timber Resource Supply/Suitable Land Evaluation

In light of the potential problems with local timber supply, described in Section H above, the supply potential from the Final Plan was further examined. Table B-1 identifies the tentatively suitable timber land on the Kootenai National Forest and classifies the remainder of the Forest into a variety of other categories. Table B-13a, below, displays additional details about land suitability. The discussion which follows the table provides definitions and explanation for each category and how it relates to the figures displayed in Table B-1. Additional information on potential timber supply is also displayed in Table B-13a(1) in Section 3.

Table B-13a

Kootenai National Forest
TIMBER RESOURCE LAND SUITABLITY

NOT SUITED LANDS	Acres	EFFECTS		
Non-Forest	82,000			
Not Capable	291,000			
Irreversible soil and watershed damage	49,000			
No Assurance of Adequate restocking	0			
Withdrawn from Timber production	35,000	FIRST DECADE		
SUBTOTAL NOT SUITED LANDS: . .	457,000	Harvest Acres annual	ASQ MMBF annual	LTSY MMBF
TENTATIVELY SUITABLE LANDS- SUITABLE PORTION				
Direct Benefits Exceed Direct Costs . .	1,051,000	13,700	190*	-
Meet Non-Timber Multiple Use Objectives	193,000	0	29	-
Local Jobs/Income	19,000	1,800	8	-
SUBTOTAL SUITABLE PORTION:	1,263,000	15,500	227	290
		RESOURCE OPPORTUNITY		
TENTATIVELY SUITABLE LANDS- NOT SUITED PORTION		FIRST DECADE		
Lands not cost efficient to meet objectives:		Harvest Acres annual	ASQ MMBF annual	LTSY MMBF
Future Timber Harvest possible	139,000	0**	0**	0
Multiple-Use Objectives Preclude Timber Production:				
Other Uses	352,000	-	-	-
Proposed Wilderness . .	34,000	-	-	-
SUBTOTAL NOT SUITED PORTION:	525,000	0**	0**	0
TOTAL NATIONAL FOREST AREA: . . .	2,245,000			

* Includes 25 MMBF of non-interchangeable volume of dead lodgepole pine in addition to 165 MMBF of live green volume of all other species including lodepole pine.

** Opportunity for 24 MMBF/year possible timber harvest is available in the second decade with a Forest Plan amendment.

See Table B-13a(1) in Section 3 for more detail on potential timber harvest possible in the 2nd decade and beyond.

1. Definitions and Discussion

Table B-13a divides the area of the Forest into two major categories. The first is "Not Suited" for timber management. This includes several sub-categories:

- Non-Forest: These are lands that are not at least 10 percent occupied by forest trees of any size, or formerly having had such tree cover and currently developed for non-forest use (36 CFR 219.14[a][1]). This amounts to the sum of water (37,000 acres) and non-forest land (45,000 acres) from Table B-1.

- Not Capable: Forest land not capable of producing industrial wood. Quantitatively defined as lands not capable of producing 20 cubic feet of wood per acre per year.

- Irreversible Soil and Watershed damage: Technology is not available to ensure timber production from the land without irreversible resource damage to soils productivity, or watershed conditions (36 CFR 219.14[1][2]). This is the acreage from Table B-1 called "Irreversible Resource Damage". These are lands that could not be harvested within the 200 year planning horizon without violating the soil and water minimum management requirements. Technically it is the difference between the acreage that would have been tentatively suitable for timber harvest and the acreage that could possibly be harvested as defined by the maximum timber benchmark.

- No Assurance of Adequate Restocking: There is not reasonable assurance that such lands can be adequately restocked (36 CFR 219.14[a][3]). If a tree ever reaches a size that could make a merchantable product it will not be cut because there is no way to assure that it can be replaced.

- Withdrawn from Timber Production: The land has been withdrawn from timber production by an Act of Congress, the Secretary of Agriculture or the Chief of the Forest Service (36 CFR 219.14[a][4]). This is the land shown on Table B-1 as withdrawn by Congress or the Chief of the Forest Service. It is the productive timberland included within the Cabinet Mountain Wilderness, the Ten Lakes Montana Wilderness Study Area, and the Adminisrative Sites on the Forest (Ranger Stations, Work Centers, etc.).

The second major category is "Tentatively Suitable". It is further divided into "Suitable" and "Not suitable" lands which are subdivided once again. Among the suitable lands we have the following:

- Direct Benefits Exceed Direct Costs: Direct benefits expressed as expected gross receipts to the government. Expected receipts are based upon expected stumpage prices and payments-in-kind from timber harvest considering future supply and demand situation for timber and upon timber production goals of the Regional Guide (see 36 CFR 219.14[b][2]). Table B-13a displays the acres of these lands derived by using the "new economics" (See NOTE below). The "old economics" would have produced 1,166,000 acres of this type land. All of the harvest except that associated with jobs and income and the allowable-cut effect, discussed below, comes from these lands. This amounts to 165 MMBF per year and 137,000 acres over the decade.

NOTE: The "new economics" included: (1) timber prices linked to transaction evidence sale data for the years 1975-1984, (2) timber price projections as used in the 1985 RPA process, and (3) road costs adjusted for real cost decreases experienced since 1978. In contrast, the "old economics" included: (1) timber prices linked to transaction evidence sale data for the years 1974-80, (2) timber price projections as used in the 1980 RPA process, and (3) road costs as experienced in 1978. In summary, the "new economics" resulted in lower timber values than the "old economics".

- Meet Non-Timber, Multiple-Use Objectives: Lands where timber production is necessary to achieve non-timber, multiple-use objectives even though direct timber production costs exceed expected gross receipts to the government. These objectives are not assigned monetary values, but are achieved at specified levels in the least cost manner. See 36 CFR 219.14(c) and 219.3 (definition of cost efficiency). Some of these lands are in the suitable timber base because they meet some objective of management, such as timber harvest in lodgepole pine stands in elk summer range or grizzly bear habitat. As touched upon above, in the discussion on cost-effective lands, one reason that these lands are included is that they contribute to increasing the PNV of the Forest as a whole even though they may individually generate a negative contribution to PNV. None of these lands are cut in the first decade thus the acreage effect is shown as zero. They do have what is known as an "allowable-cut effect" (ACE). The ACE is a result of having volume available for harvest in later decades so that first decade harvest can rise without violating the principle of non-declining yield. This will only occur if the contribution to PNV of the volume that is harvested early, offsets the negative contribution of that harvested later. It is estimated that the ACE amounts to 29 MMBF in the first decade.

- Local Jobs/Income: Lands necessary for timber production in order to maintain an appropriate level of employment and income. (No direct basis in the planning regulations; see 36 CFR 221.3(a)(3).) In order to address a public concern about local jobs and income, timber production was maximized in the first decade subject to non-declining yield and all the constraints discussed in section VII.C.16. The application of a constraint to maximize timber production in the first decade caused 19,000 acres of suitable land to be rescheduled earlier in the planning horizon. This earlier timber harvest scheduling resulted in a negative PNV on those acres because of the lower values of younger timber. About 18,000 of the acres were actually scheduled for harvest in the first decade. The ASQ rose by 8 MMBF with the addition of the maximum timber constraint. Note that much of the ACE generated by those acres which are in the suitable timber base to meet a non-timber management objective will come from harvest on the "jobs/income" acres in the first decade.

  Local jobs and income can also be maintained by providing additional timber harvest opportunities in the second decade and beyond to meet possible timber supply shortages in the future. One method to increase timber supplies is to convert 39,000 acres of stagnated lodgepole pine stands to healthy, vigorous timber stands. This will provide an ACE of 10 MMBF in the second decade at a cost of $3.1 million per year (See Table B-13a(1) for more detail on this potential timber opportunity). This conversion was

not done in the first decade in the Final Forest Plan because of the high budget requirement. (It is also hoped that a market can be developed for this small-stemmed material to avoid the investment cost of clearing and replanting.) The public response in the Draft EIS indicated that budget expectations should be as frugal as possible during the life of the Forest Plan in light of the current budget deficit-reduction climate. A budget requirement change of this magnitude would probably require a Forest Plan Amendment.

- Non-Interchangeable Component: The non-interchangeable components are increments of volume from the suitable land base or type of timber harvested from that base that are needed to meet management objectives. The total ASQ is derived from the sum of the timber volumes from all the non-interchangeable components. These increments cannot be substituted for each other for the purpose of programming harvest. Non-interchangeable components may be identified as parcels of land differentiated for purposes of Forest Plan implementation. Some conditions used to describe or differentiate these non-interchangeable components are: (1) species marketability, (2) whether it is dead or alive, (3) size class, and (4) operability. On the Kootenai National Forest, this component includes dead timber (mostly lodgepole pine) expected to be harvested from the suitable land base.

The second category under the tentatively suitable lands are those that were ultimately unsuitable.

- Lands not cost efficient to meet objectives - Future Timber Harvest possible: Lands not currently cost efficient for timber production but which could be brought into production if conditions change. These lands represent additional opportunities within the preferred alternative. Management Area 18 has moderate to high timber productivity, but involves habitat types that make regeneration difficult. Some parts of this MA have been harvested in the past and are presently understocked. Heavy competitive shrub cover is the major problem. MA 19 also has moderate to high timber productivity, but it is on steep, erodable slopes which can not be harvested with currently available equipment. If it became possible to resolve these problems, it is estimated that about 14,000 acres could be harvested each decade with about a 9 MMBF per year increase in ASQ (See Table B-13a(1) for more detail on this potential timber opportunity). Appropriate research needs have been identified in the Forest Plan to address these problems, and it is presumed that they will be resolved during the life of this plan.

  In addition to MA 18 and MA 19 lands mentioned above, other timberlands have been identified as being too expensive for scheduling regulated timber harvests during the life of the Forest Plan. These lands allow timber harvest to meet certain management objectives but the harvests are anticipated to be on an opportunistic basis. The Management Areas involved are MA 3 and MA 5 (Semi-Primitive Motorized Recreation and Viewing, respectively). The MA 3 lands provide motorized recreation opportunities for the public and the visual quality constraints make any timber harvesting very expensive because of the required helicopter logging. 12,000 acres of productive timberland is included within MA 3 which could provide 2 MMBF/yr if needed to resolve timber supply shortages in the

second decade (See Table B-13a(1) for more detail on these potential timber opportunities). The MA 5 lands provide scenic protection on steep lands which would also require helicopter logging. 10,600 acres of productive timberland is included within MA 5 which could provide 3 MMBF/yr if needed to resolve timber supply shortages in the second decade. See Table B-13a(1) for more information on these potential timber opportunities.

- Multiple-Use Objectives Preclude Timber Production - Other uses: Based upon a consideration of multiple-use objectives for the alternative, the land is proposed for resource uses that preclude timber production (36 CFR 219.14[c][1]). This category includes all of the designations for developed recreation, semi-primitive non-motorized recreation, old-growth timber retention and others that occur in the tentatively suitable timber base. Much of this area outside of MA 6 and MA 13 would contribute negatively to PNV if scheduled for harvest.

- Precludes Timber Production - Proposed Wilderness: There are 34,000 acres of tentatively suitable timber land in the Proposed Wilderness areas (MA 8). Most of these acres are not cost efficient for timber management due to their location, terrain and roadless condition.

2. Classification of Timberlands - Past and Future

Figure B-13a (Final Plan) and B-13b (Current Timber Management Plan) display the comparisons between the revised and previous timberland classifications. The narrative will refer to Table B-13a in the previous Section and Table B-13a(1) in this section.

Not Suited Lands - The Final Plan (Figure B-13a) displays 457,000 acres compared to the 436,000 acres entitled "Other" in Figure B-13b. These are the lands that are generally not capable or available for timber production as described in Table B-13a. The 21,000 acre difference is due to more recent experience with soils in harsh climatic situations.

Tentatively Suitable Lands - The Final Plan (Figure 13a) displays 1,788,000 acres compared to 1,787,000 acres shown as "Commercial Forest Land" in Figure B-13b. This is essentially the same land base and the difference is due to rounding. The 1,788,000 acres is the total of the "Suitable" and "Not Suited" timberland as displayed in Table B-13a in the previous Section.

Suitable Lands - Figure B-13a shows that 1,263,000 acres (71%) of the Tentatively Suitable base were designated as "Suitable" for scheduling regulated timber yields and timber sales. This Suitable land base corresponds to the total of the "Standard", "Special", and "Marginal" categories in Figure B-13b which totals 1,490,000 acres. This is a reduction of 227,000 from the Timber Management Plan and the difference in acres has been reclassified into the "Unsuitable" category and will be discussed below.

The "Cost Efficient" category in Figure B-13a (1,051,000 acres) corresponds to the "Standard" category (1,071,000) in Figure B-13b and the difference of 20,000 acres is included within the category shown as "Local Jobs & Income". As discussed in the previous Section, this 19,000 acres would have been cost efficient if they were not scheduled for harvest sooner to maintain historic timber sell levels. (The difference of 1,000 acres is due to rounding.)

The remaining 193,000 acres in the Suitable base in Figure B-13a shown as "Meet Non-Timber MA Objectives" corresponds to similar lands included within the "Special" category in Figure B-13b. The difference of 148,000 acres corresponds roughly to the "Opportunity" category (139,000 acres) which is discussed below. The difference of 9,000 acres has been placed within the "Other Uses" category which is also discussed below.

Not Suited Portion: The Final Plan (Figure B-13a) displays 525,000 acres of land (labeled "Future Timber Production Possible", "Other Uses", and "Proposed Wilderness") compared to 297,000 acres of "Unregulated" in Figure B-13b. The difference of 228,000 acres is described as follows:

"Future Timber Production" lands in Figure B-13a corresponds to an equal portion of the Special category in Figure B-13b. As discussed in the previous section, these lands include areas which permit timber harvesting (MA's 3, 5, 18 and 19) but because of the high costs and/or technical problems they have been removed from the Suitable timber base during the life of the Forest Plan or until the Forest Plan is amended or revised. These lands are available for reconsideration as Suitable timber lands if the cost and/or technical problems can be resolved. A Forest Plan Amendment or Revision would be needed to accomplish this change. For more detail on these Opportunity lands see Table B-13a(1) in the next Section.

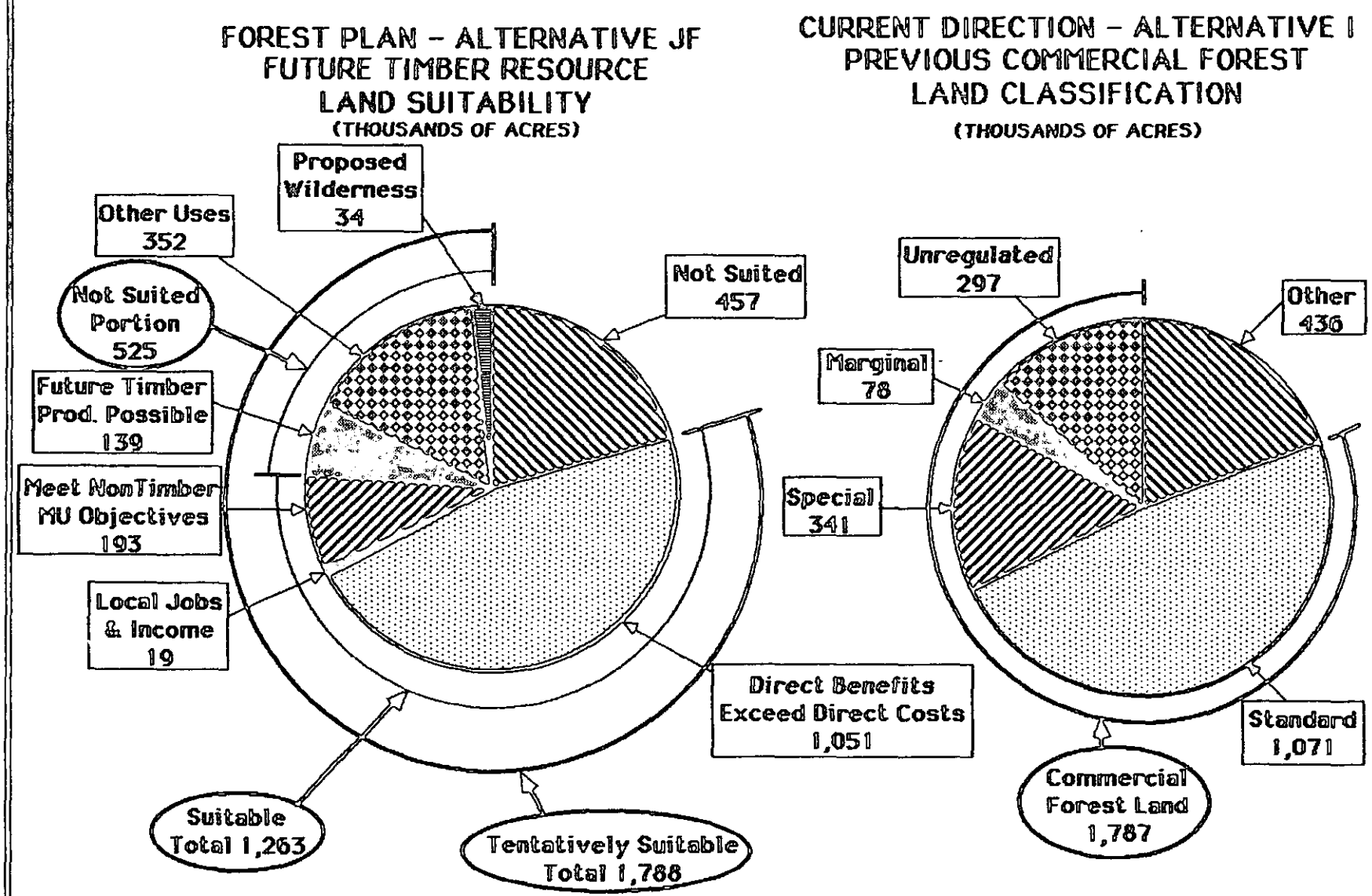
The "Other Use" category in Figure B-13a (352,000 acres) corresponds to the combined categories of "Marginal" and "Unregulated" in Figure B-13b (375,000 acres). (The difference of 23,000 acres roughly corresponds to the "Proposed Wilderness" category which is discussed below.) The previous timber management plan allowed timber harvesting on the Marginal and Unregulated lands and assumed that they would eventually be available for timber harvesting. The Final Forest Plan has analyzed these lands and determined that it is not appropriate to harvest on these lands to resolve other Forest Planning Issues such as Old-Growth Timber Management (126,000 acres), Special Interest Areas such as Research Natural Areas, etc. (10,800 acres), Roadless Management Areas, etc. Many of these lands would be very costly to manage for sustained timber yields and when compared to the other uses that they can provide, they appear to be more suitable for non-timber uses.

The "Proposed Wilderness" category in Figure B-13a does not have a corresponding category in Figure B-13b because these lands are associated with several new wilderness recommendations as a result of the Forest Planning process.

The following figures display the situation described in this discussion and Table B-13A. For more detail on the Opportunity Timberlands see Table B-13a(1) in the next Section. Also see Chapter IX of this Appendix for more details on the Timber Resource and how the Final Plan compares to the Current Direction.

Figure B-13a
and
Figure B-13b

FUTURE AND PREVIOUS CLASSIFICATION OF KOOTENAI NATIONAL FOREST LANDS



3. Local Timber Supply Options

As discussed in the previous section, there are opportunities to increase the suitable timberland base if certain conditions change (e.g., timber prices increase and regeneration and logging techniques are improved). Table B-13a(1) displays the potential results that could occur if timber prices increase significantly.

The first opportunity can be seen in the column labeled "ACE Due to..." under the title of "Future Timber Supply Opportunities." It indicates that 39,000 acres of Stagnated Lodgepole Pine stands could be converted to healthy timber stands with an allowable-cut effect (ACE) of 10 mmbf/yr. These stagnated stands are located in various Management Areas (MA's) throughout the suitable timber base in the Final Plan. This effect would take effect in the 2nd decade and beyond and would be the result of finding a market for the small-stemmed material or obtaining increased budget allowances for destruction and regeneration of these stands. These lands were not converted in the Final Plan in an attempt to reduce the budget requirements as requested by the Public's response to the Draft EIS. The significant amount of increased future budget would probably require a Forest Plan Amendment.

The other opportunities are displayed in the next three columns and indicate the additional timber volume that could be obtained by helicopter logging in Semi-Primitive Motorized Recreation Areas (MA 3), Sensitive Viewing Areas (MA 5), and Steep Lands and Regeneration Problem Lands (MA 19 and MA 18, respectively). 139,000 acres are available in these opportunities which were not provided in the Final Plan because of the high logging costs and resultant deficit timber sales. If timber prices increased significantly, helicopter logging would be feasible on all of these areas, and the regeneration problems on the MA 18 lands could be greatly reduced with increased revenues. 14 mmbf/yr could be obtained from these opportunities in the 2nd decade and beyond if these lands were brought back into the suitable base and managed for sustained yields. A Forest Plan Amendment would be necessary to provide these opportunities.

The Final Plan does not require commercial thinning in order to reduce budget needs and to generally make the plan more practical to implement (see sections VI.B.4.c; VI.C.3.e; VI.D.6.c; VIII.C.2.p(2)(a) and ; VIII.C.2.p(2)(b) of this Appendix for more details on this situation). If prices on the products generated by commercial thinning were to rise or additional funding were supplied to permit this type of sale, additional volume on the order of 10 to 20 MMBF per year could be supplied (associated impacts would also have to be acceptable as with all other opportunities discussed in this section).

Table B-13a(1) displays the additional budget and Capital Investment Road costs by decade and the probable decrease in PNV if these opportunities were initiated. The additional "Future Timber Supply Opportunity Totals" of 24 mmbf per year are displayed in the following Section which discusses the Montana Timber Supply Study and how it relates to the Kootenai National Forest.

Table B-13a(1) **Kootenai National Forest - FUTURE TIMBER SUPPLY OPORTUNITIES** (Under an Amended Forest Plan)
(Average Annual Outputs, except PNV)

KEY ITEMS	Averages for 1967-85	Proposed Action (DEIS)	BASE Final Plan (FEIS)	Future Timber Supply Opportunities: ACE Due to Conversion of Stagnated LPP Stands (Various MA's)	Harvest on Semi-Prim. Motorized Recreation Areas (MA 3)	Harvest on Sensitive Viewing Areas (MA 5)	Harvest on Steep & Regen. Problem Lands (MA 19 MA 18)	Future Timber Supply Oppor. TOTALS	Future Amended Forest Plan GRAND TOTAL
ACRES: (thousands)									
Suitable	1,400	1,306	1,263	(39)	+12	+11	+116	+139	1,402
Opportunity	297	116	139	-	-12	-11	-116	-139	0
Timber Precluded	55	286	386	-	-	-	-	-	386
Not Suited	381	457	457	-	-	-	-	-	457
VOLUME-1st Decade (mmbf)									
ASQ: (Suitable Lands)									
- Live & Recently Dead	162 /1/	202	202	0	0	0	0	0	-
- Non-interchangeable*	24	25	25	0	0	0	0	0	-
Unregulated:**	-	6	6	0	0	0	0	0	-
VOLUME-2nd Decade (mmbf)									
ASQ: (Suitable Lands)									
- Live & Recently Dead	-	233	230	+10	+2	+3	+9	+24	254
- Non-interchangeable*	-	16	16	0	0	0	0	0	16
Unregulated:**	-	6	6	0	0	0	0	0	6
VOLUME-3rd Decade (mmbf)									
ASQ: (Suitable Lands)									
- Live & Recently Dead	-	224	227	+10	+2	+3	+9	+24	251
- Non-interchangeable*	-	10	10	0	0	0	0	0	10
Unregulated:**	-	6	6	0	0	0	0	0	6
OPERATING BUDGET (million $)									
1st Decade	16.6 /2/	20.3	19.2	0	0	0	0	0	-
2nd Decade	-	19.4	19.5	+2.5	+0.06	+0.1	+0.3	+2.96	22.46
3rd Decade	-	17.1	16.0	+0.3	+0.06	+0.1	+0.3	+0.76	16.76
CAPITAL INVESTMENT ROADS (million $)									
1st Decade	2.0 /4/	3.7	3.6	0	0	0	0	0	-
2nd Decade	-	3.0	3.0	+0.6	+0.1	+0.06	+0.7	+1.46	4.46
3rd Decade	-	0.5	0.5	0	+0.08	+0.06	+0.7	+0.84	1.34
PNV (million $)	460 /3/	916	733	-15	-5	-4	-45	-69	664

NOTES: All dollars expressed in 1978 base, consistent with Forest Planning documents.
/1/ Average Annual Chargeable Volume Sold (1967-1985) exclusive of Timber Buy-Back & Salvage Volumes. Salvage volumes are shown in the Non-interchangeable entry. The Potential Yield Calculation is 277 MMBF for the 1,490,000 acres of Suitable Land, exclusive of Grizzly Bear and Old-growth Timber Management adjustments.
/2/ Average Appropriated Budget for 1980-1982 as used in the Current Direction (Alt. 1).
/3/ From the Current Direction Alternative (Alt. 1). /4/ Average Cost for 1982-1986.
* Older Dead Timber Salvage from Suitable Lands. ** All Volume from other than Suitable Lands.

J. Montana Timber Supply Study

A timber supply study was completed for the State of Montana to examine the possible supply scenarios, by ownership, from 1985 through 2030. The supply requirements for Region 1 are ultimately tied to work done for RPA using the TAMM model (Adams and Haynes, 1980). TAMM is an interregional timber supply requirement model that can be used to simulate the consequences of alternative policy decisions. Originally the equations used in the model were available only for a large region including all of the Rocky Mountains. Recently the functions for the base simulation run have been disaggregated to provide estimates of potential increases in timber supply requirements from the Forest Service's Region 1 (mostly Montana and North Idaho). The State of Montana has also developed an econometric model of timber requirements. In combination, these models were used to develop a range of potential timber supply requirements from Northwest Montana (Lincoln, Sanders, Flathead and Lake Counties) and from the Kootenai National Forest, specifically. The Planned and projected Allowable Sale Quantites (ASQ - regulated live green and recently dead timber only) from the Kootenai National Forest are compared to the range of potential timber requirements developed for Region 1 in the following Table:

Table B-13B

RANGE OF POTENTIAL TIMBER REQUIREMENTS COMPARED TO THE KOOTENAI FINAL FOREST PLAN

Decade	Forest Plan ASQ	Lower Range of Potential Requirements	Upper Range of Potential Requirements
1	227*	178	224
	Projected ASQ		
2	230	192	224
3	227	196	259
4	213	236	295
5	234	295	340

* Includes 25 MMbf of Non-interchangeable Volume

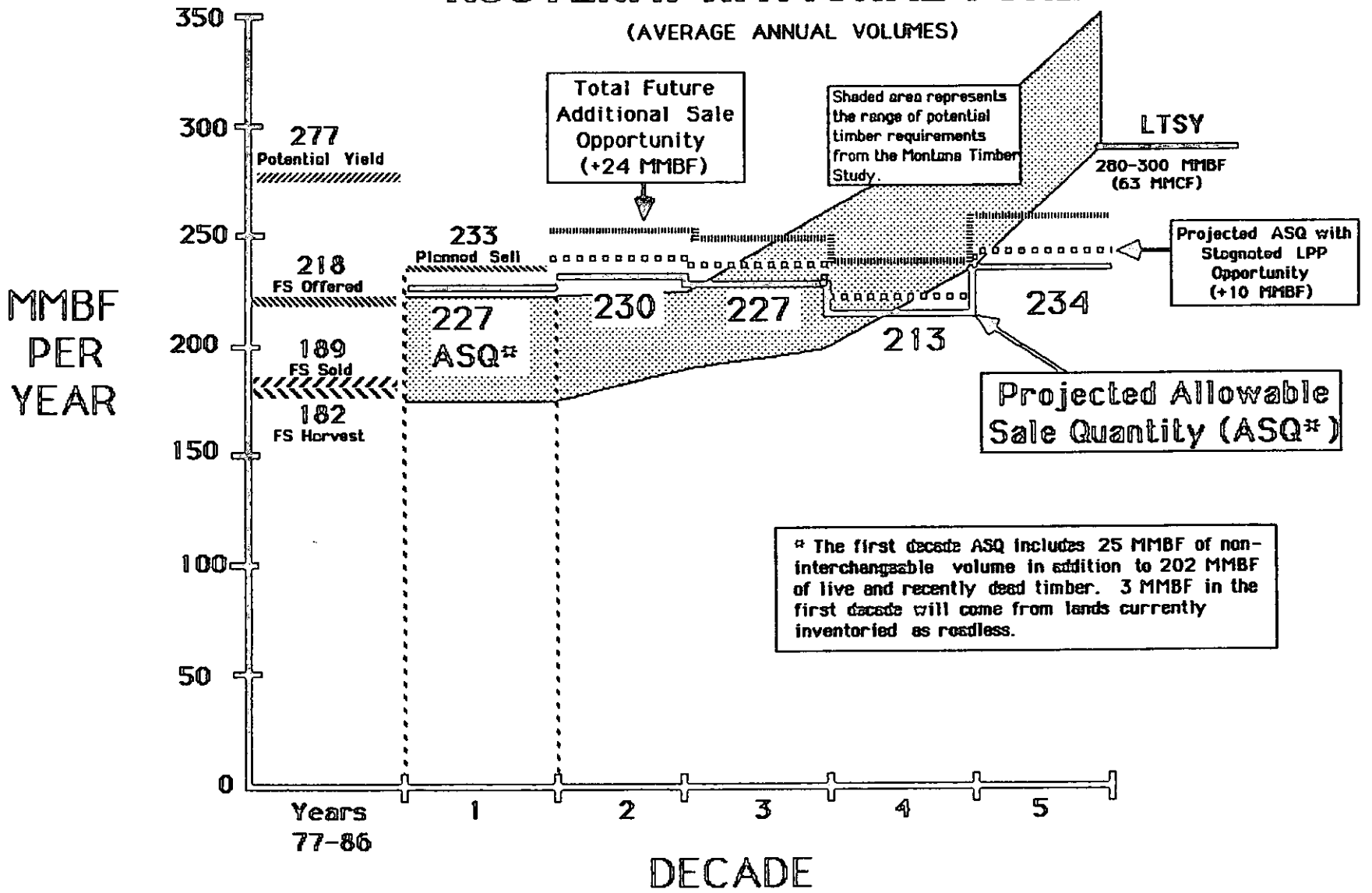
The increasing timber supply requirement from the National Forest is due, in part, from anticipated production declines from private lands. Details of the analysis process used to derive these values are provided in a paper developed by Region 1 of the Forest Service entitled "Timber Supply Analysis for Region 1". This document is among the Kootenai National Forest planning records.

The relationship between planned harvest and potential supply requirements are displayed in the following figure:

FIGURE B-13C

POTENTIAL TIMBER REQUIREMENTS AND SUPPLY RELATIONSHIPS KOOTENAI NATIONAL FOREST

(AVERAGE ANNUAL VOLUMES)



* The first decade ASQ includes 25 MMBF of non-interchangeable volume in addition to 202 MMBF of live and recently dead timber. 3 MMBF in the first decade will come from lands currently inventoried as roadless.

This figure shows that the Forest Plan and projected ASQ's will provide volumes in excess of historic levels sold and harvested. It also shows that the volumes projected for sale are within the range of timber supply requirements or in excess of that range until the fourth decade. Note that the Forest Plan was developed on a cubic foot volume basis and is constrained to non-declining flow in cubic feet. Variable board foot/cubic foot ratios result in declines from time to time when board foot measure is used. The additional sale opportunity of 24 MMBF is the volume described in Table B-13a(1) as "Future Timber Supply Opportunity Totals" in the 2nd and 3rd decade (See the preceding Section). If these opportunities were continued through the 4th and 5th decades, the timber supply levels could be significantly increased.

The five-county timber supply analysis for decade one, described previously in Section H, focuses upon a continued timber supply at historic levels and involves assumptions which differ from those inherent in the Montana Timber Supply study. A different area of analysis is also used. Alternative senarios to that presented in Section H are contained in a document entitled "Development of Response to Public Comments - Timber Supply Situation" (Haugen, 1986). One scenario has timber harvest from private lands declining by 25% in the first decade (rather than 50% as displayed in Section H). The result is a continuing timber supply similar to historic harvest levels which corresponds to the first decade analysis from the Montana Timber Supply study. "A Report on Idaho's Timber Supply", February 1987, indicates that timber supply for North Idaho is adequate to maintain recent harvest levels under the preferred alternatives of the various Forest plans. The first decade timber volumes presented in the FEIS are identical to those of the Proposed Action in the DEIS and reflect the maximum first decade production level possible, while still resolving the other issues as described elsewhere in this document.

VI. Analysis Prior to Development of Alternatives

Significant Changes from Draft to Final EIS

As a result of public comment on the DEIS and Draft Forest Plan, further analysis was done to develop a Final Plan which better addressed the public issues. The analysis that led to the Final Plan (Alt JF) is described in sections VI.B.4., VI.C.3. AND VI.D.6., below.

A. Introduction

The primary analysis prior to developing alternatives was the analysis of the management situation (AMS)--a determination of the ability of the Forest to supply goods and services in response to society's demands. This analysis process included compiling data (i.e., issues/concerns, demand projections, the current situation assessment, etc.), and using the FORPLAN model to process and/or develop information on Forest output production capability, economics, and resource interrelationships.

During the analysis of the management situation, resource supply potentials were determined by using FORPLAN to establish minimum and maximum production levels called benchmarks. Production capabilities were determined for single resources as well as for sets of multiple resource outputs produced in the most cost efficient way. This analysis established the benchmark levels required by National planning direction. The benchmarks serve as references from which the costs and effects of various objectives and constraints used in developing alternatives are evaluated.

The AMS provided a basis for assessing the need to change management direction and incorporating various approaches in developing a broad range of reasonable alternatives aimed at resolving the issues and concerns in various ways. There were four purposes for the benchmark analysis:

- estimate the schedule of management activities, resource outputs, effects, discounted benefits and costs, PNV, and acreages of prescription assignments appropriate to achieving the purposes of the benchmarks;

- define the resource production levels associated with maximizing single resource outputs;

- analyze the implications of legal and policy constraints;

- comply with the analysis of minimum management requirements as outlined in 36 CFR 219.27.

In order to fulfill these requirements, the Forest developed four types of benchmarks. These are:

1. Maximize Present Net Value Benchmarks - Maximizes present net value for various combinations of Forest constraints and displays the associated resource outputs. The benchmark with the highest PNV that meets minimum management requirements also serves as a point of reference from which the costs and effects of constraints are determined. For reference purposes these benchmarks will be labeled with the identification number from the FORPLAN run that was used

followed by the letter of the alternative if that run was carried forward as an alternative (114HH2, 114A09, 114U01, 114B06, 114C04, 114D04, 114V01-N, 114F01-A 114GG1-M, 114JJ2, and 114II2)

2. Resource Benchmarks - Defines the maximum potentials for timber production, elk, and wilderness (114W01-L, 114AA2-F, and 114M01-H, respectively).

3. Minimum Level Benchmark - Defines the minimum outputs associated with custodial management of the Forest and the unavoidable costs and benefits of maintaining public ownership (114DD1).

4. Current Level Benchmark - Specifies the management most likely to be implemented in the future if the current direction is followed. It forms the basis for the no action alternative (114Y12-I)

Several variations of the Max Present Net Value and Max Resource Benchmarks were run to determine the opportunity cost and resource tradeoffs of meeting specific constraints, objectives, regulations, and policies. In addition to these requirements, all benchmarks were designed to be approximately implementable from a physical standpoint (but not a political standpoint), were not constrained by budgets (except Min Level and Current Level),and used maximization of PNV as the objective function to obtain a fixed analytical base.

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

B. Development of Management Requirements

In order to perform the stepwise analysis of the benchmarks, various sets of management requirements were modeled in FORPLAN. These management requirements can be divided into three categories (a) minimum management requirements (MMR's); (b) timber policy requirements; and (c) maximum resource output constraints. The management requirements were incorporated into the FORPLAN model in two ways. First, many of the standards and guidelines for prescriptions were developed to include specific management requirements. These requirements are included in FORPLAN as cost and yield table variations reflecting management under these assumptions. Second, various management requirements were incorporated into FORPLAN by imposing constraints on the linear program. These constraints were used to insure that outputs, effects, and forest conditions will be produced in the proportions required to achieve the particular purposes of a benchmark.

In linear programming analysis, constraints override the objective function. Thus, if a predetermined level of outputs or minimum physical condition is entered as a constraint, it is always achieved (or no feasible solution is reached). Output levels and other desired effects entered as constraints then are implicitly assumed to contribute more to public benefits than the sum of their cost of production plus the foregone contribution to public benefits of any outputs they may have replaced. In the design of benchmarks, care was taken to insure that the effects of various constraints or sets of constraints on PNV could be quantified, and that these constraints constituted the most cost-efficient method for attaining the desired results. Following is a discussion of the management requirements used in the Kootenai FORPLAN model. The minimum management requirements (See 36 CFR 219.27) were identified and incorporated into the planning process. Several of the MMR's are a part of the design for management prescriptions assigned in the FORPLAN model to benchmarks and alternatives. In addition, a set of modeling constraints were developed for FORPLAN to approximate the effects of MMR's which could not be tied to management prescriptions.

Following is a discussion of how each MMR requirement was incorporated.

1. Minimum Management Requirements

The minimum management requirements in 36 CFR 219.27 are as follows:

a. Conserve soil and water resources.
b. Minimize hazards from flood, wind, wildlife, erosion, and other natural physical forces.
c. Reduce hazards from pest organisms.
d. Protect riparian zones.
e. Provide diversity.
f. Provide fish and wildlife habitat to maintain viable populations.
g. Adhere to multiple use laws.
h. Protect threatened and endangered species habitat.
i. Provide for rights-of-way and corridors.
j. Develop road construction standards.
k. Revegetate temporary roads.
l. Maintain air quality.

m. Reforest in 5 years.
n. Limit openings to 40 acres.

The methods used to meet these minimum management requirements include:

- Developing standards and guidelines and appropriate practices for mangement prescriptions.

- Assignment of management prescriptions and intensities to analysis areas in FORPLAN.

- Applying access, scheduled output and inventory constraints to analysis areas or groups of analysis areas in FORPLAN.

a. Conserve Soil and Water Resource

The mapping and spatial fitting of FORPLAN outputs, local experience, and research indicate that timber harvest timing, location and acreage disturbed by associated activities (including road construction, slash disposal and site preparation) are the primary activities which affect soil productivity and water quality.

A portion of this minimum management requirement is reflected in costs which recognize application of management practices which attempt to mitigate damage to the soil and water resources. For example road costs reflect construction standards that include drainage facilities which may affect the amount of erosion. In addition aerial logging systems are modeled on steep slopes (breaklands) so that fewer roads will be needed thus reducing the risk of erosion problems associated with construction and maintenance of roads on those slopes. The added logging and roading costs associated with timber harvest on steep slopes are included in the FORPLAN model.

The major questions of location, timing and acreage disturbed are modeled in FORPLAN via a scheduled output for clearcut equivalents (CCE's) which is constrained over time. A clearcut equivalent is the amount of cutting that produces runoff equivalent to that produced by one clearcut acre. For modeling purposes an acre of 60% thinning would be equated to 0.6 CCE's. The idea behind the clearcut equivalent concept is that watersheds can absorb a certain amount of timber cutting before generating increased runoff at a level that will damage stream channels or cause flooding. Since the trees grow back over time, it is possible to cut more trees later while remaining below the threshold level of clearcut equivalents. By constraining production of CCE's on an AA by AA basis which varied by the current condition and physical properties of the drainages in an AA, it was possible to spread timber harvest activities over time and space so that stream channels would not be damaged. The limitations on CCE's to prevent stream channel damage will also reduce soil loss, sedimentation and associated water quality degradation.

The constraints were applied to each AA which was greater than 1000 acres and which was not in the LPP working group. The constraints applied to the entire 200 year planning horizon. The constraints were limited to larger AA's due to limitations in the FORPLAN model. LPP AA's were not constrained because of the pine beetle situation which is killing those trees.

b. Minimize Hazards From Flood, Wind, Wildfire, Erosion, or Other Natural Physical Forces

The soil and water MMR discussed previously outlines the steps needed to minimize hazards from flood and erosion.

Wind can cause unnecessary damage to residual trees in timber sale areas if improper silvicultural systems are applied. This hazard is minimized by prescribing silviculturally sound systems by working group or habitat type. In most cases more than one system is provided to assure proper field application even though for modeling purposes only one system was used in a management area.

Each management prescription contains standards for fuel management and fire suppression tactics which are intended to reduce the risk of wildfire.

c. Reduce Hazards From Pest Organisms

Trees on the Forest are susceptible to mountain pine beetle, dwarf mistletoe, root rot and other pest organisms. Rather than let the natural process create favorable conditions for these pest organisms, several different management practices were considered to help prevent hazards from pest organisms.

For example, precommercial and commercial thinning is prescribed in many management areas to maintain stand health and reduce the risk of mountain pine beetle epidemics, control dwarf mistletoe, and minimize root rot.

The standards and guidelines provide for planting a species mixture where possible to prevent the creation of single species stands that favor insects and disease.

d. Protect Riparian Zones

In addition to the measures described above for soil and water conservation, the standards and guidelines include items specifically intended to protect the critical resources associated with riparian areas. These items range from maintenance of stream temperature by limiting tree canopy removal (to retain proper habitat for fish) to limiting livestock use to specified areas where impacts on the riparian area can be minimized. Details are contained in the standards and guidelines in the Forest Plan.

e. Diversity

As a whole the Forest tends heavily to a forested boreal habitat. As such the Forest has less species diversity associated with open areas. Physical conditions limit the amount of wetlands and therefore the diversity associated with them. Due to the fire history on the Forest there are significant areas where there is no old growth suitable for the needs of old growth dependent species. Openings in the forest canopy progress through the various successional stages over time and can provide an increase in diversity by supplying some of the type of habitat which is currently in short supply.

There is little that can be done to significantly add wetland habitats, but management practices can be designed to eventually provide additional old growth.

The economics of clearcut harvest practices cause them to be selected often in the FORPLAN model. This type of harvest is one way to achieve the canopy openings mentioned above. The economics of timber harvest also causes virtually all old growth trees which would be suitable for dependent species to be cut. Furthermore rotations are shortened so that the current supply of old growth would not be replenished over time.

Diversity is enhanced by permitting clearcutting to provide openings while constraining the inventory and designating specific lands to develop old growth conditions. It was assumed that if about 8% of the forest's acres under 5500 feet in elevation were either in old growth conditions or moving toward those conditions over time, a sufficient amount of old growth habitat would exist to maintain old growth dependent species across the Forest. The 8% figure was derived from information in McClelland, 1977 and McClelland et al, 1977.

There are about 1,860,000 acres on the Forest which are below 5500 feet in elevation. Eight percent of this amounts to 149,000 acres. Due to pine beetle and other factors, the lodgepole pine working group can not be expected to supply old growth habitat. It is further assumed that at least 9000 acres of old growth exists in the Wilderness and other portions of the 350,000 acres that are modeled as non-commercial in FORPLAN. Thus, the FORPLAN model was constrained to provide at least 140,000 acres of old growth through a combination of regulated and unregulated acres located throughout the Forest. The model was constrained to provide this amount in MIXCON I and II working groups by decade 12 when a sufficient acreage of those groups reach age 250 years. Analysis areas which are modeled as 140 and 160 years old will supply the needed 250 year old stands by the 12th decade. They also satisfy present and future needs for old growth habitat prior to decade 12. To insure a wide distribution of old growth the WLDTIM prescription was assigned to about 95,000 acres distributed in watersheds across the Forest. This prescription contributes to the 140,000 acres and includes thinnings which help assure the development of the needed old growth characteristics (large diameter, decadent relatively open stands with large snags) along with extended rotations.

Modifications to the constraints discussed above were developed to explore the possibilities of providing additional old-growth, beyond the minimum management requirements, and removing all timber harvest activities from the WLDTIM prescription. This is discussed in section VI.B.4.a., below.

Further discussion of old growth is contained in Christensen and Kuennen, 1984.

f. Adequate Fish and Wildlife Habitat to Maintain Viable Populations

The minimum management requirements for soil and water conservation discussed above assure adequate water quantity and quality to provide the habitat needed to maintain viable fish populations. The diversity minimum management requirements coupled with the standards and guidelines for specific management

areas insure that viable populations of all species will be maintained. Maintenance of habitat for endangered species is discussed below.

g. Consistency with Multiple Use Laws

The Secretary of Agriculture under various laws is directed to administer National Forests for multiple uses such as outdoor recreation, range, timber, watershed, wildlife, fish, and minerals. The Secretary is also directed to develop and administer the renewable surface resources.

Forest planning and environmental analyses require that processes formerly used to make individual resource decisions must now be combined into integrated management decisions. The use of the FORPLAN model with its construction based upon land suitabilities and capabilities insures that the variety of multiple uses are considered and properly applied on the Forest.

The riparian zone, diversity, and fish and wildlife MMR's address how multiple use and sustained yield is achieved. The reforestation MMR and the soil and water MMR provide for maintenance of a sustained yield of timber without impairment to the productivity of the land.

h. Protecting Threatened and Endangered Species Habitat

Grizzly bear, Northern Bald Eagles and Grey wolves either occupy habitat year round, occur routinely as breeders and migrants or occur as transients from adjacent areas. Peregrine falcons pass through the area on migration flights, but only on a very infrequent basis. The eagles, wolves and falcons are protected by identifying essential habitat components and developing activities which may impact those habitats in such a way that the populations will not be disturbed. No special prescriptions were developed for these species because the application of other prescriptions can be adjusted to accommodate them in their essential habitat with very little change. Protecting nest sites, perch sites and roost sites for the birds can be accomplished within the context of each of the alternatives. Survival of the grey wolf depends upon the availability of prey which is linked to the MMR for wildlife species described above.

Management to protect grizzly bear habitat is much more complex. The MMR for grizzly habitat was built into the FORPLAN model in five steps. First, as described in section III of this appendix, the analysis areas (AA's) used in the formulation of the FORPLAN model were defined in part by the grizzly management situation of the area. Second, the GRIZTM prescription was made available to all Analysis Areas in grizzly habitat. Third, the option of selecting the TMBOPT prescription was removed in grizzly habitat. Fourth, the BGSRTM prescription was adjusted to remove thinning and extend the time frames for final harvests. Fifth, a scheduled output constraint was used to limit harvest in grizzly habitat to 8.3% of the area per decade. This percentage is based upon an empirical analysis of proportions of area needed to provide secure displacement habitat (Forest Planning Record: "Analysis of Spacial Restrictions for Grizzly Bear", Shadle and Christensen, March 19, 1984 - 1922.33). In combination these steps insure that all grizzly habitat is managed in ways that are felt to be compatible with the bear and harvest is

scheduled in such a way that sufficient secure areas should always be available.

i. Providing for Utility and Transportation Rights-of-Way and Corridors

Land disturbing activities such as timber harvest, land clearing, road construction, pipeline trenches and holes for power poles occur when providing rights-of-way. An analysis outside FORPLAN and prescriptions defined the kinds of land which should be excluded or avoided in permitting or constructing linear corridor facilities. Avoidance areas are areas where establishment and use of corridors conflict with land use or management objectives such as cultural or historic sites, wilderness areas, research natural areas and scenic areas. Potential corridors and existing rights-of-ways were identified in the Utility - Transportation Corridor Study for Montana mapped and considered in the alternatives and benchmarks.

j. Road Construction Standards

Access roads are necessary for efficient timber harvest, but road construction affects the soil, water, visual, and riparian resources. Safe road conditions for public and administrative use are necessary. Road standards vary depending upon the purpose of the road, the anticipated amount of use and the terrain traversed by the road.

The costs for local road construction used in FORPLAN assumes the following standards depending upon ELU grouping:

Depositional:	12 foot travel surface 10 MPH safe speed ditch spot rock surfacing
Erosional:	14 foot travel surface 10 MPH safe speed no ditch native surface
Breaklands:	14 foot travel surface 10 MPH safe speed no ditch native surface

Clearing widths vary by cross slope and the type and amount of rock crossed. Grades on this type of road are generally rolling and not steep.

The collector construction and reconstruction and the arterial reconstruction costs used in the analysis outside the FORPLAN model are linked to specific pieces of road and the road standards necessary to safely accommodate anticipated traffic flows. For details refer to planning record: "Capital Investment Needs Arterial/Collector Road System", Haugen, April 1981.

A management goal is to construct the minimum number of roads to permit the efficient removal of timber and mineral resources at the minimum standard necessary to meet the soil and water MMR and provide a safe facility. The standards and guidelines provide the necessary flexibility in design standards to accomplish this. The above noted standards are an estimate of the average that can be expected even though lower standards will be used where feasible.

k. Revegetating Temporary Roads

Short temporary roads are sometimes needed to efficiently transport logs; however, they can affect soil and water resources. The road density for the Forest's transportation system and log skid distances were designed to preclude the use of temporary roads in most cases. The minimum requirement is to re-establish forage or grass cover by seeding. Revegetation is included in the logging practices for prescriptions that harvest timber.

l. Maintaining Air Quality

This requirement was handled outside of FORPLAN. The Regional Guide directs the Forest to work through cooperative agreements with the states to manage smoke emissions. Scheduling the time and number of prescribed burns is done outside the FORPLAN model and in cooperation with states of Montana and Idaho.

m. Reforestation

Natural reforestation will occur on many acres. The costs in FORPLAN include planting on at least 20 percent of cutover acreage. Depending upon the management prescription applied and the ELU group this is stepped up to 30, 50 or 100 percent planting. Overall about a third of the cutover acres will be artificially regenerated. Planting occurs because of the long periods between cone crops, insect (spruce budworm) and disease (dwarf mistletoe) effects on seed sources and seedlings, grass competition or prevention of natural generation, and the need to close harvest openings to meet the hydrologic recovery rate established in the soil and water MMR.

n. 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. The modeling efforts for the MMR's described above generally spread cut blocks sufficiently that they would be less than 40 acres. The exception to this is the lodgepole pine working group. A 20 decade harvest constraint was used to insure that the 40 acre limitation is satisfied across the Forest.

2. Timber Policy Requirements

a. Nondeclining Yield (NDY)

This is a constraint on timber outputs which limits the periodic harvests to levels greater than or equal to the preceding period level. This constraint was used to insure a constant even flow of timber harvest levels throughout the planning period.

b. Sequential Upper and Lower Bounds (Seq. U&L Bounds) - Harvest Floors

In lieu of the NDY constraint on timber outputs, Seq. U&L Bounds and harvest floors were used to constrain the harvest flows to reasonable levels in specific benchmark diagnoses. Floors were used to establish a parameter on timber harvests which would not invoke substantial change in local consumptive patterns. Floors were a lower limit which may be a necessary limit on harvests to offer a level of reasonablness in a benchmark.

A floor of 138 MMBF/year (34.5 MMCF/year) was used in run 114GG1 and found to be non-binding. None of the diagnoses approached this level which is 80% of the last 10 years average harvest. This was the level at which it was assumed that local economic impacts would become intolerable.

Sequential upper and lower bounds were applied in two different ways to explore two levels of economic stability in the local community. The first, and least constraining, set of bounds permitted harvest to increase or decrease 25% from the preceding decade (114GG1-M). The second set of bounds permitted increases of 20% and decreases of up to 15% in the decade to decade harvest levels (114V01-N). These levels were designed, based upon Regional Office direction, to prevent an overly rapid change in the local economy.

c. Rotation Based on CMAI

Timber rotation lengths based on the culmination of mean annual increment (CMAI) for existing and regenerated stands is required by 36CFR 219.16(2)(iii). The Forest Service is directed to analyze timber rotation lengths based on the time required for stands to reach the culmination of net growth. CMAI assures that all stands scheduled for harvest have reached this level. CMAI was used to constrain the FORPLAN model with regard to when timber harvests could actually occur.

d. Rotation Based on Utilization Standards

In order to evaluate the effects of timber rotation lengths constrained by CMAI, three FORPLAN diagnoses were executed which permitted harvest to occur up to two decades prior to culmination (114HH2, 114JJ2, 114II2). This permitted harvest scheduling based upon the proposed Regional utilization standards.

3. Maximum Resource Output Objectives

Maximum resource output constraints were used to determine the physical or biological potential of achieving specific resource outputs for the Forest, and the resulting impact on other resources or programs. The outputs chosen for this analysis were timber, wildlife and wilderness. The resource outputs were maximized by first assigning FORPLAN an objective function to maximize the particular output, locking in the resulting optimal land assignment, and rerunning FORPLAN with the objective function of maximizing PNV. In the case of wilderness, the maximum potential wilderness designations were known beforehand so it was not necessary to use an objective function that would have identified these lands.

4. Analysis in Response to Comments on the DEIS

The major points which required further analysis as a result of public input were the following:

1. Economic stability in the impact area
   a. future timber supply from all sources
   b. Forest Service opportunity to provide stability
2. Old Growth
   a. managing as unregulated
   b. maintenance of additional amounts
3. Timber Values
   a. alternative price projections
   b. alternative base values
4. Projected Budgets

The analysis of these concerns resulted in the development of the Final Forest Plan (Alternative JF). Since the public input was primarily focused upon alterations to the Proposed Forest Plan, the Final Plan was developed by modifying it. The result is a Final Plan that differs from the Proposed Plan in several key respects, but that is essentially the same in most areas.

It is the purpose of this section to describe the analysis efforts that led to the decisions to modify the Proposed Plan into the Final Plan. This section relates only to issues 2 through 4 listed above because the timber supply issue is described in section V.H. of this Appendix.

a. Old Growth

The Proposed Plan called for managing about 8% of the Forest land below 5,500 feet in elevation for old-growth timber characteristics (stands above 5,500 feet in elevation are not suitable for reproduction of most old-growth associated wildlife species). The proposed management scheme called for thinning to help hasten the development of important old-growth characteristics and an extended harvest rotation period to permit contribution of the old growth for a number of years prior to harvest.
The public questioned the notion of "managing" old growth and suggested that the old growth be removed from the regulated timber base. In addition it was pointed out that research indicates that a minimum of 8 to 10 percent old growth is needed to supply the needs of dependent wildlife species. Some

commentors suggested that 10 percent or more old growth would be more appropriate and less risky than 8 percent.

The current old growth inventory indicates that about 11 percent of the Forest acreage below 5,500 feet can currently be considered old growth (quality varies). Due to the fire history of the area, it is not likely that this acreage was ever more than 15 to 20 percent. Because of the current old-growth situation and several comments recommending use of the 10 percent level, the 10 percent level of old growth was explored. The idea of removing old growth from the regulated base was also explored.

b. Timber Values

Late in the process of developing the DEIS and Proposed Plan, new timber price projections were developed for the 1985 RPA analysis by Adams and Haynes. Some commentors suggested that these projections be used in the development of the Final Forest Plan. The DEIS and Plan had used projections developed by Adams and Haynes for the 1980 RPA process. Both sets of projections show prices increasing over a fifty-year time frame although the 1985 estimates increase at a slower rate than the 1980 figures.

The base timber prices used in the DEIS were linked to 44 sales on the Kootenai National Forest between 1974 and 1980. Some commentors suggested that this was a period of particularly high prices and was not an appropriate basis for developing future prices.

The sensitivity of the Final Plan to these estimates was tested at two points in the development process. The decisions with regard to the other questions being addressed here were based upon what will be referred to as the "old economics"; meaning those used in the DEIS. The set of "new economics" includes the following:

- base prices linked to transaction evidence sale data for the years 1975 through 1984
- price projections as used in the 1985 RPA process
- road costs adjusted for real cost decreases experienced since 1978

Overall the "new economics" represents an update of the same data used in the DEIS reflecting actual experience and revised assumptions since the original data was compiled. The "old" economics was used in order to retain comparability with the alternatives described in the DEIS. The effect of the various decisions being addressed here can thus be compared to the effects of the various constraints applied in the analyses of the DEIS.

c. Projected Budgets

Several commentors pointed out that the budget levels associated with the Proposed Action were quite high. In addition the reality of recent legislation aimed at balancing the Federal budget has raised concerns. FORPLAN was used to help explore ways to reduce budget requirements while still providing resource outputs aimed at resolving the issues and concerns. The method used was to examine the effects of essentially eliminating the Forest's commercial and pre-commercial thinning programs. In addition the policy of converting stagnated lodgepole pine stands early in the planning horizon was reexamined.

Although the elimination of commercial thinning decreases budgets, the initial impetus for this change came from within the Forest Service where past experience showed that selling commercial thins would probably not be possible. Thus removal of commercial thinning from the model makes the plan more implementable and the projections of future volumes more realistic as well as decreasing the needed budget.

C. Displayed Benchmarks (Includes constraint analysis FORPLAN diagnoses and development of the Final Plan)

1. Overview

Sixteen FORPLAN diagnoses 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 designations to meet the purpose of each benchmark were estimated. This section describes the purpose of each benchmark. The major objectives and constraints are displayed in Table B-14:

Table B-14
Summary of Constraints Used in the Benchmark Analysis

RUNID - ALTERNATIVE	CONSTRAINT Ending Inventory	Rotation	Harvest Flow	Harvest Floor	MMR Constraints	Objective Function
114HH2	yes	utilization	±25%	yes	none	Max PNV
114A09	yes	CMAI	none	no	none	Max PNV
114U01	yes	CMAI	NDSY	no	none	Max PNV
114B06	yes	CMAI	none	no	Grizzly	Max PNV
114C04	yes	CMAI	none	no	Griz/soil/wat	Max PNV
114D04	yes	CMAI	none	no	Griz/soil/wat/div	Max PNV
114V01-N	yes	CMAI	+20/-15%	no	all	Max PNV
114F01-A	yes	CMAI	NDSY	no	all	Max PNV
114GG1-M	yes	CMAI	±25%	yes	all	Max PNV
114JJ2	yes	utilization	±25%	yes	all	Max PNV
114M01-H	yes	CMAI	NDSY	no	all	Max PNV
114II2	yes	utilization	NDSY	no	all	Max PNV
114W01-L	yes	CMAI	NDSY	no	all	Max PNV
114AA2-F	yes	CMAI	NDSY	no	all	Max PNV
114DD1	yes	CMAI	NDSY	no	all	Max PNV
114Y12-I	yes	CMAI	NDSY	no	all	Max PNV

As stated earlier, four types of benchmarks were developed for the Forest:

- Benchmarks that maximize present net value for the Forest and display the efficient levels of resource outputs.

- Resource benchmarks define the maximum potential for timber production, elk, and wilderness.

- The minimum level benchmark defines the minimum outputs associated with custodial management of the Forest and the unavoidable costs and benefits of public ownership.

- The current level benchmark defines the management most likely to be implemented in the future if current direction is followed.

Note, however, that additional benchmarks were run to analyze the costs of constraints (MMR's, timber policy requirements, etc.). These benchmarks are often variations of the first type.

The following procedures apply to all benchmarks (except as noted):

- Developed using FORPLAN.

- Developed using an objective function of maximizing PNV.

- Not constrained by budget levels. Except 114DD1 which was constrained to the minimum budget which was determined from a FORPLAN run that had an objective function of Minimize Costs for 20 decades. The "Minimize Cost" run was a stepping stone to the 114DD1 benchmark and is not considered a benchmark in itself.

- Comply with minimum management requirements, except those benchmarks designed to explore the effects of the MMR's (114HH2, 114A09, 114U01, 114B06, 114C04, 114D04).

- Are legally implementable. The only exceptions were Benchmarks 114HH2, 114A09, 114U01, 114B06, 114D04, 114JJ2, and 114II2 which were used to examine tradeoffs of legal constraints including those associated with MMR's.

- Timber management constraints were used to preclude harvest from 94,360 acres of existing wilderness.

- Regulated timber management was constrained to preclude it from all non-capable timberland.

- Timber harvest rotations were constrained to be greater or equal to CMAI except benchmarks 114HH2, 114JJ2, and 114II2 where earlier harvest was permitted in order to examine the effects of this constraint.

- A constraint was used so timber inventory in 200 years will equal or exceed the volume that would occur on a regulated Forest.

- Several variations of the present net value and resource benchmarks determined the opportunity cost and resource tradeoffs of meeting specific constraints, objectives, regulations, and policies.

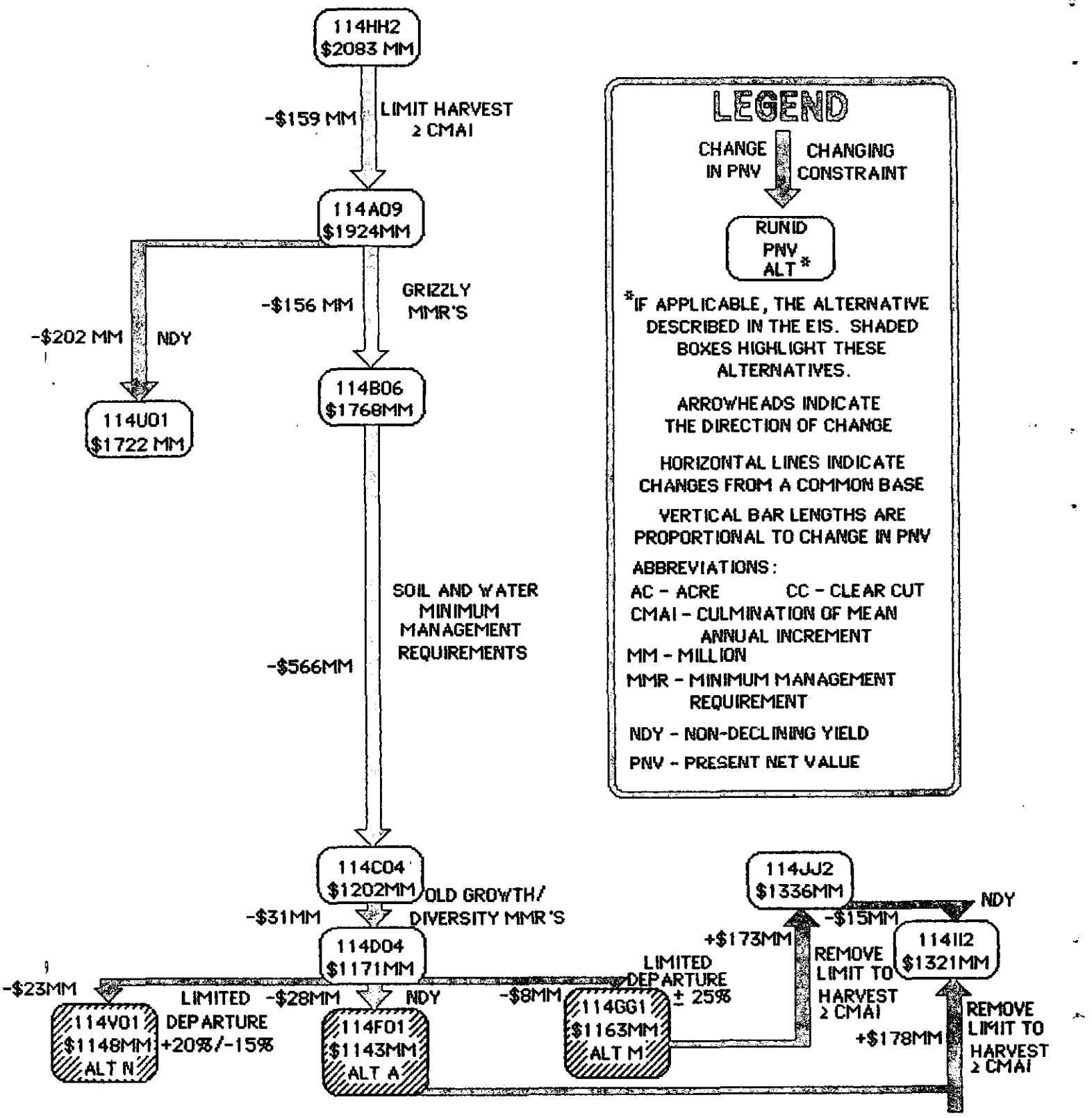
2. Displayed Benchmarks

The following figure is a graphic portrayal of the analysis described above. Details on the individual benchmarks follow the figure. The figure will be useful in following the discussion in this section as well as the section on Benchmark Analysis which follows.

The Table following after these figures briefly describes the outputs from each of the benchmarks, it is repeated at the end of this section for easy reference:

FOREGONE PNV OF THE MAJOR CONSTRAINTS EXPLORED IN THE ANALYSIS

(MMR'S AND LEGAL REQUIREMENTS)



FOREGONE PNV OF THE MAJOR CONSTRAINTS EXPLORED IN THE ANALYSIS

(MAXIMUM RESOURCE OUTPUTS, CURRENT DIRECTION AND MINIMUM LEVEL MANAGEMENT)

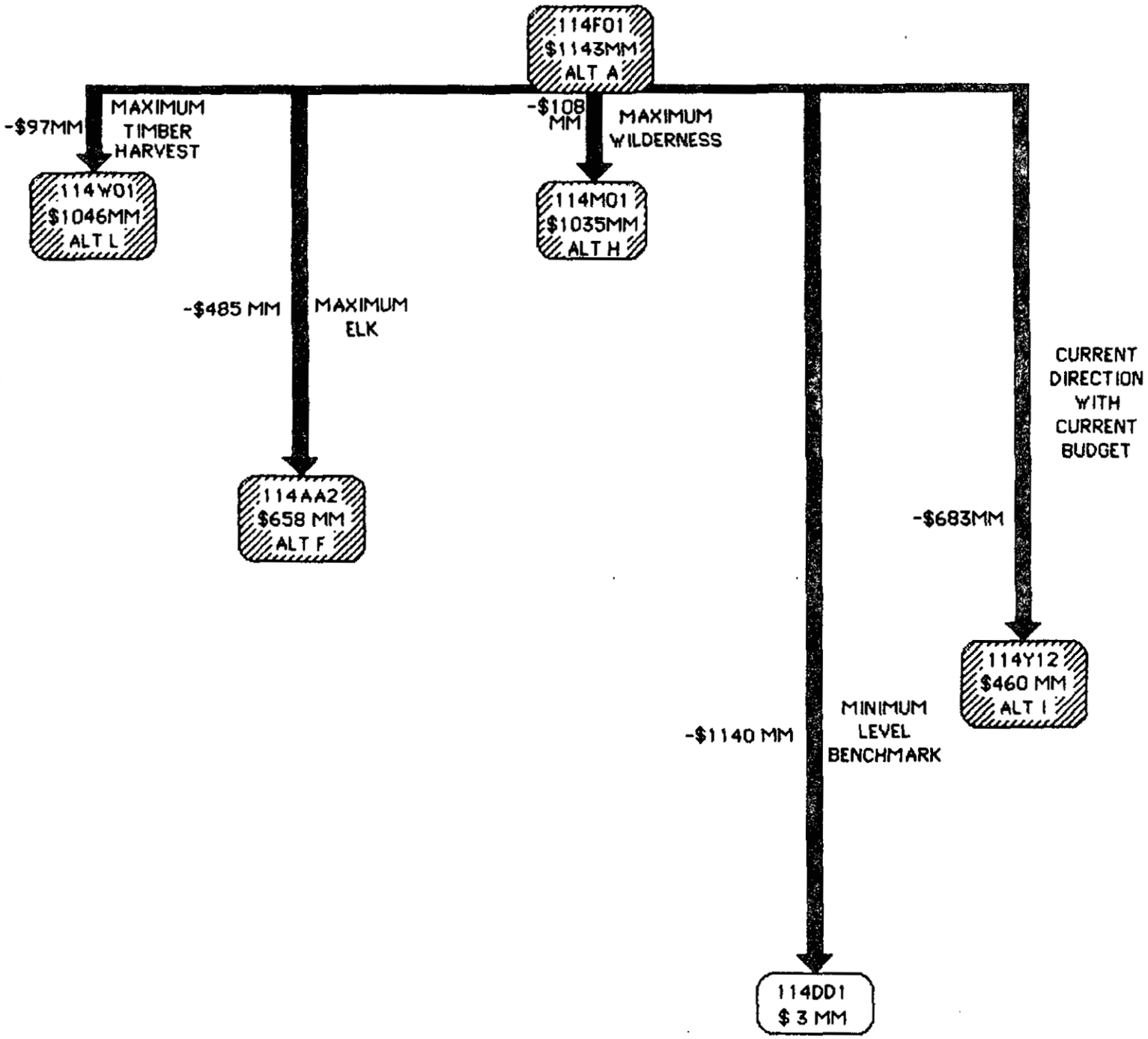


Table B-15
Resource Outputs of the Benchmarks

OUTPUT	UNIT of MEASURE	MAXIMUM PNV BENCHMARKS 114HH2	114A09	114U01	114B06	114C04	114D04	114V01-N	114F01-A	114GG1-M	114JJ2	114II2
WILDER & PWLDER	M Acre	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4
Other Unroaded Mgmt	M Acre	219.4	218.8	249.3	241.8	285.1	295.3	283.1	283.4	295.3	296.6	274.8
Roaded & Other Mgmt	M Acre	1932.0	1932.6	1902.1	1909.6	1866.3	1856.1	1868.3	1863.0	1856.1	1854.8	1876.6
Suitable Timberland	M Acre	1786.6	1752.3	1793.1	1693.4	1457.2	1477.6	1496.7	1486.8	1484.1	1518.0	1534.6
Decade 3 Elk Pop.	M Elk	6.3	6.5	7.1	8.5	8.5	8.4	8.5	8.6	8.4	8.5	8.6
LTSY	MMBF/yr	484	316	490	260	228	231	339	348	334	350	350
Allowable Sale	MMBF/yr											
Decade 1		474	261	380	275	390	367	247	226	262	311	271
Decade 2		721	1218	467	884	173	185	240	253	224	253	282
Decade 3		486	1	468	198	187	175	283	249	274	309	321
Decade 4		595	365	404	381	433	409	322	314	326	335	349
Decade 5		449	399	443	287	388	403	329	336	437	368	366
Decade 6		325	989	474	937	423	409	340	349	362	364	364
Decade 7		240	92	438	152	250	218	319	334	251	417	324
Decade 8		264	74	441	130	220	185	296	313	245	339	322
Decade 9		310	440	389	308	455	487	317	326	322	300	337
Decade 10		386	374	392	233	145	127	282	290	238	254	313
Decade 11		486	32	457	125	191	205	287	295	306	316	327
Decade 12		650	519	488	507	739	743	345	348	393	328	330
Decade 13		698	2024	533	1371	335	308	406	396	502	378	329
Decade 14		574	47	555	324	288	267	395	391	371	497	329
Decade 15		342	524	590	362	372	405	381	382	336	344	362
Decade 16		337	179	551	272	405	375	370	369	436	294	363
Decade 17		386	1510	503	1247	671	646	378	373	445	223	346
Decade 18		523	88	541	133	291	277	377	371	346	270	365
Decade 19		531	74	573	214	256	251	385	378	262	295	337
Decade 20		451	448	490	406	465	454	339	345	278	350	347
Roads for Management	Miles	12567	12404	12612	12144	11397	11380	11267	11272	11226	11857	11464
PNV (4%)	$MM	2083	1924	1722	1768	1202	1171	1148	1143	1163	1336	1321

Table B-15 (Continued)
Resource Outputs of the Benchmarks

MAXIMUM RESOURCE, MINIMUM MANAGEMENT, AND CURRENT LEVEL BENCHMARKS						
OUTPUT	UNIT of MEASURE	114W01-L MAX TIM	114AA2-F MAX ELK	114M01-H MAX WILD	114DD1 MINLVL	114Y12-I CURRENT
WILDER & PWLDER	M Acre	94.4	94.4	498.1	94.4	157.3
Other Unroaded Mgmt	M Acre	220.6	273.0	54.0	378.4	250.2
Roaded & Other Mgmt	M Acre	1930.8	1878.4	1693.7	1773.0	1838.3
Suitable Timberland	M Acre	1788.4	1132.3	1361.1	169.4	1422.2
Decade 3 Elk Pop.	M Elk	8.5	9.9	8.6	7.4	7.3
LTSY	MMBF/yr	455	250	325	0	388
Allowable Sale	MMBF/yr					
Decade 1		255	164	208	2	150
Decade 2		245	191	222	2	152
Decade 3		264	190	223	2	157
Decade 4		316	185	273	4	143
Decade 5		345	198	295	4	162
Decade 6		339	197	310	4	172
Decade 7		360	193	300	4	163
Decade 8		327	181	270	7	180
Decade 9		385	264	348	28	164
Decade 10		341	224	290	28	194
Decade 11		375	242	291	28	162
Decade 12		410	244	323	27	172
Decade 13		458	241	357	27	169
Decade 14		427	256	359	27	164
Decade 15		427	228	337	27	172
Decade 16		449	261	333	26	177
Decade 17		432	236	349	26	188
Decade 18		426	239	350	27	201
Decade 19		464	243	339	26	207
Decade 20		455	241	318	27	215
Roads for Management	Miles	12363	9847	10591	6000	9837
PNV (4%)	$MM	1046	658	1035	3	460

a. **Benchmark 114HH2**

This benchmark was developed to explore the effects of upper and lower bounds, a harvest floor and CMAI with an otherwise unconstrained model. It also forms a base run for use in formulating and evaluating minimum management requirements. None of the minimum management requirements were included. Harvest was allowed to occur up to two decades prior to CMAI thus allowing the objective function (Maximize PNV) to drive the run to the most efficient schedule of timber harvest based upon the proposed Regional utilization standards. A sequential upper

limit of 25% and lower limit of 25% was applied to the timber harvest schedule from decade to decade to offer a level of reasonableness to the benchmark. In addition a floor of 80% of the last decade actual harvest (345 MMCF) was applied to all decades.

The PNV was the highest of any of the benchmarks at $2,083,000,000 (4%). Timber volumes fluctuated within the ±25% limits. The 345 MMCF floor was never reached so it can be concluded that the opportunity cost of removing the floor is zero. The elk population is the lowest of all the benchmarks due to the amount of timber harvesting activity done without regard to elk habitat. This benchmark could not be legally implemented. The strongest argument for its illegality is its lack of the minimum management requirements necessary to satisfy the Endangered Species Act and provide for a viable population of grizzly bear.

b. Benchmark 114A09

The purpose of this benchmark was to provide a basis for calculating the opportunity costs of sequentially applying the minimum management requirements. No minimum management requirements were included, but harvest was constrained to occur at or after culmination of mean annual increment (CMAI). There were no timber harvest constraints so the harvested volumes fluctuated wildly (from 1 MMBF/year in decade 3 to 2024 MMBF/year in decade 13).

c. Benchmark 114U01

The purpose of this benchmark was to provide a basis for calculating the opportunity cost of non-declining sustained yield free from the influences of other constraints. The minimum management requirements were not included, but harvest was constrained based upon CMAI. Thus, in formulation, this benchmark is identical to 114A09 except for the NDSY constraint and the link to long term sustained yield. 36 CFR 219.12 (e)(1)(iii)(C)

d. Benchmark 114B06

This benchmark is similar to 114A09 except that it includes the minimum management requirements for grizzly bear recovery as discussed in Section IV of this Appendix. The purpose of the run is to estimate the opportunity cost of the grizzly bear minimum management requirements. This MMR was added first because it is associated with the legal requirements of the Endangered Species Act and these have been found to be critical in past modeling efforts.

e. Benchmark 114C04

This benchmark is similar to 114B06 except that the constraints associated with the minimum management requirements for soil and water conservation are added. This MMR was added second because it is associated with the legal requirements of the Water Quality Act. Its purpose is to provide a basis for estimating the opportunity cost of this MMR.

f. Benchmark 114D04

This benchmark is similar to 114C04 except that the constraints associated with supplying diversity are added. The purpose of this benchmark is to provide a basis for estimating the opportunity cost of the diversity MMR.

g. Benchmark 114V01-N

This benchmark is similar to 114D04 except that harvest flow constraints have been added along with the 40 acre clear cut limitations. The harvest flow constraints permit a maximum increase in harvest level of 20% (in cubic measure) from one decade to the next and a maximum decrease of 15% from one decade to the next. No floors or ceilings are used. The constraint to model 40 acre clearcut size limits is discussed above. This benchmark, when compared to 114D04 describes the opportunity cost of the upper and lower bounds combined with the the 40 acre clear cut limits. This benchmark is carried forward as a departure alternative (Alternative N).

h. Benchmark 114F01-A

This benchmark is similar to 114V01-N except that harvest is constrained to non-declining flow. This benchmark, when compared to the following other benchmarks is the basis for estimating the noted opportunity costs:

114D04 - opportunity cost of the NDSY constraint together with the 40 acre clearcut limitations.

114V01-N - incremental opportunity cost of constraining from a limited departure to NDSY

114GG1-M - incremental opportunity cost of constraining from a broader departure to NDSY and the estimates of the mix of resource uses combined with a schedule of outputs and costs which maximizes the PNV of those major outputs which have an established market price <u>and</u> those major outputs which have an established market price or an assigned monetary value given NDSY (36 CFR 219.12 (e)(1)(iii)(C)). See the planning record noted under 114GG1-M, below, for the analysis which demonstrated that there is insignificant change in results whether the non-market (assigned) values are used in the model or not.

114II2 - opportunity costs of rotations restricted to CMAI given the MMR's and NDSY along with the parameters common to all the benchmarks

114U01 - opportunity costs of all the MMR's combined given NDSY and the other parameters of both benchmarks

114JJ2 - opportunity costs of NDSY and rotations restricted to CMAI from a departure base

i. Benchmark 114GG1-M

This benchmark is similar to 114D04 except that the harvest flow is constrained with sequential upper and lower bounds of ±25% and a 20 decade floor of 345 MMCF per decade (the 345 MMCF floor was non-binding). This benchmark has two purposes. First, when compared to 114D04 it displays the opportunity cost of the sequential upper and lower bounds and the 40 acre clear cut limitations. Second, when compared to 114JJ2 it displays the opportunity cost of harvesting at or after CMAI. This benchmark is carried forward as alternative M because it produced the highest PNV of all when all MMR's were included and the harvest schedule was constrained to reasonable fluctuations. The opportunity costs of the alternatives are measured from this benchmark. This is the benchmark which describes the mix of outputs along with the schedule of outputs and costs which maximizes the PNV of those major outputs which have an established market price (36 CFR 219.12(e)(1)(iii)(A). An analysis demonstrated that the non-market values do not significantly alter the output mix or schedule (Planning Record: "Established Market Prices VS Assigned Monetary Values in the FORPLAN Model", Haugen, December 21, 1984). On this basis, this benchmark also estimates the mix and schedule which maximizes PNV of those major outputs which have an established market price or are assigned a monetary value (36 CFR 219.12(e)(1)(iii)(B)).

j. Benchmark 114JJ2

This benchmark is similar to 114GG1-M except that harvest is permitted up to two decades prior to CMAI. This benchmark, when compared to 114GG1-M, shows the opportunity cost of restricting harvest to CMAI given all the MMR's. It displays the effect of CMAI for both the market and non-market value situations described above (114GG1-M) in accordance with 36 CFR 219.12(e)(1)(iii)(C). In comparison with 114HH2, this benchmark displays the opportunity cost of the minimum management requirements with a limited departure from NDSY.

k. Benchmark 114II2

This benchmark is similar to 114JJ2 except that NDSY is added. It is also similar to 114F01-A except that harvest is permitted prior to CMAI. It includes all the MMR's and NDSY, but harvest is not constrained by CMAI. In comparison with 114JJ2, the opportunity cost of NDSY can be determined given that PNV is maximized without regard to harvest after CMAI. In comparison with 114F01-A, the opportunity cost of harvesting after CMAI can be determined given that all the MMR's and NDSY are in effect.

l. Benchmark 114W01-L

This benchmark is similar to 114F01-A except that FORPLAN is constrained to harvest the maximum possible amount of timber. The maximum timber volume constraint was based upon run 114T03 which had an objective function of Maximize Timber for 20 decades. In comparison with 114F01-A, this benchmark displays the opportunity cost of maximizing timber production (36 CFR 219.12(e)(1)(ii)).

m. Benchmark 114AA2-F

This benchmark is similar to 114F01-A except that FORPLAN is constrained to produce the maximum number of elk possible. The maximum production level of elk was based upon run 114Z01 which had an objective function of Maximize Elk for 20 decades. In comparison with 114F01-A, this benchmark displays the opportunity cost of maximizing elk production and, by association, other wildlife for which elk acts as an indicator species (36 CFR 219.12(e)(1)(ii)).

n. Benchmark 114M01-H

This benchmark is similar to 114F01-A except that FORPLAN is constrained so that all acres which are suitable for Wilderness designation are modeled as Proposed Wilderness. In comparison with 114F01-A, this benchmark displays the opportunity cost of designating all inventoried roadless areas as wilderness (36 CFR 219.12(e)(1)(ii)). In addition to this benchmark, several other FORPLAN diagnoses were used to analyze the incremental addition of roadless areas to designated Wilderness. Benchmark 114M01-H and four of these additional diagnoses are brought forward as alternatives to be discussed later: 114G02-B, 114H02-C, 114J01-E and 114L01-G.

o. Benchmark 114DD1

This benchmark is similar to 114F01-A except that Forest Service budget costs are constrained to the minimum levels. The cost constraints were based upon run 114P01 which had an objective function of Minimize Cost for 20 decades. This benchmark, when compared to 114F01-A, displays the opportunity cost of managing the Forest to maintain and protect it as a part of the National Forest System with essentially no production of controllable outputs while meeting the minimum management requirements (36 CFR 219.12(e)(1)(i)).

p. Benchmark 114Y12-I

This benchmark is similar to 114F01-A in that all the MMR's are satisfied. The major differences with 114F01-A involve constraining all land designations to match the Current Direction on the forest and applying constraints so that the budget is kept as close as possible to the current budget over the 20 decade time frame. The land designations are based upon the designations contained in the Unit Plans developed for the Forest over the last several years. These earlier designations were updated to account for new laws and knowledge relating to the minimum management requirements. In comparison with 114F01-A, this benchmark displays the opportunity cost of continuing management on the Forest as it has been in the past (36 CFR 219.12(e)(2)).

3. Development of the Final Plan

A series of FORPLAN diagnoses were used to help analyze the effects of various actions suggested by the public. These diagnoses are benchmarks in the sense that PNV is maximized and cost-efficient levels of output are developed. They differ somewhat from the benchmarks discussed earlier because the focus is upon changes to the proposed action rather than independent exploration of constraints as discussed above. The figure on the following page graphically portrays the relationships between the diagnoses described below and provides some key results. The analysis scheme can be more easily followed if you refer to the chart as you read the following narrative. More details are provided in section VI.D.6., below.

a. Run 11402B

The purpose of this run was to test the sensitivity of land suitabilities and other factors when the entire set of "new" economics are applied. This run is the Maximum PNV benchmark of the DEIS (114GG1) with the updated base timber prices, price trends and road costs. Constraints are identical to those described above for Benchmark 114GG1. When compared to Benchmark 114GG1, the maximum effect of the "new" economics can be seen. Diagnoses 11402B and 114GG1 were not modifications of the Proposed Plan and thus are not shown in Figure B-15. Run 114GG1 is displayed on Figure B-14, above.

b. Run 11412A

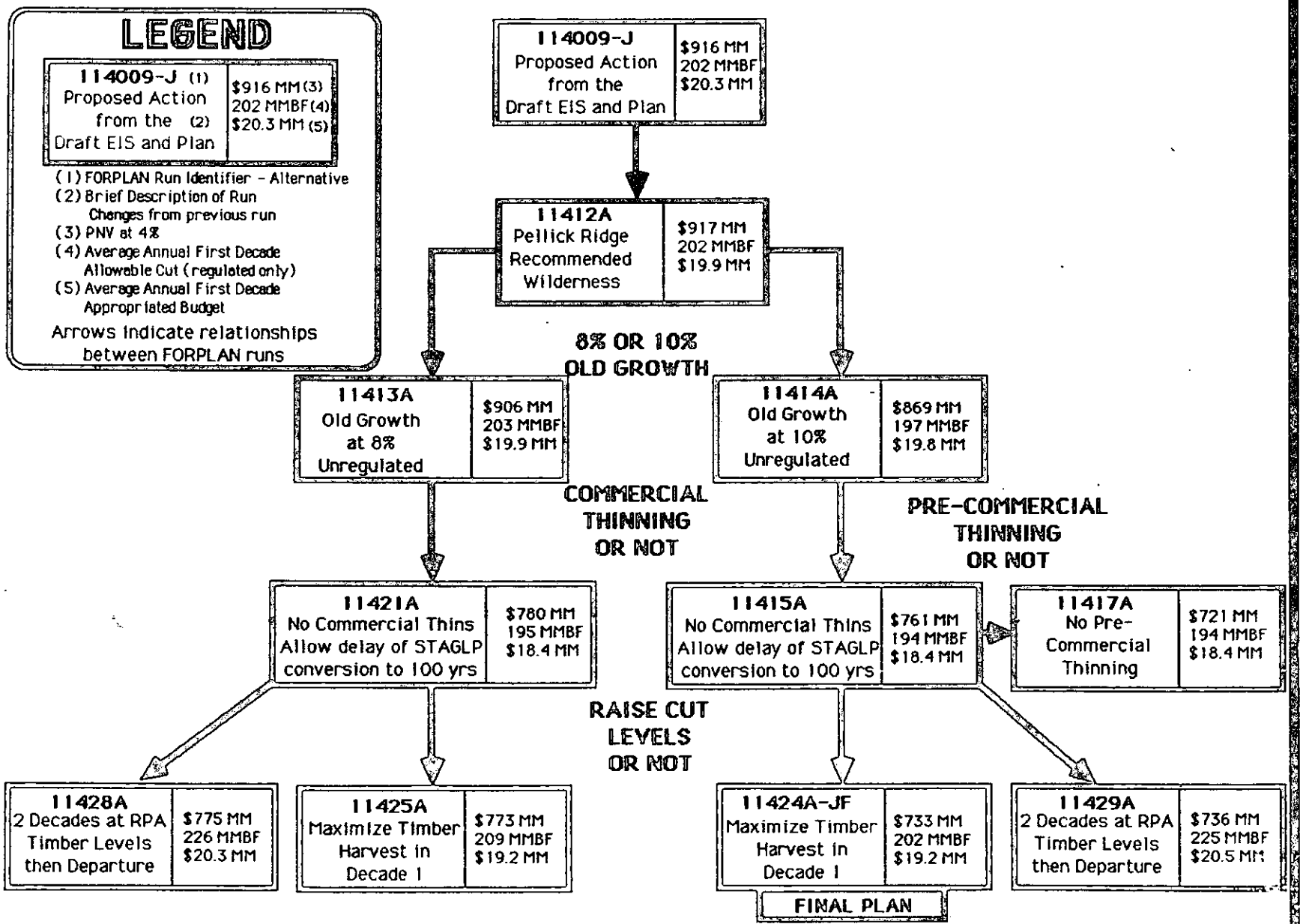
This run is essentially an update of the Proposed Plan model (114009) with the redesignation of Pelleck Ridge (Scotchman Peaks Roadless Area) to Recommended Wilderness. The update involved numerous minor adjustments to better model the Proposed Action. The redesignation of Pelleck Ridge involved 12,000 acres. Less than 500 of those acres had been designated for timber management in the Proposed Plan. Earlier recommendations for non-wilderness designation included consideration of potentially high mineral values. Recent field analyses in the vicinity have provided evidence that mineral values are not as great as earlier data would have suggested. In comparison to 114009, the Proposed Action, this run displays the effect of redesignating Pillick Ridge to Recommended Wilderness. The decision was made that this redesignation had no significant impact upon other resources while adding an important component to the National Wilderness System. For this reason the remaining diagnoses in the sequence leading to the Final Plan all retain the Pelleck Ridge proposal.

c. Run 11413A

This run displays the effects of removing the old growth (MA 13) from the regulated timber base when compared to run 11412A. About 5 percent of the Forest's acreage below 5500 feet in elevation was in MA 13 in this run with another 3 percent existing in other designations such as MA's 2, 7, 8 which do not include regulated timber harvest. This provided for a total of 8 percent of the Forest's lands below 5,500 feet in elevation with old-growth timber.

FIGURE B-15

FORPLAN RUNS LINKED TO DECISION POINTS DRAFT TO FINAL EIS



d. Run 11414A

This run increases the old growth acreage (MA 13) so that about 10 percent of the Forest's acreage below 5500 feet in elevation is in old-growth timber. In comparison to run 11412A it displays the effect of unregulating old growth at the 10 percent level. In comparison to run 11413A it displays the effect of increasing the unregulated old growth from 8 percent to 10 percent. This run and all other diagnoses depicting 10 percent unregulated old growth modeled the additional old growth as occurring on the most productive timber lands (Mixed Conifer I, Depositional). Thus, these diagnoses displayed the maximum impact of this change. The actual locations of old growth stands are shown on the Management Area Map as MA-13.

e. Run 11415A

This run was used to explore the effects of removing requirements for commercial thinning and delaying conversion of stagnated lodgepole pine for as long as 100 years into the future. The intent was to reduce budget expenditures and determine the associated impacts of those reductions. The removal of commercial thinning requirements reduced the acreage treated from 25,000 acres to 13,000 acres for a budget savings of $1.4 million annually. As originally modeled, commercial thinning generally improved PNV even though actual experience revealed that it is very difficult to sell commercial thinning sales. The reasons for this difficulty include a combination of complex factors (low volume per acre, small piece size, protection of the residual stand etc.) which make logging costs higher than originally estimated and lack of demand for the type of product produced at the prices necessary for successful sales. This run reveals that the products of commercial thinning can be replaced with the products of final harvest which are currently more in demand. Thus, even though this run reveals a reduction in PNV with the removal of commercial thins, it is more practical not to require them when actual implementation of the plan is considered in light of the current economic climate. The Final plan permits commercial thinning, but does not require it as did the Proposed Action. For more details on the topic of commercial thinning see "Commercial Thinning and the Issues - Budgets vs PNV", Haugen May 13, 1987, in the planning records and sections VI.B.4.c; VI.D.6.c; VIII.C.2.9(2)(a); and VIII.C.2.p(2)(b) of this Appendix. In comparison to run 11414A the modeled effect of these changes can be seen at the 10 percent old growth level. In comparison to run 11421A, described below, the difference between 8 and 10 percent old growth levels is seen.

f. Run 11416A

This run is identical to run 11415A except that the new economic data is used. The effect of the new economic data can be seen in comparison to 11415A. This run is not displayed on the above chart.

g. Run 11417A

This run explored the effects of eliminating the pre-commercial thinning program in addition to the commercial thinning program and delaying the conversion of stagnated lodgepole stands for up to 100 years. The effect of eliminating pre-commercial thinning can be seen in the comparison to run 11415A.

h. Run 11421A

This run explored the effects of eliminating the commercial thinning program and delaying the conversion of stagnated lodgepole pine while providing unregulated old growth at the 8 percent level. The comparison to run 11413A displays the effects of these changes. The comparison to run 11415A shows the difference in effects between the 8 and 10 percent old growth levels.

i. Run 11424A (Final Plan - Alternative JF)

This run was designed to determine the effects of maximizing timber production in the first decade under a non-declining harvest schedule. The intent was to help stabilize timber supplies at a level closer to the historic levels experienced in the area in order to reduce the potential for community disruption. This run shows the effects of maximizing timber in the first decade at the 10 percent old growth level when compared to run 11415A. The difference between the 8 percent and 10 percent old growth levels can be seen in the comparison to run 11425A, described below. Run 11424A represents the Final Plan (Alternative JF).

j. Run 11425A

This run, like 11424A, was designed to determine the effects of maximizing timber production in the first decade, but at 8 percent old growth rather than 10 percent. The difference between the effects at 8 and 10 percent old growth can be seen in the comparison to run 11424A. The effect of maximizing timber in the first decade at 8 percent old growth can be seen in the comparison to run 11421A.

k. Run 11428A

This run explores the effects of increasing harvest levels for two decades by allowing a departure from non-declining yield to occur after decade 2. The RPA timber goals are met in the first two decades. This run has old growth at the 8 percent level so this approach to increasing early timber harvests can be compared to run 11425A which maximized the first decade harvest under non-declining yield. The effect of the increased harvest levels can be seen in the comparison to run 11421A. The difference between the 8 and 10 percent old growth levels can be seen in the comparison to run 11429A, described below.

1. Run 11429A

Like run 11428A, this run explores the effects of increasing harvest levels for two decades by allowing a departure from non-declining yield to occur after decade 2. This run has old growth at the 10 percent level so it can be compared to 11415A which had no increased harvest levels. It can also be compared to run 11424A which used the approach of increasing volumes by maximizing timber in the first decade under non-declining yield. The difference between the 8 and 10 percent old growth levels can be seen in the comparison to run 11428A.

D. Benchmark Analysis - Summary of Opportunity Costs Associated With Modeling Constraints

The monetary tradeoffs of the management opportunities explored during the analysis of the management situation (AMS) and the development of the Final Plan can be determined by comparing the benchmarks or diagnoses described in Section C. Monetary tradeoffs are limited to priced benefits. In this section, the tradeoffs of timber harvest floors and ceilings, minimum management requirements, timber policy constraints, market vs. assigned values, additional timber modeling constraints, providing maximum resource outputs, current direction, and the minimum level are discussed. Note that the "opportunity cost" reference points vary in the benchmark discussion. Alternative comparisons will use benchmark 114GG1 (Alternative M) as a common reference point.

1. Opportunity Cost of Timber Harvest Floors and Ceilings

A comparison of benchmarks was performed to portray the opportunity cost of limiting timber harvest to reasonable levels, given that all minimum management requirements are satisfied in FORPLAN. Benchmark 114GG1-M revealed that a floor of 80% of the last decade's timber cut (345 MMCF) was non-binding and thus had an opportunity cost of zero. The comparison of 114GG1-M to 114D04 reveals that constraining harvest fluctuations to ±25% from one decade to the next has an opportunity cost of about $8 million. This is about a 1% decrease in PNV. Comparing 114V01-N to 114D04 reveals a decline in PNV of about $23 million (2%) when harvest levels can fluctuate upward by 20% a decade and downward by 15% per decade maximum. The latter case has a larger decrease in PNV simply because the limits are more constraining. In both cases the effect of constraining the harvest schedule is quite small because the satisfaction of the minimum management requirements already go a long way toward regulating the harvest schedule to a reasonable level. The decreases in PNV are caused by deferring some harvest from the first decade to later decades and by harvesting more in some decades and less in other decades than the amount which would maximize PNV without the constraints.

Run Comparison:

114D04	PNV = $1171 million	no scheduling constraint
114GG1	PNV = $1163 million	345 MMCF floor and ±25%/decade
114V01	PNV = $1148 million	+20% to -15% per decade

Opportunity Cost:

345 MMCF floor	= $0 (0% reduction)
±25% per decade	= $8 million (1% reduction)
+20 to -15% per decade	=$23 million (2% reduction)

2. Opportunity Cost of Minimum Management Requirements (MMRs)

The tradeoffs associated with MMRs were analyzed by comparing the opportunity costs of the following pairs of benchmarks: 114A09 vs 114B06 (grizzly), 114B06 vs 114C04 (soil and water), 114C04 vs 114D04 (diversity) and 114D04 vs 114GG1-M (40 acre clearcuts). These incremental comparisons were developed under the timber policy constraint of harvest at or after culmination of mean annual increment (CMAI). The total opportunity cost of the whole package of MMR's was developed on the same basis.

a. Endangered Species Act - Grizzly Bear

Benchmarks compared:	114A09	PNV = $1924 Million
	114B06	PNV = $1768 Million

Opportunity cost:
$156 Million (8 percent reduction, 114A09 base)

PNV is reduced 8 percent by the substitution of GRIZTM prescriptions for TMBOPT prescriptions, no thinning in the BGSRTM prescription and a limit on harvest to a maximum of 8.3 percent of the area in each grizzly situation per decade. The substitution of prescriptions which return a lower PNV was one cause of the decline in PNV, but the largest impact was a result of the harvest area constraint. This constraint reduced the fluctuations in timber harvest a great deal (see Table B-12) thus removing the options to harvest large amounts of timber early when PNV could be higher.

b. Soil and Water Protection

Benchmarks compared:	114B06	PNV = $1768 Million
	114C04	PNV = $1202 Million

Opportunity cost:
$566 Million (29 percent reduction, 114A09 base)

PNV is reduced another 29 percent by the addition of a set of scheduled output constraints which limit cutting on a watershed by watershed basis so that runoff will not cause damage to stream channels. The constraints take into account the current condition of the forest canopy and the fact that regrowth after cutting will reduce runoff over time thus allowing further cutting in the watershed. The major cause of the reduced PNV is the fact that the constraints force the harvest to be spread out over time thus reducing early harvest of large trees. This is particularly evident in decade 2 where harvest is reduced from 884 MMBF per year to 173 MMBF per year. The constraint is applied over 20 decades so these early reductions in harvest level can only gradually be picked up later.

c. Diversity

Benchmarks Compared: 114C04 PNV = $1202 Million
114D04 PNV = $1171 Million

Opportunity cost:
$31 Million (2 percent reduction, 114A09 base)

PNV is reduced by an additional 2 percent when specific lands are set aside for old growth management and a total of 140,000 acres of land are constrained to supply trees older than 250 years by decade 13. This reduction is, again, a function of altered harvest schedules and substitution of prescriptions which do not return as high a PNV as others.

d. Forty-Acre Clearcut Limits

Benchmarks Compared: 114D04 PNV = $1171 Million
114GG1-M PNV = $1163 Million

Opportunity cost:
$0 (0 percent reduction, 114A09 base)

PNV is not affected when a constraint limiting harvest outside of grizzly habitat to 25 percent of the area per decade is applied. The forty acre clearcut limits were applied along with upper and lower harvest bounds in benchmark 114GG1-M, however the constraint designed to model 40 acre clearcut limits was not binding in any decade. This constraint was also not binding in benchmarks 114V01-N and 114F01-A. This demonstrates that the other minimum management requirements disallow cutting units larger than 40 acres. The two constraints which accomplish this are those that limit harvest in grizzly habitat to 8.3 percent or less per decade and those that limit cutting to prevent stream channel damage.

e. All Minimum Management Requirements

The complete package of MMR's was evaluated in three ways described below.

(1) Rotations Based Upon CMAI - No Harvest Schedule Constraint

Benchmarks Compared: 114A09 PNV = $1924 Million
114D04 PNV = $1171 Million

Opportunity Cost:
$753 Million (39 percent reduction, 114A09 base)

PNV is reduced by 39 percent when all the minimum management requirements are applied under the assumption that harvest will occur at or later than CMAI and the harvest schedule is not otherwise constrained.

(2) Rotations Based Upon CMAI With NDY/LTSY Link

Benchmarks Compared: 114U01 PNV = $1722 Million
114F01-A PNV = $1143 Million

Opportunity Cost:
$579 Million (34 percent reduction, 114U01 base)

PNV is reduced by 34 percent when all the MMR's are applied under the assumption that harvest will occur at or later than CMAI and the harvest schedule is constrained to non-declining yield with a link to long term sustained yield.

(3) Rotations Based Upon Utilization Standards With Sequential Upper and Lower Bounds

Benchmarks Compared: 114HH2 PNV = $2083 Million
114JJ2 PNV = $1336 Million

Opportunity Cost:
$747 Million (36 percent reduction, 114HH2 base)

PNV is reduced by 36 percent when all the MMR's are applied under the assumption that rotations are based upon utilization standards rather than CMAI and sequential upper and lower bounds limit harvest to reasonable levels.

3. *Opportunity Cost of Timber Policy Constraints*

The timber policy constraints were analyzed to determine their impact on PNV. Two constraints, NDY/LTSY link and rotations based on CMAI, were applied to the FORPLAN model separately to determine their opportunity cost and then as a set to determine the net effect.

a. Rotations Based Upon CMAI

Benchmarks Compared: 114JJ2 PNV = $1336 Million
114GG1-M PNV = $1163 Million

Opportunity Costs:
$173 Million (13 percent reduction, 114JJ2 base)

PNV declines 13 percent when rotations are constrained to occur at or after CMAI given that harvest fluctuations are kept to reasonable limits by sequential upper and lower bounds and all MMR's are in effect.

b. NDY/LTSY Link

The opportunity cost of this constraint varies depending upon where in the analysis process it is applied. This difference results from the complementary relationship between the application of the MMR's and NDY. As more MMR's are applied the harvest schedule tends to flatten out over time until it becomes nearly non-declining. The following three comparisons display the situation:

(1) No MMR's, Rotations Based Upon CMAI, No Bounds

Benchmarks Compared: 114A09 PNV = $1924 Million
114U01 PNV = $1722 Million

Opportunity Cost:
$202 Million (10 percent reduction, 114A09 base)

PNV declines 10 percent when the NDY/LTSY link constraint is applied when rotations are defined by CMAI, no MMR's are in effect and harvest is not otherwise constrained initially. The decline of PNV between this pair of benchmarks ($202 MM) can be compared to the decline in PNV between the following pair ($28 MM) to indicate that the application of the MMR's go a long way toward achieving non-declining yield independently of the constraint.

(2) All MMR's, Rotations Based Upon CMAI, No Bounds

Benchmarks Compared: 114D04 PNV = $1171 Million
114F01-A PNV = $1143 Million

Opportunity Cost:
$28 Million (2 percent reduction, 114D04 base)

PNV declines 2 percent when the NDY/LTSY link constraint is applied when rotations are defined by CMAI, all MMR's are in effect and harvest is not otherwise constrained initially.

(3) All MMR's, Rotations Based Upon Utilization Standards, U & L Bounds

Benchmarks Compared: 114JJ2 PNV = $1336 Million
114II2 PNV = $1321 Million

Opportunity Costs:
$15 Million (1 percent reduction, 114JJ2 base)

PNV declines 1 percent when the NDY/LTSY link constraint is applied when rotations are defined by utilization standards, harvest fluctuations are kept to reasonable limits by sequential upper and lower bounds and all MMR's are in effect.

c. Rotations Based Upon CMAI and NDY/LTSY Link

Benchmarks Compared: 114JJ2 PNV = $1336 Million
114F01-A PNV = $1143 Million

Opportunity Cost:
$193 Million (14 percent reduction, 114JJ2 base)

PNV declines 14 percent when the two constraints are applied together given that all MMR's are in effect and harvest fluctuations are constrained by sequential upper and lower bounds prior to their application.

d. Utilization Standards

Although not considered benchmarks for the purposes of this discussion, two pairs of FORPLAN diagnoses were used to explore the the effect of the proposed regional utilization standards.

(1) Timber Volume Effect

Run Comparison: 114X01 (first decade volume 1002 MMCF)
114EE1 (first decade volume 933 MMCF)

Opportunity Cost: 69 MMCF (7 percent reduction)

The objective function for both diagnoses was "Maximize Timber for 1 decade". Both have the NDY/LTSY link constraint and include no MMR's. Because the objective function is not "Maximize PNV" they are not comparable to the benchmarks on monetary terms. Run 114EE1 used timber yield tables which depicted the current utilization standards while 114X01 depicts the proposed regional utilization standards. There is a seven percent reduction in volume when the current utilizations standards are applied in lieu of the proposed regional standards.

(2) Opportunity Cost

Run Comparison: 114009-J PNV = $916 Million
114KK2 PNV = $840 Million

Opportunity Cost: $76 Million (8 percent reduction)

These two diagnoses were generated as part of the alternative development process, but they do represent an opportunity cost of the timber policy constraint related to utilization standards and will be discussed here. Run 114009-J is the proposed alternative using the proposed regional utilization standards. Run 114KK2 is identical except that the current utilization standards are used. PNV is decreased 8 percent when the current utilization standards are used in lieu of the proposed regional standards. Both diagnoses include all MMR's and the NDY/LTSY link constraint.

4. Opportunity Costs of Valuing Market Values Only

All the FORPLAN diagnosess used in this analysis included all costs, but only the values associated with market commodities (timber and grazing). The non-market values were added to the FORPLAN economics outside of the model to generate the PNV's used.

There are basically two ways to increase the amounts of non-market outputs in an optimal FORPLAN solution. First, the costs and values associated with these outputs can be built into the model. If prescriptions which include more non-market outputs generate a larger contribution to PNV than do prescriptions with lower non-market outputs, more non-market outputs will show up in the solution. Second, constraints can be applied to the model. These constraints can either directly force more non-market outputs into the solution or they can indirectly force added non-market outputs by limiting market outputs. As a simple example, a limit on the amount of clearcut acreage will effectively remove harvest options from certain Analysis Areas thus opening the way for other prescriptions which may contribute less to PNV, but which will likely contribute more non-market outputs. The analysis described below showed that the addition of non-market values was not sufficient to make a significant change in the relative contribution of each prescription to PNV. Thus, to get significant non-market outputs, it would be necessary to apply constraints anyway.

The analysis was performed using the set of prescriptions which were the input for benchmark 114A09. Benchmark 114A09 was designed with very few limitations as to the types of prescriptions available so a wide range of opportunities can be explored if this run is used as the basis for analyzing the effects of valuing non-market outputs. A special FORPLAN option was used which generates a list of the contribution which every possible prescription and timing choice can have to the total PNV. This option simply calculates these contributions based upon the economic information supplied to it. In this case the same economic information was included as for all the other diagnoses: all costs, but only market values.

The maximum contribution to PNV from non-market (assigned) values was manually calculated for each prescription. The prescription which contributed most to PNV for each Analysis Area was determined with and without the non-market values included. In almost all cases the same prescription would be selected to maximize PNV whether or not the non-market values were included. Recall that the FORPLAN model included 389 Analysis Areas and 2,246,000 acres. The prescription which contributed most to PNV changed when the non-market values were added on 28 occasions. This involved 28 Analysis Areas and 29,920 acres. The **maximum** contribution due to non-market outputs was used so this is a maximum possible effect. The change in PNV amounted to $4.6 million out of $1924 million, again a maximum effect.

Thus the conclusions were that, at most, the inclusion of the non-market values would raise PNV about $4.6 million or 0.2 percent. The opportunity cost of not including those values ($4.6 MM) was determined to be insignificant relative to the opportunity costs of all the other factors explored. Furthermore, the inclusion of non-market values would not have supplied enough non-market outputs to effectively model the various alternatives, constraints are necessary anyway. The FORPLAN model was not restructured to attempt to include these

values, instead they were added to PNV after an optimal solution was found for each benchmark and alternative. For details on the complete analysis see Planning Record: "Established Market Prices vs Assigned Monetary Values in the FORPLAN Model", Haugen, December 21, 1984.

5. Opportunity Costs of Maximum Resource Output, Minimum Level, and Current Direction Benchmarks

An analysis of maximum resource outputs was conducted to define the opportunity costs of these resources, and to determine maximum resource potentials. These diagnoses were compared using common constraints of: rotation based on CMAI, NDY/LTSY link, and MMR's.

The Maximum Timber benchmark showed that, by maximizing timber harvest under NDY, PNV would be reduced from $1163 million (114GG1-M) to $1046 million (114W01-L) on the Forest. The reason for this relationship is the fact that maximization of timber requires that all lands with the potential for producing timber do so even if it is more costly to manage the land for timber production than can be returned from the values associated with that management. This is particularly evident in the stagnated lodgepole pine stands which are very costly to return to production, but which can make a significant long term contribution to timber harvest.

The Minimum Level benchmark defines the costs and benefits which can be attributed to operating the Forest in the absence of producing controllable outputs such as timber, range, etc. Management under this benchmark reduces PNV by 99+ percent ($1160 MM from a base of $1163 MM, 114GG1-M), and essentially terminates all market outputs. The discounted cost of this run, $196 MM, represents the cost of maintaining the Forest in public ownership for 200 years.

The Maximum Wildlife benchmark (114AA2-F) is linked to elk populations as an indicator species. It reduced PNV by 43 percent ($505 MM from a base of $1163 MM, 114GG1-M). This reduction occurs even though timber harvest contributes to the forage supply because less economical harvest regimes are necessary to provide security to the elk along with increased forage. The Max wildlife benchmark produces 9900 elk in the third decade. This represents an 80 percent increase above current levels. The continuation of current direction (114Y12-I) would increase the elk population to 7300 by the third decade so the Max wildlife benchmark represents a 36 percent increase from this base.

The opportunity cost of maximizing wilderness on the Forest was analyzed to determine the impacts of this management scenario. Under this benchmark (114M01-H), 498,100 acres of current roadless areas were allocated to wilderness management, which effectively reduces the suitable timber acres by 14 percent (245,000 acres). The results of this run show that PNV is reduced $128 MM (11 percent, 114GG1-M base). The 200 year timber harvest total is reduced 8 percent from benchmark 114GG1-M. The LTSY level declines by 3 percent from benchmark 114GG1-M.

The current direction benchmark illustrates the tradeoffs which occur by continuing management under current land use plans and direction, with a budget and associated harvest level similar to the present situation. The PNV of this run is $460 Million. Another FORPLAN run, not called a benchmark, was made to determine the effect of permitting any budget. This run, 114Y08, had a PNV of $909 million.

a. Maximum Timber

Benchmarks Compared: 114GG1-M PNV = $1163 Million
114W01-L PNV = $1046 Million

Opportunity Cost: $117 Million (10 percent reduction)

PNV is reduced 10 percent when 200 year timber production is maximized.

b. Minimum Level

Benchmarks Compared: 114GG1-M PNV = $1163 Million
114DD1 PNV = $ 3 Million

Opportunity Cost: $1160 Million (99+ percent reduction)

PNV is reduced more than 99 percent when all controllable outputs on the Forest are terminated.

c. Maximum Wildlife (Elk)

Benchmarks Compared: 114GG1-M PNV = $1163 Million
114AA2-F PNV = $ 658 Million

Opportunity Cost: $505 Million (43 percent reduction)

PNV is reduced 43 percent when wildlife resources (elk) are maximized in the objective function.

d. Maximum Wilderness

Benchmarks Compared: 114GG1-M PNV = $1163 Million
114M01-H PNV = $1035 Million

Opportunity Cost: $128 Million (11 percent reduction)

PNV is reduced 11 percent when all existing roadless areas are allocated to wilderness use.

e. Current Management

Run Comparison:

Benchmark	114GG1-H	PNV = $1163 Million
Benchmark:	114Y12-I	PNV = $ 460 Million
Run:	114Y08	PNV = $ 909 Million

Opportunity Costs:
$703 Million (60 percent reduction with current budget)
$254 Million (22 percent reduction with higher budget)

PNV is reduced 60 percent if lands are assigned to uses described in present management plans and direction when harvest levels and associated budgets are held constant at present levels.

PNV is reduced 22 percent when lands are assigned to the uses described in present management plans and direction, but budgets are not limiting.

6. Development of the Final Plan

The monetary tradeoffs of the management approaches explored during the development of the Final Plan can be determined by examining the FORPLAN diagnoses described in section C.3. above. In this section the tradeoffs associated with the various approaches to management are discussed. The opportunity cost reference points used in this discussion will vary depending upon the action being examined. The same economic values used above will be used in these comparisons.

a. Opportunity Cost of Redesignation of Pillick Ridge to Recommended Wilderness

Redesignation of Pillick Ridge to Recommended Wilderness was done in concert with a number of model adjustments designed to better portray the Proposed Action. The effect was an estimated opportunity cost of negative one million dollars. In other words, the opportunity cost of keeping the designations as they were in the Proposed Plan was one million dollars.

Run Comparison:
114009 PNV = $916 million (Proposed Action - Alt. J)
11412A PNV = $917 million

Opportunity Cost: $1 million (0 percent change)

b. Opportunity Cost of Unregulating Old Growth

The Proposed Action managed about 8 percent of the Forest acres below 5,500 feet as old growth. The MA 13 portion of this was in the regulated timber base. Removing MA 13 from the regulated base so that no scheduled timber management activities would occur resulted in an opportunity cost of $11 million. Enlarging the size of MA 13, so that about 10 percent of the Forest below 5,500 feet is managed for old growth, and removing MA 13 from the regulated base resulted in an opportunity cost of $48 million. The difference between 8 percent and 10 percent old growth was an opportunity cost of $37 million.

Run Comparison:
11412A PNV = $917 million
11413A PNV = $906 million
11414A PNV = $869 million

Opportunity Cost:
8% Unregulated = $11 million (1% reduction in PNV)
10% Unregulated = $48 million (5% reduction in PNV)
8% to 10% Unregulated = $37 million (4% reduction in PNV)

c. Opportunity Cost of No Commercial Thinning and Delayed Conversion of Stagnated Lodgepole Pine

Removing the requirement to commercially thin timber stands and allowing delays in the conversion of stagnated lodgepole pine stands of up to 100 years had an opportunity cost of from $108 million to $126 million. With 8 percent old growth, the opportunity cost was $126 million. With the smaller regulated base associated with 10 percent old growth, the opportunity cost was $108 million.

Run Comparison:
11413A PNV = $906 million
11421A PNV = $780 million

11414A PNV = $869 million
11415A PNV = $761 million

Opportunity Cost:
No Com Thin 8% Old Growth = $126 million (14% reduction)
No Com Thin 10% Old Growth = $108 million (12% reduction)

d. Opportunity Cost of No Pre-Commercial Thinning

When the opportunity to pre-commercially thin stands is removed, the PNV drops by about $40 million.

Run Comparison:
11415A PNV = $761 million
11417A PNV = $721 million

Opportunity Cost: $40 million (5% reduction in PNV)

e. Opportunity Cost of Maximizing Timber Production in Decade 1 With Non-Declining Yield

In an effort to help bolster timber supply in the area, timber production was maximized in the first decade subject to non-declining yield. This approach dropped the PNV from $7 million to $28 million depending upon the size of the regulated base.

Run Comparison:
11421A PNV = $780 million
11425A PNV = $773 million

11415A PNV = $761 million
11424A PNV = $733 million

Opportunity Cost:
8% Old Growth: $7 million (1% reduction in PNV)
10% Old Growth: $28 million (4% reduction in PNV)

f. Opportunity Cost of RPA Timber Goals for 2 Decades Followed By Departure

Another approach to bolstering timber supply in the area was explored: timber volume was set to equal the RPA volumes for the first two decades followed by a permitted departure in decades 3 and 4 (± 25%) and a return to non-declining yield thereafter. The opportunity cost of this approach was $5 million at the 8% old growth level and $25 million at the 10% old growth level.

Run Comparison:
11421A PNV = $780 million
11428A PNV = $775 million

11415A PNV = $761 million
11429A PNV = $736 million

Opportunity Cost:
8% Old Growth: $5 million (1% reduction in PNV)
10% Old Growth: $25 million (3% reduction in PNV)

g. Effects of Alternative Base Timber Values, Price Projections and Road Costs

In response to public comment, the effects of using a new set of economic data were determined. The new economic data included:

- base prices linked to transaction evidence sale data for the years 1975 through 1984
- price projections as used in the 1985 RPA process
- road costs adjusted for real cost decreases experienced since 1978

These effects were determined at two different levels in the analysis process. First, the maximum PNV benchmark of the DEIS (114GG1 - Alt M) was rerun using the new set of economic data. This run has the opportunity to choose land designations based upon maximizing PNV in a departure (±25%) mode. The model was relatively unconstrained except for the minimum management requirements. Second, a heavily constrained run, 11415A, was rerun with the new data. This run is similar to the Final Plan run except that first decade harvest is not forced upward. All land designations are fixed, thus the only opportunity for change under the new set of economic data is in the area of harvest flow scheduling. The Final Plan run (11424A) was not used because the first decade harvest constraint limits the opportunity for scheduling changes.

Some key effects of changing the economic data in the PNV benchmark run are displayed below:

Table B-16
EFFECTS OF "NEW" ECONOMICS ON THE PNV BENCHMARK

RunID	Description	Suitable Acres	PNV ($MM)	1st Decade Timber (MMBF)
114GG1	Max PNV - Old Econ	1,484,000	$1163	262
11402B	Max PNV - New Econ	1,337,000	$ 222	240
	Change from 114GG1	-147,000	-941	22
	% Change from 114GG1	-9.9%	-81%	-8.4%

The PNV drops a great deal under the new set of economic data, but the suitable acreage and the first decade harvest level drops a smaller amount. From the change in PNV it can be seen that the relationship between costs and prices changes significantly. From the change in suitable base, it can be seen that the changes in price and cost relationships are not sufficient enough to move a proportionate amount of land out of the regulated base. While some land becomes uneconomical to harvest, most of the land base remains economical to harvest, but at considerably lower net returns.

The effect of changing the economic data in run 11415A is displayed in the following table:

Table B-17

EFFECTS OF "NEW" ECONOMICS ON A HEAVILY CONSTRAINED RUN

RunID	Description	Suitable Acres	PNV ($MM)	1st Decade Timber (MMBF)
11415A	Old Econ	1,263,000	$761	194
11416A	New Econ	1,263,000	$162	185
	Change from 11415A	0	$599	-9
	% Change from 11415A	0.0%	-79%	-4.6%

This shows that the PNV changes at about the same proportion as in a relatively unconstrained run while the first decade timber harvest is affected somewhat less. The suitable acres remain constant because each analysis area is constrained to specified designations. This constancy in suitable acres reduces the latitude of the model to vary timber harvest scheduling by almost half.

The effect of changing the economic data in run 11424A is displayed in the following table:

Table B-18

EFFECTS OF "NEW" ECONOMICS ON THE FINAL PLAN

RunID	Description	Suitable Acres	PNV ($MM)	1st Decade Timber (MMBF)
11424A	Final Plan-Old Econ	1,263,000	$733	202
11430A	Final plan-New Econ	1,263,000	$122	202
	Change from 11424A	0	-$611	0
	% Change from 11415A	0.0%	-83%	0.0%

The Final Plan is heavily constrained. In addition to the acreage constraints mentioned above, the first decade volume is maximized and thus can not change with changing economic parameters. The only effect is a decline in PNV because of the values used in its calculation.

A paper entitled "The Effects of Updated Economics on the Suitable Timber Land Base and A Comparison of the Final Forest Plan to Suitabilities When PNV is Maximized" (Haugen, June 10, 1986) provides details on the types of lands that become unsuitable and how the designations in the Final Plan compare to those in run 114GG1.

In summary: When the updated economic values are used, more land becomes unsuitable for timber production. The affected lands tend to be those which are less productive and on steeper slopes. The Final Plan has more unsuitable land than when harvest flow constraints are relatively relaxed. Since the Final Plan land designations were established then installed in the model, the reasons for the increased unsuitable acreages are fairly obvious. The Final Plan reflects refinements in non-capable lands, the decision to manage old growth outside the regulated base, the decision to preserve certain roadless areas and decisions to provide several types of management for specific purposes even though the lands involved may contribute more financially if managed for timber production (viewing, semi-primitive non-motorized recreation, big game winter range and special interest areas).

h. Utilization Standards

Unless noted otherwise, all of the timber volumes presented in this Appendix are based upon the desired Regional Utilization Standards. A document entitled "Analysis of Proposed Vs Current Timber Utilization Standards" (Haugen and Johnson, February 1985) and a document entitled "Utilization Standards Analysis - Volume of Projected Harvest by Species" (Haugen, September 27, 1985) are in the planning records. These documents describe the analysis developed for the Proposed Plan. The following Tables display the two standards and the results of the analysis as adjusted to the volumes of the Final Plan (Alternative JF):

Table B-19
CURRENT VS PROPOSED UTILIZATION STANDARDS

	MINIMUM D.B.H.		MINIMUM TOP D.I.B.	MINIMUM LENGTH
Standard	Lodgepole Pine	All Other Species	All Species	All Species
Current	7 inches	8 inches	5.6 inches	8 feet
Reg Guide	6 inches	7 inches	4.6 inches	8 feet

The general effect of shifting from the current to the Regional utilization standards is an increase in harvest volumes. Harvest from a given acre will be larger simply because smaller trees and higher tops are counted in the harvest volumes.

Table B-20

Comparison of Volume by Tree Species and Tree Diameters
Current Vs Regional Guide Utilization Standards
Final Plan

SPECIES:	DF	LA	CE	ES	LP	GF	AF	HE	PP	WP	TOTAL
Current Stds											
1st Decade											
MMBF	39.4	30.5	9.1	8.5	66.4	6.6	13.2	6.7	6.5	1.0	188
MMCF	9.3	7.2	2.2	2.0	15.3	1.5	3.1	1.6	1.5	.2	44
5th Decade											
MMBF	44.6	39.6	14.5	12.3	68.7	9.1	12.7	10.1	7.0	1.6	220
MMCF	9.0	7.9	2.9	2.4	13.6	1.8	2.6	2.0	1.4	.3	44
Regional Guide Stds											
1st Decade											
MMBF	35.2	34.0	10.4	9.2	81.3	6.9	11.0	7.7	4.9	1.1	202
MMCF	8.4	8.3	2.5	2.2	19.9	1.7	2.6	1.9	1.1	.3	49
5th Decade											
MMBF	46.5	42.1	15.1	12.8	75.4	9.5	13.2	10.6	7.3	1.7	234
MMCF	9.9	8.8	3.2	2.7	15.6	2.0	2.8	2.2	1.6	.3	49

DIAMETER CLASS (inches DBH)	6.0 to 6.9	7.0 to 7.9	8.0 to 9.9	10.0 to 11.9	12.0 to 13.9	14.0 to 15.9	16.0 and more
Current Stds							
1st Decade							
MMBF	0	4	5	46	0	38	95
MMCF	0	1	1	11	0	10	22
5th Decade							
MMBF	0	0	2	32	69	0	117
MMCF	0	0	0	6	15	0	23
Regional Guide Stds							
1st Decade							
MMBF	7	0	6	63	0	15	111
MMCF	2	0	2	14	0	4	27
5th Decade							
MMBF	3	1	2	38	73	0	117
MMCF	1	0	0	8	15	0	25

Volumes by species may decline in some cases when the Regional Guide standards are used because a different species mix may be chosen to maximize PNV under those standards.

The detailed analysis in the planning records concluded that the major impact associated with the Regional utilization standards is that the cut volume in the larger size classes increases. There is no large increased cut of the smallest size classes or of the minimum sized lodgepole pine. The increased volumes

obtained from the larger size classes are due to the lower minimum top diameter. In general larger harvested volumes produce higher PNV's so the Regional standards contribute to raising the PNV. Changes in land designations tend to be insignificant when analyzed using the maximum PNV benchmark (114GG1).

E. Resource Relationships

1. Timber Harvest/Roadless and Wilderness Management

Timber harvest levels and roadless/wilderness management are generally inversely related. The mix of resources which maximizes PNV manages much of the inventoried roadless area for timber production although some areas which are very expensive to manage for timber do become designated for roadless uses. As the roadless/wilderness acreage is increased above the minimum, the efficient level of harvest over 200 years decreases. When roadless/wilderness acreage is maximized (498,100 acres), the efficient level of timber output is 81 percent of the maximum 200 year total harvest determined by the Maximum Timber benchmark. To the extent that non-commercial areas are put into roadless/wilderness timber harvest is not affected.

2. Timber Harvest/Livestock Forage

All livestock forage on the Forest is modeled as coming from transitory range. Thus as acres harvested increases acres of available transitory range increases as does available forage. When elk is maximized through the application of prescriptions which maximize elk forage production, livestock forage is also maximized at about 78 MAUM's in the first decade (114AA2-F). Since useful livestock forage is limited by the lack of overwintering facilities, the remoteness of available range, and the expense of providing adequate water and range developments, increased timber harvest acreages tend only to supply additional unused AUM's.

3. Timber Harvest/Elk Forage

Creating elk forage with timber harvest could increase elk habitat potential from 5500 elk at the present to 9900 elk by decade 3. The mix of timber harvest and elk forage which maximizes PNV is 88 percent of the 200 year timber harvest potential and 85 percent of the third decade elk potential. Maximizing elk forage reduces the amount of efficient timber harvest to 59 percent of the 200 year potential.

4. Livestock Forage/Elk Forage

Both livestock forage and elk winter range forage are increased with certain timber harvest prescriptions. However, both forage outputs cannot be maximized at the same time because of competition between livestock and elk for forage. The demand for livestock forage on this Forest is constant at about 13,000 AUM's and no significant competition with wildlife is expected at this level (Dillion, 1982).

5. Livestock Forage/Roadless and Wilderness Management

Producing high levels of roadless areas and livestock forage is not possible because roadless management precludes creating transitory forage with timber harvest.

6. Elk Forage/Roadless Area and Wilderness Management

Elk forage production is decreased when roadless management is maximized because of the decrease in acres of timber harvest which create forage. The mix of resources which maximizes PNV is 84 percent of the elk forage potential and no additional wilderness.

7. Grizzly Habitat/Timber Harvest

Grizzly habitat is decreased when short term timber harvest is increased. Long term harvest will be somewhat decreased when grizzly habitat is maintained or enhanced. In the long run (200 years) timber harvest totals can be relatively high and grizzly habitat can be maintained by spreading the harvest out over time and space. Timber harvests are decreased somewhat by eliminating commercial thinning which would otherwise impact the grizzly population. Potential grizzly populations were not tracked in the analysis and grizzly were valued only in terms of the opportunity cost of the grizzly MMR's.

F. Production Potential

The benchmarks provide information about production and economic potential of the Forest. This section discusses the potential and efficient mix of resource outputs to meet the potential.

1. Economic Potential of Maximum PNV (114GG1-M)

The maximum PNV of the Forest is defined in the Max PNV benchmark (114GG1-M) with the following constraints: sequential upper and lower bounds of 25 percent, rotations based on the culmination of mean annual increment, and minimum management requirements (MMRs). The PNV of this benchmark is $1163 MM. Other benchmarks analyzed had higher PNVs, but did not meet the timber policy and legal requirements to be considered in this analysis. Timber management is cost efficient on 83 percent of the tentatively suitable lands, or 1,484,100 acres. Timber harvests are 262 MMBF per year in the first decade.

2. Fixed Costs of Public Land Ownership (114DD1)

The cost of maintaining the Forest in public ownership, protecting existing facilities, and providing for uncontrollable outputs is $5.5 MM in the first decade. The major activities include:

- Facilities maintenance is reduced to levels which protect the incidental user.
- Fire suppression would be limited to preventing safety hazards and protecting adjacent landowners.
- Timber harvest, road construction, and livestock grazing activities are limited to completing current contracts.

The present value of the costs is $196 MM and the distribution is:

General Administration/other	75 percent
Recreation/Wildlife	23 percent
Range	0 percent
Timber	1 percent
Roads	1 percent

Outputs which are incidental to management include timber and livestock grazing under contracts, recreation use, and elk forage. Recreation use would be restricted as trails, roads, and facilities are closed. The present value of the outputs is $199 MM, mostly recreation related.

3. Timber Potential (114W01-L)

The Forest has the ability to produce more timber than it is currently producing, but maximizing timber production would have a opportunity cost of $117 MM. The Max timber benchmark was modeled to address the capability of harvesting maximum yields of timber. This benchmark was constrained to produce the maximum volumes of timber possible. Run 114T03 with an objective function of maximize timber for 20 decades was used to define these constraints. Associated constraints included NDY/LTSY link, rotations based upon CMAI, volume based upon proposed regional utilization standards, and all MMR's. The first decade timber harvest is 255 MMBF per year and the long term sustained yield is about 455 MMBF per year. Timber management is applied to all the tentatively suitable timberlands, although in comparison to the Maximum PNV benchmark (114GG1-M), about 304,000 acres would not be cost efficient. Elk forage is at 86 percent of maximum and no added wilderness is proposed.

4. Elk Summer Range Forage Potential (114AA2-F)

The Max Elk Benchmark was modeled to show the capability of producing elk habitat on the Forest. This benchmark had constraints for managing for maximum elk habitat production, NDY/LTSY link, rotations based on CMAI, and all MMRs. This benchmark produces the highest levels of elk habitat, capable of supporting 9900 elk in the third period. The first decade timber harvest is 164 MMBF per year, and the LTSY is 250 MMBF per year. Timber management is cost-efficient on 1,132,300 acres, or 63 percent of the tentatively suitable lands. The PNV is $658 MM.

5. Wilderness Potential (114M01-H)

The roadless resource of the Kootenai National Forest consists of 498,100 acres in 32 separate areas. All of the Forest's roadless areas are presently by definition eligible candidates for inclusion in the National Wilderness Preservation System. When all of these areas are modeled as Proposed Wilderness, the first decade regulated timber yield averages 208 MMBF per year. This is 82 percent of the first decade harvest when timber is maximized. The LTSY is 325 MMBF, and 1,361,100 acres were designated for timber management, 76 percent of the tentatively suitable lands. This benchmark produces 87 percent of the maximum elk population. The PNV is $1035 MM

6. Dispersed Recreation Potential

Although not addressed specifically in this analysis, dispersed recreation opportunities are expected to shift in emphasis among benchmarks. The type of recreation opportunities will shift from semiprimitive to roaded natural in proportion to the roading of present roadless areas. In the same proportion, outfitter operations will decrease and users preferring primitive experiences will be limited to wilderness use. There will be a decreased need for trail maintenance in present roadless areas and an increased need for trail maintenance in classified areas. This pattern will be most obvious in alternatives which show an emphasis in timber development. In general, the higher the timber harvest levels, the more motorized dispersed recreation and the less non-motorized recreation will be produced.

7. Resource and Economic Potential Under Current Management (114Y12-I)

Continuing current management on the Forest with or without a budget constraint provides for a moderate level of roadless, wilderness, livestock forage, and elk winter range forage. Timber harvest starts at 150 MMBF/year for the first decade, then increases to 162 MMBF/year by decade 5 when current budgets are maintained. About 80 percent of the tentatively suitable timberland is defined as suitable for timber management. The PNV is $460 million, reflecting the $703 million opportunity cost of operating at the current level.

Where budget is not limiting (run 114Y08), timber harvest starts at 204 MMBF/year and climbs to 260 MMBF/year by decade 5. The same amount of land is suitable for timber harvest although less harvest is deferred until after the planning horizon (200 years). The PNV is $909 MM, thus reducing the opportunity cost to $254 MM.

Tables B-15, B-21, and B-22 summarize the outputs and effects of the benchmark analysis.

Table B-15
Resource Outputs of the Benchmarks

OUTPUT	UNIT of MEASURE	MAXIMUM PNV BENCHMARKS 114HH2	114A09	114U01	114B06	114C04	114D04	114V01-N	114F01-A	114GG1-M	114JJ2	114II2
WILDER & PWLDER	M Acre	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4	94.4
Other Unroaded Mgmt	M Acre	219.4	218.8	249.3	241.8	285.1	295.3	283.1	283.4	295.3	296.6	274.8
Roaded & Other Mgmt	M Acre	1932.0	1932.6	1902.1	1909.6	1866.3	1856.1	1868.3	1863.0	1856.1	1854.8	1876.6
Suitable Timberland	M Acre	1786.6	1752.3	1793.1	1693.4	1457.2	1477.6	1496.7	1486.8	1484.1	1518.0	1534.6
Decade 3 Elk Pop.	M Elk	6.3	6.5	7.1	8.5	8.5	8.4	8.5	8.6	8.4	8.5	8.6
LTSY	MMBF/yr	484	316	490	260	228	231	339	348	334	350	350
Allowable Sale	MMBF/yr											
Decade 1		474	261	380	275	390	367	247	226	262	311	271
Decade 2		721	1218	467	884	173	185	240	253	224	253	282
Decade 3		486	1	468	198	187	175	283	249	274	309	321
Decade 4		595	385	404	381	433	409	322	314	326	335	349
Decade 5		449	399	443	287	388	403	329	336	437	368	366
Decade 6		325	989	474	937	423	409	340	349	362	364	364
Decade 7		240	92	438	152	250	218	319	334	251	417	324
Decade 8		264	74	441	130	220	185	296	313	245	339	322
Decade 9		310	440	389	308	455	487	317	326	322	300	337
Decade 10		386	374	392	233	145	127	282	290	238	254	313
Decade 11		486	32	457	125	191	205	287	295	306	316	327
Decade 12		650	519	488	507	739	743	345	348	393	328	338
Decade 13		698	2024	533	1371	335	308	406	396	502	378	329
Decade 14		574	47	555	324	288	267	395	391	371	497	329
Decade 15		342	524	590	362	372	405	361	382	336	344	362
Decade 16		337	179	551	272	405	375	370	369	436	294	363
Decade 17		386	1510	503	1247	671	646	378	373	445	223	346
Decade 18		523	88	541	133	291	277	377	371	346	270	365
Decade 19		531	74	573	214	256	251	385	378	262	295	337
Decade 20		451	448	490	406	465	454	339	345	278	350	347
Roads for Management	Miles	12567	12404	12612	12144	11397	11380	11267	11272	11226	11857	11464
PNV (4%)	$MM	2083	1924	1722	1768	1202	1171	1148	1143	1163	1336	1321

Table B-15 (Continued)
Resource Outputs of the Benchmarks

MAXIMUM RESOURCE, MINIMUM MANAGEMENT, AND CURRENT LEVEL BENCHMARKS

OUTPUT	UNIT of MEASURE	114W01-L MAX TIM	114AA2-F MAX ELK	114M01-H MAX WILD	114DD1 MINLVL	114Y12-I CURRENT
WILDER & PWLDER	M Acre	94.4	94.4	498.1	94.4	157.3
Other Unroaded Mgmt	M Acre	220.6	273.0	54.0	378.4	250.2
Roaded & Other Mgmt	M Acre	1930.8	1878.4	1693.7	1773.0	1838.3
Suitable Timberland	M Acre	1788.4	1132.3	1361.1	169.4	1422.2
Decade 3 Elk Pop.	M Elk	8.5	9.9	8.6	7.4	7.3
LTSY	MMBF/yr	455	250	325	0	388
Allowable Sale	MMBF/yr					
Decade 1		255	164	208	2	150
Decade 2		245	191	222	2	152
Decade 3		264	190	223	2	157
Decade 4		316	185	273	4	143
Decade 5		345	198	295	4	162
Decade 6		339	197	310	4	172
Decade 7		360	193	300	4	163
Decade 8		327	181	270	7	180
Decade 9		385	264	348	28	164
Decade 10		341	224	290	28	194
Decade 11		375	242	291	28	162
Decade 12		410	244	323	27	172
Decade 13		458	241	357	27	169
Decade 14		427	256	359	27	164
Decade 15		427	228	337	27	172
Decade 16		449	261	333	26	177
Decade 17		432	236	349	26	188
Decade 18		426	239	350	27	201
Decade 19		464	243	339	26	207
Decade 20		455	241	318	27	215
Roads for Management	Miles	12363	9847	10591	6000	9837
PNV (4%)	$MM	1046	658	1035	3	460

Table B-21
Present Value Benefits and Costs for Resource Groups by Benchmark (4%)
(Millions 1978$)[1]

Benchmark	Present Net Value	Present Value Benefits: Timber	Range	Recreation/ Wildlife	Present Value Costs: Timber	Roads	Range	Recreation/ Wildlife	Other
114HH2	2083	2945	3	215	497	344	2	79	158
114A09	1924	2671	3	212	440	291	2	78	151
114U01	1722	2476	3	219	394	337	2	79	164
114B06	1768	2374	3	230	373	234	2	82	148
114C04	1202	1732	3	228	277	234	2	80	168
114D04	1171	1687	3	227	268	229	2	80	167
114V01-N	1148	1604	3	231	245	200	2	81	162
114F01-A	1143	1588	3	228	236	195	2	81	162
114GG1-M	1163	1631	3	227	251	204	2	80	161
114JJ2	1336	1863	3	227	293	222	2	80	160
114II2	1321	1839	3	229	284	219	2	81	164
114W01-L	1046	1590	3	229	300	227	2	81	166
114AA2-F	658	962	3	234	151	149	2	80	159
114M01-H	1035	1440	3	219	215	175	2	76	159
114DD1	3	26	1	172	2	2	0	45	147
114Y12-I	460	776	3	227	169	125	2	82	168

1/ The direct comparison of individual resource benefits and costs is misleading because not all costs are allocated to each resource, ie. the "other" cost category contains inseparable joint costs associated with several resources.

NOTE: Timber benefit in the FORPLAN model is evaluated as lumber value and costs include logging, haul and production costs so that land designation and scheduling can take these cost factors into account. The above table shows only the timber costs of the Kootenai National Forest and does not include purchaser costs; timber benefits as shown here are based upon stumpage value.

Table B-22
Present Value Benefits and Costs for Resource Groups by Benchmark (4%)
(Millions 1978$)[1]

Benchmark	Present Net Value	Present Value Benefits: Timber	Range	Recreation/ Wildlife	Present Value Costs: Timber	Roads	Range	Recreation/ Wildlife	Other
114HH2	2083	2945	3	215	497	344	2	79	158
114A09	1924	2671	3	212	440	291	2	78	151
114U01	1722	2476	3	219	394	337	2	79	164
114B06	1768	2374	3	230	373	234	2	82	148
114C04	1202	1732	3	228	277	234	2	80	168
114D04	1171	1687	3	227	268	229	2	80	167
114V01-N	1148	1604	3	231	245	200	2	81	162
114F01-A	1143	1588	3	228	236	195	2	81	162
114GG1-M	1163	1631	3	227	251	204	2	80	161
114JJ2	1336	1863	3	227	293	222	2	80	160
114II2	1321	1839	3	229	284	219	2	81	164
114W01-L	1046	1590	3	229	300	227	2	81	166
114AA2-F	658	962	3	234	151	149	2	80	159
114M01-H	1035	1440	3	219	215	175	2	76	159
114DD1	3	26	1	172	2	2	0	45	147
114Y12-I	460	776	3	227	169	125	2	82	168

1/ The direct comparison of individual resource benefits and costs is misleading because not all costs are allocated to each resource, ie. the "other" cost category contains inseparable joint costs associated with several resources.

NOTE: Timber benefit in the FORPLAN model is evaluated as lumber value and costs include logging, haul and production costs so that land designation and scheduling can take these cost factors into account. The above table shows only the timber costs of the Kootenai National Forest and does not include purchaser costs; timber benefits as shown here are based upon stumpage value.

VII. Formulation of Alternatives

Significant Changes from Draft to Final EIS

A discussion of Alternative JF (11424A), the Final Plan, has been added to the end of this section.

A. Introduction

A Forest planning alternative is a mix of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives. To be viable (NFMA - 36 CFR 219.12f), the alternative must:

1. Exist between maximum and minimum resource potential of the Forest;
2. Facilitate analysis of opportunity costs and of resource use and environmental tradeoffs among alternatives;
3. Facilitate evaluation of present net value, benefits, and costs of achieving various outputs as well as values that are not assigned monetary values;
4. Show a different way to address and respond to major public issues, management concerns, and resource opportunities (ICO's);
5. Represent the most cost-efficient combination of management prescriptions that can meet the objectives of the alternative;
6. State the condition and uses that will result from implementation;
7. State what goods and services will be produced including timing and flow of outputs and the costs and benefits generated;
8. State the resource management standards and guidelines used;
9. State the purpose of the management direction used.

Formulating alternatives was planning action number five in the Forest planning process following the analysis of the management situation (AMS). During the analysis of the management situation a determination was made of the ability of the Forest to supply goods and services. Maximum and minimum output levels were established. These levels form the range within which the alternatives were developed. Two specific alternatives are required. One alternative must be developed which responds to and incorporates the Resource Planning Act (RPA) program tentative resource objective. Another alternative was developed to reflect the current and expected level of goods and services produced should current management be continued (the "no-action" alternative). The process for formulating alternatives can best be explained in a series of steps.

Step 1: Major public issues and concerns were identified through public involvement. (This process is further explained in Appendix A). These issues and concerns were reviewed by an interdisciplinary team and consolidated into a set of planning questions to be answered.

Step 2: A comprehensive multi-resource data base was formed based on the identified issues and concerns and stored in a computer retrieval system.

Step 3: Land analysis areas with similar physical and biological attributes were identified and mapped as analysis areas. The capability, suitability, and management opportunities of specific areas of the Forest were considered in this step.

Step 4: A set of management prescriptions was prepared to represent a variety of possible ways and intensities to manage the Forest.

Step 5: The 389 analysis areas identified in Step 3 were assigned management prescriptions. Some analysis areas were assigned only one prescription while others were assigned a variety of prescriptions that could be applied depending upon the capability, suitability and management opportunities of the analysis area. Single prescription assignments, which are applied because of limited capabilities of the land, limit the model's land designation choices.

Step 6: Resource outputs and the associated costs and dollar values that would result when a prescription was implemented were calculated and entered into the computer model FORPLAN.

Step 7: Demand was estimated for the resources involved in the planning questions.

Step 8: Supply potentials were determined using the FORPLAN computer model. Various assumptions, constraints, and objectives were used to establish benchmarks for supply potentials of each resource. Benchmarks were established for the minimum, maximum, and constraint resource levels and maximum present net value. Existing resource supply and projected demand were compared to supply potentials of each benchmark. Opportunities to resolve issues and concerns were identified for each resource by comparing existing and projected demand to potential production levels. These potentials, when compared to the Current Direction, indicate opportunities and/or need for change. This step concluded the analysis of the management situation - benchmark analysis.

Step 9: Alternative objectives were established to provide a broad range of options for future management of the Forest. Selected benchmarks were used to define upper and lower limits for the production of each resource. These upper and lower limits outlined the decision space boundaries for the resources involved. The interdisciplinary team considered expected use, supply, potential (upper and lower limits), and evaluated public input to establish the range of alternatives within the decision spaces.

Step 10: The FORPLAN model was again used to estimate the outputs and costs for each alternative by reflecting the objective of the alternative through a given set of constraints.

Step 11: The results of the FORPLAN analysis for each alternative were evaluated to assure conformance with laws, policies, and guidelines. Refinements were made to insure that each alternative could be achieved.

Further information on the FORPLAN model is presented in Section III of this Appendix.

The interdisciplinary team incorporated cost-efficiency into the planning process. First, objectives, standards, and guidelines were established for each prescription by resource element. Second, given the objective of the prescription, costs were estimated for resource elements to meet the standards and guidelines of the prescription. Third, 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. These prescriptions were applied to suitable analysis areas and were combined with the necessary constraints and incorporated into FORPLAN to form different alternatives. Each alternative produces a different combination of priced and nonpriced outputs. The technical feasibility of each alternative is analyzed with FORPLAN. All constraints must be satisfied or an infeasibility will result. The methodology used to account for both priced and non-priced outputs in alternative formulation and evaluation is discussed in Section IV of this Appendix.

B. Common Constraints

The constraints used in the Max PNV (114GG1) benchmark formed the basis for constraints applied to all alternatives except current management (Alternative I). Common benchmark constraints were developed, examined, and tested to see how well they addressed their stated purpose. They also represent the most cost-efficient approach to meeting the intended purpose. These constraints were previously analyzed in Section VI, "Analysis Prior to Development of Alternatives." The benchmark constraints common to all alternatives were as follows:

1. Constraint: All alternatives except departures (114GG1-M, 114V01-N) require nondeclining yield for timber harvests (NDY).

   Purpose: Providing a sustained yield of timber harvests generally results in positive social effects by providing an economy with consistent and relatively stable growth potential.

   Rationale: Assumes a constant supply or upward trend in timber supply.

   Tradeoff: Small reduction in PNV and base timber harvest schedule (see Section VI).

2. Constraint: Insure an appropriate level of timber inventory at the end of the planning horizon (long-term sustained yield link - LTSYC).

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

Rationale: Assure a future sustained yield of timber harvest.

Tradeoff: Small reduction in PNV and timber harvest schedule (see Section VI).

3. Constraint: Timber rotations are based on the culmination of mean annual increment (CMAI) for existing and regenerated stands. This constraint is applied by limiting potential harvest periods in every harvest prescription to times at or after CMAI for the particular type of stand.

Purpose: Assure that timber is harvested at or beyond its maximum mean annual growth rate.

Rationale: Provide rotation ages that maintain high productivity and abide by Forest Service Manual direction.

Tradeoff: $173 Million reduction in PNV and an associated reduction in timber yield.

4. Constraint: Limit amount of harvest on MIXCON I and MIXCON II analysis areas of greater than 1000 acres over the entire 200 year planning horizon. This constraint is applied in the form of over 100 individual constraints on the CCE scheduled output.

Purpose: Assure that basic soil, water quality, water yield, fisheries objectives, and legal size of opening requirements are maintained.

Rationale: Soil, water, and fisheries resources must be maintained at legally defined levels.

Tradeoff: $566 Million reduction in PNV and an associated reduction in timber yield.

5. Constraint: Disallow thinning in grizzly habitat to maintain adequate secure displacement habitat when timber management activities do occur. This constraint is applied in two parts. First, every timber harvest prescription inside of grizzly habitat is designed so no thinning occurs. Second, a series of several constraints are applied which limit the acres harvested in the various grizzly management situations to 8.3 percent of the land area or less in any decade.

Purpose: Assist in the recovery of the grizzly bear population in accordance with the Endangered Species Act. This constraint, by limiting thinning, limits repetitive entries into a stand and, by preserving displacement habitat, gives the bears a place to go when activities do occur.

Rationale: The Endangered Species Act can not be violated.

Tradeoff: $156 Million reduction in PNV and an associated reduction in timber yield.

6. Constraint: A minimum of 8 percent old growth is maintained on the land base under 5500 feet in elevation. This constraint is applied by first forcing a minimum amount of oldgrowth timber to be managed under the WLDTIM (extended rotation) prescription then forcing the inventory to include a minimum acreage of old trees after the twelfth decade when there are sufficient trees to meet the constraint.

Purpose: Help maintain viable wildlife populations of all species and provide a more diverse range of habitats.

Rationale: Old growth would not be maintained on the more productive timber sites without a constraint.

Tradeoff: $31 MM reduction in PNV and an associated reduction in timber yield.

C. Development of Alternatives

1. Alternative A (114F01)

a. Goal

The goal of Alternative A is to provide the most cost effective land base for timber management without the addition of any new wildernesses.

b. Criteria and Assumptions

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

- Designation of land uses will be constrained only by the minimum management requirements (MMR's), by non-declining yield and by the long term sustained yield link.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)
- MMR's (see Section VI)

d. Rationale

Alternative A is designed to develop the maximum PNV and other outputs that can be supplied in a legal and implementable alternative which is constrained to NDY. For this reason additional constraints are carefully omitted.

2. Alternative B (114G02)

a. Goal

The goal of this alternative is to display an historical perspective to the wilderness issue by providing wilderness proposals as recommended by the administration following the RARE II process (April 1979).

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness areas would be based upon cost efficiency.
- This alternative proposes an additional 63,900 acres of Wilderness in Scotchman Peaks and the Cabinet Additions. This is 16% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)
- MMR's (see Section VI)
- Assign 63,900 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	48,300 acres
Cabinet Face West	8,100 acres
Cabinet Face East	400 acres
McKay	6,700 acres
Chippewa	400 acres

d. Rationale

The RARE II process was a Nationwide effort to develop a set of Wilderness recommendations for action by Congress. Those areas specifically recommended for Wilderness on the Kootenai National Forest are carried forward as Proposed Wilderness in this alternative. The specific analysis areas and portions of analysis areas within the boundaries of each RARE II wilderness proposal were constrained to the Proposed Wilderness prescription in order to properly model this situation.

3. Alternative C (114H02)

a. Goal

The goal of this alternative is to display a wilderness recommendation similar to the Montana Wilderness Bill of June 1984 (which was not acted upon) while managing areas outside of the wilderness areas in a cost efficient manner.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness areas would be based upon cost efficiency.

- This alternative proposes an additional 81,300 acres of Wilderness in Scotchman Peaks, the Ten Lakes Contiguous Area, Trout Creek and the Cabinet Additions. This is 20% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)

- MMR's (see Section VI)

- Assign 81,300 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	28,900 acres
Ten Lakes Contiguous	7,100 acres
Trout Creek	13,100 acres
Cabinet Face West	6,700 acres
Cabinet Face East	17,900 acres
McKay	5,000 acres
Chippewa	400 acres
Tuchuck	2,200 acres

d. Rationale

The Montana Wilderness Bill of June 1984 was developed as a compromise between various constituencies and is a valid proposal. This alternative was developed so that a level of analysis comparable to the analyses for the other alternatives could be prepared. In order to be on a comparable base, the set of constraints were the same as for the other alternatives in this series (i.e. alternatives B, C, E, G and H) except for the particular areas forced into the Proposed Wilderness designation.

4. Alternative D (114CC5) - RPA Alternative

a. Goal

The goal of this alternative is to respond to and incorporate the RPA program tentative resource objectives as displayed in the Regional Guide (36 CFR 219.12(f)(6)) and the RARE II Wilderness recommendations.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness areas would be based upon cost efficiency.

- This alternative proposes an additional 63,900 acres of Wilderness in Scotchman Peaks and the Cabinet Additions to match the RARE II recommendations. This is 16% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

- Departure from non-declining yield is limited to occur between decades 5 and 10 only and will not change more than 25% from one decade to the next or fall below a floor equal to historic ten year harvest levels.

- Elk population goals can be satisfied without additional constraints.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints) except as noted below.

- MMR's (see Section VI)

- Assign 63,900 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	48,300 acres
Cabinet Face West	8,100 acres
Cabinet Face East	400 acres
McKay	6,700 acres
Chippewa	400 acres

- Force harvest volumes in the first five decades to match the RPA goals

- Apply sequential upper and lower bounds of ±25% and a 345 MMCF floor to decades 6 through 10.

- Apply NDY to decades 11 through 20.

d. Rationale

This alternative is developed as required in 36 CFR 219.12(f)(6). The RPA timber goals were originally developed from different data and presumed a base harvest schedule (NDY). The data used here is aggregated differently and the MMR and other constraints applied in this analysis differ from those used in any previous analysis. On this basis it was determined that the RPA goals for timber could not be achieved without departure from a base harvest schedule. Thus, this alternative was constrained as closely as possible to NDY while attaining those harvest levels. The constraints to designate specific areas as Proposed Wilderness match those of Alternative B and are the RARE II proposals which were incorporated into the RPA program.

5. Alternative E (114J01)

a. Goal

The goal of this alternative is to exceed the RARE II and Montana Wilderness proposals by recommending some large blocks of land as Wilderness and Wilderness additions, while still providing as much opportunity for timber harvest as possible.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness areas would be based upon cost efficiency.

- This alternative proposes an additional 186,600 acres of Wilderness in Scotchman Peaks, Trout Creek, the Cabinet Additions, Roderick, Galena and Cataract. This is 46% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)
- MMR's (see Section VI)
- Assign 186,600 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	49,300 acres
Trout Creek	24,100 acres
Cabinet Face West	9,800 acres
Cabinet Face East	46,700 acres
McKay	10,500 acres
Chippewa	400 acres
Roderick	19,700 acres
Galena	12,700 acres
Cataract	12,300 acres
Government Mountain	1,100 acres

d. Rationale

This alternative is another in a series of alternatives developed to explore the effects of a range of Wilderness proposals. In order to be comparable to others in the series it was modeled identically except for the constraints which force specific areas into the Proposed Wilderness designation.

6. Alternative F (114AA2)

a. Goal

The goal of this alternative is to provide significant big game (elk) habitat management opportunities.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs is secondary to management of Elk habitat.
- Areas not suitable for elk habitat will be managed for cost efficiency

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)
- MMR's (see Section VI)

- The maximum elk population will be produced (this is based upon the maximum generated by run 114Z01 which had maximize elk as its objective function and was otherwise the same as Alternative F).

d. Rationale

This alternative was designed to emphasize, to the extreme, management for big game species using elk as an indicator species. Base elk population numbers are calculated within the Kootenai FORPLAN model as a non-scheduled output. This means that the output depends only upon the way in which the land is designated. The population generated in this way is the population which can be supported when the various land designations are being managed as described in the Forest Plan. This population is adjusted somewhat outside of the FORPLAN model to account for a period of adjustment of the herd as the designations are implemented and for impacts of specific management activities over time. Because the model is constructed in this way, a special intermediate FORPLAN run was made with Maximize Elk as the objective function. This run defined the highest level of the elk base population which could be achieved. In order to make a comparable alternative under the rules of 36 CFR 219, the model was restructured with Maximize Present Net Value as the objective function and the maximum elk population as a constraint.

7. Alternative G (114L01)

a. Goal

The goal of this alternative is to recommend significant amounts of additional Wilderness while managing the areas outside of Wilderness for cost efficiency.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness areas would be based upon cost efficiency.

- This alternative proposes an additional 304,900 acres of Wilderness in many roadless areas across the Forest. This is 76% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)

- MMR's (see Section VI)

- Assign 304,900 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	51,900 acres
Trout Creek	30,300 acres
Cabinet Face West	10,400 acres
Cabinet Face East	50,200 acres
Government Mountain	6,200 acres
McKay	13,500 acres
Chippewa	2,300 acres
Rock Creek	400 acres
Roderick	24,700 acres
Galena	15,500 acres
Cataract	17,700 acres
Buckhorn	22,000 acres
Northwest Peaks	13,200 acres
West Fork Elk Creek	4,800 acres
Gold Hill	10,700 acres
Gold Hill West	10,200 acres
Berray Mountain	8,000 acres
East Fork Elk Creek	4,900 acres
Thompson-Seton	5,700 acres
Tuchuck	2,300 acres

d. Rationale

This is another alternative in a series with incrementally more Proposed Wilderness developed to explore the range of potential resolutions to the Wilderness issue. The constraints used are necessarily the same as those used in the other alternatives in this series except for the actual areas constrained to Proposed Wilderness. This is the only way to make the analysis results directly comparable between the various alternatives in the series.

8. Alternative H (114M01) - Maximum Wilderness

a. Goal

The goal of this alternative is to recommend the maximum amount of wilderness while managing areas outside of the wilderness areas for cost efficiency.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness areas would be based upon cost efficiency.

- This alternative proposes an additional 403,700 acres of Wilderness in all the inventoried roadless areas on the Forest (except Ten Lakes). This is 100% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)

- MMR's (see Section VI)

- Assign 403,700 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	51,900 acres
Ten Lakes Contiguous	7,100 acres
Trout Creek	31,400 acres
Cabinet Face West	10,900 acres
Cabinet Face East	50,400 acres
Government Mountain	8,600 acres
McKay	13,500 acres
Chippewa	2,300 acres
Rock Creek	400 acres
Roderick	24,800 acres
Galena	15,500 acres
Cataract	17,700 acres
Buckhorn	22,000 acres
Northwest Peaks	13,400 acres
West Fork Elk Creek	4,800 acres
Gold Hill	10,700 acres
Gold Hill West	10,200 acres
Berray Mountain	8,300 acres
East Fork Elk Creek	5,000 acres
Lone Cliff-Smeads	6,600 acres
McNeeley	7,700 acres
Flagstaff	9,500 acres
Roberts Mountain	8,000 acres
Grizzly Peak	6,000 acres
Zulu	6,400 acres
Marston	6,000 acres
Willard Lake - Estelle	18,500 acres
Cube-Iron	1,200 acres
Thompson-Seton	20,100 acres
Tuchuck	2,300 acres
Maple Peak	1,400 acres
Le Beau	700 acres

d. Rationale

This alternative is the last in the series of incrementally increasing Wilderness proposals and has the maximum amount of Wilderness. The determinations of Wilderness suitability are the same as those used for the latest roadless area review so all of the areas defined as roadless on the current inventory are constrained to Proposed Wilderness in this alternative. The other constraints are the same as for the other alternatives in this series in order to keep the alternative comparable.

9. Alternative I (114Y12) - Current Direction

a. Goal

The goal of this alternative is to display the direction that the Kootenai National Forest is currently following. The current direction is a composite of 25 separate land use plans completed over a six year period. (36 CFR 219.12(f)(7))

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- All land designations are as established in the unit plans except as updated to satisfy new laws and regulations as embodied in the MMR's, thus only activity scheduling can be used to maximize PNV.

- This alternative proposes an additional 62,900 acres of Wilderness in Scotchman Peaks, and the Cabinet Additions. This is 16% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

- Budgets and resource outputs over the 200 year horizon approximate current levels.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints) except as noted below.

- MMR's (see Section VI)

- Assign 62,900 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	47,600 acres
Cabinet Face West	8,200 acres
Cabinet Face East	400 acres
McKay	6,300 acres
Chippewa	400 acres

- Limit budgets to current levels by constraining timber volumes to current levels over the 200 year horizon.

- Assign all acres to prescriptions which match the Unit Plans except as necessary to meet the MMR's.

d. Rationale

This alternative is one of the most heavily constrained since every land designation is forced into solution. The *NFMA regulations*, 36 CFR 219.12(f)(7), require an alternative which reflects "the current level of goods and services provided by the unit and the most likely amount of goods and services expected to be provided in the future if current management direction continues". The Unit Plans for the Forest have a set of designated land uses that are reproduced in this alternative with some alterations to reflect recent policy changes which would be carried into the future. The Unit Plans do not involve the same detail in scheduling activities as does the analysis process described in this appendix. Thus, it was necessary to devise a set of constraints which would force a schedule of activities to match what could be expected in the future if current management were continued. Current direction seems to be toward very contained budgets so this philosophy was carried into this alternative. The budget could be directly constrained except that the several adjustments, discussed earlier, which are made after the run is complete make it difficult to develop an appropriate constraint level. Timber harvest and budget are directly related so the constraint was applied to harvest levels to force them to match, as closely as possible, the current cut levels out into the future. As a consequence of the relationship between timber harvest and budget, the resulting budget was close to the current level. Recreation and wildlife outputs are generally a function of the way in which the land is designated so by matching the Unit Plan designations this alternative matches those current direction outputs.

10. Alternative J (114009) - Proposed Action

a. Goal

The goal of this alternative is to provide a combination of Wilderness, roadless and timber management designations that provide both for stability and future options. Wildlife and fish production are emphasized to provide a more balanced multiple resource program.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Roadless designations are applied where timber management is environmentally unsound or not cost effective.

- This alternative proposes an additional 66,500 acres of Wilderness in Scotchman Peaks, the Ten Lakes Contiguous Area, and the Cabinet Additions. This is 16% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

- Land designations are based upon suitabilities and cost efficiency with added emphasis for the retention of future options and enhancement of the wildlife and fish resources.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)

- MMR's (see Section VI)

- Assign 66,500 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	24,200 acres
Ten Lakes Contiguous	6,800 acres
Cabinet Face West	8,000 acres
Cabinet Face East	20,400 acres
McKay	6,700 acres
Chippewa	400 acres

- Prescriptions assigned on the basis of suitability with deference given to maintaining future options.

d. Rationale

The goal of retaining future options does not lend itself to modeling with the use of broad constraints because it involves subjective rather than mathematical decisions. Thus, this alternative was developed by constraining individual areas to designations which were subjectively determined to retain the various options (for timber, for roadless recreation etc.). Together, this set of designations was also subjectively determined to meet the goal. The NDY constraint was applied to help attain the stability goal in the form of a constant or steadily increasing timber harvest schedule. The emphasis on wildlife and fish was made jointly with the subjective emphasis on the retention of options so it is embedded in the set of designation constraints. Since the goals of the alternative were met by constraining the designations of the land, the schedule was optimized from a cost efficiency standpoint like the other alternatives.

11. Alternative K (114FF5) - Departure on the Proposed Action

a. Goal

The goal of this alternative is to provide for an increase in timber harvest levels for the first two decades to more closely approach the RPA timber goals while providing a combination of Wilderness, roadless and timber management designations that provide for both stability and future options.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Roadless designations are applied where timber management is environmentally unsound or not cost efficient.

- This alternative proposes an additional 66,500 acres of Wilderness in Scotchman Peaks, the Ten Lakes Contiguous Area, and the Cabinet Additions. This is 16% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

- Land designations are based upon suitabilities and cost efficiency with added emphasis for the retention of future options and enhancement of the wildlife and fish resources.

- RPA timber goals are achieved in the first two decades by allowing departure to NDY after decade 2.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints) except as noted below.

- MMR's (see Section VI)

- Assign 66,500 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	24,200 acres
Ten Lakes Contiguous	6,800 acres
Cabinet Face West	8,000 acres
Cabinet Face East	20,400 acres
McKay	6,700 acres
Chippewa	400 acres

- Prescriptions assigned on the basis of suitability with deference given to maintaining future options.

- Decade 1 and 2 harvest levels are set in cubic measure so as to approximate RPA goals which are expressed in board foot measure. The harvest schedule is forced back to NDY after decade 4.

d. Rationale

This alternative has the same goals as the Proposed Action except that it aims to harvest timber at the RPA levels in decades one and two. The goals are met in the same way as for Alternative J - by constraining each area to specific designations which were subjectively determined. Since Alternative J had the same set of designations and did not achieve the RPA harvest goals under the NDY constraint, it was necessary to force the harvest volumes upward in decades one and two to meet the increased timber harvest goal of this alternative. In addition, it was necessary to permit a departure from NDY to make these higher harvest levels feasible. Permitting continued fluctuations in harvest levels would detract from the stability goal so the harvest schedule was forced back into NDY as soon as this was feasible (decade 4).

12. Alternative L (114W01) - Maximum Timber Benchmark

a. Goal

The goal of this alternative is to supply the highest possible timber yields.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of outputs from areas outside of the Wilderness would be based upon maximizing timber outputs.
- This alternative proposes no additional acres of Wilderness.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)
- MMR's (see Section VI)
- Timber volume for each decade constrained to match the maximum levels as determined by run 114T03.

d. Rationale

Since the goal of this alternative is to maximize the production of timber over the 200 year time horizon of the model, it was necessary to determine the levels of harvest which would need to be applied to accomplish this. An intermediate model was run with an objective function of Maximize Timber for 20 decades. The harvest levels from this run were then used as constraints in the model of this alternative which had an objective function of Maximize PNV. The MMR constraints were included to keep the solution legally implementable and the timber harvest schedule constraints (NDY) were included to keep this alternative comparable to the others (except those which explored departure opportunities).

13. Alternative M (114GG1) - Maximum PNV Benchmark

a. Goal

The goal of this alternative is to provide the highest possible present net value while fluctuations in timber outputs over time are kept within reasonable limits.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of market outputs from areas outside of the Wilderness would be based upon cost efficiency.

- This alternative proposes no additional acres of Wilderness.

- Harvest levels can increase or decrease by up to 25 percent from one decade to the next without causing unacceptable impacts on dependent communities.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints) except as noted below.

- MMR's (see Section VI)

- Timber harvest scheduling is constrained by sequential upper and lower bounds so that a change in harvest level does not exceed 25 percent from one decade to the next. NDY is not a constraint.

d. Rationale

Timber harvest levels are closely linked to PNV so restrictions on harvest schedules or levels tends to decrease PNV, as determined in the benchmark analysis. Thus, in the development of this alternative, it was recognized that releasing the NDY constraint would permit a higher PNV. From a social impact viewpoint, however, large fluctuations in timber harvest activities are linked to large fluctuations in local economic activity. To keep these fluctuations within reasonable limits the ± 25 % sequential upper and lower bound constraint was applied.

14. Alternative N (114V01)

a. Goal

The goal of this alternative is to provide higher first decade timber harvest levels by allowing a limited departure from non-declining yield while providing more stable support of the local economy than Alternative M.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- Production of outputs from areas outside of the Wilderness would be based upon cost efficiency.

- This alternative proposes no additional acres of Wilderness.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints) except as noted below.

- MMR's (see Section VI)

- Timber harvest is allowed to decline by up to 15 percent or rise by up to 20 percent from one decade to the next for the first five decades then returns to NDY.

d. Rationale

The goal of this alternative, to provide higher first decade timber volumes, is broad. The added stability consideration limits the ways in which the goal can be achieved. Rather than constraining to harvest the maximum possible timber in the first decade, which would have required large harvest fluctuations later, another approach was used. The approach is similar to that for Alternative M, except that the departure options are limited somewhat. Thus, this alternative becomes a variation on Alternative G which provides added stability in the local economy by limiting fluctuations in harvest levels.

15. Alternative O (114S07)

a. Goal

The goal of this alternative is to provide significant protection to roadless areas (both as proposed Wilderness and as other designations) and visual quality. Areas outside of the protected roadless areas are managed for cost efficiency subject to emphasizing the visual resource.

b. Criteria and Assumptions

The criteria and assumptions underlying this alternative are:

- This alternative proposes an additional 81,300 acres of Wilderness in Scotchman Peaks, the Ten Lakes Contiguous Area, Trout Creek and the Cabinet Additions. This is 20% of the total inventoried roadless area on the Forest (excluding Ten Lakes).

- Emphasis is given to non-motorized recreation and visual quality.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints (see Common Constraints)

- MMR's (see Section VI)

- Assign 81,300 acres of the following roadless areas, as noted, to Proposed Wilderness prescriptions:

Scotchman Peaks	28,900 acres
Ten Lakes Contiguous	7,100 acres
Trout Creek	13,100 acres
Cabinet Face West	6,700 acres
Cabinet Face East	17,900 acres
McKay	5,000 acres
Chippewa	400 acres
Tuchuck	2,200 acres

- *Timber harvest prescriptions are limited as follows:*

  Where an analysis area is not in grizzly habitat, not lodgepole pine and not in the breaklands land class and where the recommended visual quality objective is retention or partial retention timber harvest may occur only under the VIEWTM prescription (partial retention). Where the recommended visual quality objective is modification, harvest may occur only under the TMVIEW prescription (modification).

  Where an analysis area is not in grizzly habitat and is lodgepole pine or is in the breaklands land class, only the TMVIEW harvest prescription (modification) is allowed. In these areas it is very difficult to meet the partial retention objective.

  In the above analysis areas, options for the MINLVL prescription are retained and the WLDTIM prescription may compete where the appropriate suitabilities exist.

d. Rationale

The goal for this alternative is very similar to that for Alternative C except that additional emphasis is given to visual quality and non-motorized recreation. The Proposed Wilderness is the same as for Alternative C. The visual quality constraints noted above are designed to limit degradation of visual quality where that can be accomplished without violating the MMR's. The visual quality limitations are not applied in grizzly habitat because shelterwood cuts require additional periodic entries in a stand which are disruptive to grizzly use of the habitat. A visual quality objective (VQO) of "modification" is allowed on steep slopes and in lodgepole pine stands because of the physical difficulty in managing for a more stringent VQO. These constraints involve removing BGSRTM and TMBOPT prescriptions from consideration in most of the area outside of grizzly habitat (the TMBOPT designation is removed from consideration in grizzly habitat by the MMR's). In these areas the non-motorized recreation designations are now competing on a cost efficiency basis with designations which tend to be more costly than TMBOPT or BGSRTM. This situation allows those non-motorized recreation and other non-harvest designations to be selected more often.

16. Alternative JF (11424A - Final Plan)

a. Goal

The intent of this alternative is to provide a combination of wildlife, wilderness, roadless and timber management designations that provide for balance, economic stability and future options. Roadless designations are provided where timber management appears to be environmentally less desirable or not cost efficient. Other wildlife, especially old growth timber dependent species, receive more emphasis to provide for a balanced multiple resource program. Increased emphasis is also placed on the protection of fish habitat and water quality. Visual quality protection is provided in sensitive areas such as along major travel routes and around communities and recreation sites. The recommended wilderness proposal is a combination of parts of the RARE II Final EIS and the June, 1984, Montana Wilderness Bill.

b. Criteria and Assumptions

The criteria and assumptions underlying the Final Plan are:

- Roadless designations are generally applied where timber management is environmentally unsound or not cost effective.

- The Final Plan proposes a total of 79,000 acres of Wilderness in Scotchman Peaks, the Ten Lakes Contiguous area and the Cabinet Additions. This is 20% of the total inventoried roadless area on the Forest (excluding The Ten Lakes Montana Wilderness Study Act Area).

- Land designations are based upon suitabilities and cost efficiency with added emphasis for the retention of future options and enhancement of the wildlife and fish resources.

c. Constraints

The constraints used to meet the criteria and assumptions are:

- Timber policy constraints as described in the "Common Constraints" section above, plus:
  maximize timber in the first decade

- MMR's (see Section VI)

- Assign 78,500 acres of the following roadless areas, as noted, to Recommended Wilderness prescriptions:

Scotchman Peaks	36,200
Ten Lakes Contiguous	6,800
Cabinet Face West	8,000
Cabinet Face East	20,400
McKay	6,700
Chippewa	400

- Prescriptions assigned on the basis of suitability with deference given to maintaining future options.

d. Rationale

The goal of retaining future options does not lend itself to modeling with the use of broad constraints because it involves subjective rather than mathematical decisions. Thus, the Final Plan was developed by constraining individual areas to designations which were subjectively determined to meet the goal.

The non-declining yield constraint was applied because anticipated declines in timber supplies available from all sources in the area could not be offset with a departure. In addition, eventual declines in Kootenai National Forest harvest levels under a departure sequence would likely be necessary before supplies on other ownerships could be increased to offset National Forest declines. In essence a departure would bolster the short-term timber supply to some degree while increasing social disruption in the future when declines would be necessary. Timber harvest is maximized in the first decade (to 202 MMBF regulated) to bolster short-term supplies as much as possible without increasing instability in the local economy in the future (see section V.H. above).

The emphasis on wildlife (particularly big game, grizzly bear and old-growth timber dependent species) and fish was made jointly with the subjective emphasis on the retention of options so it is embedded in the set of designation constraints. Since the goals of the Final Plan were met by constraining the designations of the land, the schedule was optimized from a cost efficiency standpoint like the alternatives described in the DEIS.

VIII. Summary of Tradeoffs Within Selected Benchmarks, and Alternatives

Significant Changes from Draft to Final EIS

A discussion of Alternative JF (Final Plan) has been added to the end of this section. See also Chapter IX for details related to the timber resource and suitable timber land.

A. Overview

The purpose of estimating and displaying tradeoffs is to compare priced and nonpriced outputs in a way that helps decisionmakers select which alternative maximizes Net Public Benefits. This comparative analysis is the basis for evaluating alternatives and selecting a preferred action (planning steps 7 and 8). This section focuses on the overall effects of alternatives and benchmarks. The constraints are discussed in detail in Appendix B, Section VII, and social and environmental effects are discussed in Chapters II and IV. Section 17 in Chapter II summarizes the tradeoff discussion details presented here.

B. Process for Evaluating Significant Constraints

Management 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 and one which does not. The change in PNV is the efficiency tradeoff of achieving a specific objective if both solutions have efficient prescriptions, both solutions maximize PNV, and the constraints are cost-efficient. The efficiency tradeoff was not determined for individual alternative objectives because of the prohibitive costs of analyzing every constraint used to develop alternatives. But by comparing alternatives, the economic tradeoffs of the groups of objectives which have the most significant impact on PNV can be determined. These efficiency tradeoffs can then be compared to environmental, social consequences and other nonpriced outputs produced to help decisionmakers identify the alternative which maximizes net public benefits.

A major factor in the tradeoff analysis is the order in which the objectives are analyzed. For example, the economic tradeoff of meeting management 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. Therefore, the economic tradeoffs discussed in this section are only relevant to the actual alternative where the objectives were analyzed.

C. Tradeoffs Among Alternatives

This discussion focuses on how alternatives respond to the various issues and concerns and the various tradeoffs (both priced and nonpriced) that occur.

Resource outputs and socioeconomic effects are displayed in Chapter II, and environmental effects are discussed in Chapters II and IV.

1. Response to Issues and Concerns

Alternatives were designed to address the major issues, management concerns and opportunities. A single alternative cannot fully resolve all issues because of the conflicts among issues. Nor can most issues be resolved to the satisfaction of all interested parties simply because of differences of opinions and viewpoints of the participants. Table B-23 compares the response of each alternative to the major issues and concerns. A detailed discussion of issues is in Appendix A.

Table B-23, Part 1

COMPARISON OF ALTERNATIVES FOR RESPONSE TO THE MAJOR ISSUES, CONCERNS, AND OPPORTUNITIES

No.	Indicator of Issues, Concerns, & Opportunities	RPA Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alt. H	CD Alt. I	PA Alt. J	FP Alt. JF	Dep. Alt. K	Alt. L	PNV Alt. M	Alt. N	Alt. O
1.	Decade 1 regulated (live green) tmbr. harv.(mmbf/yr)	226	223	225	227	218	164	213	208	150	202	202	230	255	262	247	215
	& % change from last 10-yr. average regulated harvest	+53	+51	+52	+53	+47	+11	+44	+40	0	+36	+36	+55	+72	+77	+67	+45
2.	Suitable tmbrland managed(MAcres) &	1470	1464	1466	1595	1425	1132	1386	1361	1422	1386	1263	1386	1788	1484	1481	1389
	% of total available	82	82	82	89	80	63	78	76	80	78	71	78	100	83	83	78
3.	New road const. needed by Decade 5 (miles) and %	5270	5200	5150	5690	4950	3850	4750	4590	3840	4690	4050	4720	6360	5230	5270	4680
	change from exist. miles on 1/1/84	+88	+87	+86	+95	+83	+64	+79	+77	+64	+78	+68	+79	+106	+87	+88	+78
4.	Miles of new road const. needed in 1st decade	2690	2660	2680	2670	2630	2020	2510	2480	1850	2440	2370	2760	3100	3150	2890	2560
5.	Total road system eventually required (mi.)	11270	11200	11150	11690	10950	9850	10750	10590	9840	10690	10050	10720	12360	11230	11270	10680
6.	Rec. wilderness (MAcres) & number	None	64	81	64	187	None	305	404	64	66	78	66	None	None	None	81
	of locations	0	2	5	2	6	0	15	27	2	3	3	3	0	0	0	5
7.	Designated rdless acres in invent. rdless areas	211	164	151	155	99	209	53	0	174	202	192	202	159	200	205	322
	(M Acres) & % of total	52	41	37	38	25	52	13	0	43	50	48	50	39	50	51	80
8.	Inventoried rdless acres developed in Decade 1 (MAcres)	46	50	45	39	45	49	17	0	34	10	10	10	57	55	42	0
9.	Inventoried rdless acres remain.after 1st decade (MAcres)	358	289	278	301	172	355	81	0	307	327	315	327	347	349	362	322
	& % of total	89	72	69	75	43	88	20	0	76	81	78	81	86	86	90	80
10.	Total roadless rec. opportunities provided (MAcres)	399	428	419	410	476	401	534	583	441	518	521	518	349	389	393	574
	and % of the total Forest	18	19	19	18	21	18	24	26	20	23	23	23	16	17	18	26
11.	Elk population by 3rd decade	8400	8500	8500	8000	8400	9900	8500	8600	7300	8000	8000	8000	8500	8300	8400	8500
12.	Additional road restrictions needed by 5th decade(mi.)	3510	3510	3520	3170	3280	3360	3180	3130	2990	4480	4130	4480	4090	3500	3520	2700
13.	Migratory fish (smolts) prod. in Decade 1 (MM fish/	191	192	191	190	192	194	193	193	199	192	192	192	188	192	189	190
	yr.) & % change	-7	-6	-7	-7	-6	-5	-6	-6	-3	-6	-6	-6	-8	-6	-8	-7
14.	Old growth timber (160+ yr.) after Decade 10 (MAcres)	204	203	204	186	206	344	218	230	537	255	311	255	168	191	196	232

Table B-23, Part 2

COMPARISON OF ALTERNATIVES FOR RESPONSE TO THE MAJOR ISSUES, CONCERNS AND OPPORTUNITIES

No.	Indicator of Issues, Concerns, & Opportunities	Alt. A	Alt. B	Alt. C	RPA Alt. D	Alt. E	Alt. F	Alt. G	Alt. H	CD Alt. I	PA Alt. J	FP Alt. JF	Dep. Alt. K	Alt. L	PNV Alt. M	Alt. N	Alt. O
15.	Grizzly habitat design. for limited or no development (M Acres)	425	434	439	469	475	339	514	545	551	589	609	589	354	434	424	444
	& % of total habitat	42	42	42	45	46	33	50	53	53	57	59	57	34	42	41	43
16.	Visual quality protection(preservation,retention, & partial retent. VOQs) (MAcres)	1108	1114	1120	1046	1137	1465	1157	1199	1240	1311	1311	1311	976	1092	1102	1382
17.	Decade I lodgepole pine harvest (MMBF/yr)	69	70	72	67	64	56	59	51	77	75	78	79	42	93	85	75
	& % change from last 5 yrs.	+38	+40	+44	+34	+28	+12	+18	+2	+54	+50	+56	+58	-16	+86	+70	+50
18.	Stagnated lodgepole pine stands covert. by Decade 5(MAcres)	2	2	1	45	1	44	1	1	69	70	32	70	93	1	1	5
19.	Projected withdrawals from oil & gas exploration(MAcres)	148	212	228	212	335	148	453	540	212	215	227	215	148	148	148	228
20.	Projected withdrawals from locatable mineral explor.(M Acres)	185	249	265	249	371	185	484	579	249	252	264	252	185	185	185	265
21.	Forest-related employmt.(jobs) in Decade I in private sector	2460	2440	2450	2460	2390	2010	2340	2240	1930	2300	2300	2490	2730	2710	2610	2400
	& % change from 1980	+47	+46	+47	+47	+44	+20	+41	+34	+16	+38	+38	+50	+64	+62	+57	+44
22.	Decade I total aver. ann. budget needed (million dollars)	27.2	27.0	27.1	26.9	26.4	20.7	25.7	25.1	19.6	25.2	24.0	27.5	34.2	30.4	29.1	26.9
23.	Average annual capital investmt. road const. funding needed in Decade I (million dollars)	4.3	4.2	4.3	4.3	4.1	3.4	3.9	3.8	2.4	3.7	3.6	4.2	5.2	5.1	4.6	3.9
24.	Decade I appropriated budget needed:capital investments + operation & maint. (million dollars)	21.7	21.6	21.8	21.5	21.1	16.8	20.6	20.0	16.6	20.3	19.2	22.0	28.1	24.1	23.2	21.8
25.	Landownership Adjustment	All alternatives treated landownership adjustment similarly - Dispose of approximately 69,000 acres and acquire approximately 91,000 acres to meet grizzly recovery goal, recreation and wildlife needs, solve trespass, etc.															

2. Tradeoffs

This discussion identifies the consequences of implementing the alternatives by comparing each alternative to Benchmark 114GG1 (Alternative M) and to at least three other alternatives: the next cheapest alternative in terms of discounted costs, the next cheapest alternative in terms of PNV, and the current management alternative I. In some cases, alternatives with similar objectives are also compared. In addition each alternative is compared to the non-priced benefits of other alternatives in terms of how the alternative ranks compared to the others. The comparisons form the basis for balancing economic tradeoffs with nonpriced resource outputs in selecting the preferred action.

One measure of the cost of an alternative is the discounted cost which represents the equivalent payment required by the government to implement an alternative. The minimum cost (discounted over 200 years at 4%) for federal ownership is defined by Benchmark 114DD1 as $196 million. Table B-24 displays the discounted costs, discounted benefits, and PNV in order of increasing costs for the alternatives. In general, the costs of alternatives increase with the size of the timber and road construction programs. These costs range from $541 million for Alternative F to $776 million for Alternative L. By comparing the benefits and costs of an alternative with the next cheapest alternative, the economic consequences of the additional expenditure can be compared to the additional nonpriced benefit values.

Another measure of the cost of an alternative is the change in PNV between alternatives. The maximum net value of the Forest is defined by Benchmark 114GG1 (Alternative M) as $1163 million. The difference between $1163 million and the PNV of an alternative represents the foregone investment opportunity to the government for implementing that alternative. Table B-25 displays the discounted costs and benefits by resource and the PNV in order of decreasing PNV. In general, the PNV of alternatives increases with the size of the timber program. Changes in the timber program are caused by constraints which preclude regulated timber harvest, disperse timber harvest over the landscape, set a timber harvest objective in certain decades or constrain harvest schedules. By comparing each alternative with the alternative having the next highest PNV, the incremental economic tradeoffs can be compared to the incremental nonpriced benefits. (see Table B-26)

The economic consequences of changing from the current land designation, output schedule, and budget are defined by comparing the PNV of the alternatives with the PNV of Alternative I. All alternatives allow for a more efficient land designation and output schedule than the current direction when the current direction is constrained to current budgets. When the budget for the current direction alternative is not constrained (FORPLAN run 114Y08) the PNV rises to $909 Million which is higher than alternative F.

The non-priced consequences of one alternative in comparison to any other is described by the outputs listed in Table B-26 and by the rank of the alternative under discussion in relation to the other alternatives. The quantifiable elements of each issue, concern and opportunity are ranked from the highest (1) to the lowest (15) by output level.

The discussion of each alternative will focus upon the items which differ between alternatives. Demand projections for the transitory range which the Kootenai can supply are far below supply levels of all the alternatives. Thus, the value of the available forage is considered to be constant for all alternatives (see Table B-25) and will not be further addressed in this discussion.

Table B-24
Alternatives in Order of Increasing Discounted Costs
(Discount Rate = 4%, Millions of 1978 dollars)

	Present Value Costs		Present Value Benefits		Present Net Value	
ALT	$MM	Change From Max PNV %	$MM	Change From Max PNV %	$MM	Change From Max PNV %
F	541	-22	1199	-36	658	-43
I-CD	546	-22	1006	-46	460	-60
JF-FP	611	-12	1344	-28	733	-37
H	627	-10	1662	-11	1035	-11
G	647	- 7	1720	- 8	1073	- 8
J-PA	647	- 7	1563	-16	916	-21
E	659	- 5	1772	- 5	1113	- 4
K-DEP	662	- 5	1573	-15	911	-22
B	673	- 3	1809	- 3	1136	- 2
C	674	- 3	1802	- 3	1128	- 3
A	676	- 3	1819	- 2	1143	- 2
O	689	- 1	1753	- 6	1064	- 9
N	689	- 1	1837	- 1	1148	- 1
M-PNV	697	0	1860	0	1163	0
D	718	+ 3	1782	- 4	1064	- 9
L	776	+11	1822	- 2	1046	-10

Table B-25

Present Net Value, Present Value Benefits, and Present Value Costs
By Alternative

		PRESENT VALUE BENEFITS			PRESENT VALUE COSTS				
ALT	PNV $MM	TIMBER $MM	RANGE $MM	REC AND WILDLIFE $MM	TIMBER $MM	ROADS $MM	RANGE $MM	REC AND WILDLIFE $MM	OTHER $MM
M-PNV	1163	1631	3	227	251	204	2	80	161
N	1148	1603	3	231	245	200	2	81	161
A	1143	1588	3	228	237	195	2	81	161
B	1136	1575	3	231	236	194	2	81	160
C	1128	1568	3	231	236	194	2	81	161
E	1113	1538	3	231	229	186	2	81	161
G	1073	1490	3	227	222	183	2	80	160
D-RPA	1064	1552	3	227	267	205	2	81	163
O	1064	1514	3	236	263	178	2	83	163
L	1046	1590	3	229	300	227	2	81	166
H	1034	1441	3	219	218	175	2	76	158
J-PA	916	1328	3	232	224	175	2	82	164
K-DEP	911	1338	3	232	231	183	2	82	164
JF-FP	733	1109	3	233	196	163	2	82	167
F	658	962	3	233	151	149	2	80	158
I-CD	460	776	3	227	169	124	2	82	169

NOTE: The direct comparison of individual resource benefits and costs is misleading because not all costs are allocated to each resource. The "Other" cost category includes unseparable joint costs associated with several resources.

Summary of Net Public Benefits

Alternatives (In Order of Descending PNV)	PNV M	N	A	B	C	E	G	RPA D	O	L	H	PA J	DEP K	FP JF	F	CD I
PRICED BENEFITS																
PNV ($MM)	1163	1148	1143	1136	1129	1113	1073	1064	1064	1046	1035	916	911	733	658	460
Opportunity Cost ($MM)	0	15	20	27	34	50	90	99	99	117	128	247	252	430	505	703
% Change from Alt. M	0	-1	-2	-2	-3	-4	-8	-9	-9	-10	-11	-21	-22	-27	-43	-60
Numerical Rank*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	14	15
Present Value Benefits	1860	1837	1819	1809	1803	1772	1720	1782	1753	1823	1662	1563	1573	1345	1198	1006
% Change From Alt. M	0	-1	-2	-3	-3	-5	-8	-4	-6	-2	-11	-16	-15	-28	-36	-46
Numerical Rank*	1	2	4	5	6	8	10	7	9	3	11	13	12	14	14	15
Present Value Costs	697	689	676	674	674	658	647	718	689	776	627	647	662	611	541	547
% Change from Alt. M.	0	-1	-3	-3	-3	-6	-7	+3	-1	+11	-10	-7	-5	-12	-22	-22
Numerical Rank*	3	4	5	6	6	8	9	-2	4	1	10	9	7	11	12	11
1st Decade Regulated (live green)																
Timber Harvest-mmbf/yr	262	247	226	223	225	218	213	227	215	255	208	202	230	202	164	150
% Change over last 10 yr. Ave. Regulated Timber Harvest	+77	+67	+53	+51	+52	+47	+44	+53	+45	+72	+40	+36	+55	+36	+11	0
Numerical Rank*	1	3	6	8	7	9	11	5	10	2	12	13	4	13	14	15
NONPRICED BENEFITS																
Jobs and Community Stability																
Decade 1 Forest-related Private Sector Jobs	2710	2610	2460	2440	2450	2390	2340	2460	2400	2730	2240	2300	2490	2300	2010	1930
% Change from Alt. I	+40	+35	+27	+26	+27	+24	+21	+27	+24	+41	+16	+19	+29	+19	+4	0
Numeric Rank*	2	3	5	7	6	9	10	5	8	1	12	11	4	11	13	14
Potential Population Change from 1980	2310	2020	1570	1500	1540	1370	1230	1570	1400	2370	910	1100	1670	1100	220	0
% Change in Population	+13	+11	+9	+8	+9	+8	+7	+9	+8	+13	+5	+6	+9	+6	+1	0
Numerical Rank*	2	3	5	7	6	9	10	5	8	1	12	11	4	11	13	14

*Numerical rank is from the highest quantity (1) to the lowest quantity (15).

Alternatives (In Order of Descending PNV)	PNV M	N	A	B	C	E	G	RPA D	O	L	H	PA J	DEP K	FP JF	CD F	I
NONPRICED BENEFITS (CONT.)																
Visual Quality Protection In Sensitive Areas																
M Acres of Preservation Retention and Partial Retention VQO	1092	1102	1108	1114	1120	1137	1157	1046	1382	976	1199	1311	1311	1311	1465	1240
% Change from Alt. I	-12	-11	-11	-10	-10	-8	-7	-16	+11	-21	-3	+6	+6	+6	+18	0
Numerical Rank*	12	11	10	9	8	7	6	13	2	14	5	3	3	3	1	4
Wilderness and Roadless Quality																
Total Roadless Rec Opportunities (M Acres)	389	393	399	428	419	476	534	410	574	349	583	518	518	521	401	441
% of Total Forest	17	18	18	19	19	21	24	18	26	16	26	23	23	23	18	20
% Change from Alt. I	-12	-11	-10	-3	-5	+8	+21	-7	+30	-21	+32	+17	+17	+17	-9	0
Numerical Rank*	13	12	11	7	8	5	3	9	2	14	1	4	4	4	10	6
Accessibility for Minerals Oil & Gas Exploration																
M Acres Withdrawn from Oil and Gas Exploration	148	148	148	212	228	335	453	212	228	148	540	215	215	227	148	212
% Change from Alt. I	-30	-30	-30	0	+8	+58	+114	0	+8	-30	+155	+1	+1	+8	-30	0
Numerical Rank*	7	7	7	6	4	3	2	6	4	7	1	5	5	4	7	6
M Acres withdrawn from locatable mineral exploration	185	185	185	249	265	371	484	249	265	185	579	252	252	264	185	249
% Change from Alt. I	-26	-26	-26	0	+6	+49	+94	0	+6	-26	+133	+1	+1	+6	-26	0
Numerical Rank*	7	7	7	6	4	3	2	6	4	7	1	5	5	4	7	6

*Numerical rank is from the highest quantity (1) to the lowest quantity (15).

Summary of Net Public Benefits (continued)

Alternatives (In Order of Descending PNV)	PNV M	N	A	B	C	E	G	RPA D	O	L	H	PA J	DEP K	FP JP	F	CD I
Grizzly Recovery																
M Acres of Grizzly Habitat with Little or no Development	434	424	425	434	439	475	514	469	444	354	545	589	589	609	339	551
% of Total Habitat	42	41	42	42	42	46	50	45	43	34	53	57	57	59	46	53
% change from Alt. 1	-21	-23	-23	-21	-20	-14	-7	-15	-19	-36	-1	+7	+7	+11	-38	0
Numerical Rank*	10	12	11	10	9	6	5	7	8	13	4	2	2	1	14	3
Lodgepole Pine Risk Management																
MMBF/yr Lodgepole Pine Harvest Decade 1	93	85	69	70	72	64	59	67	75	42	51	75	79	78	56	77
% Change from Last 5 yr. Average	+86	+70	+38	+40	+44	+28	+18	+34	+50	-16	+2	+50	+58	+58	+12	+54
Numerical Rank*	1	2	8	7	6	10	11	9	5	14	13	5	3	3	12	4
M Acres of Stagnated Lodgepole Pine Converted by Decade 5	1	1	2	2	1	1	1	45	5	93	1	70	70	32	44	69
% Change from Alt. I	-99	-99	-97	-97	-99	-99	-99	-35	-93	+35	-99	+1	+1	-54	-36	0
Numerical Rank*	9	9	8	8	9	9	9	4	7	1	9	2	2	6	5	3
Miles of Road (Access)																
New Road Construction needed by Decade 5, as of 1/1/84 (miles)	5230	5270	5270	5200	5150	4950	4750	5690	4680	6360	4590	4690	4720	4050	3850	3840
% Change from Existing Miles on 1/1/84	+87	+88	+88	+87	+86	+83	+79	+95	+78	+106	+77	+78	+79	+68	+64	+64
Numerical Rank*	4	3	3	5	6	7	8	2	11	1	12	10	9	13	14	15

*Numerical rank is from the highest quantity (1) to the lowest quantity (15).

Summary of Net Public Benefits (continued)

Alternatives (In Order of Descending PNV)	PNV M	N	A	B	C	E	G	RPA D	O	L	H	PA J	DEP K	FP JP	P	CD I
First Decade Appropriated Budget																
Million $ per year	24.1	23.2	21.7	21.6	21.8	21.1	20.6	21.5	21.8	28.1	20.0	20.3	22.0	19.0	16.8	16.6
% Change from 1980-82 Average (Alt. I)	+45	+40	+31	+30	+31	+27	+24	+30	+31	+69	+20	+22	+33	+16	+1	0
Numerical Rank*	2	3	6	7	5	9	10	8	5	1	12	11	4	13	14	15
Old-growth timber management																
Percent of Total Forest Land below 5,500 feet elevation	8	8	8	8	8	8	8	8	8	8	8	8	8	10	8	8
% Change from Alt. I	0	0	0	0	0	0	0	0	0	0	0	0	0	+25	0	0
Numerical Rank*	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2

*Numerical rank is from the highest quantity (1) to the lowest quantity (15).

a. Alternative A

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1143 Million	3	+148 %
Opportunity Cost	$ 20 Million	12	- 97 %
Present Value Costs	$ 676 Million	5	+ 24 %
Present Value Benefits	$1819 Million	4	+ 81 %
Jobs & Community Stability	2457 Jobs	5	+ 27 %
Visual Quality Protection	1108 M Acres	10	- 11 %
Wilderness/Roadless Quality	399 M Acres	11	- 10 %
Oil & Gas Withdrawals	148 M Acres	7	- 30 %
Locatable Mineral Withdrawals	185 M Acres	7	- 26 %
Undeveloped Grizzly Habitat	425 M Acres	10	- 23 %
Total Decade 1 Timber Harvest	226 MMBF/Year	6	+ 51 %
Decade 1 Lodgepole Pine Harvest	69 MMBF/Year	8	- 10 %
Stagnated LPP Converted - Dec 5	2 M Acres	7	- 97 %
New Road Access by Decade 5	5270 Miles	3	+ 37 %
First Decade Budget (approp)	$21.7 MM/Year	6	+ 31 %

Note: A higher numeric rank may or may not equate to "best" or "worst" depending upon the reader's value system.

(2) Discussion

Alternative A was modeled so that all tentatively suitable timberland would be available for designation to timber management prescriptions. It stresses timber management on the most cost efficient land base (sixth highest first decade timber harvest) while giving little consideration to non-market outputs (tenth highest visual quality and eleventh highest wilderness/roadless quality). This alternative has the highest first decade timber harvest of all the alternatives which do not deviate from non-declining yield and which do not have special harvest constraints. The opportunity cost of $20 million is the result of applying the NDY constraint, thus, the only way to raise the PNV of this alternative would be to permit some type of departure harvest schedule.

(a) Cost Comparison

The present value of costs for Alternation A is $676 Million which is the fifth highest of all the alternatives. Alternative A has slightly higher timber and road costs than Alternative C (sixth highest) because alternative A has more timberland designated for management and harvests more timber than Alternative A.

(b) PNV Comparison

The PNV for Alternative A is $1143 Million. Only alternatives M and N have higher PNV's and these alternatives achieve the increase by departing from non-declining yield harvest schedules.

(c) Comparison to Current Direction

Alternative A has the third highest PNV and Alternative I (Current Direction) has the lowest PNV because Alternative A has no constraint on timber harvest or budgets and it has 48,000 more acres in the suitable timber base. The additional timber management emphasis of Alternative A causes much higher timber and road costs than the current direction, but these added costs are more than offset by the much higher timber benefits. The recreation and wildlife costs and benefits are essentially the same between the two alternatives, but Alternative A has slightly more roaded recreation and slightly less wilderness recreation, as a percentage of recreation/wildlife benefits, than does the current direction.

The number of private sector Forest related jobs supported by Alternative A is 27 percent higher than for the Current Direction. While Alternative A has fewer recreation related jobs the added timber related jobs far offset the losses in recreation.

In order to produce the high levels of timber, Alternative A trades off 132,000 acres of protected visual quality that the current direction would retain. Alternative A does not use the costly TMVIEW and VIEWTM prescriptions which accommodate improved visual quality and which were forced into the Current Direction solution. Alternative A is one of the lowest (tenth) and the Current Direction is one of the highest (fourth) in acres of protected visual quality.

Alternative A has 10 percent fewer acres designated for wilderness or roadless uses than does the current direction. The only lands that fall into the wilderness/roadless designation in Alternative A are those that do not generate a positive return under timber management or those that can not be harvested due to the minimum management requirements. The current direction forced additional lands into these categories to satisfy public demands.

Withdrawals of land from oil,gas and mineral exploration are associated with Wilderness and Proposed Wilderness land designations. Since Alternative A has no Wilderness Proposals it is among the five alternatives that minimize withdrawals. Alternative A has 26 percent fewer acres of locatable mineral withdrawals and 30 percent fewer withdrawals from oil and gas exploration than the Current Direction.

The risk of failing to recover the grizzly population is decreased as more grizzly habitat is left undisturbed. Alternative A has the tenth highest amount of undisturbed grizzly habitat because of the high timber harvest emphasis. Alternative A leaves 23 percent fewer undisturbed acres than does the current direction.

In order to manage the risk associated with the lodgepole pine beetle and the fire hazards associated with dead and dying lodgepole stands it is necessary to have these stands in the suitable timber base. The costs of converting stagnated stands are high and returns come far in the future so Alternative A which is focusing upon cost efficient land management converts only a minimal amount of stagnated lodgepole. Alternative A converts 97 percent less stagnated lodgepole pine than does the current direction. High risk lodgepole stands do return a positive cash flow so they often appear in the suitable

timber base. In order to manage the current risk of insect and fire damage these stands must be cut in the first decade. This becomes a question of scheduling. In order to get these stands into the first decade harvest schedule they must provide a higher return in the first decade than other stands because overriding constraints such as non-declining yield and the minimum management requirements prevent all stands with a positive return from being cut in the first decade. Alternatively, harvest of these stands can be forced into solution with special constraints. Alternative A has the NDY constraint and does not force these stands to be harvested early so has the eighth highest first decade LPP harvest among the alternatives. It cuts 10 percent less than the current direction.

Alternative A harvests 51 percent more timber in decade one than does the current direction. This is partly due to the additional land in the suitable timber base, but it is primarily due to the constraint on timber volumes in the Current Direction model which was necessary to keep budgets at the current level. When the Current Direction model is run without the harvest constraints (114Y08), the first decade harvest rises to 204 MMBF/year. Without the harvest constraint in the Current Direction model, Alternative A would cut only 11 percent more timber than the Current Direction.

Alternative A requires 37 percent more new road construction by the end of decade five than does the current direction. This is due to the added suitable timber base and the relatively rapid harvest schedule in comparison to the current direction.

This alternative requires a relatively high budget (sixth highest) in the first decade to finance the activities associated with the high timber harvest levels. Alternative A has a first decade budget that is 31 percent higher than the current direction which has the lowest budget of all the alternatives.

b. Alternative B

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1136 Million	4	+147 %
Opportunity Cost	$ 27 Million	11	- 96 %
Present Value Costs	$ 673 Million	7	+ 23 %
Present Value Benefits	$1809 Million	5	+ 80 %
Jobs & Community Stability	2436 Jobs	7	+ 26 %
Visual Quality Protection	1114 M Acres	9	- 10 %
Wilderness/Roadless Quality	428 M Acres	7	- 3 %
Oil & Gas Withdrawals	212 M Acres	6	0 %
Locatable Mineral Withdrawals	249 M Acres	6	0 %
Undeveloped Grizzly Habitat	439 M Acres	9	- 20 %
Total Decade 1 Timber Harvest	223 MMBF/Year	8	+ 49 %
Decade 1 Lodgepole Pine Harvest	70 MMBF/Year	7	- 10 %
Stagnated LPP Converted - Dec 5	2 M Acres	7	- 97 %
New Road Access by Decade 5	5200 Miles	5	+ 35 %
First Decade Budget (Approp.)	$21.6 MM/Year	7	+ 30 %

(2) Discussion

Alternative B was modeled similarly to Alternative A except that 63,900 acres were designated, by constraint, as Proposed Wilderness. Of this acreage 30,400 were tentatively suitable, but only about 6,000 acres of this total were selected in Alternative A as being cost efficient and available under the minimum management requirements. Thus, the suitable timber base under Alternative B is 6000 acres less than for Alternative A. Since the general thrust of the alternative is toward cost efficient timber management except for the 6000 acres, the range of outputs are quite similar to Alternative A. The opportunity cost of $27 Million is due to the combination of the NDY constraint and the specially constrained Proposed Wilderness designation. Alternative A displayed an opportunity cost of $20 Million for the NDY constraint so the added opportunity cost of $7 Million (<1% of Maximum PNV) can be attributed to the 63,900 acres of proposed wilderness. This added opportunity cost is quite small because most of the acreage which was constrained to Proposed Wilderness was already in non-developmental designations due to economics and the minimum management requirements.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative K ($662 MM). This is due to the higher timber and road costs of Alternative B. Even though Alternative K has higher timber outputs in decade one, Alternative B has higher outputs in all other decades so the 200 year discounted costs are two percent higher for "B" than for "K". Alternative K was constrained to produce the higher first decade volume and allowed to depart from non-declining yield for two decades to make that higher cut feasible.

(b) PNV Comparison

The PNV for Alternative B is $1136 Million. This is the fourth highest PNV of all the alternatives. Alternative B has a slightly lower PNV than Alternative A ($1143 MM) simply because 6000 acres of cost efficient timber management land are included in the Proposed Wilderness designation of Alternative B. Alternative M and N achieve even higher PNV's by departing from non-declining yield.

(c) Comparison to Current Direction

Alternative B has a much higher PNV than the current direction ($1136 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to an added 42,000 acres in the suitable timber base of Alternative B and a different mix of land designations between the alternatives. As with Alternative A, the major difference is in the timber program. Timber costs are much higher for Alternative B over the Current Direction but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative B has 26 percent more jobs than does the Current Direction. If the

Current Direction model were not constrained by current levels of timber and associated budgets, Alternative B would still provide 5 percent more jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative B trades off 126,000 acres of visual quality compared to the Current Direction. This is 6,000 acres less of a tradeoff than Alternative A because those 6,000 acres moved from timber harvest prescriptions in Alternative A to Proposed Wilderness in Alternative B where the visual quality is protected. Even though the suitable timberland in Alternative B is only 42,000 acres larger than the Current Direction, the visual quality tradeoff is 126,000 acres. This is because the Current Direction uses the VIEWTM and TMVIEW prescriptions to protect visual quality while generating a regulated flow of timber whereas Alternative B does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative B to manage timber in the most cost efficient manner.

Alternative B has three percent less acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative B picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. The shift in this category from Alternative A to Alternative B does not equal the Proposed Wilderness acreage because some of those acres were already in roadless recreation designations in Alternative A.

Because they have the same Wilderness proposal, Alternative B and the Current Direction have the same withdrawals from oil, gas, and locatable mineral exploration.

Alternative B has 20 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis outside of the Proposed Wilderness.

Alternative B, like Alternative A, is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (2000 acres). This is 97 percent less than the Current Direction. For the same reasons discussed for Alternative A, Alternative B has a relatively low first decade lodgepole pine harvest (seventh highest). This is 10 percent less than the Current Direction and about the same as Alternative A.

Alternative B harvests 49 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative B would only harvest 9 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative B it would be necessary to build 5200 new miles of road by decade 5. This is 35 percent more than the Current Direction alternative. This difference is due to the higher harvest levels of Alternative B.

Alternative B requires the seventh highest budget to carry out the various programs. Its budget is 30 percent higher than the Current Direction.

c. Alternative C

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1129 Million	5	+145 %
Opportunity Cost	$ 34 Million	10	- 95 %
Present Value Costs	$ 674 Million	6	+ 23 %
Present Value Benefits	$1802 Million	6	+ 79 %
Jobs & Community Stability	2447 Jobs	6	+ 27 %
Visual Quality Protection	1120 M Acres	8	- 10 %
Wilderness/Roadless Quality	419 M Acres	8	- 5 %
Oil & Gas Withdrawals	228 M Acres	4	+ 8 %
Locatable Mineral Withdrawals	265 M Acres	4	+ 6 %
Undeveloped Grizzly Habitat	439 M Acres	8	- 20 %
Total Decade 1 Timber Harvest	225 MMBF/Year	7	+ 50 %
Decade 1 Lodgepole Pine Harvest	72 MMBF/Year	6	- 6 %
Stagnated LPP Converted - Dec 5	1 M Acres	8	- 99 %
New Road Access by Decade 5	5150 Miles	6	+ 34 %
First Decade Budget (Approp.)	$21.8 MM/Year	5	+ 31 %

(2) Discussion

Alternative C was modeled in much the same way as Alternatives A and B except that the wilderness proposal of Alternative C has 17,400 more acres in it than does that for Alternative B. The Proposed Wilderness constraints also apply to different acres, in some cases, from Alternative B. The Wilderness Proposals in this alternative match those in the Montana Wilderness Bill of June 1984. About 38,700 acres of the 81,300 acres in the Proposed Wilderness are tentatively suitable, but only about 18,700 acres were selected for timber management under Alternative A. All of the tentatively suitable timberland could not be managed for timber production because some is not cost efficient and other acres can not be managed for timber due to the constraints needed to satisfy the minimum management requirements and harvest flow needs (NDY). The reduction of 18,700 acres of suitable timberland which is placed into PWLDER is offset by 14,700 acres which were outside the Proposed Wilderness and which moved into timber management prescriptions. The number of acres in timber management prescriptions changed because the wilderness proposal removed the opportunity to select some lands from various age classes for timber management. This change in the lands available for timber management caused a different set of prescriptions and a different schedule to be selected as maximizing PNV under the constraints described in Section VII of this Appendix.

The additional opportunity cost in moving from Alternative A (no PWLDER) to Alternative C (81,300 acres of PWLDER) amounts to about $14 Million. This added opportunity cost is associated with the wilderness proposal. Outside of the Proposed Wilderness, this alternative manages for cost efficiency and thus produces a relatively high volume of timber (seventh highest in the first decade).

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative B which has essentially the same present value of costs ($1 MM less). Alternative C harvests slightly more timber in the first 3 decades but after that alternative B harvests more. The effect of discounting balances out the costs of the different schedules. The alteration in the harvest schedule and the associated costs is caused by the age class differences between the suitable timber lands of the two alternatives. The cost difference is in the "other" category. It is not possible to break the cost out specifically to timber activities, but the amount of all costs is related to the timber harvest activity on the Forest. Thus the costs difference is described here based upon timber harvest differences.

(b) PNV Comparison

The PNV for Alternative C is $1128 Million. This is the fifth highest PNV of all the alternatives. Alternative C has a slightly lower PNV than Alternative B ($1136 MM) because about 12,700 additional acres of cost efficient timber lands are placed into Proposed Wilderness.

(c) Comparison to Current Direction

Alternative C has a much higher PNV than the Current Direction ($1128 MM vs $460 MM) primarily because of the harvest constraints on the Current Direction which were applied to bring budgets down to current levels. Without the volume constraints the PNV for Alternative C would be 24 percent higher than the Current Direction rather than 145 percent higher as it is when those constraints are applied to form the Current Direction. In addition to the harvest constraints, the PNV of Alternative C is higher because it manages 44,000 additional acres of cost efficient timber lands and has a different mix of land designations. Those added timber management acres cost $116 MM more over 200 years (4%, timber and roads) to manage, but return $771 MM in timber benefits (4%).

Alternative C has a higher timber harvest level in the first decade thus it has 27% more private sector jobs related to Forest Service programs. If the Current level were not constrained by current levels of timber harvest and budget, Alternative C would provide only 5 percent more jobs than the Current Direction.

In order to produce high volumes of timber on its suitable timberland, Alternative C trades off 120,000 acres of visual quality compared to the Current Direction. This is 12,000 acres less of a tradeoff than Alternative A because those 12,000 acres moved from timber harvest prescriptions in Alternative A to Proposed Wilderness and other non-harvest prescriptions in Alternative C where the visual quality is protected. Even though the suitable timberland in Alternative C is only 44,000 acres larger than the Current Direction, the visual quality tradeoff is 120,000 acres. This is because the Current Direction uses the VIEWTM and TMVIEW prescriptions to protect visual quality while generating a regulated flow of timber whereas Alternative C does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative C to manage timber in the most cost efficient manner.

Alternative C has seven percent less acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative C picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. The shift in this category from Alternative A to Alternative C does not equal the Proposed Wilderness acreage because some of those acres were already in roadless recreation designations in Alternative A.

Alternative C has more acreage proposed for wilderness than the Current Direction thus it has more withdrawals from oil, gas, and locatable mineral exploration.

Alternative C has 20 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis outside of the Proposed Wilderness.

Alternative C, like Alternatives A and B, is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (1000 acres). This is 99 percent less than the Current Direction. For the same reasons discussed for Alternative A, Alternative C has a relatively low first decade lodgepole pine harvest (sixth highest). This is 6 percent less than the Current Direction.

Alternative C harvests 51 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative C would only harvest 10 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative C it would be necessary to build 5150 new miles of road by decade 5. This is 34 percent more than the Current Direction alternative. This difference is due to the higher harvest levels of Alternative C.

Alternative C requires the seventh highest budget to carry out the various programs. Its budget is 31 percent higher than the Current Direction.

d. Alternative D - RPA (with departure from NDY)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1064 Million	8	+125 %
Opportunity Cost	$ 99 Million	7	- 86 %
Present Value Costs	$ 718 Million	2	+ 32 %
Present Value Benefits	$1782 Million	7	+ 77 %
Jobs & Community Stability	2457 Jobs	5	• 27 %
Visual Quality Protection	1046 M Acres	13	- 16 %
Wilderness/Roadless Quality	410 M Acres	9	- 7 %
Oil & Gas Withdrawals	212 M Acres	6	0 %
Locatable Mineral Withdrawals	249 M Acres	6	0 %
Undeveloped Grizzly Habitat	469 M Acres	6	- 15 %
Total Decade 1 Timber Harvest	227 MMBF/Year	5	+ 51 %
Decade 1 Lodgepole Pine Harvest	67 MMBF/Year	9	- 13 %
Stagnated LPP Converted - Dec 5	45 M Acres	4	- 35 %
New Road Access by Decade 5	5690 Miles	2	+ 48 %
First Decade Budget (Approp.)	$21.5 MM/Year	8	+ 30 %

(2) Discussion

This alternative begins to deviate more from Alternative A than do Alternatives B and C. The primary reason is that timber volumes are constrained in decades one through five to approximate the RPA program tentative resource goals for timber. The wilderness proposal was constrained to match the RARE II proposal upon which the RPA goals are based. The wilderness proposal is identical to that of Alternative B. In order to generate a feasible solution it was necessary to allow a departure from non-declining yield. The departure schedule was constrained to allow departure for decades 6 through 10 and then return to NDY. The solution, however, only declined in decades 6, 7, and 8 before starting to increase the timber harvest volume. It should be noted here that the NDY constraint and the various departure schedules are based upon cubic foot measure. The RPA goals are in board foot measure. Since the ratio between board feet and cubic feet varies by the type and size of tree harvested, it was necessary to approximate the RPA volumes in cubic measure in order to constrain the model. This results in a board foot harvest schedule which differs slightly from the RPA goals. The results were as follows:

DECADE	RPA GOAL MMBF/yr	ALT D MMBF/yr
1	228	227
2	248	248
3	292	285
4	315	320
5	345	344

Permitting a departure from NDY is a release of a constraint and will cause PNV to rise (unless NDY was not binding on the solution). In Alternative D, the constraints to reach the higher RPA goals for five decades cost more in terms

of PNV than could be offset by relaxation of the NDY constraint. Alternative D is like Alternative B except for the timber harvest schedule constraints, so the change in PNV from $1136 MM for Alternative B to $1064 MM for Alternative D ($72 MM) can be attributed to the effort to achieve RPA timber goals. The total opportunity cost of $99 MM is associated with the combination of timber harvest and proposed wilderness constraints.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative M (maximum PNV benchmark). Alternative D has higher timber costs because the volumes were forced to climb relatively rapidly in the first five decades and the departure schedule was so limited that it was not possible to lower later costs sufficiently via a departure. Alternative M had a more open departure schedule (±25% for 20 decades) so that harvest could be scheduled more freely. In this way those stands with large timber volumes and lower costs could be harvested first and those stands which were more costly to harvest and which produced less volume could be deferred. The result is that Alternative M harvests about 66.2 Billion BF over the 200 year period and Alternative D harvests about 66.9 Billion BF over the same period. The larger harvest from Alternative D costs more.

(b) PNV Comparison

The PNV of Alternative D is $1064 Million. This is the eighth highest PNV of all the alternatives. Alternative G has the next higher PNV and Alternative O has the same PNV. Alternative O achieves the same PNV by proposing more wilderness acres (81,300 acres) and stressing the visual and recreation resources under a NDY harvest schedule. Alternative G achieves a slightly higher PNV ($1073 MM) by proposing wilderness designation on 304,900 acres and managing for cost efficiency outside the proposed wilderness under a NDY harvest schedule. On the basis of PNV alone, the selection between Alternative O (which stresses wilderness, recreation and viewing) and Alternative D (which stresses meeting the RPA goals for timber and wilderness) would be a toss up.

(c) Comparison to Current Direction

Alternative D has a higher PNV than the current direction ($1064 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to an added 173,000 acres in the suitable timber base of Alternative D, a different mix of land designations between the alternatives, the departure from NDY in Alternative D and the high timber volume constraints in Alternative D. As with Alternatives A, B and C, the major difference is in the timber program. Timber costs are much higher for Alternative D over the Current Direction but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative D has 27 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative D would still provide 5 percent more jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative D trades off 194,000 acres of visual quality compared to the Current Direction. This is the thirteenth highest amount of visual quality protection and is 68,000 acres more of a tradeoff than Alternative B, which had the same Proposed Wilderness. Here those 68,000 acres moved from non-timber harvest prescriptions in Alternative B to harvest prescriptions in Alternative D where the visual quality is not protected. Even though the suitable timberland in Alternative D is 173,000 acres more than the Current Direction, the visual quality tradeoff is 194,000 acres. This is because the Current Direction uses the VIEWTM and TMVIEW prescriptions to protect visual quality while generating a regulated flow of timber whereas Alternative D does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative D to manage timber in the most cost efficient manner while still achieving the RPA goals.

Alternative D has seven percent less acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative D picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. The shift in this category from Alternative B to Alternative D is the result of the RPA timber goals which required that additional suitable timberland be used even though it would not be cost efficient on an acre by acre basis.

Because they have the same Wilderness proposal, Alternative D and the Current Direction have the same withdrawals from oil, gas, and locatable mineral exploration.

Alternative D has 15 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis.

Alternative D, like Alternative A, is focusing on cost efficient timber management, but in order to achieve the RPA harvest goals and meet NDY after decade 10 it is necessary to convert 45,000 acres of stagnated lodgepole pine in the first five decades. This is 35 percent less than the Current Direction. For the same reasons discussed for Alternative A, Alternative D has a relatively low first decade lodgepole pine harvest (ninth highest). This is 13 percent less than the Current Direction and is similar to Alternative A.

Alternative D harvests 51 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative D would only harvest 11 percent more timber in the first decade than the Current Direction. Another factor is that the first decade volume of Alternative D is constrained to the RPA goal level.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative D it would be necessary to build 5690 new miles of road by decade 5. This is 48 percent more than the Current Direction alternative and also higher than the other alternatives discussed so far. This difference is due to the higher harvest levels and larger suitable timber land base of Alternative D.

Alternative D requires the eighth highest budget to carry out the various programs. Its budget is 30 percent higher than the Current Direction.

e. Alternative E

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1113 Million	6	+142 %
Opportunity Cost	$ 50 Million	9	- 93 %
Present Value Costs	$ 659 Million	9	+ 21 %
Present Value Benefits	$1772 Million	8	+ 76 %
Jobs & Community Stability	2391 Jobs	9	+ 24 %
Visual Quality Protection	1137 M Acres	7	- 8 %
Wilderness/Roadless Quality	476 M Acres	5	+ 8 %
Oil & Gas Withdrawals	335 M Acres	3	+ 58 %
Locatable Mineral Withdrawals	371 M Acres	3	+ 49 %
Undeveloped Grizzly Habitat	475 M Acres	5	- 14 %
Total Decade 1 Timber Harvest	218 MMBF/Year	9	+ 45 %
Decade 1 Lodgepole Pine Harvest	64 MMBF/Year	10	- 17 %
Stagnated LPP Converted - Dec 5	1 M Acres	8	- 99 %
New Road Access by Decade 5	4950 Miles	7	+ 29 %
First Decade Budget (Approp.)	$21.1 MM/Year	9	+ 27 %

(2) Discussion

Alternative E was modeled similarly to Alternative A except that 186,600 acres were designated as Proposed Wilderness by constraint. Of this acreage, 106,700 acres were tentatively suitable for timber harvest, but much of this acreage can not be managed for timber in a cost efficient manner or was not accessible in Alternative A given the MMR's and harvest schedule constraints. Alternative A displayed the opportunity cost of the NDY constraint as being $20 MM so the additional opportunity cost of $30 MM can be attributed to the wilderness proposal.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative J, the Proposed Action ($647 MM). The timber and road costs are lower for Alternative J because it harvests less timber from a smaller suitable timber base.

(b) PNV Comparison

The PNV for Alternative E is $1113 Million. This is the sixth highest PNV of all the alternatives. Alternative E has a slightly lower PNV than Alternative C ($1128 MM) simply because additional acres of cost efficient timber management land are included in the Proposed Wilderness designation of Alternative E.

(c) Comparison to Current Direction

Alternative E has a higher PNV than the current direction ($1113 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to an added 3,000 acres in the suitable timber base of Alternative E and a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber costs are much higher for Alternative E over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative E has 24 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative E would still provide 3 percent more jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative E trades off 103,000 acres of visual quality compared to the Current Direction. Even though the suitable timberland in Alternative E is only 3,000 acres larger than the Current Direction, the visual quality tradeoff is 103,000 acres. This is because the Current Direction uses the VIEWTM and TMVIEW prescriptions to protect visual quality while generating a regulated flow of timber whereas Alternative E does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative E to manage timber in the most cost efficient manner.

Alternative E has 8 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative E picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. The shift in this category from Alternative A to Alternative E does not equal the Proposed Wilderness acreage because some of those acres were already in roadless recreation designations in Alternative A.

Alternative E has 58 percent more acres withdrawn from oil and gas exploration and 49 percent more acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the larger wilderness proposal of Alternative E.

Alternative E has 14 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis outside of the Proposed Wilderness.

Alternative E is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (1000 acres). This is 99 percent less than the Current Direction. For the same reasons discussed for Alternative A, Alternative E has a relatively low first decade lodgepole pine harvest (tenth highest). This is 17 percent less than the Current Direction.

Alternative E harvests 45 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which

was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative E would only harvest 7 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative E it would be necessary to build 4950 new miles of road by decade 5. This is 29 percent more than the Current Direction alternative. This difference is due to the higher harvest levels of Alternative E.

Alternative E requires the ninth highest budget to carry out the various programs. Its budget is 27 percent higher than the Current Direction.

f. Alternative F (Maximum Elk Benchmark)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$ 658 Million	13	+ 43 %
Opportunity Cost	$ 505 Million	2	- 28 %
Present Value Costs	$ 541 Million	13	- 1 %
Present Value Benefits	$1199 Million	14	+ 19 %
Jobs & Community Stability	2006 Jobs	13	+ 4 %
Visual Quality Protection	1465 M Acres	1	+ 18 %
Wilderness/Roadless Quality	401 M Acres	10	+ 4 %
Oil & Gas Withdrawals	148 M Acres	7	- 30 %
Locatable Mineral Withdrawals	185 M Acres	7	- 26 %
Undeveloped Grizzly Habitat	339 M Acres	13	- 38 %
Total Decade 1 Timber Harvest	164 MMBF/Year	14	+ 9 %
Decade 1 Lodgepole Pine Harvest	56 MMBF/Year	12	- 27 %
Stagnated LPP Converted - Dec 5	44 M Acres	5	- 36 %
New Road Access by Decade 5	3850 Miles	13	0 %
First Decade Budget (Approp.)	$16.8 MM/Year	13	+ 1 %

(2) Discussion

Alternative F is like Alternative A except that a special constraint is applied so that the selection of prescriptions is made on the basis of their ability to provide elk habitat before maximizing PNV. "ELK" is a non-scheduled output in the FORPLAN model and the yield tables are set up so that the number of elk produced varies by AA (potential habitat quality) and by prescription (capability to manage elk habitat). Thus, the designation of land is driven by the elk constraint, but the schedule of activities is driven by the objective function of maximizing PNV. In general the BGSRTM prescription provides the highest elk outputs so it is selected more often than in Alternative A (698,000 acres vs 522,100 acres). Outside of suitable elk summer range the land is managed for cost efficiency subject to the NDY and MMR constraints. The opportunity cost of $505 MM is made up of a combination of the NDY constraint and the constraint to supply high elk numbers. The additional opportunity cost beyond that for Alternative A is $485 MM and can be associated with the effort to produce those high elk numbers.

(a) Cost Comparison

The present value of costs for Alternative F is $541 MM. This is the lowest cost of all the alternatives. The low cost is associated with low timber harvest volumes and a lack of either commercial or precommercial thinning on the summer range acres. Repetitive entries into summer range to manage timber tends to displace elk so to maximize elk these entries (including thinnings) are minimized. Final harvests are used to manage cover/forage ratios and produce a regulated flow of timber while doing so.

(b) PNV Comparison

The PNV for Alternative F is $658 Million. Only the Current Direction Alternative with its constrained timber harvest and associated budget produces a lower PNV. The next higher PNV is produced by Alternative K. Alternative F has a lower PNV primarily because it has 254,000 acres less suitable timberland than Alternative K. Alternative K is a departure on the Proposed Action and has a different mix of prescriptions constrained into the solution which also helped produce the higher PNV but generated lower elk populations (8070 elk vs 10,100 elk).

(c) Comparison to Current Direction

Alternative F has a higher PNV than the current direction ($658 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM which exceeds the PNV from Alternative F by $251 MM. The difference is due to a suitable timber base which is 290,000 acres smaller than the Current Direction and a different mix of land designations between the alternatives. As with the other alternatives, the major difference is in the timber program. Timber costs are higher for the Current Direction because more commercial and precommercial thinning and conversion of stagnated lodgepole pine is scheduled. The roading program for Alternative F is more costly than for the Current Direction even though the suitable timber base is 290,000 acres smaller because much of the Current Direction road building was unnecessary, within the 200 year time horizon, to produce the low volumes of timber. Timber benefits are higher for Alternative F because it harvests more timber.

With a higher timber harvest level comes more jobs in the timber industry. Alternative F has 4 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative F would provide 14 percent <u>fewer</u> jobs.

Managing for elk habitat tends to be compatible with visual quality enhancement. Alternative F has 18 percent more visual quality protection than does the Current Direction.

Alternative F has four percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. All of this acreage is in unroaded, non-wilderness designations which contribute a great deal to elk habitat.

Since Alternative F has no Wilderness proposed, it has 30 percent fewer withdrawals from oil and gas exploration and 26% fewer withdrawals from locatable mineral exploration.

Alternative F has 38 percent less undeveloped grizzly habitat than the Current Direction. This is due to the heavy use of the BGSRTM prescription on elk summer range and the fact that elk summer range is frequently within grizzly habitat.

Alternative F is attempting to improve elk habitat at all costs so when stagnated lodgepole pine stands occur within elk summer range, they are converted and managed for elk habitat. Alternative F converts 44,000 acres of stagnated lodgepole which is 36% less than the Current Direction but much more than those alternatives which maximize PNV without the constraint to supply elk. For the same reasons discussed for Alternative A, Alternative F has a relatively low first decade lodgepole pine harvest (twelfth highest). This is 27 percent less than the Current Direction.

Alternative F harvests 9 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative F would harvest 20 percent less timber in the first decade than the Current Direction. The long run sustained yield harvest level for Alternative F is the lowest of all the alternatives because high long range yields are associated with intensive management in the form of precommercial and commercial thinnings and these are not compatible with elk habitat management. Compounding this, Alternative F has the smallest suitable timber base of all the alternatives.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative F it would be necessary to build 3850 new miles of road by decade 5. This is essential the same as the Current Direction alternative. The reason for this similarity given the big differences in suitable timber lands is described above in the first paragraph of this section.

Alternative F requires a budget which is the second lowest of all the alternatives. The Current Direction requires the lowest budget. Alternative F is budgeted at a level one percent higher than the Current Direction.

g. Alternative G

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1073 Million	7	+133 %
Opportunity Cost	$ 90 Million	8	- 87 %
Present Value Costs	$ 647 Million	10	+ 18 %
Present Value Benefits	$1720 Million	10	+ 71 %
Jobs & Community Stability	2343 Jobs	10	+ 21 %
Visual Quality Protection	1157 M Acres	6	- 7 %
Wilderness/Roadless Quality	534 M Acres	3	+ 21 %
Oil & Gas Withdrawals	453 M Acres	2	+144 %
Locatable Mineral Withdrawals	484 M Acres	2	+ 94 %
Undeveloped Grizzly Habitat	514 M Acres	4	- 7 %
Total Decade 1 Timber Harvest	213 MMBF/Year	11	+ 42 %
Decade 1 Lodgepole Pine Harvest	59 MMBF/Year	11	- 23 %
Stagnated LPP Converted - Dec 5	1 M Acres	8	- 99 %
New Road Access by Decade 5	4750 Miles	8	+ 24 %
First Decade Budget (Approp.)	$20.6 MM/Year	10	+ 24 %

(2) Discussion

This alternative is modeled like alternatives A, B, C, and E except that the wilderness proposal is different. In this case there are 304,900 acres constrained to the Proposed Wilderness prescription in twenty roadless areas. About 172,700 acres of this Proposed Wilderness is tentatively suitable timberland, but much of this acreage can not be managed for timber in a cost efficient manner or was not accessible in Alternative A given the MMR's and NDY constraints. The land outside of the Proposed Wilderness is managed for cost efficiency. Alternative A displayed an opportunity cost of $20 Million for the NDY constraint so the additional opportunity cost of $70 Million can be attributed to the Wilderness proposal.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative H, the maximum Wilderness benchmark. Alternative H has lower timber and road costs because it harvests less timber from a smaller suitable timber base. It also has lower recreation related costs because some recreationists who prefer the less rustic semi-primitive non-motorized recreation experience do not continue to use the area if it is managed for Wilderness thus fewer overall recreationists use the Forest and the cost of managing them is less. This is based upon the assumptions that current use patterns by recreation type can be used to project future demand and that future recreation management will not cause shifts in demand between the different types of recreation. Management for elk and other big game hunting recreation is higher for Alternative H, but this is offset by the lower costs for semi-primitive non-motorized recreation. Note that in this analysis the elk and big game hunting recreation projections are independent of the other

recreation types and that hunting can occur in areas suitable for either roaded or non-roaded recreation.

(b) PNV Comparison

The PNV for Alternative G is $1073 Million. This is the seventh highest PNV of all the alternatives. Alternative G has a slightly lower PNV than Alternative E ($1113 MM) simply because additional acres of cost efficient timberland are included in the wilderness proposal of Alternative G.

(c) Comparison to Current Direction

Alternative G has a higher PNV than the current direction ($1073 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative G over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative G has 21 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative G would provide less than one percent more jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative G trades off 83,000 acres of visual quality compared to the Current Direction. Even though the suitable timberland in Alternative G is less than the Current Direction, the visual quality tradeoff is 83,000 acres. This is because the Current Direction uses the VIEWTM and TMVIEW prescriptions to protect visual quality while generating a regulated flow of timber whereas Alternative G does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative G to manage timber in the most cost efficient manner.

Alternative G has 21 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative G picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. The shift in this category from Alternative A to Alternative G does not equal the Proposed Wilderness acreage because some of those acres were already in roadless recreation designations in Alternative A.

Alternative G has 144 percent more acres withdrawn from oil and gas exploration and 94 percent more acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the larger wilderness proposal of Alternative G.

Alternative G has 7 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis outside of the Proposed Wilderness.

Alternative G is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (1000 acres). This is 99 percent less than the Current Direction. For the same reasons discussed for Alternative A, Alternative G has a relatively low first decade lodgepole pine harvest (eleventh highest). This is 23 percent less than the Current Direction.

Alternative G harvests 42 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative G would only harvest 4 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative G it would be necessary to build 4750 new miles of road by decade 5. This is 24 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels of Alternative G. Even though the current direction has more suitable timber land than Alternative G fewer roads are needed in the time horizon of this analysis (200 years) because some of the suitable timberland is never managed in that time period thus the roads are not needed.

Alternative G requires the tenth highest budget to carry out the various programs. Its budget is 24 percent higher than the Current Direction.

h. Alternative H (Maximum Wilderness)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1035 Million	10	+125 %
Opportunity Cost	$ 128 Million	5	- 82 %
Present Value Costs	$ 627 Million	11	+ 15 %
Present Value Benefits	$1662 Million	11	+ 65 %
Jobs & Community Stability	2237 Jobs	12	+ 16 %
Visual Quality Protection	1199 M Acres	5	- 3 %
Wilderness/Roadless Quality	583 M Acres	1	+ 32 %
Oil & Gas Withdrawals	540 M Acres	1	+155 %
Locatable Mineral Withdrawals	579 M Acres	1	+133 %
Undeveloped Grizzly Habitat	545 M Acres	3	- 1 %
Total Decade 1 Timber Harvest	208 MMBF/Year	12	+ 39 %
Decade 1 Lodgepole Pine Harvest	51 MMBF/Year	13	- 34 %
Stagnated LPP Converted - Dec 5	1 M Acres	8	- 99 %
New Road Access by Decade 5	4590 Miles	12	+ 20 %
First Decade Budget (Approp.)	$20.0 MM/Year	12	+ 20 %

(2) Discussion

Alternative H was modeled similarly to Alternatives A, B, C, E and G except that in this alternative all inventoried roadless areas are designated for Proposed Wilderness by constraint. Of the 403,700 acres of Proposed Wilderness 245,100 acres are tentatively suitable timber lands. About 206,400 acres of the inventoried roadless areas were not in the suitable timber base of Alternative A because they were either non-commercial forest lands, were not cost efficient to manage for timber production or could not be managed for timber without violating the MMR's. Of the 245,100 acres in the tentatively suitable lands, about 23,200 acres were not designated for timber management in Alternative A because they either could not increase PNV or could not be accessed due to the MMR's and NDY constraints. Alternative A displayed the opportunity cost of the NDY constraint as being $20 Million so the additional opportunity cost of $108 Million can be attributed to the wilderness proposal.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative I, the Current Direction ($546 MM). Alternative H has higher timber and road costs which offset its lower recreation costs. The higher road and timber costs are due to the higher timber harvest levels and the fact that the Current Direction defers some of these activities until even after the 200 year planning horizon. The lower recreation costs are related to the shift of some lands from semi-primitive non-motorized (SPNMRC) designations which serve the demands of a segment of the recreationist population to wilderness designations which serve a different segment. It is assumed that demand for wilderness recreation will not change due to this shift. Alternative G, which has the next lowest amount of Proposed Wilderness already supplies more wilderness recreation than will be demanded until late in the planning horizon (decade 16). Thus, the added wilderness of Alternative H brings neither increased costs or benefits, but the lost SPNMRC users do take with them both costs and benefits when they no longer use the Forest.

(b) PNV Comparison

The PNV for Alternative H is $1035 million. This is the tenth highest PNV of all the alternatives. Alternative H has a slightly lower PNV than Alternative L ($1046 MM). This is due to a combination of factors. First, Alternative L has no Proposed Wilderness so this would be expected to raise its PNV considerably. Second, Alternative L has the largest suitable timber base of all the alternatives (100 percent of the tentatively suitable base) which may also be expected to raise the PNV. Third, Alternative L is constrained to produce the maximum amount of timber in 200 years under the NDY constraint and the MMR's. In fact forcing all the tentatively suitable timberland into timber management is very costly, particularly when stagnated lodgepole pine stands are considered. The raise in PNV of Alternative L due to its lack of wilderness is almost offset by the increased costs of managing all the tentatively suitable timberlands in a way which will maximize timber outputs. The result is that Alternative L has only a slightly higher PNV than Alternative H.

(c) Comparison to Current Direction

Alternative H has a higher PNV than the current direction ($1035 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative H over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative H has 16 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber harvest and associated budgets, Alternative H would provide 4 percent fewer jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative H trades off 41,000 acres of visual quality compared to the Current Direction. Even though the suitable timberland in Alternative H is less than the Current Direction, the visual quality tradeoff is 41,000 acres. This is because the Current Direction uses the VIEWTM and TMVIEW prescriptions to protect visual quality while generating a regulated flow of timber whereas Alternative G does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative H to manage timber in the most cost efficient manner.

Alternative H has 32 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative H picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. The shift in this category from Alternative A to Alternative H does not equal the Proposed Wilderness acreage because some of those acres were already in roadless recreation designations in Alternative A.

Alternative H has 155 percent more acres withdrawn from oil and gas exploration and 133 percent more acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the larger wilderness proposal of Alternative H.

Alternative H has 1 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis outside of the Proposed Wilderness.

Alternative H is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (1000 acres). This is 99 percent less than the Current Direction. For the same reasons discussed for Alternative A plus the fact of its lower suitable timber land acreage, Alternative H has a relatively low first decade lodgepole pine harvest (thirteenth highest). This is 34 percent less than the Current Direction.

Alternative H harvests 39 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative H would only harvest 2 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative H it would be necessary to build 4590 new miles of road by decade 5. This is 20 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels of Alternative H. Even though the current direction has more suitable timber land than Alternative H fewer roads are needed in the time horizon of this analysis (200 years) because some of the suitable timberland in the Current Direction alternative is never managed in that time period thus the roads are not needed.

Alternative H requires the twelfth highest budget to carry out the various programs. Its budget is 20 percent higher than the Current Direction.

i. Alternative I (Current Direction)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$ 460 Million	14	0 %
Opportunity Cost	$ 703 Million	1	0 %
Present Value Costs	$ 546 Million	12	0 %
Present Value Benefits	$1006 Million	15	0 %
Jobs & Community Stability	1931 Jobs	14	0 %
Visual Quality Protection	1240 M Acres	4	0 %
Wilderness/Roadless Quality	441 M Acres	6	0 %
Oil & Gas Withdrawals	212 M Acres	6	0 %
Locatable Mineral Withdrawals	249 M Acres	6	0 %
Undeveloped Grizzly Habitat	551 M Acres	2	0 %
Total Decade 1 Timber Harvest	150 MMBF/Year	15	0 %
Decade 1 Lodgepole Pine Harvest	77 MMBF/Year	4	0 %
Stagnated LPP Converted - Dec 5	69 M Acres	3	0 %
New Road Access by Decade 5	3840 Miles	14	0 %
First Decade Budget (Approp.)	$16.6 MM/Year	14	0 %

(2) Discussion

This alternative differs from all the others because the land designations are constrained to match the designations currently in effect on the Forest. The designations were originally developed in a series of Unit Plans developed in accordance with the Multiple Use Sustained Yield Act and the National Environmental Policy Act. The development of these plans considered costs, benefits and schedule implications to a much lesser extent than the process described in this Appendix. As a result the Current Direction generates a rather low PNV ($909 MM when not operating under a limited budget or $460 MM

when the outputs and budget are similar to current experience). The opportunity cost of this alternative (with current outputs) is $703 million. This is due to the specified set of land designations including forced management of stagnated lodgepole pine stands (69,000 acres) and use of the TMVIEW and VIEWTM designations which are costly, but permit regulated timber flows while maintaining visual quality. The constraint on timber volumes which was designed to keep timber outputs and budgets at the current level through the entire 200 year horizon also detracted a great deal from the PNV of this alternative (-$449 MM).

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative F, the maximum elk benchmark ($541 MM). Alternative F harvests more timber, but converts 36 percent less stagnated lodgepole pine, does less thinning and focuses on clearcuts rather than shelterwood cuts (at the expense of 7 percent of visual quality) so that total timber costs are lower. Road costs are higher even though the suitable acreage is lower because the Current Direction defers some access beyond the end of the 200 year horizon. The overall effect is that Alternative I has a higher present value of costs.

(b) PNV Comparison

The PNV for the Current Direction is $460 Million. This is the lowest PNV of all the alternatives and is due in large part to the output levels which are constrained to match current levels. Without these output constraints the Current Direction would generate a PNV of $909 million which is slightly less than Alternative K (departure on the Proposed Action) and more than Alternative F (maximum elk benchmark).

j. Alternative J (Proposed Action)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$ 916 Million	11	+ 99 %
Opportunity Cost	$ 247 Million	4	- 65 %
Present Value Costs	$ 647 Million	10	+ 18 %
Present Value Benefits	$1563 Million	13	+ 55 %
Jobs & Community Stability	2299 Jobs	11	+ 19 %
Visual Quality Protection	1311 M Acres	3	+ 6 %
Wilderness/Roadless Quality	518 M Acres	4	+ 17 %
Oil & Gas Withdrawals	215 M Acres	5	+ 1 %
Locatable Mineral Withdrawals	252 M Acres	5	+ 1 %
Undeveloped Grizzly Habitat	589 M Acres	1	+ 7 %
Total Decade 1 Timber Harvest	202 MMBF/Year	13	+ 35 %
Decade 1 Lodgepole Pine Harvest	75 MMBF/Year	5	- 3 %
Stagnated LPP Converted - Dec 5	70 M Acres	2	+ 1 %
New Road Access by Decade 5	4690 Miles	10	+ 22 %
First Decade Budget (Approp.)	$20.3 MM/Year	11	+ 22 %

(2) Discussion

This alternative differs from those already discussed in several ways. First, as previously noted, the VIEWTM and TMVIEW designations are used in specific locations to manage the view of particularly sensitive areas while still producing a regulated flow of timber. Second, there are 66,500 acres of Proposed Wilderness. Third, designations are constrained in such a way that future options are retained. This last difference resulted in this alternative having one of the higher acreages dedicated to roadless recreation, but one of the lowest acreages in Proposed Wilderness. The goals of this alternative could not be attained in the FORPLAN model using the general constraints applied to most of the other alternatives so each land designation was individually constrained in the model. The opportunity cost of this alternative is $247 million. This cost is associated with the NDY constraint plus the individual land designation constraints which were established, in part, on the basis of non-priced values.

(a) Cost Comparison

Alternative G has the same present value of costs as the Proposed Action. Alternative G produces more timber than the Proposed Action and has higher road costs, but lower timber costs than the Proposed Action. The suitable timber base of Alternative G is the same size as that of the Proposed Action, but it is in different locations. Thus, Alternative G requires more road miles to access its timber base and the costs are higher. The timber costs in the Proposed Action are higher because of the added stagnated lodgepole pine conversions and the special visual management prescriptions (which involve shelterwood cuts). Recreation costs are lower in Alternative G because, under the assumptions used in this analysis, its high Proposed Wilderness acreage caused the total number of recreationists to decline. This is discussed in more detail under the discussion for Alternative G (above). The net effect of these differences is that Alternative G and the Proposed Action have the same present value of costs.

(b) PNV Comparison

The PNV for the Proposed Action is $916 million. This is the eleventh highest PNV of all the alternatives. The Proposed Action has the next lower PNV than Alternative H, the maximum wilderness benchmark ($1034 MM). The PNV is lower for the Proposed Action because harvest volumes are lower, producing lower timber benefits and timber and recreation costs are higher. Timber costs are higher even though volumes are lower because more costly prescriptions are used to manage visual quality and more stagnated lodgepole is converted. Recreation costs are higher because, under the assumptions used to develop recreation use projections, the Proposed Action will provide a greater diversity of recreation experiences and thus attract more recreation. This added cost of managing recreation is more than offset by the added benefits derived from recreation, but the added recreation benefits are not sufficient to offset the higher timber costs.

(c) Comparison to Current Direction

The Proposed Action has a higher PNV than the current direction ($916 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for the Proposed Action over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. The Proposed Action has 19 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber harvest and associated budgets, the Proposed Action would provide 1 percent fewer jobs.

Due to the stress on visual quality through the use of the TMVIEW and VIEWTM designations and through special application of other designations, which tend to preserve future options, the Proposed Action provides 6 percent more visual quality protection than does the Current Direction.

The Proposed Action has 17 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. The Proposed Action has 2,000 acres of additional Proposed Wilderness along with a heavier emphasis on retaining options which has the effect of providing more acreage useful for unroaded sorts of recreation.

The Proposed Action has 1 percent more acres withdrawn from oil and gas exploration and 1 percent more acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the slightly larger wilderness proposal of the Proposed Action.

The Proposed Action has 7 percent more undeveloped grizzly habitat than the Current Direction. This is the highest protection afforded to grizzly in any of the alternatives and reflects the stress on retaining options, including those affecting the grizzly bear.

The Proposed Action is focusing on preserving options thus a relatively high amount of stagnated lodgepole pine is converted in the first five decades (70,000 acres). This is 1 percent more than the Current Direction. This conversion preserves, or enhances opportunities for timber management while reducing the risk of fire and insect damage to other parts of the Forest. Such damage could remove or at least delay the acquisition of many of the benefits discussed in this document. Harvest of lodgepole pine in the first decade is 3 percent less than that for the Current Direction. This reflects a tradeoff in the preservation of options by leaving areas unroaded and the preservation of options by managing high risk lodgepole pine. The Proposed action puts 15,800 acres more mature lodgepole pine stands into non-harvest designations than does the Current Direction. Thus the Proposed Action accepts more insect and fire risk (with the potential loss of options) and preserves more options in terms of leaving areas undeveloped.

The Proposed Action harvests 35 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, the Proposed Action would harvest 1 percent less timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of the Proposed Action it would be necessary to build 4690 new miles of road by decade 5. This is 22 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels of the Proposed Action. Even though the current direction has more suitable timber land than the Proposed Action fewer roads are needed in the time horizon of this analysis (200 years) because some of the suitable timberland in the Current Direction alternative is never accessed.

The Proposed Action requires the eleventh highest budget to carry out the various programs. Its budget is 22 percent higher than the Current Direction.

(d) Sustained Yield by Administrative Forest

Section 13(a) of the National Forest Management Act of 1976 discusses 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-27 and B-28 and Figure B-16 display long term sustained yield, suitable acres and allowable sale quantity for the proclaimed Kootenai National Forest and that portion of the Kaniksu National Forest administered by the Kootenai National Forest.

TABLE B-27

Proclaimed N.F and Administrative N.F.
Long Term Sustained Yield (LTSY) AND Suitable Acres
(Thousands of Acres and Millions of Cubic Feet per decade)

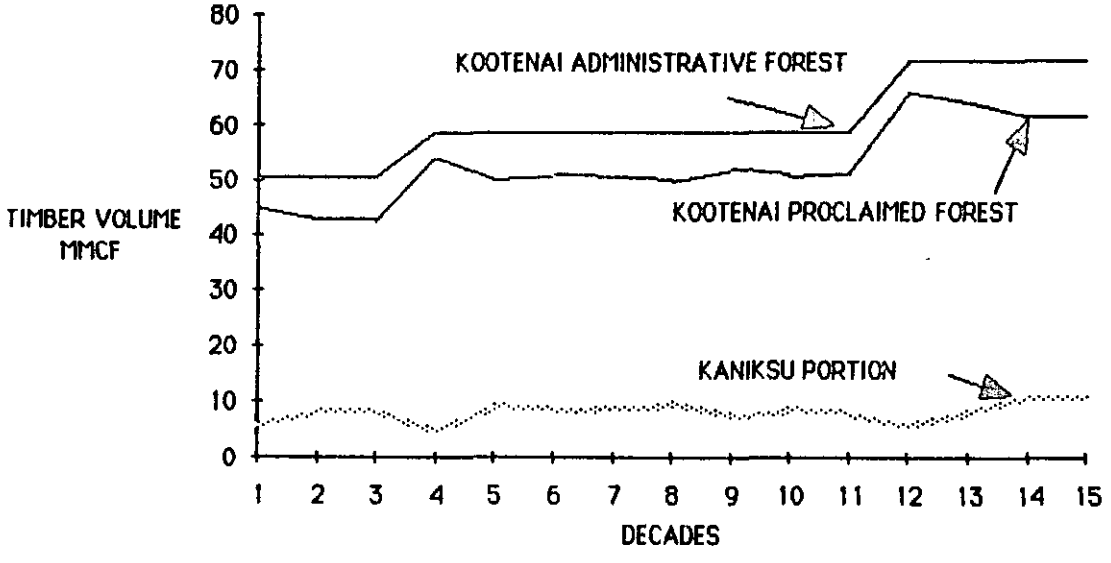
Proclaimed Forest	Administrative Forest	Suitable Acres (MAC)	LTSY (MMCF/dec)
Kootenai	Kootenai	1195.3	624.9
Kaniksu	Kootenai	182.6	93.8

TABLE B-28
Proclaimed National Forest and Administrative National Forest
Allowable Sale Quantity (MMCF/Decade)

Decade	Kootenai Proclaimed National Forest	Kaniksu Proclaimed Administered by the Kootenai	Kootenai Administrative Forest Total Allowable Sale Quantity
1	447.0	57.0	504.0
2	424.8	80.2	504.0
3	422.8	82.2	504.0
4	537.2	48.9	586.1
5	498.7	87.4	586.1
6	507.2	78.9	586.1
7	501.1	85.0	586.1
8	493.8	92.3	586.1
9	516.5	69.6	586.1
10	502.6	83.5	586.1
11	509.1	77.0	586.1
12	656.2	57.6	713.8
13	634.2	79.6	713.8
14	610.5	103.3	713.8
15	612.1	101.7	713.8

FIGURE B-16

KOOTENAI PROCLAIMED NATIONAL FOREST AND ADMINISTRATIVE NATIONAL FOREST
ALLOWABLE SALE QUANTITY - PROPOSED ALTERNATIVE
(AVERAGE ANNUAL VOLUMES)



The figures displayed for the Kootenai proclaimed Forest and the Kaniksu portion of the administrative Kootenai National Forest appear as departures. This happens because they were separated from the sum of the allowable sale quantity of the Kootenai administrative Forest. The suitable acres on the Kootenai proclaimed Forest and the Kaniksu portion of the administrative Kootenai were included in only the FORPLAN models developed by the Kootenai National Forest. The administrative Kootenai allowable sale quantity was done on an administrative forest-wide basis and does not depart from a base sale schedule.

The allowable sale quantity and LTSY for the proclaimed Kaniksu National Forest can be found in the Idaho Panhandle Forest Plan EIS.

k. Alternative K (Departure on the Proposed Action)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$ 911 Million	12	+ 98 %
Opportunity Cost	$ 252 Million	3	- 64 %
Present Value Costs	$ 662 Million	8	+ 21 %
Present Value Benefits	$1573 Million	12	+ 56 %
Jobs & Community Stability	2492 Jobs	4	+ 29 %
Visual Quality Protection	1311 M Acres	3	+ 6 %
Wilderness/Roadless Quality	518 M Acres	4	+ 17 %
Oil & Gas Withdrawals	215 M Acres	5	+ 1 %
Locatable Mineral Withdrawals	252 M Acres	5	+ 1 %
Undeveloped Grizzly Habitat	589 M Acres	1	+ 7 %
Total Decade 1 Timber Harvest	230 MMBF/Year	4	+ 53 %
Decade 1 Lodgepole Pine Harvest	79 MMBF/Year	3	+ 3 %
Stagnated LPP Converted - Dec 5	70 M Acres	2	+ 1 %
New Road Access by Decade 5	4720 Miles	9	+ 23 %
First Decade Budget (Approp.)	$22.0 MM/Year	4	+ 33 %

(2) Discussion

Alternative K is much like the Proposed Action except that additional emphasis is given to raising short term timber harvest levels. This is accomplished by constraining timber harvest in the first two decades so than the RPA goals are reached. In order to make this harvest schedule feasible it was necessary to permit departure from NDY in decades three and four. Due to the size of trees being harvested the BF/CF ratios change over time so in order to constrain FORPLAN in cubic feet while the RPA goals are provided in board feet it was necessary to force a decline from decade 1 to decade 2 in cubic measure. The timber harvest schedule in the first five decades is as follows:

Decade	RPA Goal MMBF/yr	Alternative K MMBF/yr	MMCF/yr
1	228	230	57
2	248	241	53
3	292	216	48
4	315	251	57
5	345	271	57

The first two decades of Alternative K's harvest volume are only approximately equal to the RPA goals because it is nearly impossible to predict precisely the BF/CF ratio that the optimal solution will provide before the model is run.

The opportunity cost of Alternative K is $252 Million. This is due to the same factors outlined for Alternative J plus the schedule to reach the RPA volume goals. The difference in PNV between Alternative J and Alternative K is $5 Million. This difference can be attributed to the effort to raise the early harvest volumes.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative E which is $3 Million cheaper. The timber costs of Alternative K are $3 Million higher and the road costs are $3 Million lower than Alternative E. Timber costs are higher even though volume is lower in the long run because Alternative K uses the TMVIEW and VIEWTM designations, which are more costly, and converts more stagnated lodgepole pine. The road costs are lower because the suitable timber base for Alternative K is smaller than for Alternative E. Recreation and wildlife costs are slightly lower for Alternative E due to the mix of recreation opportunity provided. The "other" costs of Alternative E are also lower than for Alternative K due to the mix of activities that are being managed.

(b) PNV Comparison

The PNV for Alternative K is $911 Million. This is the twelfth highest PNV of all the alternatives. Alternative K has a slightly ($5 MM) lower PNV than Alternative J, the Proposed Action. The increase in PNV attained by relaxing the NDY constraint is offset by the decrease in PNV resulting from forcing the higher timber volumes in the first two decades.

(c) Comparison to Current Direction

Alternative K has a higher PNV than the current direction ($911 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative K than for the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative K has 29 percent more jobs than does the Current Direction. If the

Current Direction model were not constrained by current levels of timber harvest and associated budgets, Alternative K would provide 7 percent more jobs in the first decade. There would however be a decline in the number of jobs in the third decade when the harvest volume declines.

Alternative K, like the Proposed Action is managing toward retaining future options. As such it provides 6 percent more visual quality compared to the Current Direction. The Current Direction, the Proposed Action and Alternative K all use the TMVIEW and VIEWTM designations so that a regulated yield can be achieved while managing for visual quality.

Alternative K has 17 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative K picks up 2000 acres of Proposed Wilderness over the Current Direction. The other acres in roadless management designations come from individual constraints designed to retain options for the future.

Alternative K has 1 percent more acres withdrawn from oil and gas exploration and 1 percent more acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the slightly larger wilderness proposal of Alternative K.

Alternative K has 7 percent less undeveloped grizzly habitat than the Current Direction. This is due to the effort to retain options as described under Alternative J.

Alternative K is focusing on the preservation of options thus slightly more stagnated lodgepole pine is converted in the first five decades (1 % more). The rationale is explained above, under Alternative J. For the same reasons discussed for Alternative J, Alternative K has a relatively high first decade lodgepole pine harvest (third highest). This is 3 percent more than the Current Direction.

Alternative K harvests 53 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative K would only harvest 13 percent more timber in the first decade than the Current Direction. The constraint to reach the RPA timber volume goal in the first decade also contributes to this difference.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative K it would be necessary to build 4720 new miles of road by decade 5. This is 23 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels of Alternative K. Even though the current direction has more suitable timber land than Alternative K fewer roads are needed in the time horizon of this analysis (200 years) because some of the suitable timberland in the Current Direction alternative is never managed in that time.

Alternative K requires the fourth highest budget to carry out the various programs. Its budget is 33 percent higher than the Current Direction.

1. Alternative L (Maximum Timber Benchmark)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1046 Million	9	+127 %
Opportunity Cost	$ 117 Million	6	- 83 %
Present Value Costs	$ 776 Million	1	+ 42 %
Present Value Benefits	$1822 Million	3	+ 81 %
Jobs & Community Stability	2727 Jobs	1	+ 41 %
Visual Quality Protection	976 M Acres	14	- 21 %
Wilderness/Roadless Quality	349 M Acres	14	- 21 %
Oil & Gas Withdrawals	148 M Acres	7	- 30 %
Locatable Mineral Withdrawals	185 M Acres	7	- 26 %
Undeveloped Grizzly Habitat	354 M Acres	12	- 36 %
Total Decade 1 Timber Harvest	255 MMBF/Year	2	+ 70 %
Decade 1 Lodgepole Pine Harvest	42 MMBF/Year	14	- 45 %
Stagnated LPP Converted - Dec 5	93 M Acres	1	+ 35 %
New Road Access by Decade 5	6360 Miles	1	+ 66 %
First Decade Budget (Approp.)	$28.1 MM/Year	1	+ 69 %

(2) Discussion

Alternative L is like Alternative A except that timber volume outputs are specially constrained to the levels which will produce the maximum amount of timber in the 20 decade time horizon. In order to determine where these harvest level constraints should be set, the data set for Alternative A was run with an objective function of maximizing timber for 20 decades. In this alternative all of the tentatively suitable timber land is in the suitable base even though the MMR, NDY and timber constraints may not permit harvesting in the 20 decade time horizon. The opportunity cost of NDY as determined by Alternative A is $20 Million. The additional opportunity cost of $97 Million can be associated with maximizing the production of timber.

(a) Cost Comparison

The next cheaper alternative in terms of the present value of costs is Alternative D ($718 MM). Alternative L is the most costly of all the alternatives due to the high timber harvest levels and the necessity of managing all possible acres including stagnated lodgepole pine to maximize the output of timber. Recreation and wildlife costs do not change between Alternative D and Alternative L, but the mix of recreation opportunities supplied changes. Alternative L provides more roaded recreation and less wilderness and semi-primitive non-motorized recreation than does Alternative D. Due to the added forage for elk provided by cutting activities, more elk hunter recreation can be expected. The decreases balance out the increases in terms of discounted costs so both alternatives have the same present value of recreation and wildlife costs.

(b) PNV Comparison

The PNV for Alternative L is $1046 Million. This is the ninth highest PNV of all the alternatives. Alternative H has a slightly lower PNV ($1034 MM). Constraining to produce the maximum amount of wilderness (Alternative H) generates a lower PNV than constraining to provide the maximum amount of timber (Alternative L). The timber and road costs for Alternative L are much higher than those for Alternative H, but the associated timber benefits outweigh this cost. The recreation costs are lower for Alternative H because, under the assumptions of the analysis, the mix of recreation opportunities do not supply the needs of as many recreationists so management costs are less. For the same reason recreation benefits are less for Alternative H.

(c) Comparison to Current Direction

Alternative L has a higher PNV than the current direction ($1046 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative L over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative L has 41 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative L would still provide 17 percent more jobs. Alternative L provides the second highest first decade timber volume but the highest number of jobs due to the recreation activity generated and the Forest Service budget spent to generate all the outputs. These expenditures are linked to local economic activity and the number of jobs. The addition of this many jobs in the local economy is not expected to be particularly disruptive to the social fabric of the community. At 2.98 people per job, the 796 additional people beyond those currently associated with Forest activities would be a 13.4 percent increase in Lincoln County population. During the decade of 1960 to 1970 the county population increased by 5,526 people for a 44 percent increase. This was a result of the initiation of construction on the Libby Dam and was socially disruptive in many ways. The 13.4 percent maximum increase due to Forest activities not only is much less than has been experienced previously, but only affects sectors of the economy that are already in place and functioning.

In order to produce high volumes of timber on all suitable timberland, Alternative L trades off 264,000 acres of visual quality compared to the Current Direction. The TMVIEW and VIEWTM designations are not used in Alternative L because they are inconsistent with efforts to maximize timber production.

Alternative L has 21 percent less acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative L manages all the tentatively suitable timber land for timber production thus only those acres

which are not suitable for timber production are available for unroaded recreation uses.

Alternative L has 30 percent fewer acres withdrawn from oil and gas exploration and 26 percent fewer acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the wilderness proposal of the Current Direction.

Alternative L has 36 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis.

Alternative L is focusing on timber production over 200 years so all the stagnated lodgepole pine is converted in the first five decades (93,000 acres). This is 35 percent more than the Current Direction. Alternative L eventually harvests all the lodgepole pine, but gets 45 percent less than the Current Direction in the first decade. In effect Alternative L is ignoring the risk of fire and insect damage related to leaving these stands and harvests those other stands (MIXCON I and II) that can contribute to faster growth over the 200 year time frame and higher harvests later.

Alternative L harvests 70 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level and the efforts of Alternative L to maximize timber production. Without the limits on the Current Direction, Alternative L would only harvest 25 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative L it would be necessary to build 6360 new miles of road by decade 5. This is 66 percent more than the Current Direction alternative. This difference is due to the higher suitable timber base in Alternative L and is the highest amount of road construction needed by any alternative.

Alternative L requires the highest budget of any alternative to carry out the various programs. Its budget is 69 percent higher than the Current Direction.

m. Alternative M (Maximum PNV Benchmark with departure from NDY)

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1163 Million	1	+153 %
Opportunity Cost	$ 0 Million	14	-100 %
Present Value Costs	$ 697 Million	3	+ 28 %
Present Value Benefits	$1860 Million	1	+ 85 %
Jobs & Community Stability	2706 Jobs	2	+ 40 %
Visual Quality Protection	1092 M Acres	12	- 12 %
Wilderness/Roadless Quality	389 M Acres	13	- 12 %
Oil & Gas Withdrawals	148 M Acres	7	- 30 %
Locatable Mineral Withdrawals	185 M Acres	7	- 26 %
Undeveloped Grizzly Habitat	434 M Acres	9	- 21 %
Total Decade 1 Timber Harvest	262 MMBF/Year	1	+ 75 %
Decade 1 Lodgepole Pine Harvest	93 MMBF/Year	1	+ 21 %
Stagnated LPP Converted - Dec 5	1 M Acres	8	- 99 %
New Road Access by Decade 5	5230 Miles	4	+ 36 %
First Decade Budget (Approp.)	$24.1 MM/Year	2	+ 45 %

(2) Discussion

Alternative M is much like Alternative A except that fluctuations (25 percent in volume from one decade to the next) in timber harvest are permitted over the entire 200 year time frame modeled. The fluctuations are limited to the maximum amount that would seem to be feasible without causing excessive distabilization of the community over time. The application of the timber harvest constraint used in this run reduced PNV by $8 Million over a benchmark which had no harvest limitations at all. Refer to Section VI of this appendix for further discussion on this point. Since this alternative is the most lightly constrained of all the alternatives, it produces the highest PNV and is used as the maximum PNV benchmark for determining opportunity costs of the other alternatives.

(a) Cost Comparison

The next cheapest alternative in terms of the present value of costs is Alternative N which is $8 Million cheaper. Alternative N also departs from NDY, but not as much as Alternative M (+20 to -15% from one decade to the next with a return to NDY after decade 5). Since both Alternatives are headed in the same direction as far as management of the Forest, but Alternative N is constrained from going quite as far as Alternative M, it is not surprising to note that Alternative M has higher overall timber harvest volumes and suitable timber base along with higher road and timber costs.

(b) PNV Comparison

The PNV for Alternative M is $1163 Million, the highest of all the alternatives. The next lower PNV is $1148 for Alternative N. The ability of Alternative M to generate a higher PNV is related to the fact that its timber harvest is not as tightly constrained.

(c) Comparison to Current Direction

Alternative M has the highest PNV and the Current Direction has the lowest PNV of all the alternatives ($1163 MM vs $460 MM). The difference between the two alternatives is primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down and Alternative M has more latitude in harvest scheduling and in the assignment of land designations. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives and the less tight scheduling constraints of Alternative M. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative M over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative M has 40 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative M would provide 16 percent more jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative M trades off 48,000 acres of visual quality compared to the Current Direction. The Current Direction uses the VIEWTM and TMVIEW designations to protect visual quality while generating a regulated flow of timber whereas Alternative M does not. The VIEWTM and TMVIEW prescriptions are costly and would not be consistent with the aim of Alternative M to manage timber in the most cost efficient manner.

Alternative M has 12 percent less acreage dedicated to Wilderness and roadless recreation than the Current Direction. This is related to the aim of the alternative to maximize PNV and the general situation wherein timber harvest produces higher PNV's than do recreation activities. It has 3 percent less acreage in this category than does Alternative A because the additional flexibility to schedule timber activities to meet the MMR's permits Alternative M to schedule additional acres for timber harvest.

Alternative M has 30 percent fewer acres withdrawn from oil and gas exploration and 26 percent fewer acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the larger wilderness proposal of the Current Direction.

Alternative M has 21 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis.

Alternative M is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (1000 acres). This is 99 percent less than the Current Direction.

Alternative M harvests 21 percent more lodgepole pine in the first decade than does the Current Direction. This is the highest of all the alternatives. This is due to a combination of a larger suitable land base, higher overall timber harvest levels and an increased ability to schedule more harvest while meeting the MMR's.

Alternative M harvests 75 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative M would only harvest 22 percent more timber in the first decade than the Current Direction. The remaining difference is due to the latitude which Alternative M has to depart from NDY, assign land designations and schedule harvest.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative M it would be necessary to build 5230 new miles of road by decade 5. This is 36 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels and suitable timber base of Alternative M. The additional difference is due to the fact that the limited harvest of the Current Direction and the time horizon of this analysis (200 years) allow some of the suitable timberland to escape management in the time period thus the roads are not needed.

Alternative M requires the second highest budget to carry out the various programs. Its budget is 45 percent higher than the Current Direction.

n. Alternative N

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1148 Million	2	+150 %
Opportunity Cost	$ 15 Million	13	- 98 %
Present Value Costs	$ 689 Million	4	+ 26 %
Present Value Benefits	$1837 Million	2	+ 83 %
Jobs & Community Stability	2608 Jobs	3	+ 35 %
Visual Quality Protection	1102 M Acres	11	- 11 %
Wilderness/Roadless Quality	393 M Acres	12	- 11 %
Oil & Gas Withdrawals	148 M Acres	7	- 30 %
Locatable Mineral Withdrawals	185 M Acres	7	- 26 %
Undeveloped Grizzly Habitat	424 M Acres	11	- 23 %
Total Decade 1 Timber Harvest	247 MMBF/Year	3	+ 65 %
Decade 1 Lodgepole Pine Harvest	85 MMBF/Year	2	+ 10 %
Stagnated LPP Converted - Dec 5	1 M Acres	8	- 99 %
New Road Access by Decade 5	5270 Miles	3	+ 37 %
First Decade Budget (Approp.)	$23.2 MM/Year	3	+ 40 %

(2) Discussion

Alternative N is similar to both Alternatives M and A. It permits a departure from the NDY constraint of Alternative A, but that departure is more limited than the departure for Alternative M. Alternative N is permitted to depart only for the first five decades and, in that period, harvest can not decline more than 15 percent or rise more than 20 percent from one decade to the next (in cubic measure). This close relationship leads to the 1, 2, 3 ranking of the alternatives by PNV in the order of M, N, A with Alternative M having the highest PNV. The opportunity cost of $15 Million for Alternative N is associated with the more restrictive departure schedule than that permitted for the Maximum PNV benchmark (Alternative M).

(a) Cost Comparison

Alternative O achieves the same present value of costs as Alternative N. The next cheaper alternative is Alternative A. The discounted costs for Alternative N are somewhat higher than for Alternative A because the departure option permits more harvest in the early decades and a larger suitable timber base. Thus, the discounted timber and road costs are higher for Alternative N.

(b) PNV Comparison

The PNV of Alternative N is $1148 Million. This is the second highest PNV of all the Alternatives. Alternative M has a higher PNV because its harvest schedule has fewer constraints. Alternative A has a lower PNV because its harvest schedule (NDY) is more constraining.

(c) Comparison to Current Direction

Alternative N has the second highest PNV and the Current Direction has the lowest PNV of all the alternatives ($1148 MM vs $460 MM). The difference between the two alternatives is primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down and Alternative N has more latitude in harvest scheduling and in the assignment of land designations. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives and the less tight scheduling constraints of Alternative N. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative N over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative N has 35 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative N would provide 12 percent more jobs.

In order to produce high volumes of timber on its suitable timberland, Alternative N trades off 138,000 acres of visual quality compared to the Current Direction. The Current Direction uses the VIEWTM and TMVIEW designations to protect visual quality while generating a regulated flow of timber whereas Alternative N does not. The VIEWTM and TMVIEW prescriptions are

costly and would not be consistent with the aim of Alternative N to manage timber in the most cost efficient manner.

Alternative N has 11 percent less acreage dedicated to Wilderness and roadless recreation than the Current Direction. This is related to the aim of the alternative to maximize PNV and the general situation wherein timber harvest produces higher PNV's than do recreation activities. It has 1 percent less acreage in this category than does Alternative A because the additional flexibility to schedule timber activities to meet the MMR's permits Alternative N to schedule additional acres for timber harvest.

Alternative N has 30 percent fewer acres withdrawn from oil and gas exploration and 26 percent fewer acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the larger wilderness proposal of the Current Direction.

Alternative N has 23 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis.

Alternative N is focusing on cost efficient timber management thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (1000 acres). This is 99 percent less than the Current Direction. Alternative N harvests 10 percent more lodgepole pine in the first decade than does the Current Direction. This is the second highest of all the alternatives. This is due to a combination of a larger suitable timber base, higher overall timber harvest levels and an increased ability to schedule more harvest while meeting the MMR's.

Alternative N harvests 65 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative N would only harvest 21 percent more timber in the first decade than the Current Direction. The remaining difference is due to the extra latitude which Alternative N has to depart from NDY, assign land designations and schedule harvest.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative N it would be necessary to build 5270 new miles of road by decade 5. This is 37 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels and suitable timber base of Alternative N. The additional difference is due to the fact that the limited harvest of the Current Direction and the time horizon of this analysis (200 years) allow some of the suitable timberland to escape management in the time period thus the roads are not needed.

Alternative N requires the third highest budget to carry out the various programs. Its budget is 40 percent higher than the Current Direction.

o. Alternative O

(1) Quantified Comparisons

Quantity	Value	Rank From Highest	Change From Alt I - CD
Present Net Value	$1064 Million	9	+131 %
Opportunity Cost	$ 99 Million	7	- 86 %
Present Value Costs	$ 689 Million	4	+ 26 %
Present Value Benefits	$1753 Million	9	+ 74 %
Jobs & Community Stability	2401 Jobs	8	+ 24 %
Visual Quality Protection	1382 M Acres	2	+ 11 %
Wilderness/Roadless Quality	574 M Acres	2	+ 30 %
Oil & Gas Withdrawals	228 M Acres	4	+ 8 %
Locatable Mineral Withdrawals	265 M Acres	4	+ 6 %
Undeveloped Grizzly Habitat	444 M Acres	7	- 19 %
Total Decade 1 Timber Harvest	215 MMBF/Year	10	+ 43 %
Decade 1 Lodgepole Pine Harvest	75 MMBF/Year	5	- 3 %
Stagnated LPP Converted - Dec 5	5 M Acres	6	- 93 %
New Road Access by Decade 5	4680 Miles	11	+ 22 %
First Decade Budget (approp)	$21.8 MM/Year	5	+ 31 %

(2) Discussion

Alternative O is similar to Alternative C except that added emphasis is given to the visual and non-motorized recreation resources. This is done by constraining the model to select either TMVIEW or VIEWTM, depending upon the visual quality objective for an area, or some non-developmental prescription rather than the TMBOPT or BGSRTM prescriptions. This is only done outside of grizzly habitat because the various entries associated with the VIEWTM and TMVIEW prescriptions detract from the quality of the habitat and would violate the MMR's. This alternative has the same 81,300 acre wilderness proposal as Alternative C. The opportunity cost of the NDY constraint has been estimated at $20 Million based upon the PNV of Alternative A. The additional opportunity cost of the wilderness proposal has been estimated at $14 Million based upon Alternative C. The additional opportunity cost of $65 Million can be associated with the added emphasis on the visual and recreation resources mentioned above.

(a) Cost Comparison

The next cheaper alternative in terms of the present value of costs is Alternative A. Alternative N has the same present value of costs. Alternative O has higher timber costs than Alternative A even though Alternative A harvests more volume because of the higher costs associated with the VIEWTM and TMVIEW prescriptions and the slightly higher acreage of stagnated lodgepole pine that is converted in Alternative O. Alternative O has lower road costs than Alternative A because it has a smaller suitable timber base. Recreation and wildlife costs are also a bit higher for Alternative O.

(b) PNV Comparison

The PNV for this alternative is $1064 Million. This is the ninth highest of all the alternatives. Alternative O has the same PNV as Alternative D. The tradeoffs between the resources supplied by these two alternatives is such that the opportunity costs of reaching the RPA goals for timber and Wilderness are equal to the opportunity costs for emphasizing the visual and recreation resources more heavily. Alternative O has lower timber and road costs and slightly higher recreation and wildlife costs than does Alternative D. To balance this off, Alternative O has higher recreation and wildlife benefits and lower timber benefits than Alternative D. The largest difference is in the road costs where Alternative D is $27 Million higher. This is primarily due to the additional 206,000 acres of suitable timber land in Alternative D.

(c) Comparison to Current Direction

Alternative O has a higher PNV than the current direction ($1064 MM vs $460 MM) primarily because the harvest in the Current Direction model is constrained downward to current levels to keep the budget down. Without the volume constraints the Current Direction would have a PNV of $909 MM. The additional difference is due to a different mix of land designations between the alternatives. As with the other Alternatives, the major difference is in the timber program. Timber and road costs are higher for Alternative O over the Current Direction, but these higher costs are offset by higher timber benefits to produce a higher net value.

With a higher timber harvest level comes more jobs in the timber industry. Alternative O has 24 percent more jobs than does the Current Direction. If the Current Direction model were not constrained by current levels of timber and associated budgets, Alternative O would provide three percent more jobs.

Due to the high emphasis on the visual and recreation resources, Alternative O has 142,000 acres more visual quality protection than does the Current Direction. Both Alternative O and the Current Direction use the VIEWTM and TMVIEW prescriptions to achieve visual quality objectives on suitable timber land. Alternative O has a smaller suitable land base due to the emphasis on roadless recreation. Thus Alternative O has almost 60 percent of its suitable timber land managed for visual quality where as the Current Direction has about 9 percent managed for visual quality.

Alternative O has 30 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. Alternative O picks up the additional Proposed Wilderness discussed above along with other acres that did not fall into timber harvest prescriptions as discussed for Alternative A. Additional roadless designations arose when the economics associated with those designations were competing with the costly VIEWTM and TMVIEW designations rather than the cheaper TMBOPT and BGSRTM designations.

Alternative O has 8 percent more acres withdrawn from oil and gas exploration and 6 percent more acres withdrawn from locatable mineral exploration than does the Current Direction. This is due to the larger wilderness proposal of Alternative O.

Alternative 0 has 19 percent less undeveloped grizzly habitat than the Current Direction. This is due to the high timber emphasis outside of the Proposed Wilderness and inside grizzly habitat. Note that the constraints that were used to push more visual and recreation consideration into the model were applied only outside of grizzly habitat. As mentioned above this is because the added entries required to manage for visual quality detract from grizzly habitat usefulness.

Alternative 0 is focusing on cost efficient timber management subject to the constraints in the model thus only a minimal amount of stagnated lodgepole pine is converted in the first five decades (5000 acres). This is 93 percent less than the Current Direction. Alternative 0 has the fifth highest first decade lodgepole pine harvest of all the alternatives. This is fairly high because of the scheduling limitations associated with the constraints that were used to enhance the visual and recreation emphasis.

Alternative 0 harvests 43 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get output levels and budgets close to the current level. Without these limits on the Current Direction, Alternative 0 would only harvest 5 percent more timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of Alternative 0 it would be necessary to build 4680 new miles of road by decade 5. This is 31 percent more than the Current Direction alternative. This difference is partly due to the higher harvest levels of Alternative 0. Even though the current direction has more suitable timber land than Alternative 0 fewer roads are needed in the time horizon of this analysis (200 years) because some of the suitable timberland is never managed in that time period.

Alternative 0 requires the fifth highest budget to carry out the various programs. Its budget is 31 percent higher than the Current Direction.

p. Alternative JF (Final Plan)

(1) Quantified Comparisons

Quantity	Value	Rank from Highest	Change from Alt I -CD
Present Net Value	$ 733 Million	14	+ 59%
Opportunity Cost	$ 430 Million	3	- 39%
Present Value Costs	$ 611 Million	14	+ 12%
Present Value Benefits	$1344 Million	14	+ 34%
Jobs & Community Stability	2299 jobs	11	+ 19%
Visual Quality Protection	1311 M acres	3	+ 6%
Wilderness/Roadless Quality	518 M acres	4	+ 18%
Oil & Gas Withdrawals	227 M acres	5	+ 7%
Locatable Mineral Withdrawals	264 M acres	5	+ 6%
Undeveloped Grizzly Habitat	589 M acres	1	+ 7%
Total Decade 1 Timber Harvest (reg)	202 MMBF/Year	13	+ 35%
Decade 1 Lodgepole Pine Harvest	78 MMBF/Year	4	+ 1%
Stagnated LLP Converted - Dec 5	32 M acres	6	- 54%
New Road Access by Decade 5	3850 miles	13	0%
First Decade Budget (Approp.)	$19.2 MM/Year	13	+ 16%

(2) Discussion

Alternative JF is similar to the Proposed Action (Alternative J) except that (1) the Pillick Ridge Area is recommended for Wilderness designation, (2) additional old-growth will be retained and it will be outside the regulated timber base, (3) commercial thinning will not occur very often and (4) stagnated lodgepole pine stands will not be converted during the life of the plan.

(a) Cost Comparison

Timber costs are 13 percent lower than for the Proposed Plan primarily because commercial thinning is removed and stagnated lodgepole pine conversion is delayed. Commercial thinning contributed to increased PNV in the model, but commercial thins have proven very difficult to sell in the past. Thus, it was considered impractical to expect that the increased PNV could actually be achieved. In addition, removal of commercial thinning (and delaying stagnated Lodgepole pine conversions) results in lower budget needs. Because there are conditions where commercial thinnings can be sold and contribute to increased PNV, their elimination from the model is not intended to imply that they will never occur. Instead, it is expected that there will be some commercial thins occurring in the future as budgets permit. They are removed from the model so that values derived in the future are more realistic.

(b) PNV Comparison

The PNV for the Final Plan is $733 Million. This is fourteenth highest of the PNV's developed for the alternatives in the DEIS. It is a 20% decrease from the Proposed Action of the DEIS. The PNV is lower than that for Alternative K and higher than that for Alternative F. Alternative F was aimed at maximizing elk production while Alternative K sought to attain higher timber harvests in the first two decades through a departure schedule. On the cost side,

discounted road and timber costs are less for the Final Plan than for the Proposed Plan because of the smaller regulated timber base of the Final Plan. The smaller timber base is a result of increasing the acreage of MA 13 (old-growth timber) and removing it from the regulated base. In addition, the elimination of commercial thinning costs and delays in the costs of stagnated lodgepole pine conversion result in lower discounted timber costs. Discounted timber benefits are also lower due to the smaller regulated base and lower timber volumes in the future decades. While the costs dropped $26 Million, the benefits dropped $219 Million thus accounting for almost all of the change in PNV.

(c) Comparison to Current Direction

The Final Plan has a higher PNV than the Current Direction ($733 MM vs $460 MM) primarily because harvest in the Current Direction model is constrained downward to current levels to keep the budget similar to current levels. Without the volume constraints, the Current Direction would have a PNV of $909 MM and this would be higher than the PNV of the Final Plan. This $176 MM difference can be primarily attributed to the decrease in regulated timber base and the constraint to produce higher timber volumes in the first decade. Timber and road costs are higher than the current direction, but these higher costs are associated with higher timber benefits which offset the costs to produce a PNV higher than the Current Direction.

The Final Plan has higher timber harvest levels than the Current Direction and is estimated to contribute 19% more jobs. If the current direction were not constrained by current levels of timber harvest and associated budgets, the Final Plan would contribute 1 percent fewer jobs than the "unconstrained" current direction.

Due to the emphasis on visual quality through the use of MA-16 and MA-17 designations and through special applications of other designations which tend to preserve future options, the Final Plan provides 6% more visual quality protection than does the Current Direction.

The Final Plan has 18 percent more acreage dedicated to Wilderness and roadless recreation than the Current Direction. The Final Plan has 14,000 acres of additional Recommended Wilderness along with heavier emphasis on retaining options which has the effect of providing more acreage useful for unroaded sorts of recreation.

The Final Plan has 7 percent more acres withdrawn from oil and gas exploration and 6 percent more acres withdrawn from locatable mineral exploration than does the current direction. This is due to the larger Wilderness proposal of the Final Plan.

The Final Plan has 7 percent more undeveloped grizzly habitat than the Current Direction. This is the highest protection afforded to grizzly in any of the alternatives and reflects the emphasis on retaining options, including those affecting the grizzly bear.

The Final Plan emphasizes preserving options so 2 percent more of the lands below 5500 feet in elevation are designated for old growth timber retention.

The amount of stagnated lodgepole pine to be converted by the fifth decade is 54 percent less than envisioned in the Current Direction. This is contrary to the general goal of maintaining options because this land will not be immediately placed back into production and the risk of fire will remain high in these stands. This tradeoff is seen as necessary in the face of declining budgets and the high costs of conversion.

The Final Plan harvests 35 percent more timber in the first decade than does the Current Direction. This is primarily due to the constraint on volumes which was applied to the Current Direction to get outputs and budgets close to the current level. Without these limits on the Current Direction, the Final Plan would harvest 1 percent less timber in the first decade than the Current Direction.

In order to access the timber lands in the suitable base with the harvest schedule of the Final Plan it would be necessary to build 3850 new miles of road by decade 5. This is essentially the same as Current Direction. The harvest levels of the Final Plan are higher than those of the Current Direction, but the regulated timber base is smaller. The schedule of harvest for the Current Direction would not fully road the regulated base by the end of the 200 year analysis horizon because some of the suitable base is never accessed. The amount of land eventually roaded under the Current Direction is greater than that roaded under the Final Plan.

The Final Plan requires the 13th highest budget of the alternatives to carry out the various programs. Its budget is 16% higher than the Current Direction.

The Final Plan is very similar to the Proposed Plan as can be seen by those quantified items in the following Table which have not significantly changed. The decrease in PNV and increase in opportunity cost of the Final Plan is due to the combination of the following changes from the Proposed Plan:

- Old-growth timber designation increased to 10% of the Forest acreage below 5500 feet in elevation
- Old-growth timber designation removed from the regulated base
- Commercial thinning removed from the model
- Conversion of Stagnated Lodgepole pine stands delayed
- Timber harvest maximized in the first decade
- Redesignation of Pillick Ridge to Recommended Wilderness

These changes, either individually or in combination, also affected the other outputs which differ from the Proposed Plan.

Oil and gas and locatable mineral withdrawals increase by 12,000 acres with the increased size of the Proposed Scotchman Peaks Wilderness. The increased wilderness acreage is due to high public interest in Pillick Ridge as a quality Wilderness addition. Coupled with this is recent evidence that the potential for mineral resources in the area is less than previously estimated.

The first decade lodgepole pine harvest is 4% greater than the Proposed Plan. This is a result of reducing the regulated base and maximizing timber harvest in the first decade (subject to non-declining yield). The increased harvest level for lodgepole pine will provide enhanced opportunities to capture this volume before the trees are killed by the Mountain Pine Beetle.

(d) Comparison to the Proposed Action

The following table compares the Final Plan to the Proposed Action:

Table B-29

Kootenai National Forest

Comparison of Final Plan to Proposed Plan for Response to the Major Issues, Concerns, and Opportunities

Issue No.	Key Indicator of Issue, Concern and Opportunity	Proposed Plan (Alt J)	Final Plan (Alt JF)
2.	Suitable timberland managed (thous. acres) &	1,386	1,263
	% of total available	78	71
3.	New road construction needed by decade 5 (miles) and %	4,490	3,850
	change from existing in 1986	72	62
4.	Miles of new road construction needed in the first decade	2,440	2,370
5.	Total road system eventually required (miles)	10,690	10,050
6.	Recommended wilderness (thous. acres) and the number of	66	79
	locations	3	3
7.	Designated roadless acres in inventoried roadless areas (thousand acres)	202	192
9.	Inventoried roadless acres remaining after first decade	327	315
	(thous. acres) and % of total	81	78
10.	Total roadless recreation opportunity provided (thous.	518	521
	acres) and % of total Forest	23	23

Table B-29 (continued)

Kootenai National Forest

Comparison of Final Plan to Proposed Plan for Response to the Major Issues, Concerns, and Opportunities

Issue No.	Key Indicator of Issue, Concern and Opportunity	Proposed Plan (Alt. J)	Final Plan (Alt. JF)
12.	Additional road restrictions needed by fifth decade (miles)	4,480	4,130
14.	Old-growth timber (160 + yrs.) after 10 decades (thous. acres)	255	311
17.	First decade lodgepole pine harvest (mmbf/yr)	75	78
	and % change from last 5 years	+50	+56
18.	Stagnated lodgepole pine stands converted by the fifth decade (thousand acres)	70	32
19.	Projected withdrawals from oil and gas exploration (thous acres)	215	227
20.	Projected withdrawals from locatable mineral exploration (thousand acres)	252	264
22.	First decade total average annual budget needed (million $)	25.2	24.0
23.	First decade average annual Capital Investment road constr. funding needed (million $)	3.7	3.6
24.	First decade Appropriated Budget needed -- Capital Invest. plus Operation & Maintenance. (million $)	20.3	19.2

The model was provided with the option of delaying the conversion of stagnated lodgepole pine stands for as long as 100 years. Due to the high cost of this operation and the long time before returns are developed, the model delayed significantly more acres beyond decade 5. The effect is a reduction of 54% in the acres of stagnated lodgepole pine converted by the fifth decade.

New road access needed by the fifth decade (essentially all the new roads that will be ever needed) is 14% less than the Proposed Plan because of the smaller regulated timber base.

The first decade average budget is reduced by 5% due to the elimination of commercial thinning and reduced roading needs.

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APPENDIX B - INDEX

Kootenai National Forest Plan

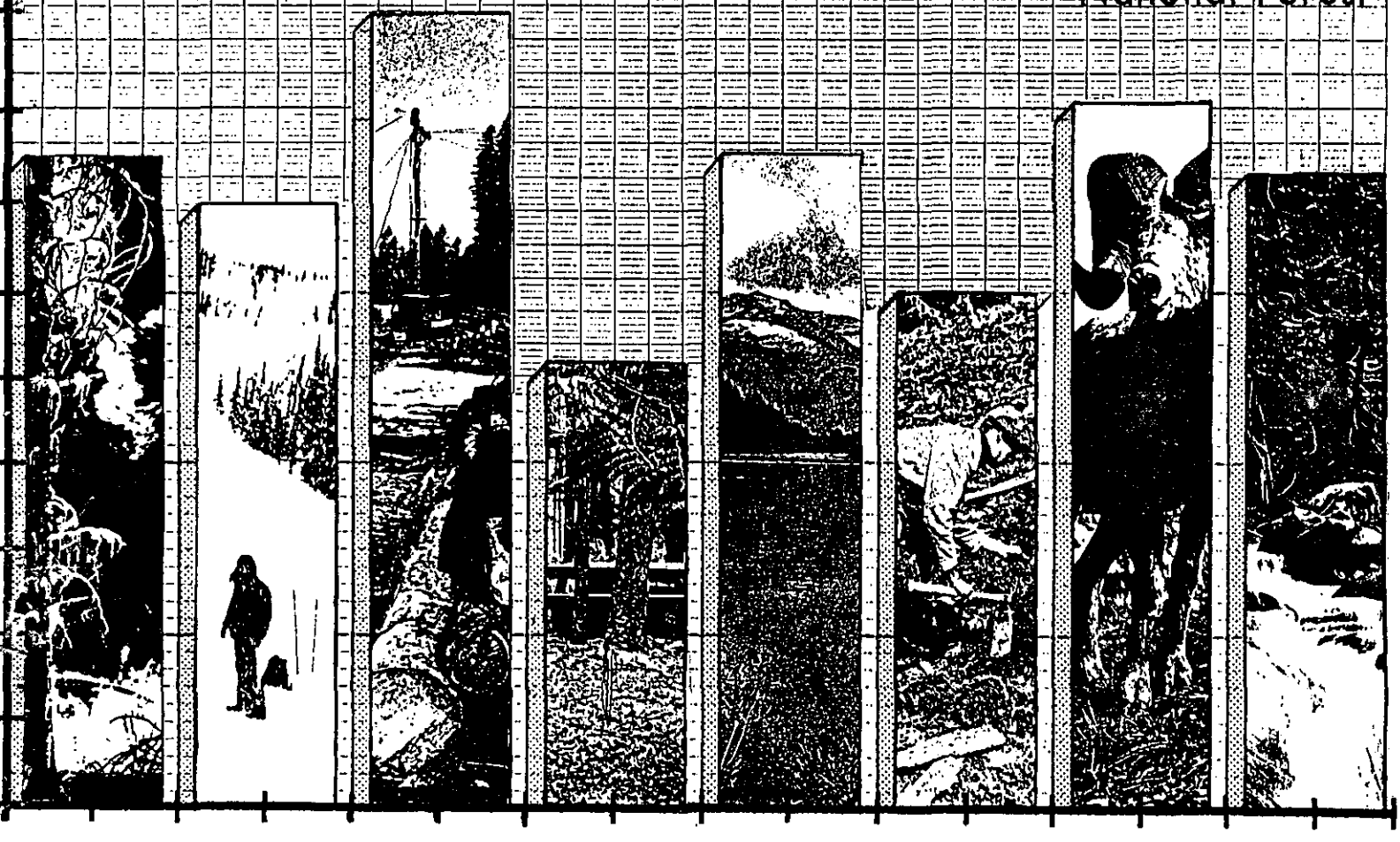
Final Environmental Impact Statement

Appendix C-Inventoried Roadless Areas-Volume 1

United States
Department
of Agriculture

Forest Service

Kootenai
National Forest



FINAL

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

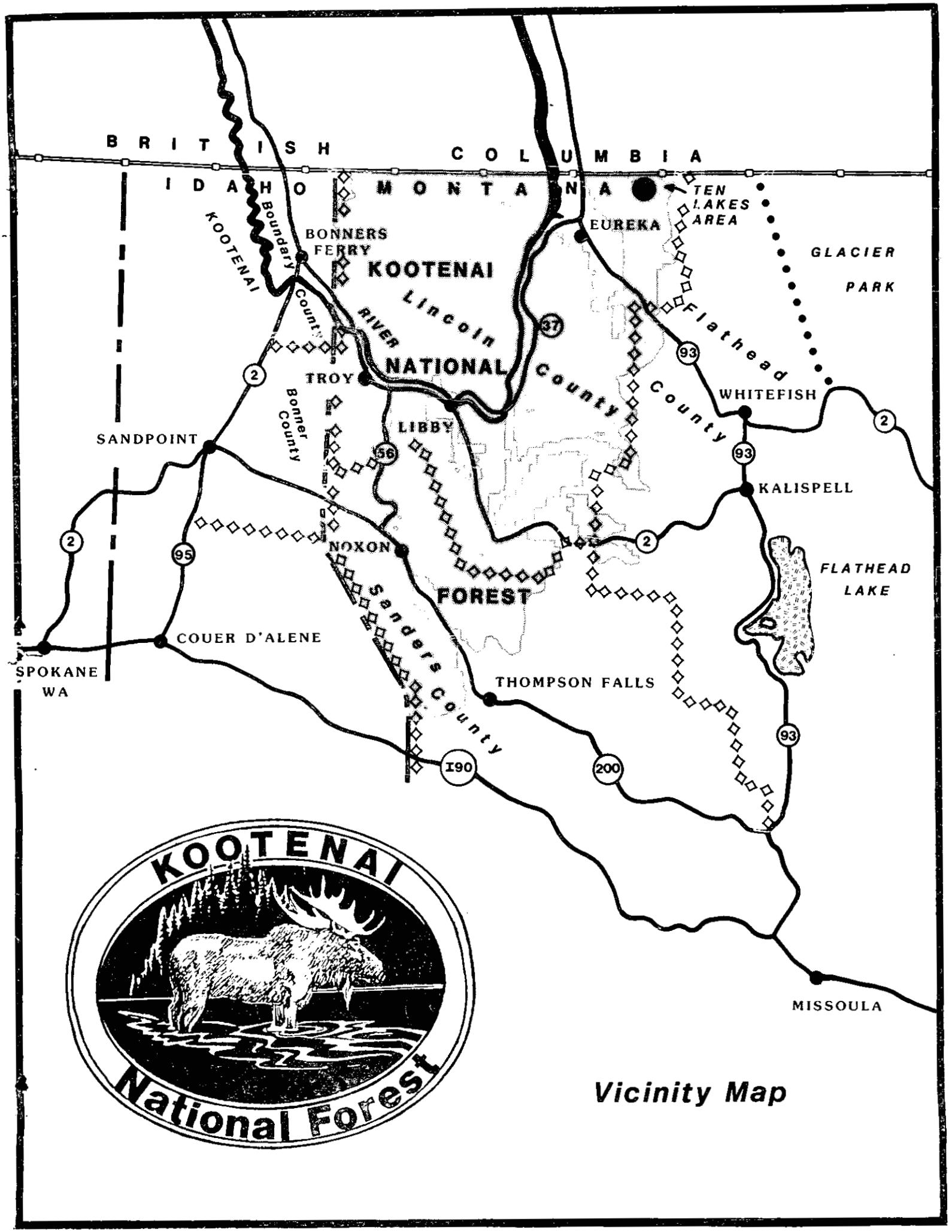
KOOTENAI NATIONAL FOREST PLAN

APPENDIX C

ROADLESS AREA DESCRIPTIONS
AND EVALUATIONS

KOOTENAI NATIONAL FOREST

VOLUME 1



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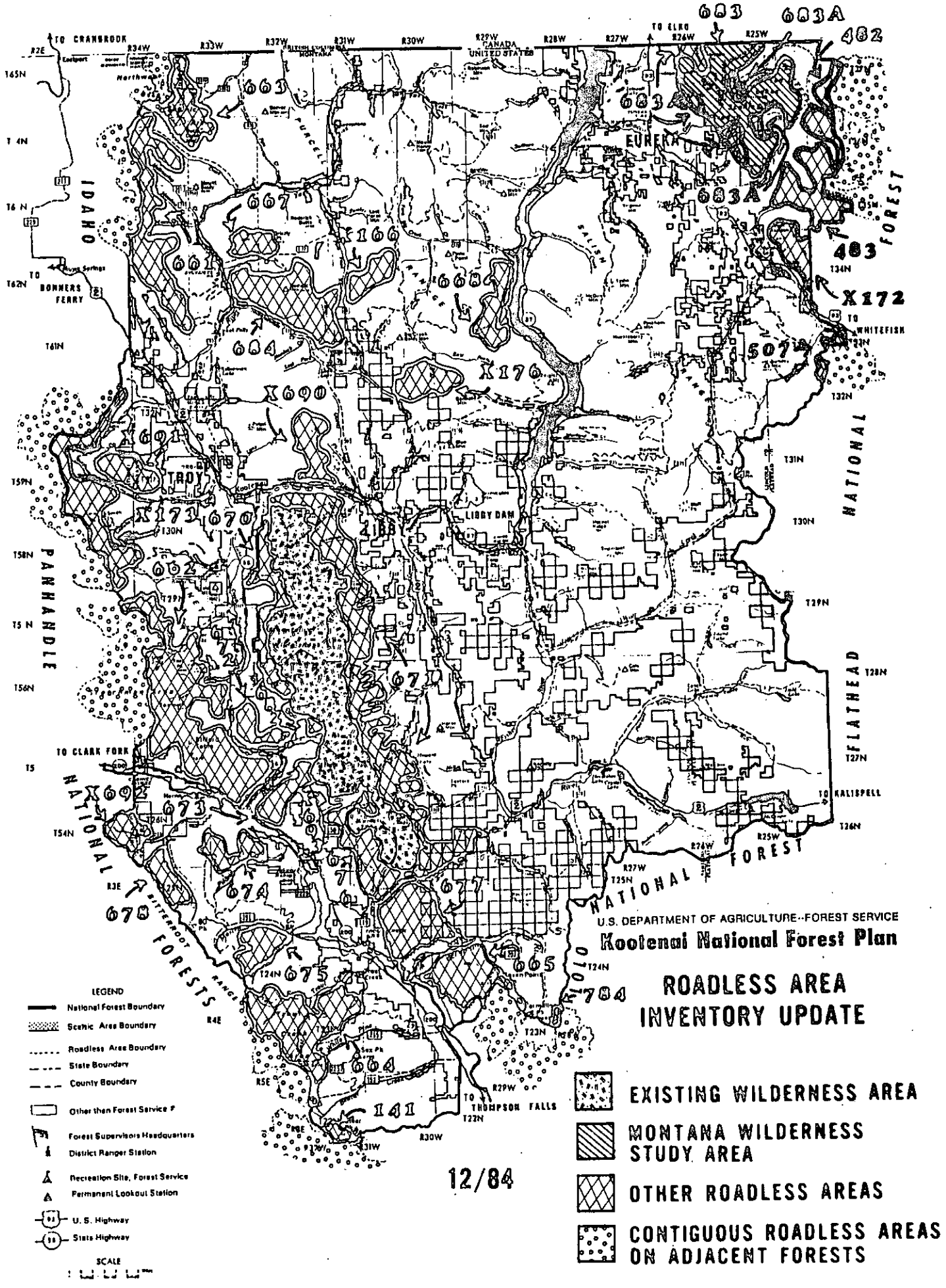
U.S. DEPARTMENT OF AGRICULTURE--FOREST SERVICE
Kootenai National Forest Plan
ROADLESS AREA INVENTORY UPDATE
EXISTING WILDERNESS AREA
MONTANA WILDERNESS STUDY AREA
OTHER ROADLESS AREAS
CONTIGUOUS ROADLESS AREAS ON ADJACENT FORESTS
12/84
LEGEND
National Forest Boundary
Scenic Area Boundary
Roadless Area Boundary
State Boundary
County Boundary
Other than Forest Service F
Forest Supervisors Headquarters
District Ranger Station
Recreation Site, Forest Service
Permanent Lookout Station
U. S. Highway
State Highway
SCALE
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X173
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APPENDIX C

This Appendix is arranged with the Roadless Areas in the same order as they are presented in the EIS. The following Table of Contents is arranged with the Roadless Areas in alphabetical order for the readers convenience.

Table of Contents

APPENDIX C

Inventoried Roadless Area Descriptions and Evaluations

Introduction

This appendix discusses each roadless area on the Kootenai that has been studied for wilderness designation. Each discussion includes a description of the area, the resources present, current use and public interest, how each Forest Plan alternative designated the area, the effects of each alternative on the roadless area, and the expected outputs associated with the area in each alternative.

Summary of Changes that occurred between the Draft and Final EIS

There were no changes in the actual inventory of the Inventoried Roadless Areas between the Draft and Final EIS. There was some new mineral potential information received concerning the Scotchman Peak Roadless Area and it is presented in that roadless area discussion. The Final Plan (Alt. JF) recommends 12,000 acres additional wilderness on Pellick Ridge in the Scotchman Peak Roadless Area and the effects of that recommendation are discussed in that roadless area discussion. The other roadless area discussions remain the same as presented in the Draft EIS. On those roadless areas, the information and results for the Proposed Action (Alt. J) can also be applied to the final Forest Plan (Alt. JF).

Management Area Prescription Assignments

Multiple use management prescriptions were grouped into categories (management emphases or designations) which have similar impacts on the wilderness and roadless resources.
Table C-1 displays these categories and identifies the Management Area Prescriptions.

Table C-2 briefly describes these Management Area Prescriptions and how they can be identified in the Forest Plan Document and map.

Table C-1

KOOTENAI NATIONAL FOREST

MANAGEMENT AREA PRESCRIPTION ASSIGNMENT CATEGORIES
(Management Emphasis or Designation)

Designation:
Wilderness

Mgmt. Area No.	Management Area Prescription
8	Recommended Wilderness

Designation:
Nonwilderness (Roadless)

Mgmt. Area No.	Management Area Prescription
29	Primitive Recreation
2	Semi-primitive Non-motorized Recreation
5	Viewing
24 & 1	Limited Use Areas

Designation:
Nonwilderness (Some Development)

Mgmt. Area No.	Management Area Prescription
10	Big Game Winter Range

Designation:
Nonwilderness (Developed)

Mgmt. Area No.	Management Area Prescription
11	Big Game Winter Range/Timber
12	Big Game Summer Range/Timber
13	Wildlife/Timber (Old Growth Timber Mgmt.)
14	Grizzly/Timber
15	Timber Optimization
16	Timber/Viewing
17	Viewing/Timber
18	Minimum Use due to Regeneration Problems
19	Minimum Use due to Steep or Unstable Slopes

Table C-2

KOOTENAI NATIONAL FOREST

MANAGEMENT AREA IDENTIFICATION

GROUP	MGMT AREA NO.	DEFINITION
RECREATION	29	LARGE AREAS OFFERING ROADLESS RECREATION OPPORTUNITIES IN A PRIMITIVE SETTING
	2	LARGE AND SMALL AREAS OFFERING ROADLESS RECREATION OPPORTUNITIES IN A SEMI-PRIMITIVE SETTING
	3	SMALL NATURAL APPEARING AREAS OFFERING OPPORTUNITIES FOR ROADED RECREATION IN A SEMI-PRIMITIVE SETTING
	5	NATURAL APPEARING AREAS CONTAINING HIGHLY SENSITIVE VIEWSHEDS
	6	SMALL AREAS CONTAINING CAMPGROUNDS, PICNIC AREAS, SKI AREAS, ETC.
WILDERNESS	7	EXISTING CABINET MOUNTAIN WILDERNESS
	8	AREAS BEING RECOMMENDED FOR WILDERNESS
	9	TEN LAKES MONTANA WILDERNESS STUDY AREA
WILDLIFE, TIMBER & VISUAL QUALITY	10	BIG GAME WINTER RANGE LOCATED ON UNSUITABLE TIMBERLAND
	11	BIG GAME WINTER RANGE LOCATED ON SUITABLE TIMBERLAND
	12	BIG GAME SUMMER RANGE LOCATED ON SUITABLE TIMBERLAND
	13	SMALL AREAS PROVIDING OLD GROWTH TIMBER DIVERSITY
	14	GRIZZLY HABITAT ON SUITABLE TIMBERLAND
	15	SUITABLE TIMBERLANDS MANAGED FOR THE HIGHEST POSSIBLE TIMBER YIELDS
	16	SUITABLE TIMBERLANDS IN A MODERATELY SENSITIVE VIEWSHED
	17	SUITABLE TIMBERLANDS IN A HIGHLY SENSITIVE VIEWSHED
	18	SMALL PRODUCTIVE AREAS THAT HAVE IDENTIFIED REGENERATION PROBLEMS
SPECIAL & OTHER	19	SMALL AREAS THAT ARE STEEP AND COSTLY TO ROAD
	20	RANGER STATIONS AND WORK CENTERS NEEDED FOR FOREST ADMINISTRATION
	21	UNIQUE OR SPECIAL AREAS INCLUDING RESEARCH NATURAL AREAS
	23	POWERLINE TRANSMISSON CORRIDORS
	24	UNPRODUCTIVE LANDS WITH LIMITED USE
	27	LANDS UNDERGOING ACTIVE EXCHANGE WITH OTHER LANDOWNERS
	30	WATER
	1	PRODUCTIVE LANDS WITH LIMITED USE

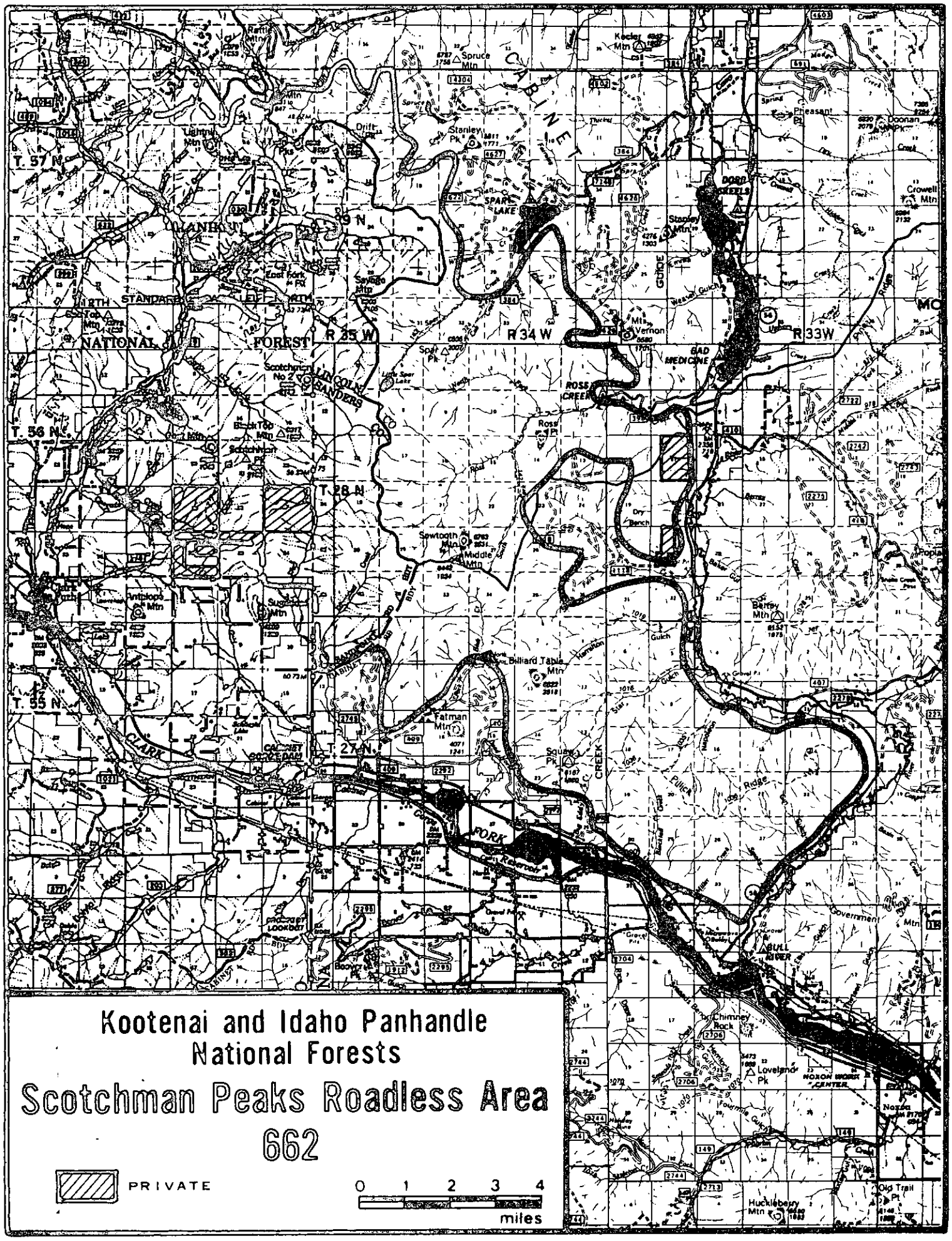
REGIONAL WILDERNESS OPPORTUNITIES and PROXIMITY to ROADLESS LANDS
on the KOOTENAI NATIONAL FOREST-in air miles

WILDERNESS	LOCATION	ACRES	DISTANCE
Gospel Hump	Central Idaho	206,000	190
Hells Canyon	Central Idaho	84,000	200
Selway Bitterroot	Central Idaho Western Montana	1,089,000 251,000	150 200
Rattlesnake	Western Montana	300,000	120
Scapegoat	Western Montana	240,000	150
Welcome Creek	Western Montana	28,000	150
Anaconda Pintlar	Western Montana	158,000	190
Gates of the Mountains	Western Montana	29,000	220
Cabinet Mountains	Western Montana	94,000	0
Mission Mountains	Western Montana	74,000	90
Great Bear	Western Montana	287,000	120
Bob Marshall	Western Montana	1,009,000	120
Absaroka-Beartooth	South Central Montana	922,000	320
Red Rock Lake	Northeastern Montana	32,000	320
Lee Metcalf	Southwestern Montana	259,000	220

SUMMARY:

Total Wilderness less than 100 miles from Kootenai National Forest roadless areas:	2 Areas 168,000 Acres
Total wilderness 100-200 miles from Kootenai National Forest roadless areas:	9 Areas 3,273,000 Acres
Total wilderness 200-300 miles from Kootenai National Forest roadless areas:	2 Areas 343,000 Acres
Total wilderness 300-400 miles from Kootenai National Forest roadless areas:	2 Areas 954,000 Acres

TOTAL AREAS - 15 TOTAL ACRES - 4,378,000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Scotchman Peaks Roadless Area
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T. 55 N.
T. 28 N.
T. 27 N.
R 35 W
R 34 W
R 33 W
NATIONAL
FOREST
CABINET
SPARE LAKE
BAD MEDICINE
ROSS CREEK
LINCOLN
SANDERS
CO.
CLARK
FORK
CABINET GORGE DAM
BULL RIVER
Spruce Mtn
Stanley Pk
Stanley Mtn
Mt Vernon
Spar Pk
Scotchman No 2
Scotchman Pk
Sawtooth Mtn
Middle Mtn
Billiard Table Mtn
Fatman Mtn
Squaw Pk
Barney Mtn
Government Mtn
Chimney Rock
Lovelands Pk
Huckleberry Mtn
Old Trail Pt
Crowell Mtn
Pleasant Pt
Doonan Pk
Kocher Mtn
Raffe Mtn
Drift Pk
Sayoko Mtn
Antelope Mtn
Sugar Mtn
Dry Bench
Fulton Ridge
Weasel Gulch
Little Spar Lake
Ross Pt
Beaver Pk
Prospect Lookout
NORTH WORKS CENTER
Noxon

KOOTENAI & IDAHO PANHANDLE NATIONAL FORESTS

Scotchman Peaks - 01662 State: Montana and Idaho

	Gross Acres			Net Acres		
	Total	Montana	Idaho	Total	Montana	Idaho
Total Area	86,250	64,580	21,670	83,740	64,280	19,660
Kootenai ---------	52,400	51,900	500	51,900	51,400	500
Idaho Panhandle --	33,850	12,680	21,170	31,840	12,680	19,160

I. Description

No Changes occurred in this section between the Draft and Final EIS

The Scotchman Peaks roadless area is located in the southwest corner of the Kootenai National Forest in western Lincoln and Sanders Counties, Montana, and northeast Bonner County, Idaho, situated on the Idaho-Montana border between the Kootenai and Clark Fork Rivers. The area extends into the Idaho Panhandle National Forest (33,849 acres). Access to the area is provided by State Highways 200 and 56 leading to several trails, particularly the Ross Creek Trail in the mid-portion and onto Pellick Ridge in the in the southeast corner. Trails are also present in Star and Napolean Gulches, leading to Squaw Peak on Pellick Ridge and in Spar and Cub Creeks on the northern tip. On the Idaho side, a few trails provide access into the area.

The area is surrounded by Forest developments such as roads and clearcuts, particularly in the northern portion and by private lands along State Highways 56 and 200.

Discussions of geography, topography, and vegetation invariably include descriptions of the area's rugged alpine scenery left by glaciers. Perhaps some of the most classic examples of glacial cirques found in the region dominate the upper reaches of Ross Creek. Other displays of the deep glaciation are particularly striking in the Savage Creek area. Major streams draining the Scotchman area are Ross, Spar and Blue Creeks. Spar Creek forms a deep canyon from Little Spar Lake to Spar Lake. Little Spar Lake is the only named water body in the area although several alpine potholes or ponds are scattered throughout the rocks along the main divide. (Lightning Creek drains much of the west side, in the Idaho Panhandle N.F., including the north face of Scotchman Peak. Steep, timbered breaks characterize this stretch of Lightning Creek, where the elevation changes a dramatic 4,500 feet in less than two miles on the slopes of Scotchman Peak).

Just over the headwalls of the deep cirques in Ross Creek, hillsides of alpine vegetation slope into the West Fork Blue Creek while the backsides of distinctive Sawtooth and Billiard Table Mountains drain through side hill parks and waterfalls to the East Fork of Blue Creek. The U-shaped valley of South Fork Ross Creek curves through green meadows and rock slides to meet the main Ross Creek. The scoured headlands of Ross Creek are soon lost in stands of large cedar, hemlock and white pine, as the creek tumbles through what is

often a tangle of moss-covered boulders and devil's club on its way to the scenic Ross Creek Cedar grove below.

Pellick Ridge, with its summit of Squaw Peak, tips rocky south slopes nearly 4,000 feet into the Clark Fork and lower Bull River valleys. In contrast, an almost continuous canopy of trees cover the cooler north aspects of Pellick Ridge in Napoleon and Lower Star Gulches. Upper Star Gulch, like neighboring Hamilton Gulch, shows much of its bedrock at the surface.

The area supports numerous wildlife including elk, deer, bighorn sheep, and grizzly bear. Most of Scotchman Peaks is grizzly habitat. Scenic attractions include Sawtooth and Billiard Table Mountains and Scotchman Peaks. Views from Pellick Ridge include Lake Pend Oreille to the west, the Bitterroot Mountains to the south, the Cabinet Mountain Wilderness to the east, and excellent views of the Bull River and Clark Fork Valleys.

Use of the area consists of hiking, cross country skiing, and roadless hunting, and is characterized as light to moderate in intensity. Some snowmobile use has been occurring in the Drift Peak area, on the northern portion of the roadless area boundary.

II. Capability

No Changes occurred in this section between the Draft and Final EIS

A. Natural Integrity and Appearance

Within the present roadless area boundary, the natural integrity and appearance is very high. Other than a few remnants of old, log trapper huts, the only man-made structure in the area is the Squaw Peak Lookout. Evidence of past mining activities has been reduced significantly by weathering and vegetation.

There are relatively few miles of constructed trail in the area, considering the large size, and no constructed recreation sites. Little Spar Lake is the only area having enough concentrated recreation use to visibly show the signs of wear.

B. Opportunities for Solitude

Through much of the area, opportunities for solitude are numerous. The north central sections of Ross and Blue Creeks in particular have deep valleys covered with large old growth cedar, hemlock and white pine, sharply defined cirque basins, and heavily vegetated riparian zones. These screening factors coupled with a distinct lack of concentrated recreation use provide opportunites for a very primitive recreation experience. In existing western wilderness the shorelines of alpine lakes with fish and mainline access trails concentrate users, making a primitive experience difficult. Recreation use is well dispersed in the Scotchman area, as there

are no mainline access trails and only one lake with fish. The Pellick Ridge trail is over 10 miles long, but does not have a destination of concentrated use. Much of the travel in the area is crosscountry both summer and winter, with quality backcountry hunting for elk, deer, and goats in the fall.

C. Primitive Recreation Opportunities

The rugged country and lack of recreation access provides a challenge for the visitor for a true wilderness experience. Bow hunting for elk and deer and ski mountaineering are also challenges people now experience in the area.

D. Other Features

There are several special features in the Scotchman Peaks area. One important one is its wide range of wildlife species; from the bighorn sheep in the Pellick ridge area to goats, grizzly bears and significant elk herds in the Ross Creek-Blue Creek areas. Ross Creek contains some of the largest western red cedar, western white pine, western hemlock and mountain hemlock remaining on the Forest. The strongly glaciated topography of the upper basins is another special feature.

E. Manageability and Boundaries

The Scotchman Peaks roadless area was evaluated for wilderness in the 1979 RARE II Final EIS. The EIS recommended wilderness for 24,553 acres on the Kootenai Forest (24,047 in Montana and 506 acres in Idaho) and for 22,338 acres on the Idaho Panhandle Forest (12,680 in Montana and 9,658 acres in Idaho). Since 1979, the boundaries of the area have remained unchanged. The acres have changed slightly because of recalculation.

	Gross Acres	Net Acres	
Total Area	86000	84190	1979 RARE II EIS
Kootenai Forest	52600	52100	
Idaho Panhandle	33400	32090	
Total Area	86250	83740	1983 roadless inven.
Kootenai Forest	52400	51900	
Idaho Panhandle	33850	31840	

The Squaw Peak lookout is the only man-made structure that constitutes a nonconforming use but its presence does not detract from the wilderness quality of the area. There are about 1,800 acres of private lands that could cause potential conflicts with wilderness.

A considerable portion of the Kootenai National Forest portion of the Scotchman Peaks area has remained roadless to the very perimeter of its landform, making much of the area ideal in terms of boundary management. This boundary could be enhanced further with the inclusion of some older spruce logging areas such as those in Dry Creek. The roadless area in its entirety is of a size and configuration which, should it become wilderness, should be relatively easy to manage.

The Idaho portion of the area has boundaries which are fairly well defined on major terrain or other recognized features. Exceptions to this occur along Lightning Creek and along the southern boundary which borders private lands. Two sections of private land lie within the roadless area boundary along the southern edge. The private lands are within one mile of Scotchman Peak, the highest peak in the roadless area. Recommendations made during the RARE II study included excluding the "fingers" of wilderness that protruded into the developed areas which would enhance the solitude opportunities but reduce the wilderness acres.

Conflicts with the private land inside the proposed boundary along the southern edge could be avoided by purchase or trade for these private lands. Boundary adjustments to exclude the private lands would be very difficult if the integrity of the proposed wilderness area were to be maintained.

III. Availability

A. Significant Resource Potentials

Summary of Changes between the Draft and Final EIS

More recent information on mineralization in the Star Gulch area on Pellick Ridge has shown the area to be of a lessor economic importance than previously rated. No changes occurred in Recreation, Wildlife and Fish, Timber, Cultural Resources or Special Considerations.

1. Recreation

The area has the potential to provide 15,600 RVD's of wilderness recreation. Snowmobile use is occurring around the Drift Peak area. Current recreation use is estimated to be 6,000 RVD's per year.

2. Wildlife and Fish

Habitat in the area supports elk, mule and whitetail deer, bighorn sheep, goats and grizzly and black bear. Most of the area is important grizzly habitat. Wildlife management in the form of burning, is considered most desirable in the big game winter range along the south face of Pellick Ridge.

Little Spar Lake, a cutthroat trout lake, is in this area as are numerous tributaries that flow into either Bull Lake, Bull River, or Noxon Reservoir. Some of the more important streams are Ross Creek, a cutthroat-brook trout creek, and Blue Creek, a poor to fair cutthroat trout stream. Stream bottoms are generally quite brushy which results in very little fishing pressure.

3. Timber

There are 34,000 acres of tentatively suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. Much of this timberland is located on the eastern portion (Pellick Ridge) of the roadless area. Approximately 90% of the tentatively suitable timberland is located on slopes greater than 55%. Road construction will be difficult and costly and logging will require the use of cable and helicopter yarding methods.

4. Minerals

Minerals investigations by the U.S. Geological Survey and the U.S. Bureau of Mines indicate that the potential for the discovery of economic copper/silver deposits within the Ross Point area and the Star Gulch area of Pellick Ridge is very high, similar to the Troy Mine on Mt. Vernon immediately to the north (Asarco). In the remainder of the roadless area, the mineral potential is considered medium to low. The oil and gas potential is considered moderate.

Summary of Changes between the Draft and Final EIS

The Star Gulch area of Pellick Ridge is adjacent to mineralized zones with a High-Very High potential for silver/copper deposits. Some of these deposits are currently being mined at Asarco's Troy mine at Mt. Vernon, and Star Gulch was regarded as having a similar mineral potential. Although silver/copper mineralization is present in the Star Gulch area, recent field investigations including core drilling indicate that the grade and tonnage of the mineral material is less favorable than previously estimated. The potential for silver/copper deposits in the Star Gulch area is now considered to be moderate. The area affected is about 1,000 acres and has been adjusted on Table 1.

5. Cultural Resources

Cultural resources in the area include several historic sites including the Squaw Peak Lookout, the remains of a tent camp at Ross Point, 6 mining adits and pits, and 2 other mining remains. There are no known prehistoric sites in the area and the probability of sites occurring is

considered low, except in the Ross Creek drainage bottom where the probability is moderate to high. This is based on surveys done in similar areas.

6. Special Considerations

The Scotchman Peaks area contains a Western Red Cedar potential Research Natural Area in Ross Creek, and at a small lake near Scotchman Peak No. 2.

B. Other Resources

No Changes occurred in this section between the Draft and Final EIS

1. Range

There are no grazing allotments in the area and grazing potential is all transitory.

2. Water

Average annual precipitation is very high, varying from 33 to 105 inches depending on the elevation and proximity to the watershed divide. Average annual runoff for the area varies from 12 to 60 inches, varying again with elevation and with aspect. The only deviation in the pristine water quality to be found in this area would be background or natural sediment levels during high runoff events.

C. Resource Information

Summary of Changes between the Draft and Final EIS

The following Table displays resource information within the Scotchman Peak roadless area. The only changes that occurred between the Draft and Final EIS were in the Hardrock Mineral Potential category and represented a difference of 1,000 acres less in the Very High Mineral Potential and 1,000 acres more in the Moderate Mineral Potential.

C. Resource Situation — Table 1 — Scotchman Peak 01662

Category	Unit	Total Area	Kootenai NF	Idaho Panhandle NF
Gross Acres	Acres	86250	52400	33850
Net Acres	Acres	83740	51900	31840
Recreation				
Semiprim. Nonmotor.	RVDs	6500	6000	500
Range				
Suitable Acres	Acres	0	0	0
AUMs	AUMs	0	0	0
Timber				
Tentative Suitable	Acres	34300	24100	10200
Standing Volume	MMBF	602	384	218
Corridors				
Existing & Potential	No.	0	0	0
Wildlife - T&E				
Grizzly Bear Habitat				
Situation 1	Acres	69800	41100	28700
Situation 2	Acres	13100	9900	3162
Situation 3	Acres	0	0	0
Wildlife - Big Game				
Summer Range Total	Acres	25100	25100	-
Winter Range Total	Acres	2450	2100	350
Significant Fisheries				
Stream Miles	Miles	9	4	5
Stream Habitat	Acres	5	-	5
Lakes	No.	1	1	0
Lake Habitat	Acres	51	51	0
Water Developments				
Existing	No.	1	0	1
Minerals				
Hardrock Potential				
Very High		3500	3500	0
High		7100	700	6400
Moderate		55700	39900	15800
Low		17400	9000	8400
Mining Claims		816	800	16
Oil & Gas Potential				
Very High				
High				
Moderate		83700	51900	31800
Low				
Oil & Gas Leases				
Lease Applications		20	20	-
Acres Applied For		51900	51900	-

D. Management Considerations Scotchman Peak-01662

No Changes occurred in this section between the Draft and Final EIS

1. **Land Use Authorizations**

There are no special uses.

2. **Fire**

The area has had low fire occurrance (8 fires in the last 20 years). The fuels situation is considered predominantly dense conifers with downed, woody materials as ground fuels.

3. **Insect and Disease**

Except for some mature lodgepole pine stands in the area of Dry Bench, there are no high risk stands nor is there insect or disease activity in the area.

4. **Non-Federal Lands**

There are about 500 acres of private lands located adjacent to State Highway 56 in Montana and about 2000 acres in Idaho. (1,800 acres of the private land in Idaho is being acquired by the Forest Service.)

IV. **Need**

No Changes occurred in this section between the Draft and Final EIS

A. **Proximity to Other Wilderness and to Population Centers**

Although the Scotchman roadless area is just across the Bull River valley (3 miles) from the Cabinet Mountains Wilderness, it would serve a different purpose were it to become wilderness. In recent years the Cabinets are receiving rapidly increasing numbers of visitors. These visitors tend to concentrate in the numerous lake basins. This, coupled with mineral exploration activity, is putting tremendous pressure on the Cabinet Mountains wilderness qualities. As a rugged area with less spectacular recreation features, Scotchman would make a significant contribution to the wilderness system simply by being wild and less used, available to those visitors looking for a truly wild experience, which is becoming difficult during the popular summer months in the Cabinet Mountains Wilderness.

The Scotchman Peaks roadless area is less than 100 miles from Coeur d'Alene, Idaho and Spokane, Washington on the west, 25 miles from Libby, Montana on the east, and 150 miles from Missoula, Montana to the south.

B. 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.

C. Public Interest

Much interest has been expressed about Scotchman Peaks throughout the last decade, generating altogether more support for wilderness than any other area on the Kootenai National Forest. During the RARE II public review, over 6200 comments were received, 75 percent of which expressed support for wilderness in Scotchman Peaks. Opposition to a wilderness classification stemmed from concern for the timber and mineral values in the area. The RARE II recommendation for Scotchman was wilderness. The Montana Wilderness Association's Alternative "W" (1978) recommended that Scotchmans be wilderness.

About 41,000 acres of the Scotchman Peaks roadless area have been recommended for wilderness as part of the Montana Wilderness Bill proposal of June, 1984. The Governors recommendation also included wilderness (46,000 acres).

V. Alternatives and Environmental Consequences

Summary of Changes between the Draft and Final EIS

The Final Plan (Alt.JF) recommends an additional 12,000 acres for wilderness on Pellick Ridge. This additional area was previously designated as roadless management (10,000 acres) and big-game winter range (2,000 acres) in the Proposed Plan (Alt. J). About half of this additional 12,000 acres (6,400 acres) was suitable timberland. Mineral exploration opportunity will be reduced by 12,000 acres as a result of this additional wilderness recommendation.

A. 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.

Table 2. Management Emphasis by Alternative for Scotchman Peaks Roadless Area, Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES (M Acres)

	A	B	C	D	E	F	G	H	I	J	JF	K	L	M	N	O
Kootenai National Forest	2	4	6	1	5	2	10	3	8	11	13	12	2	2	2	9
Idaho Panhandle National Forests																
MANAGEMENT EMPHASIS																
Nonwilderness (Roadless)																
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas																
Kootenai:	33.2	1.2	7.5	3.6	0.8	30.4	0	0	3.5	19.6	9.6	19.6	28.4	32.5	33.3	23.3
Idaho Panhandle NF:	22.7	4.1	4.1	5.6	9.3	22.7	0	0	5.3	6.9	6.9	6.9	22.7	22.7	22.7	7.7
Nonwilderness (Some Development)																
Big Game Winter Range																
Kootenai:	0	0	0	0	0	0	0	0	0	4.0	2.0	4.0	0	0	0	0
Idaho Panhandle NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonwilderness (Developed)																
Timber Harvest with Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes, or Regeneration Problems																
Kootenai:	18.8	2.2	15.6	0	2.0	21.7	0	0	.8	4.3	4.3	4.3	23.7	19.7	18.8	0
Idaho Panhandle NF:	9.1	5.2	5.2	3.7	0	9.1	0	0	4.0	2.3	2.3	2.3	9.1	9.1	9.1	1.6
Wilderness																
Recommended Wilderness																
Kootenai	0	48.3	28.9	48.3	49.3	0	51.9	51.9	47.6	24.2	36.2	24.2	0	0	0	28.9
Idaho Panhandle	0	22.5	22.5	22.5	22.5	0	31.8	31.8	22.5	22.5	22.5	22.5	0	0	0	22.5
Summary of Management Emphasis:																
Nonwilderness																
Developed - Decade 1:																
Kootenai:	.3	0	0	0	0	.9	0	0	0	0	0	0	.8	.3	.3	0
Idaho Panhandle NF:	3.7	2.3	1.8	1.3	1.0	3.7	0	0	.5	2.0	2.0	.4	3.7	3.7	3.7	2.0
Decade 5:																
Kootenai:	18.8	2.2	15.6	0	2.0	21.7	0	0	0	4.3	4.3	4.3	23.7	19.7	18.8	0
Idaho Panhandle NF:	9.1	5.2	5.2	3.7	1.0	9.1	0	0	5.0	2.3	2.3	3.3	9.1	9.1	9.1	2.0
Roadless - Decade 1:																
Kootenai:	51.6	2.8	23.2	3.6	2.8	51.0	0	0	4.3	27.9	27.9	27.9	51.1	51.6	51.6	23.3
Idaho Panhandle NF:	28.1	1.0	7.5	8.0	8.3	28.1	0	0	8.8	7.3	7.3	8.9	28.1	28.1	28.1	7.3
Decade 5:																
Kootenai:	33.3	1.2	7.5	3.6	0.8	30.4	0	0	0	23.6	23.6	23.6	28.4	32.5	33.3	23.3
Idaho Panhandle NF:	22.7	4.1	4.1	5.6	8.3	22.7	0	0	4.3	6.9	6.9	6.9	22.7	22.7	22.7	7.3
Recommended Wilderness																
Kootenai	0	48.3	28.9	48.3	49.3	0	51.9	51.9	47.6	24.2	36.2	24.2	0	0	0	28.9
Idaho Panhandle NF	0	22.5	22.5	22.5	22.5	0	31.8	31.8	22.5	22.5	22.5	22.5	0	0	0	22.5
Total Acres - Kootenai	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9	51.9
Total Acres - Idaho Panhandle	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
Total Acres - Scotchman Peaks	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7	83.7

B. Impacts Scotchman Peaks-01662

1. Designation: Wilderness
Management Emphasis: Wilderness

Summary of Changes between Draft and Final EIS

12,000 acres of additional wilderness has been recommended on Pellick Ridge. This will increase the amount of suitable timberland that would be located within a wilderness designation.

The amount of proposed wilderness for the Scotchman Peaks roadless area, is dependent on the goals and objectives for a particular alternative. All alternatives, except A, F, L, M, and N propose some amount of wilderness in the Scotchman Peaks area. (In the Current Direction, Scotchman Peaks is a recommended wilderness). Alternatives G and H designate wilderness on all available acres on both the Kootenai and Idaho Panhandle National Forests. 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 would preserve the existing wilderness characteristics of the area. The naturalness of the area will be maintained along with the solitude opportunities available in the area. Primitive recreation opportunities would be maximized as well as protection of old growth timber and associated wildlife habitat.

About 34,000 acres of commercial land are in the Scotchman Peaks roadless area. The opportunity to harvest timber would be foregone to some extent in all Alternatives except Alternative A, F, L, M and N. All suitable timberlands would be included in wilderness in Alternatives G and H. Much of the productive timber lands are located on Pellick Ridge. Alternatives J, JF, K, and C exclude the most productive portions of Pellick Ridge from proposed wilderness designation. The following chart displays the acres of suitable timberland that would lie within proposed wilderness in each alternative.

Acres of Suitable Timberland in Wilderness by Alternative (M Acres)

A	B	C	D	E	F	G	H	I	J	JF	K	L	M	N	O
0	26.9	11.7	26.9	26.2	0	34.3	34.3	26.9	9.4	15.8	9.4	0	0	0	11.7

Grizzly bear habitat (Situations 1 and 2 - see Glossary) covers the entire area. Wilderness management would provide security to the bear from roading and related increases in human activity in the area. However, opportunities to increase forage through timber harvest and prescribed burning would not occur.

Opportunities to manage big game winter range on the south-facing slopes of Pellick Ridge by prescribed burning would not be present unless

specified in a wilderness management plan. Opportunities to manage the 25,000 acres of big-game summer range through timber harvest would also be precluded. The inability to produce long term forage through timber harvest would be offset by the security afforded to big game in a wilderness designation.

Wilderness restricts the exploration for, and removal of, mineral resources. The 10,600 acres of high minerals potential would be restricted by a wilderness designation in some alternatives. Under the Wilderness Act, the area would be withdrawn from mineral entry except for the validated mining claims. Alternatives A, F, L, M, and N would have no restrictions on between 700 and 1,700 acres of very high-high mineral potential. (See Table 3 which follows). The remaining 10,000 acres lie within roadless designation emphases. (See next section- Designation: Nonwilderness (Roadless). A wilderness designation is not considered significant to oil and gas because the potential is rated moderate. The oil and gas lease applications would not be processed and the land withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects 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 would not be available in Alternatives G and H, thus not supporting the timber industry. Those publics valuing wilderness would be supportive of this management emphasis.

2. Designation: Nonwilderness (Roadless)
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, Minimum Use Areas

Summary of Changes between the Draft and Final EIS

The 12,000 acres of additional wilderness recommended on Pellick Ridge was previously designated as roadless, primarily, (10,000 acres). This will result in a reduction of the amount of designated roadless land as displayed in the following Output Tables. Roadless designations would still allow for the exploration for minerals, although more expensive methods would be required such as the use of helicopters, etc.

The amount of nonwilderness/roadless management in the Scotchman Peaks roadless area is dependent on the goals and objectives for a particular alternative. Alternatives A and N designate the most roadless acres (but no wilderness), followed by Alternatives M, F, L, O, J, and K. All alternatives designate some portions of the area to roadless management, primarily to semi-primitive, nonmotorized recreation. There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are primarily associated with dispersed recreation including hunting and fishing. The following chart displays the percentage of the area designated to roadless management under each alternative.

Percent Designated to Roadless Management by Alternative

A	B	C	D	E	F	G	H	I	J	JF	K	L	M	N	O
66	5	13	10	12	63	0	0	10	31	20	31	61	63	66	37

Designations to roadless management will maintain the primitive character of the area and provide primitive recreation opportunities. Old-growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game will be maintained. The landscape would remain as natural appearing but the buildup of natural fuels could increase risks of wildfire. Mineral development could negate a roadless designation.

Like wilderness, roadless designations require stiffer requirements for conducting activities, requirements that are designed to protect the qualities inherent in a roadless allocation. Restrictions on access and motorized travel are major limitations for conducting activities, making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in this emphasis.

3. Designation: Nonwilderness (Some Development)
Management Emphasis: Big Game Winter Range

Summary of Changes between Draft and Final EIS

The 12,000 acres of additional wilderness recommended on Pellick Ridge included 2,000 of big-game winter range. Most of this area was located on the south side of Pellick Ridge. This will reduce the amount of habitat manipulation that could have been done through prescribed burning by 50 percent. 2,000 acres will still be available for prescribed burning for big-game purposes.

Alternatives J and K designate about 4% of the area (4,000 acres) to this management emphasis. This emphasis is located primarily along the south facing slopes of Pellick Ridge, facing into the Clark Fork valley. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. Designation: Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Grizzly Timber.

Summary of Changes between the Draft and Final EIS

No Changes occurred between the Draft and Final EIS. This is because the lands recommended for wilderness were not available for development in the Proposed Plan (Alt. J). Seven percent of the land in the roadless area will be available for development as displayed in the Proposed Action (Alt. J).

The following chart displays the amount of the roadless area designated to this emphasis in each alternative.

Percent of Roadless Area Designated for Developmental Activities by Alternative

A	B	C	D	E	F	G	H	I	J	JF	K	L	M	N	O
33	8	21	4	2	36	0	0	5	7	7	7	39	34	33	1

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.

As indicated in Table 3, at the end of this discussion, only in Alternatives A, F, L, M, and N, is development scheduled to occur during the first decade. (On the Idaho portion of the area, development begins in the first decade in all alternatives except G and H). Most timber harvest activities would occur in the Pellick Ridge area where the

majority of the productive timberland is located. As harvest and road building take place, the naturalness of the area will be impacted. Activities conducted along the slopes of Pellick Ridge would be highly visible from Highways 200 and 56. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Forests. Timber from the Scotchman Peaks roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3, Part One. Decadal Outputs by Alternative for Scotchman Peaks Roadless Area , Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES

Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	JF	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	13	12	2	2	2	9
OUTPUT CATEGORIES DECADE																
Rec. Wilderness MAcres																
Kootenai	0	48.3	28.9	48.3	49.3	0	51.9	51.9	47.6	24.2	36.2	24.2	0	0	0	28.9
Idaho Panhandle	0	22.5	22.5	22.5	22.5	0	31.8	31.8	22.5	22.5	22.5	22.5	0	0	0	22.5
Total	0	70.8	51.4	70.8	71.8	0	83.7	83.7	50.1	46.7	58.7	46.7	0	0	0	51.4
Roadless MAcres																
Kootenai	33.3	1.2	7.5	3.6	.8	30.4	0	0	3.5	19.6	9.6	19.6	28.4	32.5	33.3	23.3
Idaho Panhandle	22.7	4.1	4.1	5.6	9.3	22.7	0	0	5.3	6.9	6.9	6.9	22.7	22.7	22.7	7.7
Total	56.0	5.3	11.6	9.2	10.1	53.1	0	0	8.8	26.5	16.5	26.5	51.1	55.2	56.0	31.0
Recreation																
Prim./Semiprim.MRVDs																
Kootenai	127	152	124	157	150	110	156	156	160	162	161	162	125	123	129	180
Idaho Panhandle*	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Total	132	157	129	162	155	115	161	161	165	167	166	167	130	128	134	185
Semiprim. Motor.MRVDs																
Kootenai	71	100	65	0	10	81	0	0	0	23	23	23	100	75	66	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	71	100	65	0	10	81	0	0	0	23	23	23	100	75	66	0
Timber																
Suitable MAcres																
Kootenai	18.8	2.2	15.6	0	2.0	21.7	0	0	.8	4.3	4.3	4.3	23.7	19.7	18.8	0
Idaho Panhandle*	9.1	5.2	5.2	3.7	0	9.1	0	0	4.0	2.3	2.3	2.3	9.1	9.1	9.1	1.6
Total	27.9	7.4	20.8	3.7	2.0	30.8	0	0	4.8	6.6	6.6	6.6	32.8	28.8	27.9	1.6
Volume (MMBF)																
Kootenai 1	6.0	0	0	0	0	19.4	0	0	0	0	0	0	6.0	6.0	6.0	0
Idaho Panhandle*	20.0	8.0	8.0	1.0	8.0	20.0	0	0	10.0	4.0	4.0	4.0	20.0	20.0	20.0	3.0
Kootenai 3	39.0	0	70.6	0	2.6	62.5	0	0	0	17.4	17.4	19.0	99.9	74.0	75.0	0
Idaho Panhandle*	20.0	8.0	8.0	1.0	8.0	20.0	0	0	10.0	4.0	4.0	4.0	20.0	20.0	20.0	3.0
Kootenai 5	33.0	0	15.6	0	0	66.5	0	0	0	0	0	0	65.0	84.0	53.0	0
Idaho Panhandle*	20.0	8.0	8.0	1.0	8.0	20.0	0	0	10.0	4.0	4.0	4.0	20.0	20.0	20.0	3.0
Harvest Acres - MAcres																
Kootenai 1	.3	0	0	0	0	.9	0	0	0	0	0	0	.8	.3	.3	0
Idaho Panhandle*	1.0	.4	.5	.6	.4	1.0	0	0	.6	.3	.3	.3	1.0	1.0	1.0	.3
Kootenai 3	1.7	0	2.9	0	.2	2.6	0	0	0	1.2	1.2	1.3	4.3	3.1	3.1	0
Idaho Panhandle*	1.0	.4	.5	.6	.4	1.0	0	0	.6	.3	.3	.3	1.0	1.0	1.0	.3
Kootenai 5	1.3	0	.7	0	0	2.9	0	0	0	0	0	0	3.0	3.7	2.4	0
Idaho Panhandle*	1.0	.4	.5	.6	.4	1.0	0	0	.6	.3	.3	.3	1.0	1.0	1.0	.3

* Estimated Outputs

Table 3, Part Two. Decadal Outputs by Alternative for Scotchman Peaks Roadless Area, Kootenai and Idaho Panhandle National Forests.

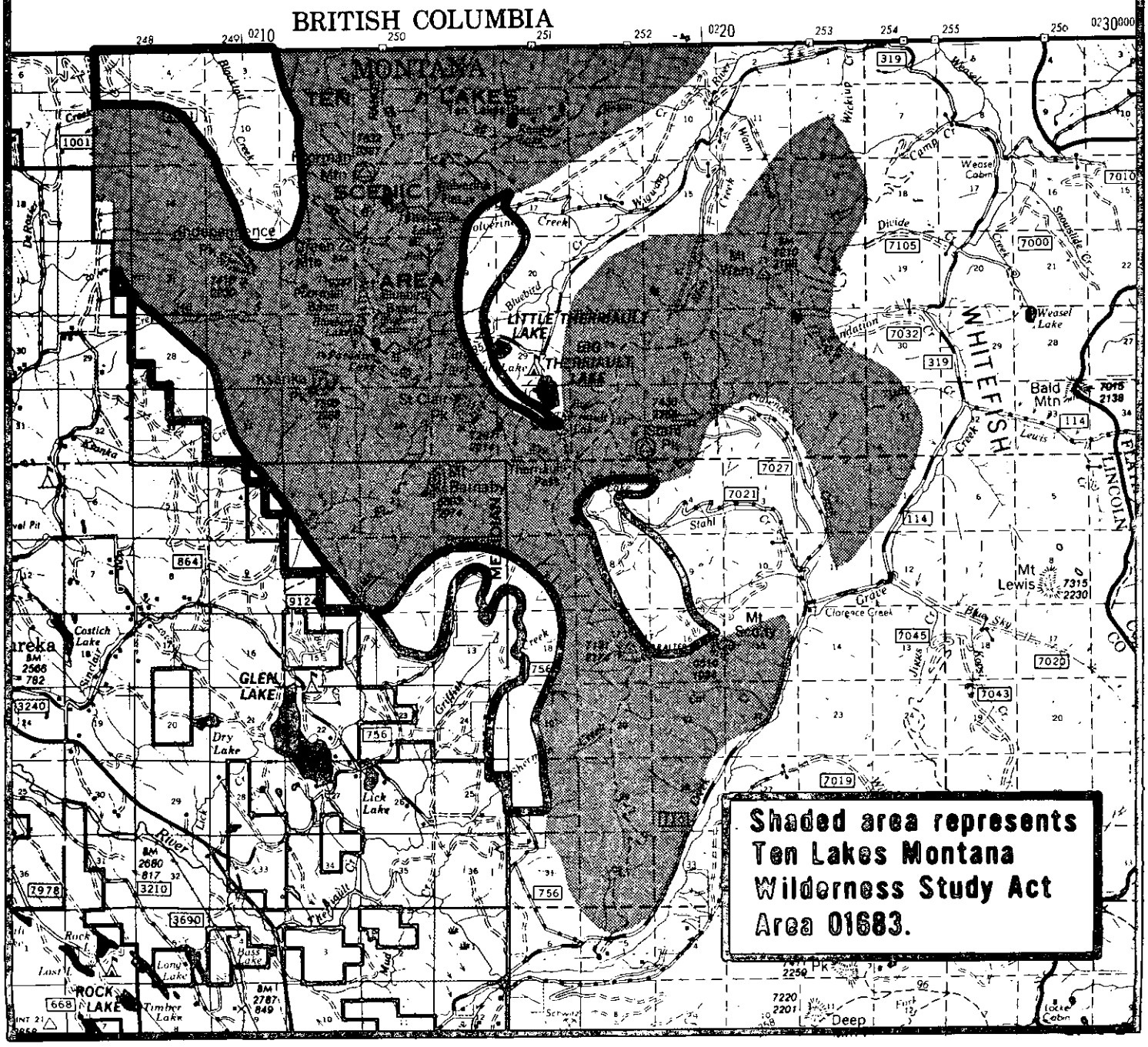
ALTERNATIVES

Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	JF	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	13	12	2	2	2	9
OUTPUT CATEGORIES																
Roads																
Roads Constructed First Decade - Miles																
Kootenai	2	0	0	0	0	6	0	0	0	0	0	0	4	2	1	0
Idaho Panhandle*	10	5	6	9	5	10	0	0	7	4	4	4	10	10	10	6
Total	**12**	**5**	**6**	**9**	**5**	**16**	**0**	**0**	**7**	**4**	**4**	**4**	**14**	**12**	**11**	**6**
Total Road Miles Needed by Fifth Decade - Miles																
Kootenai	52	0	39	0	1	63	0	0	0	26	26	26	65	68	63	0
Idaho Panhandle*	40	20	25	35	20	40	0	0	30	18	18	18	40	40	40	25
Total	**92**	**20**	**64**	**35**	**21**	**103**	**0**	**0**	**30**	**44**	**44**	**44**	**105**	**108**	**103**	**25**
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)																
Kootenai	33.3	49.5	36.4	52.9	51.1	30.4	51.9	51.9	51.1	43.8	45.8	43.8	28.4	32.5	33.3	52.2
Idaho Panhandle*	22.7	26.6	26.6	28.1	31.8	22.7	31.8	31.8	27.8	29.4	29.4	29.4	22.7	22.7	22.7	30.2
Total	**56.0**	**76.1**	**63.0**	**81.0**	**82.9**	**53.1**	**83.7**	**83.7**	**78.9**	**73.2**	**75.2**	**73.2**	**51.1**	**55.2**	**56.0**	**82.4**
Wildlife - Big Game																
Summer Range MAcres																
Kootenai	14.1	2.1	12.9	0	2.0	16.2	0	0	0	0	0	0	20.0	15.0	14.1	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**14.1**	**2.1**	**12.9**	**0**	**2.0**	**16.2**	**0**	**0**	**0**	**0**	**0**	**0**	**20.0**	**15.0**	**14.1**	**0**
Winter Range MAcres																
Kootenai	0	0	0	0	0	0	0	0	0	4.5	2.5	4.5	0	0	0	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4.5**	**2.5**	**4.5**	**0**	**0**	**0**	**0**
Minerals																
Hardrock-Very High/ High Potential - Accessible MAcres																
Kootenai	.7	0	0	0	0	1.7	0	0	0	0	0	0	1.7	1.1	.7	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**.7**	**0**	**0**	**0**	**0**	**1.7**	**0**	**0**	**0**	**0**	**0**	**0**	**1.7**	**1.1**	**.7**	**0**
Oil & Gas-Very High/ High Potential - Accessible MAcres																
Kootenai	NOT APPLICABLE IN THIS ROADLESS AREA															
Idaho Panhandle*																
Total																

* Estimated Outputs

Kootenai National Forest
Ten Lakes
Contiguous Area 683A

0 1 2 3 4
miles



Ten Lakes Contiguous - 01683A **State: Montana**

Gross Acres: 7,100 **Net Acres: 7,100**

I. Description

The Ten Lakes Contiguous Areas lie adjacent to the Ten Lakes Montana Wilderness Study Act (MWSA) area which is located in the northeast corner of the Forest, next to the Canadian border. (See the Ten Lakes MWSA Final Report and Proposal, for a detailed description of the Ten Lakes area).

The Ten Lakes Contiguous Area is composed of five separate sections surrounding the Ten Lakes MWSA area. They include the Blacktail Basin on the northwest corner of the MWSA, the Eureka Face, a portion of the upper basin of Griffith Creek, a portion of upper Stahl Creek, and a portion of Bluebird Basin just above the Therriault Lakes. These contiguous areas were recommended additions to the proposed Ten Lakes wilderness in the June, 1984, Montana Wilderness Bill. The areas are being evaluated because they can enhance the potential wilderness qualities of the Ten Lakes MWSA area and to provide a more manageable boundary.

The lower elevations of the contiguous roadless area contain some commercial forests.

The entire area including the Ten Lakes MWSA, is generally surrounded by signs of past forest management activities, roads, or population centers. The Ten Lakes MWSA area is directly west of the Thompson-Seton and Tuchuck roadless areas and overlooks the Tobacco Valley where the towns of Eureka, Fortine, and Trego are located. Many of the basins surrounding the MWSA area were logged during the spruce bark beetle infestation in the early 1950's, which explains the "finger" configuration of the core Ten Lakes MWSA area.

Current use in the contiguous roadless area is estimated at about 400 RVD's per year and is largely associated with use in the Ten Lakes core area. Existing use in the Ten Lakes MWSA area itself is considered moderate to heavy and consists primarily of hiking, nature photography, cross country skiing, and snowmobiling.

II. Capability

A. Natural Integrity and Appearance

Parts of the contiguous area contain some old logging roads that, if the area were designated wilderness, would be obliterated and allowed to revert to a roadless situation.

B. Opportunities for Solitude

Opportunities for solitude are limited in the contiguous areas because, for the most part, the areas face out into developments which tend to detract from the opportunities for solitude. Together, however, they enhance the opportunities for solitude within the Ten Lakes MWSA Area.

C. Primitive Recreation Opportunities

Good opportunities for primitive recreation exist such as hiking, camping, and wildlife observation. Challenging experiences include rock climbing and wildlife photography.

D. Other Features

The area is a part of the Whitefish Range of the Northern Continental Divide grizzly bear ecosystem. Other features include panoramic views of Glacier Park from the open ridges within the Ten Lakes MWSA Area.

E. Manageability and Boundaries

These contiguous areas were identified during the MWSA process as potential additions to the Ten Lakes MWSA area. The Montana Wilderness Bill (June 1984) also identified the areas as additions to the Ten Lakes MWSA area.

There are old logging roads and existing oil & gas leases within the boundary that present nonconforming uses.

The boundary lines are located, for the most part, next to private lands or along existing roads.

III. Availability

A. Significant Resource Potentials

1. Recreation

The Ten Lakes MWSA area itself has the potential to provide about 16,900 RVD's of roadless recreation. Current use of the entire general area is moderate to heavy with most activity focused in campgrounds immediately outside the MWSA roadless boundary from where day hikes into the area are made. Some snowmobile use occurs primarily in the Wolverine and Bluebird Basins, and across Therriault Pass.

2. Timber

About 7,100 acres of the contiguous area are considered suitable timberlands.

3. Wildlife and Fish

The contiguous area contains elk, whitetail and mule deer, bear, and moose habitat. Portions of winter range also exist, primarily in the Eureka Face area. Ten Lakes is part of the Northern Continental Divide grizzly bear ecosystem and sightings have been made. Evidence indicates that caribou use the area though the extent is not known. It is assumed that the use is transient and that the main herd is located in Canada.

Bluebird, Rainbow, and Wolverine Lakes support a cutthroat trout fisheries.

4. Minerals, Oil and Gas

The mineral potential is considered low. The area lies within the Overthrust Belt which is considered to have the highest oil and gas exploration potential within the lower 48 states. As such, the contiguous area is considered to be high. The entire contiguous area is under lease.

B. Other Resources

1. Range

The contiguous area has the potential to provide about 1,000 AUM's of livestock forage, all of which would be on transitory range. There are no grazing allotments.

2. Cultural Resources

There have been no historic or prehistoric sites identified. Based on surveys done in similar areas, the probability of sites occurring is considered low.

3. Water

The area contains portions of the Blacktail, Ksanka, Sinclair, Glen, Therriault, Stahl, Wolverine, and Bluebird Creek watersheds. Precipitation ranges from a low of 20 inches in the Ksanka Creek portion of the area to a high of 65 inches in the Blacktail and Bluebird Creek portions. Runoff varies from 5 to 60 inches, depending on the drainage. Water quality is considered high, even during peak runoff periods.

C. Resource Situation

Ten Lakes Contiguous Area
Table 1
01683A

Category	Unit		Category	Unit	
Gross Acres	Acres	7100			
Net Acres	Acres	7100			
Recreation					
Semiprim. Nonmotor.	RVDs	400	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	7100	Existing	No.	0
Standing Volume	MMBF	50			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	0
Wildlife - T&E			High	Acres	0
Grizzly Bear Habitat			Moderate	Acres	0
Situation 1	Acres	7100	Low	Acres	7100
Situation 2	Acres	0	Mining Claims	No.	3
Situation 3	Acres	0	Oil & Gas Potential		
			Very High	Acres	0
Wildlife - Big Game (Elk, Deer)			High	Acres	7100
			Moderate	Acres	0
Summer Range Total	Acres	6500	Low	Acres	0
Winter Range Total	Acres	500	Unknown	Acres	0
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	
Existing Facilities	No.	0	Leased Acres	Acres	7100

D. Management Considerations **Ten Lakes (Contiguous)-01683A**

1. Land Use Authorizations

There are no special uses. Oil and Gas leases exist on the area.

2. Fire

The contiguous area has had moderate fire occurrence (12 fires in the last 23 years). The fuels situation is primarily dense conifer with downed woody materials as ground fuels.

3. Insect and Disease

Mountain pine beetle and spruce bark beetle activity is occurring in the area. There are about 700 acres of susceptible lodgepole and spruce that are affected.

4. Non-Federal Lands

There are no private lands within the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The Ten Lakes contiguous area is about 65 miles from the existing Cabinet Mountains Wilderness and about 40 miles from Glacier National Park. The area is about 60 miles from the populated Flathead Valley and 200 miles from Missoula, Montana, the nearest population centers.

B. Contribution to National Wilderness Preservation System

This area contains portions of the Northern Continental Divide Grizzly Bear Ecosystem which is represented in the existing wilderness system.

C. Public Interest

Through RARE II and the Montana Wilderness Study Act process, much public comment has been received concerning Ten Lakes MWSA area. Opinion has been divided over whether or not the area should have a wilderness classification. Even those who don't particularly favor a wilderness for Ten Lakes have expressed concern that the area might be developed and thus degrade the roadless recreation qualities. Much local concern has been expressed for protecting the visual quality of the Eureka Face. Because the Ten Lakes contiguous area (01683A) is a new roadless area, no specific public opinion has been expressed to date. The Ten Lakes Contiguous Area was included in the June, 1984, Montana Wilderness Bill.

V. Alternatives

A. 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 (Table 2) displays how the roadless area acreage was designated in each alternative, defines further the rate of development, and indicates the future disposition of the roadless area.

Table 2. Management Emphasis by Alternative for Ten Lakes Contiguous Roadless Area.

MANAGEMENT EMPHASES	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	0	0	0	0	0	0	0	0	3.9	0	0	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	7.1	7.1	0	7.1	7.1	7.1	7.1	0	3.2	.3	.3	7.1	7.1	7.1	0
Wilderness															
Recommended Wilderness	0	0	7.1	0	0	0	0	7.1	0	6.8	6.8	0	0	0	7.1
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	2.2	2.2	0	2.2	2.2	2.6	2.2	0	.7	0	0	1.6	2.2	2.2	0
Decade 5:	7.1	7.1	0	7.1	7.1	7.1	7.1	0	3.2	.3	.3	7.1	7.1	7.1	0
Roadless - Decade 1:	4.9	4.9	0	4.9	4.9	4.5	4.9	0	6.4	.3	.3	5.5	4.9	4.9	7.1
Decade 5:	0	0	0	0	0	0	0	0	3.9	0	0	0	0	0	0
Recommended Wilderness	0	0	7.1	0	0	0	0	7.1	0	6.8	6.8	0	0	0	7.1
Total Acres- Ten Lakes Cont.	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1

B. Impacts Ten Lakes (Contiguous)-01683A

1. Designation: Wilderness
Management Emphasis: Wilderness

The Ten Lakes Contiguous Area is designated wilderness in its entirety in Alternatives C, H and O while Alternatives J and K designate 95% (6,800 acres) to wilderness. There are no specific ground-disturbing management activities associated with wilderness although the establishment of wilderness may, in itself, have effects on other resources and uses.

A wilderness classification will protect the naturalness of the area and will result in those portions where developments exist to revert to a natural condition. A wilderness classification will also enhance the adjacent Ten Lakes Montana Wilderness Study Act Area (MWSA), a portion of which (26,000 acres) is recommended for wilderness designation. (See the Ten Lakes MWSA Final Report and Proposal). Primitive recreation opportunities would be maximized and security would be provided for big game and grizzly bears.

There are about 7,100 acres of suitable timberland that would not be available for harvest in Alternatives C, H and O and essentially unavailable in Alternatives J and K.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security for the bear by prohibiting roading thereby reducing sharp increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big-game summer and winter range would not occur in this emphasis. Management activities associated with wildlife habitat management include timber harvest and burning. However, the security provided by the limited wilderness access would be beneficial to wildlife.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. This restriction is not considered significant to hardrock minerals because the mineral potential is low. The oil and gas potential is rated as high. The existing oil and gas leases would be honored. However, if there is no discovery when a lease expires, the land will be withdrawn from mineral entry for leasing. If oil and gas development does occur, it would negate the wilderness designation.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting would continue. Timberland would not be available in Alternatives C, H, J, K,and O, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

3. **Designation: Nonwilderness (Roadless)**
Management Emphases: Semiprimitve Nonmotorized Recreation, Viewing

Alternative I designates a portion of the area to these management emphases. There are few, if any, ground-disturbing management activities specifically associated with this unroaded management.

The roadless character of the area would be maintained in these emphases as would the semiprimitive recreation opportunities. Old growth timber habitat will be provided and security for grizzlies and big game would be maintained.

Like wilderness, roadless designations require more stringent 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, making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. Oil and gas development could negate the roadless designation.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest in this group of emphases.

4. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

Each Alternative, except Alternatives C, H, and O, designate all, or portions, of the area to these management emphases. Timber harvest and associated activities, such as road building, have more effect on the physical and biological environment than any other forest management emphasis. The extent of the effects are dependent on management prescriptions selected.

In all alternatives where this mix of emphases occurs, except Alternatives J and K, activities are scheduled to occur in the first decade. Total road miles expected to be needed to manage the area range from 2 to 22, depending on the alternative. (See Table 3 at the end of this discussion).

As roading and other developments occur, the naturalness of the area will be impacted. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

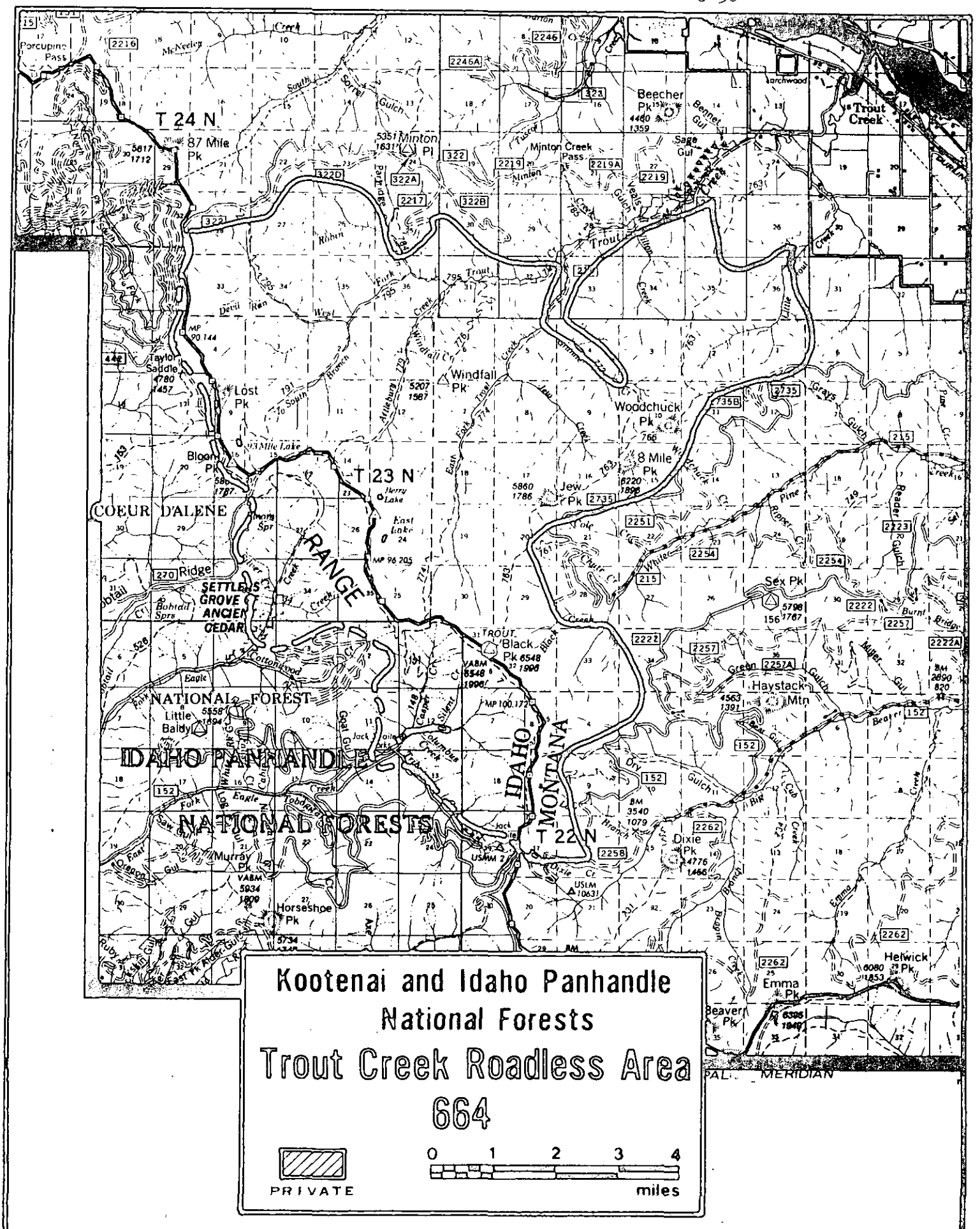
Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

The harvest of some of the mature lodgepole pine will provide an opportunity for control of insects and disease because all diseased or susceptible trees are removed and a young, vigorous stand is installed.

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 local communities in the Forests. Timber from the Ten Lakes Contiguous Roadless Area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Ten Lakes Contiguous Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	7.1	0	0	0	0	7.1	0	6.8	6.8	0	0	0	7.1
Roadless MAcres		0	0	0	0	0	0	0	0	3.9	0	0	0	0	0	0
Recreation																
Prim./Semiprim.MRVDs		0	0	34	0	0	0	0	35	9	34	34	0	0	0	35
Semiprim. Motor.MRVDs		35	35	0	35	35	35	35	0	16	1	1	35	35	35	0
Timber																
Suitable MAcres		7.1	7.1	0	7.1	7.1	7.1	7.1	0	3.2	.3	.3	7.1	7.1	7.1	0
Volume (MMBF)	1	30.1	30.1	0	30.1	30.1	39.8	30.1	0	6.0	0	0	27.1	30.1	30.1	0
	3	24.8	24.8	0	24.8	24.8	15.7	24.8	0	1.0	1.7	1.7	24.8	24.8	24.8	0
	5	11.1	11.1	0	11.1	11.1	3.8	11.1	0	6.0	4.0	4.0	11.1	11.1	11.1	0
Harvest Acres - MAcres	1	2.2	2.2	0	2.2	2.2	2.6	2.2	0	.7	0	0	1.6	2.2	2.2	0
	3	1.8	1.8	0	1.8	1.8	.6	1.8	0	.05	.07	.07	1.3	1.8	1.8	0
	5	.8	.8	0	.8	.8	1.8	.8	0	.8	.1	.1	1.9	.8	.8	0
Roads																
Roads Constructed First Decade - Miles		8	8	0	8	8	13	8	0	3	0	0	6	8	8	0
Total Road Miles Needed by Fifth Decade - Miles		11	11	0	11	11	22	11	0	11	2	2	22	11	11	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		0	0	7.1	0	0	0	0	7.1	3.9	6.8	6.8	0	0	0	7.1
Wildlife - Big Game																
Summer Range MAcres		4.3	4.3	0	4.3	4.3	7.1	4.3	0	0	0	0	4.5	4.3	4.3	0
Winter Range MAcres		.6	.6	0	.6	.6	0	.6	0	1.3	.3	.3	.5	.6	.6	0
Minerals																
Hardrock-Very High/ High Potential - Accessible MAcres			NOT APPLICABLE TO THIS ROADLESS AREA													
Oil & Gas-Very High/ High Potential - Accessible MAcres		7.1	7.1	0	7.1	7.1	7.1	7.1	0	3.2	.3	.3	7.1	7.1	7.1	0


Kootenai and Idaho Panhandle
National Forests
Trout Creek Roadless Area
664
PRIVATE
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RANGE
IDAHO PANHANDLE
NATIONAL FORESTS
IDAHO
MONTANA
Porcupine Pass
87 Mile Pk
Minton Pl
Minton Creek Pass
Beecher Pk
Trout Creek
Larchwood
Taylor Saddle
Lost Pk
Bloom Pk
Windfall Pk
Woodchuck Pk
8 Mile Pk
Jew Pk
Sex Pk
Black Pk
Haystack Mtn
Little Baldy
Murray Pk
Horseshoe Pk
Dixie Pk
Emma Pk
Helwick Pk
Beaver Pk
Ridge
SETTLERS GROVE OF ANCIENT CEDARS
MERIDIAN

KOOTENAI & IDAHO PANHANDLE NATIONAL FORESTS

Trout Creek - 01664 **State: Montana and Idaho**

Total Gross Acres:	**39,760**	**Total Net Acres:**	**39,700**
Kootenai ----------	**31,400**	**Kootenai** ----------	**31,400**
Idaho Panhandle --------	**8,360**	**Idaho Panhandle** ---	**8,300**

I. Description

The area is located on the southern border of the Forest, in western Sanders County and is bordered on the west by Idaho, into which part of the area extends. It is readily accessible from the Clark Fork Valley. Roads up Trout Creek, White Pine Creek, Minton Peak, and to the Lost Peak - Bloom Peak Ridgeline provides easy access via several trail heads.

Access is available from the Idaho Panhandle side of the area via the Casper Creek and Idaho-Montana Divide Trails.

The area is rugged, steep and mountainous with some very productive timberlands. The high ridgeline setting and timbered drainages make it unique among roadless areas on the Kootenai. Black Peak, at 6500 feet, is the highest point. The area was mostly burned over during the 1910 fire, but some old growth remains in a few areas untouched by the fires. Most of the productive timberland contains 70-80 year old stands. The fire also left many of the southern slopes either bare or brush covered. This area includes numerous named triburaries of Trout Creek plus some headwater areas of both Whitepine and Beaver Creeks on the Kootenai portion. On the Idaho Panhandle portion, major drainages include Casper, West Fork Eagle, and Tributary Creeks.

Clearcut blocks and roads are most noticeable on the Idaho side of the roadless area. However, because of the concaveness of the roadless area, surrounding developments are not an intrusion except when viewed from ridgetops.

Three ecosystem types are represented. Douglas-Fir Forest, Cedar Hemlock Pine Forest, and Western Spruce Fir Forest.

Elk hunting is the predominant recreational use of the area. The Settler's Grove of Ancient Cedars Botanical Area also attracts many visitors. Recreational visitor use is estimated at 10,000 RVD's annually.

Wildlife present on the Idaho Panhandle portion include elk, whitetail and mule deer, black bear, cougar, bobcat, moose, coyote, wolverine, marten, owls, pileated woodpecker, hawks, and beaver. Numerous non-game species inhabit the area.

II. Capability

Trout Cr.-01664

A. Natural Integrity and Appearance

Outside of two low-standard roads, the natural integrity and appearance of the area is quite high. There are several miles of trail throughout the area, including a National Recreation Trail, which are generally in good shape and lay relatively lightly on the land.

B. Opportunities for Solitude

Opportunities for solitude vary from moderate, along the ridgetop of the State line divide, to very high in the upper basins of the various forks of Trout Creek and White Pine Creek and, of course, down in the valleys and canyons of Trout Creek itself.

Visitor use tends to be dispersed throughout the area, which also enhances the solitude for any particular part of the area.

C. Primitive Recreation Opportunities

The size and configuration of the Trout Creek area lends itself to opportunities for primitive recreation. There are several miles of very scenic streamside trails leading to shallow subalpine basins above with a wide variety of flowers and berries, in addition to the regionally known elk herd, plus other quality hunting oportunities for bear and deer. There is also a high quality fisheries in the forks of Trout Creek. Prospective primitive campsites abound throughout the area, both in the canyon bottoms and the basins above, which have small alpine lakes.

The potential for challenging experiences in the Trout Creek area would include elk hunting with bow and rifle, crosscountry hiking in the rugged canyons, and ski mountaineering along the main divide in the winter.

D. Other Features

The Trout Creek area is most known for the relatively large number of elk that inhabit the area.

E. Manageability and Boundaries

The Trout Creek roadless area was identified in the RARE II inventory. The recommendation made was for a nonwilderness designation and subsequent designations were primarily roadless management.

	Gross Acres	Net Acres	
Total Acres	41140	41040	1979 RARE II EIS
Kootenai Acres	32640	32640	
Idaho Panhandle Acres	8500	8400	
Total Acres	39760	39700	1983 Roadless Invent
Kootenai Acres	31400	31400	
Idaho Panhandle Acres	8360	8300	

Nonconforming uses include two low standard mining access roads, about 60 acres of private land and existing oil & gas leases within the area boundary.

The bulk of this roadless area consists of drainages and tributaries which are entirely roadless. The main "state line" divide to the west forms the headwaters of these streams, and is roadless on the Trout Creek (Montana) side. These factors add up to a readily manageable boundary. The boundary could perhaps best be improved by either including the corridor presently excluded along the Granite Creek mining access road, or using it as a boundary and excluding the lands to the east of the road.

The road itself is of very low standard and would have the same impact on a wilderness experience whether inside or out. There is a similar situation in the Robin Run drainage, where an old, low-standard road extends about a mile into what would be the best topographic boundary for the area.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential of providing 9,500 RVD's of wilderness recreation per year. The 22 mile Trout Creek Loop National Recreation Trail is located in this area.

2. Wildlife and Fish

The area's wildlife is one of its biggest attractions, and a wilderness classification would preclude wildlife management opportunities particularly along Robin Run, Windfall, and other finger ridges in the area where elk winter range exists. However, a wilderness classification would not significantly affect the elk population in the area according to wildlife biologists.

Upper Trout Creek and its headwaters are in this roadless area. Trout Creek provides popular fishing for cutthroat trout, bull trout, and whitefish.

3. Timber

Approximately 30,000 acres are tentatively suitable timber lands capable of producing at least 20 cubic feet per acre per year of timber growth. Over 90% of this timber land is located on slopes in excess of 55 %. Road construction will be difficult and costly and logging will require the use of cable and helicopter yarding methods.

4. **Minerals**

The mineral potential is considered high along the South Branch of Trout Creek and Attlebury Creek and very high in the area of the Jack Waite mine. Total acres are approximately 7,920 acres of high and very high potential. Mineral activity is occuring in the Tributary, Casper, Eagle, and Silent Creek drainages. The oil and gas potential is moderate.

5. **Cultural Resource**

There are two identified historic cultural sites (mining adits) on the Kootenai portion. Two historic trails pass through the Trout Creek area. Gold seekers followed these trails in the 1880's to the gold rush towns of Eagle and Murray from the Montana side. The Jack Waite mine and most of its workings are located within the Idaho Panhandle portion of the area. The mine was developed in the 1890's, which included the mine and mill complex and the Duthie townsite. The town remained active until the 1960's but is now a ghost town.

The area has not been surveyed for prehistoric sites so no sites have been identified. However, based on surveys in similar locales, the probability of sites occurring is considered low, except within the Trout Creek drainage bottom itself where the probability is moderate to high.

B. **Other Resources**

1. **Range**

There are no active grazing allotments in the area. Grazing potential for the area is considered transitory.

2. **Water**

Mean annual precipitation varies from 30-85 inches in the area, depending on elevation. Average annual runoff for the area in general varies from 8-45 inches, with most of this amount running off as streamflow in May and June. Overall existing water quality is very high, except during high runnoff events.

C. Resource Situation

Trout Cr. 01664

Table 1

Category	Unit	Kootenai	Idaho Panhandle	Total
Gross Acres	Acres	31400	8300	39700
Net Acres	Acres	31400	8300	39700
Recreation				
Semiprim. Nonmotor.	RVDs	12100	-	12100
Roaded Natural/Rural	RVDs	0	200	200
Range				
Suitable Acres	Acres	0	0	0
AUMs	AUMs	0	0	0
Timber				
Tentative Suitable	Acres	24200	5700	29900
Standing Volume	MMBF	219	40	259
Corridors				
Existing & Potential	No.	0	0	0
Wildlife - T&E				
Grizzly Bear Habitat				
Situation 1	Acres	0	0	0
Situation 2	Acres	0	0	0
Situation 3	Acres	0	0	0
Wildlife - Big Game (Elk, Deer)				
Summer Range Total	Acres	24000	-	24000
Winter Range Total	Acres	1900	-	1900
Special Uses Existing	No.	0	0	0
Existing Facilities	No.	0	0	0
Significant Fisheries				
Stream Miles	Miles	10	-	10
Stream Habitat	Acres	-	-	-
Lakes	No.	-	-	-
Lake Habitat	Acres	-	-	-
Water Developments				
Existing	No.	0	0	0
Minerals				
Hardrock Potential				
Very High	Acres	-	640	640
High	Acres	4080	3200	7280
Moderate	Acres	3800	1300	5100
Low	Acres	25000	3300	28300
Mining Claims	No.	345	300	645
Oil & Gas Potential				
Very High	Acres	-	-	-
High	Acres	-	-	-
Moderate	Acres	31400	8300	39700
Low	Acres	-	-	-
Unknown	Acres	-	-	-
Oil & Gas Leases				
Leases	No.	9	-	9
Leased Acres	Acres	31400	-	31400

D. Management Considerations

1. Land Use Authorizations

There are no special use permits. Oil & Gas leases exist.

2. Fire

The area has had an active fire history, with the 1910 fires burning over 80 percent of the area. Recently, there has been low fire occurrence (1 fire in the last 10 years). The fuels situation is considered predominately dense conifer stands with thick downed woody materials as ground fuels.

3. Insect and Disease

The insect and disease situation is stable with no high risk lodgepole pine stands or insect activity in the area.

4. Non-Federal Lands

There are about 60 acres of private land in the area.

IV. Need

A. Proximity to Other Wilderness and to Populations Centers

The existing wilderness closest to the Trout Creek area is the Cabinet Mountains Wilderness - some 20 miles to the north. The Cabinets receive over 18,000 RVD's per year, and this number is beginning to increase rapidly.

The Trout Creek area is about 125 miles from Missoula, Montana and a similar distance from the Coeur d'Alene, Idaho and Spokane, Washington, areas.

B. Contribution to National Wilderness Preservation System

This area is representative of the Douglas-fir, Cedar Hemlock Pine, and Western Spruce Fir forest ecosystems which are common in the existing wilderness system.

2. Public Interest

During the Unit Plan public review period (Beaver-Marten-Vermilion, August 1979), concern was expressed for protecting the primitive qualities of Trout Creek area. During the RARE II public review period, over 6,300 responses specifically addressed the area, the most received on any area on the Kootenai. Most of the responses (67%) favored wilderness in Trout Creek. Opposition to wilderness focused on the timber values present. Thus, RARE II recommended non-wilderness. The Montana Wilderness Association's Alternative "W" (1978) recommended that the Trout Creek area be wilderness. About 13,100 acres of the Trout Creek area were recommended for wilderness in the Montana Wilderness Bill proposal in June, 1984.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Trout Creek Roadless Area, Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES (M Acres)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Kootenai National Forest	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
Idaho Panhandle National For.															
MANAGEMENT EMPHASIS															
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas															
Kootenai:	15.4	15.0	6.6	9.4	2.7	12.8	1.1	0	22.4	22.5	22.5	6.9	12.9	15.4	18.3
Idaho Panhandle NF:	2.7	2.7	0	5.4	5.4	2.7	0	0	2.7	5.6	5.6	2.7	2.7	2.7	0
Nonwilderness (Some Development)															
Big Game Winter Range															
Kootenai:	.04	.04	.04	0	0	0	0	0	0	0	0	0	0	.04	0
Idaho Panhandle NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems															
Kootenai:	16.0	16.4	12.5	22.0	4.7	18.7	0	0	8.6	8.9	8.9	24.6	18.5	16.0	0
Idaho Panhandle NF:	5.6	5.6	0	2.9	2.9	5.6	0	0	5.6	2.7	2.7	5.6	5.6	5.6	0
Wilderness															
Recommended Wilderness															
Kootenai	0	0	13.1	0	24.1	0	30.3	31.4	0	0	0	0	0	0	13.1
Idaho Panhandle	0	0	8.3	0	0	0	8.3	8.3	0	0	0	0	0	0	8.3
Summary of Management Emphasis															
Nonwilderness															
Developed - Decade 1:															
Kootenai:	1.2	1.6	1.6	1.9	.3	2.1	0	0	2.5	1.0	1.0	3.4	2.5	1.6	0
Idaho Panhandle NF:	0	0	0	0	0	0	0	0	0	3.5	3.5	0	0	0	0
Decade 5:															
Kootenai:	16.0	16.4	12.5	22.0	4.7	18.7	0	0	8.6	8.9	8.9	24.6	18.5	16.0	0
Idaho Panhandle NF:	5.6	5.6	0	4.6	4.6	5.6	0	0	4.0	3.5	3.5	5.6	5.6	5.6	0
Roadless - Decade 1:															
Kootenai:	30.2	29.8	16.7	29.5	7.1	29.3	1.1	0	28.9	30.4	30.4	28.0	28.9	29.8	18.3
Idaho Panhandle NF:	8.3	8.3	0	8.3	8.3	8.3	0	0	8.3	0	0	8.3	8.3	8.3	0
Decade 5:															
Kootenai:	15.4	15.0	6.6	9.4	2.7	12.8	0	0	22.4	22.5	22.5	6.9	12.9	15.4	18.3
Idaho Panhandle NF:	2.7	2.7	0	3.7	3.7	2.7	0	0	4.3	4.8	4.8	2.7	2.7	2.7	0
Recommended Wilderness															
Kootenai	0	0	13.1	0	24.1	0	30.3	31.4	0	0	0	0	0	0	13.1
Idaho Panhandle NF	0	0	8.3	0	0	0	8.3	8.3	0	0	0	0	0	0	8.3
Total Acres - Kootenai	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4
Total Acres - Idaho Panhandle	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
Total Acres- Trout Creek	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7

B. Impacts

1. Designation: Wilderness
Management Emphasis: Wilderness

The Trout Creek roadless area is essentially recommended for wilderness in its entirety in Alternatives G and H, while Alternatives C, E and O recommend 53%, 60%, and 53%, respectively. There are no specific ground-disturbing management activities associated with wilderness 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 will be maintained along with the high solitude opportunities available in the upper basins on the various forks of Trout Creek and White Pine Creek and in the valleys and canyons of Trout Creek itself. Roadless elk hunting opportunites would also be maintained.

There are about 30,000 acres of suitable timberland located within the area (both Kootenai and Idaho Panhandle portions). The following chart displays the acres of suitable timberland that would be located within recommended wilderness.

Acres of Suitable Timberland in Wilderness
By Alternative (M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	13.7	0	18.6	0	30	30	0	0	0	0	0	0	13.7

Opportunities to manage the timber resource would be foregone entirely in Alternatives G and H and to lesser extents in Alternatives C, E, and O.

Opportunities to manage big-game summer range through timber harvest would be foregone in wilderness. This affects about 24,000 acres on the Kootenai. Wilderness, however, would provide security by affording cover and by limiting access thereby reducing human activity. Efforts to improve big-game winter range would be prohibited. This affects about 1,900 acres.

Wilderness restricts the exploration for, and removal of, mineral resources. About 7,900 acres are rated as having high mineral potential and 31,000 acres have been leased for oil & gas exploration. (See Table 3 at the end of this discussion). Under the provisions of the Wilderness Act, lands would be withdrawn from mineral entry if no valid mining claims existed to date. If valid claims did exist, development could negate a wilderness designation. The existing oil and gas leases would be honored. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing. Discovery may also negate a wilderness designation

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

The following chart displays the percent of the area designated for roadless management, by alternative.

Percent Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
46	45	16	37	20	39	2	0	62	70	70	24	39	46	47

There are few, if any, ground-disturbing management activities specifically associated with roadless management. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within these emphases will be maintained as well as the semi-primitive recreation opportunities. Old growth timber habitat and security for big game will be provided.

Like wilderness, roadless designations 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, making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. Mineral and/or oil and gas development could negate a roadless designation.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest under these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

Alternatives A, B, C, I, and N designate about 40 acres to this management emphasis. This emphasis is located primarily along Robin Run and Windfall Creek. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

The following chart displays the percent of the area designated for developmental management emphases, by alternative.

Percent of Roadless Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
54	55	31	62	18	61	0	0	38	29	29	76	61	54	0

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.

Activity is scheduled to occur in all alternatives except G, H and O in the first decade. (See Table 3 at the end of this discussion). Estimated road miles expected in the first decade by alternative range from 1 mile (Alternative E) to 25 miles (Alternative L).

The naturalness of the area will be impacted by harvest units, roads, and other evidence of human modifications. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

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 National Forests. Timber from the Trout Creek roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on big game and other wildlife could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3, Part One. Decadal Outputs by Alternative for Trout Creek Roadless Area, Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES

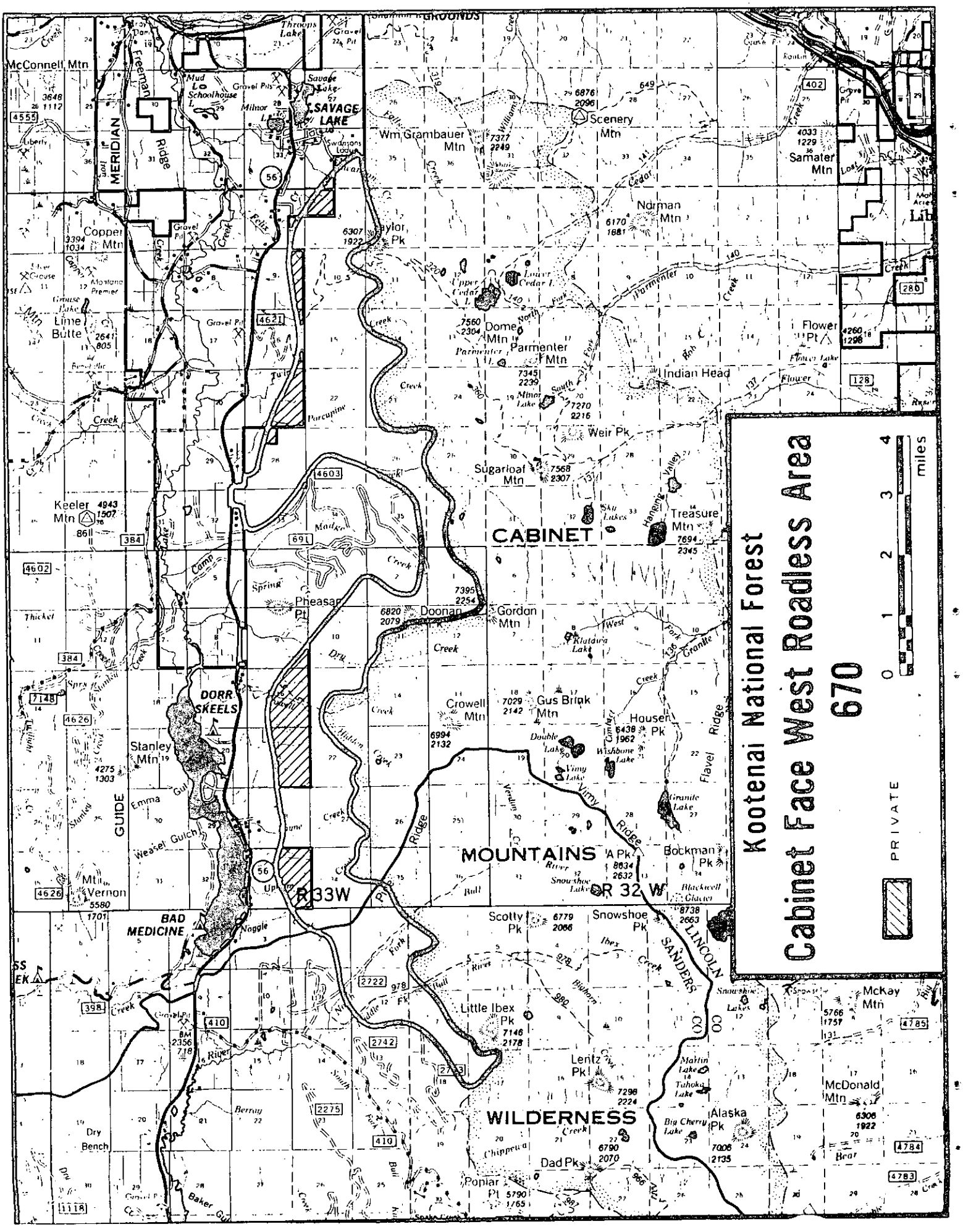
Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
OUTPUT CATEGORY DECADE															
Rec. Wilderness MAcres															
Kootenai	0	0	13.1	0	24.1	0	30.3	31.4	0	0	0	0	0	0	13.1
Idaho Panhandle	0	0	8.3	0	0	0	8.3	8.3	0	0	0	0	0	0	8.3
Total	0	0	21.4	0	24.1	0	38.6	39.7	0	0	0	0	0	0	21.4
Roadless MAcres															
Kootenai	15.4	15.0	6.6	12.5	2.7	12.8	1.1	0	22.4	22.5	22.5	6.9	12.9	15.4	18.3
Idaho Panhandle	2.7	2.7	0	5.4	5.4	2.7	0	0	2.7	5.6	5.6	2.7	2.7	2.7	0
Total	18.1	17.7	6.6	17.9	8.1	15.5	1.1	0	25.1	28.1	28.1	9.6	15.6	18.1	18.3
Recreation															
Prim./Semiprim.KRVDs															
Kootenai	60	59	68	37	80	50	92	92	60	62	62	28	50	61	113
Idaho Panhandle*	0	0	50	2	2	0	50	50	2	2	2	0	0	0	50
Total	60	59	118	39	86	50	142	142	62	64	64	28	50	61	163
Semiprim. Motor.MRVDs															
Kootenai	78	80	56	107	21	91	3	0	48	34	34	118	90	78	0
Idaho Panhandle*	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1
Total	79	81	57	108	22	92	3	0	49	35	35	119	91	79	1
Timber															
Suitable MAcres															
Kootenai	16.0	16.4	12.5	22.0	4.7	18.7	1.1	0	8.6	8.9	8.9	24.0	18.5	16.0	0
Idaho Panhandle*	6.0	6.0	0	3.0	3.0	6.0	0	0	6.0	3.0	3.0	6.0	6.0	6.0	0
Total	22.0	22.4	12.5	25.0	7.7	24.7	1.1	0	15.6	11.9	11.9	30.0	24.5	22.0	0
Volume (MMBF)															
Kootenai 1	1.0	7.0	6.6	13.2	2.0	22.0	0	0	14.5	0.6	4.5	20.0	13.0	7.0	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	.4	.4	0	0	0	0
Kootenai 3	21.0	17.0	14.0	30.9	13.0	6.0	0	0	3.3	22.0	12.7	24.0	22.0	37.0	0
Idaho Panhandle*	7.0	6.0	4.0	0	7.0	0	0	0	1.0	4.0	4.0	7.0	7.0	7.0	0
Kootenai 5	56.0	56.0	30.0	51.6	9.0	68.0	0	0	7.5	13.4	8.3	60.0	83.0	54.0	0
Idaho Panhandle*	19.0	19.0	0	7.0	0	19.0	0	0	2.0	7.0	7.0	19.0	19.0	19.0	0
Harvest Acres - MAcres															
Kootenai 1	1.2	1.6	1.6	1.9	.3	2.1	0	0	2.5	0.6	1.0	3.4	2.5	1.6	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	.4	.4	0	0	0	0
Kootenai 3	3.4	2.9	2.5	8.1	1.8	.5	0	0	.5	2.3	1.8	6.2	3.1	4.8	0
Idaho Panhandle*	1.1	1.0	0.5	0	1.1	0	0	0	.2	.5	.5	1.1	1.0	1.0	0
Kootenai 5	3.7	3.8	2.2	4.2	.8	5.8	0	0	1.1	1.8	1.3	4.2	5.4	3.6	0
Idaho Panhandle*	1.3	1.3	0	.6	0	1.3	0	0	.5	.6	.6	1.3	1.3	1.3	0

* Estimated Outputs

Table 3, Part Two. Decadal Outputs by Alternative for Trout Creek Roadless Area, Kootenai and Idaho Panhandle National Forests.

	ALTERNATIVES														
Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
OUTPUT CATEGORY															
Roads															
Roads Constructed First Decade - Miles															
Kootenai	7	10	9	12	1	13	0	0	17	6	6	25	14	10	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0
Total	7	10	9	12	1	13	0	0	17	12	12	25	14	10	0
Total Road Miles Needed by Fifth Decade - Miles															
Kootenai	73	74	57	113	19	67	0	0	40	31	31	117	77	69	0
Idaho Panhandle*	60	60	0	30	30	60	0	0	70	10	10	60	60	60	0
Total	133	134	57	143	49	127	0	0	110	41	41	177	137	129	0
Wildlife - T&E															
Grizzly Bear Habitat MAcres (w/o activity)															
Kootenai		NOT APPLICABLE TO THIS													
Idaho Panhandle		ROADLESS AREA													
Total															
Wildlife - Big Game															
Summer Range MAcres															
Kootenai	5.9	5.9	2.5	2.9	0	17.4	0	0	1.3	5.1	5.1	3.7	8.1	5.9	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.9	5.9	2.5	2.9	0	17.4	0	0	1.3	5.1	5.1	3.7	8.1	5.9	0
Winter Range MAcres															
Kootenai	.04	.04	.04	.04	0	0	0	0	5.0	.4	.4	0	.04	.04	0
Idaho Panhandle*	0	0	0	.01	0	0	0	0	0	0	0	0	0	0	0
Total	.04	.04	.04	.05	0	0	0	0	5.0	.4	.4	0	0	0	0
Minerals															
Hardrock-Very High/ High Potential - Accessible MAcres															
Kootenai	1.8	0	0	0	0	1.8	0	0	0	0	0	2.8	2.4	1.8	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1.8	0	0	0	0	1.8	0	0	0	0	0	2.8	2.4	1.8	0
Oil & Gas-Very High/ High Potential - Accessible MAcres															
Kootenai		NOT APPLICABLE IN THIS													
Idaho Panhandle		ROADLESS AREA													
Total															

* Estimated Outputs


Kootenai National Forest
Cabinet Face West Roadless Area
670
0 1 2 3 4
miles
PRIVATE
CABINET
MOUNTAINS
WILDERNESS
R 33 W
R 32 W
MERIDIAN
GUIDE
LINCOLN
SANDERS
CO
McConnell Mtn
Savage Lake
Wm Grambauer Mtn
Scenery Mtn
Samater Mtn
Norman Mtn
Copper Mtn
Taylor Pk
Lime Butte
Dome Mtn
Parmenter Mtn
Flower Pt
Indian Head
Weir Pk
Sugarloaf Mtn
Keeler Mtn
Treasure Mtn
Pheasant Pt
Doonan
Gordon Mtn
DORR SKEELS
Crowell Mtn
Gus Brink Mtn
Houser Pk
Stanley Mtn
Mt Vernon
Bockman Pk
BAD MEDICINE
Scotty Pk
Snowshoe Pk
Little Ibex Pk
McKay Mtn
Lentz Pk
McDonald Mtn
Alaska Pk
Dry Bench
Dad Pk
Poplar Pt

KOOTENAI NATIONAL FOREST

Cabinet Face West - 01670 State: Montana

Gross Acres: 13,300 Net Acres: 10,900

I. Description

This area is located along the northwest edge of the Cabinet Mountains Wilderness, extending for approximately 16 miles from Swanson Creek on the north to the Middle Fork Bull River on the South The area is bordered by the Lake Creek and Bull River Valleys to the west and the Cabinet Mountains Wilderness to the east, with an average width of about one mile. The area is readily accessible from roads and trails leading off the Bull River Road (State Highway 56). These include the Madge Creek Road, Taylor Peak Trail, and trails up the North Fork and Middle Fork of the Bull River.

The area is steep and rugged, and is primarily a sidehill situation along the northwest flank of the Cabinet Mountains. The drainages and side slopes are forested but, overall, the timber productivity is considered fair to poor.

The Bull River valley has a growing population, spurred by the ASARCO Mt. Vernon mine near Troy and the recreation features of Bull Lake and the Lake Creek area.

Ecosystems represented in this area include Western Ponderosa Pine and Douglas-fir Forests.

Current recreation use is light to moderate (1,500 RVD's per year) and consists of viewing, hunting, hiking, camping, and fishing.

II. Capability

A. Natural Integrity and Appearance

The only developments within the roadless area are short segments of wilderness access trails in four locations. There are no lookouts or other known structures.

B. Opportunities for Solitude

Some of the drainages in the roadless area are well defined and well vegetated, providing ample opportunity for solitude. Other portions face steeply into the Lake Creek and Bull River valleys and do not have good opportunities for solitude but do lend solitude to the existing wilderness through increased size.

C. Primitive Recreation Opportunities Cabinet Face West-01670

The trails along the scenic stream bottoms and the open ridges leading to the main wilderness divide offer primitive recreation experiences. There is also high quality hunting for deer, elk, and bear throughout the area. Hiking some of the steep areas without a trail and crosscountry skiing the Gordon Peak area present significant primitive recreation opportunities.

D. Other Features

Mountain goats winter in the Camp Creek area, and bighorn sheep can often be seen in the Ibex Peak area.

E. Manageability and Boundaries

The area was inventoried during RARE II. The recommendation at that time was for a wilderness classification for the area. The difference in the acreage figures below reflect an adjustment made to the roadless inventory to match the Forest data base.

Gross Acres	Net Acres	
12000	9600	RARE II inventory
13300	10900	1983 roadless inventory

There are about 2,400 acres of private land constituting the major potential conflict with a wilderness classification. The lands are owned by the State of Montana, Champion Timberlands (formerly St. Regis), and Plum Creek Timberlands, Incorporated.

The present boundaries of the existing wilderness are difficult to follow as they are, for the most part, topographically illogical. The roadless area boundary would not only make the existing wilderness more manageable through more well-defined, logical boundaries, but would also add width to an existing wilderness area that is difficult to manage because of its narrow configuration. The roadless area boundary is within private land in a few places, which makes an "optimum" adjustment difficult to achieve. But even if the boundary were drawn back to the Forest boundary, it would still be better than the present midslope wilderness boundaries.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential to provide approximately 4,400 RVD's of wilderness recreation per year. Current use is estimated to be 1,500 RVD's per year.

2. **Wildlife and Fish**

The area is in grizzly habitat.

The tributaries to Lake Creek, Bull Lake, and Bull River contain small populations of cutthroat and brook trout, depending on gradient. The North Fork and Middle Fork of the Bull River contain cutthroat and some large bull trout.

3. **Timber**

Some of the area (6,300 acres) is suitable timberland capable of producing at least 20 cubic feet per year of growth. Over 95% of this timberland is on slopes in excess of 55% and road access is difficult and costly. Timber harvest will require cable systems or aerial logging (helicopters).

B. **Other Resources**

1. **Range**

There are no livestock grazing allotments. The grazing potential is all transitory range.

2. **Minerals**

The mineral potential is considered low and the oil and gas potential is moderate. There are 25 mining claims in the area and 8 lease applications pending.

3. **Cultural Resources**

There are no identified historic or prehistoric cultural sites in the area. Based on surveys done in similar areas, the probability of prehistoric sites occurring is considered low.

4. **Water**

Mean annual precipitation for the area varies from 35 to 100 inches based on elevation. Average annual runoff also varies, from 15 to 60 inches, again based on elevation. Quality of the water resource remains high at all times except during seasonal peak runoff events.

C. Resource Situation

Cabinet Face West 01670

Table 1

Category	Unit	
Gross Acres	Acres	13300
Net Acres	Acres	10900
Recreation		
Semiprim. Nonmotor.	RVDs	1500
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	6300
Standing Volume	MMBF	74
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	10000
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat, Sheep)		
Summer Range Total	Acres	3800
Winter Range Total	Acres	400
Special Uses Existing	No.	1
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	5
Stream Habitat	Acres	-
Lakes	No.	-
Lake Habitat	Acres	-
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	-
Low	Acres	10900
Mining Claims	No.	25
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	10900
Unknown	Acres	0
Oil & Gas Leases		
Lease Applications	No.	8
Acres Applied For	Acs.	10900

D. Management Considerations

1. Land Use Authorizations

There is one special use permit, a domestic water transmission line to Swanson's Lodge on the north end of the roadless area.

2. Fire

The area has a low to moderate fire occurrence (8 fires in the last 10 years). The fuels situation is predominately dense conifer stands with thick, downed, woody material as ground fuels (Fuel Model G) on the lower slopes merging into more sparse fuels on the upper slopes (Fuel Model H)

3. Insect and Disease

The insect and disease situation is stable with no major stands of susceptible lodgepole pine or spruce or insect/disease activity occurring.

4. Non-Federal Lands **Cabinet Face West-01670**

There are 2,400 acres of private lands in the roadless area, located on the western edge. The properties are owned by the State of Montana, Champion Timberlands (formerly St. Regis Paper Co.), and Plum Creek Timberlands Inc. (previously known as Burlington Northern Timberlands). There are opportunities to make land exchanges with these property owners.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is about 15-30 miles from Libby, 10 miles from Troy and is contiguous to the Cabinet Mountains Wilderness. It is about 150 miles from Spokane, Washington and about 190 miles from Missoula, Montana.

B. 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.

C. Public Interest

During the public comment period for RARE II, about 200 people commented on Cabinet Face West. The respondents were divided on the issue of wilderness classification (54% opposed, 43% favored, 3% ambivalent). RARE II recommended approximately 8100 acres for wilderness. During the Unit Plan public comment period (Keeler Unit Plan, February 1979 and Bull River-Clark Fork Unit Plan, January 1980) some concern was expressed for protecting the primitive quality of the area.

Approximately 6900 acres of Cabinet Face West was included in both the Governor's wilderness recommendations to the Montana Congressional delegation and the legislative wilderness proposal for Montana in June, 1984.

V. Alternatives and Environmental Consequences

A. 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 (Table 2) 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.

Table 2. Management Emphasis by Alternative for Cabinet Face West Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	6.4	1.8	1.8	2.7	.5	4.6	.5	0	1.4	1.3	1.3	4.5	5.5	5.7	3.7
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	4.4	.9	2.4	0	.6	6.3	0	0	1.2	1.5	1.5	6.3	5.4	5.2	0
Wilderness															
Recommended Wilderness	0	8.1	6.7	8.1	9.8	0	10.4	10.9	8.2	8.0	8.0	0	0	0	6.7
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decade 5:	4.4	.9	2.4	0	.6	6.3	0	0	1.2	1.5	1.5	6.3	5.4	5.2	0
Roadless - Decade 1:	10.9	2.8	4.2	2.8	1.1	10.9	.5	0	2.7	2.4	2.4	10.9	10.9	10.9	3.7
Decade 5:	6.4	1.8	1.8	2.8	.5	4.6	.5	0	1.4	1.3	1.3	4.5	5.5	5.7	3.7
Recommended Wilderness	0	8.1	6.7	8.1	9.8	0	10.4	10.9	8.2	8.0	8.0	0	0	0	6.7
Total Acres- Cabinet Face West	10.9	10.9	10.9	10.9	10.9	10.9	10.4	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9

B. Impacts **Cabinet Face West-01670**

1. Designation: Wilderness
Management Emphasis: Wilderness

The Cabinet Face West roadless area is recommended for wilderness in its entirety in Alternatives G and H while Alternatives B, C, D, E, I, J, K, and O recommend 74%, 61%, 74%, 89%, 75%, 73%, 73%, and 61% respectively. 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 primitive qualities of the area including the naturalness and opportunities for solitude. As wilderness, the area would also contribute to the solitude opportunities of the adjacent Cabinet Mountains Wilderness.

There are 6300 acres of suitable timberland located within the roadless area. The following chart displays the amount of timberland that would be located in wilderness in each alternative.

Acres of Suitable Timberland in Wilderness
(M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	5.4	4.0	5.4	5.8	0	6.3	6.3	5.4	3.2	3.2	0	0	0	4.0

Opportunities to manage the timber resource would be foregone completely in Alternatives G and H and to lesser extents in Alternatives B, C, D, E, I, J, K, and O.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers most of the roadless area. Wilderness management would provide security to the bear by prohibiting roading thereby reducing sharp increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big game summer range through timber harvest would also be unavailable. As with the grizzly bears, however, wilderness would provide security for big game by limiting access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry for hard rock since no valid mining claims exist. The oil and gas lease applications would not be honored and the land would be withdrawn from mineral leasing. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by these management emphases.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternatives G and H, designate a portion of the area to this emphasis. The following chart displays the percent of the area designated for roadless management by alternative.

Percent of Roadless Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
58	16	16	24	4	42	0	0	12	11	11	41	50	52	33

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

These emphases will provide opportunities for semiprimitive recreation while maintaining roadless character. Old growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game would be maintained.

Like wilderness, roadless designations require more stringent 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest under these emphases.

3. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. The following displays the percent of the area designated to these emphases in each alternative.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
40	8	22	0	6	57	0	0	11	13	13	57	49	47	0

No alternative in this emphasis group, however, scheduled any development activities during the first decade. (See Table 3 at the end of this discussion). By the fifth decade, however, about 4 miles of road would be in place in most alternatives.

For the first ten years, the wilderness character of the area would be maintained. By the third decade, the naturalness of the area would be impacted by timber cutting units, roads, and other evidence of human modifications in alternatives A, B, C, F, K, L, M, and N. The area faces into the Bull Lake Valley and activities conducted along the facing slopes would be highly visible. Roading foregoes the opportunity to consider the area for wilderness in the long term and reduces the opportunity for primitive recreation and experiences of solitude.

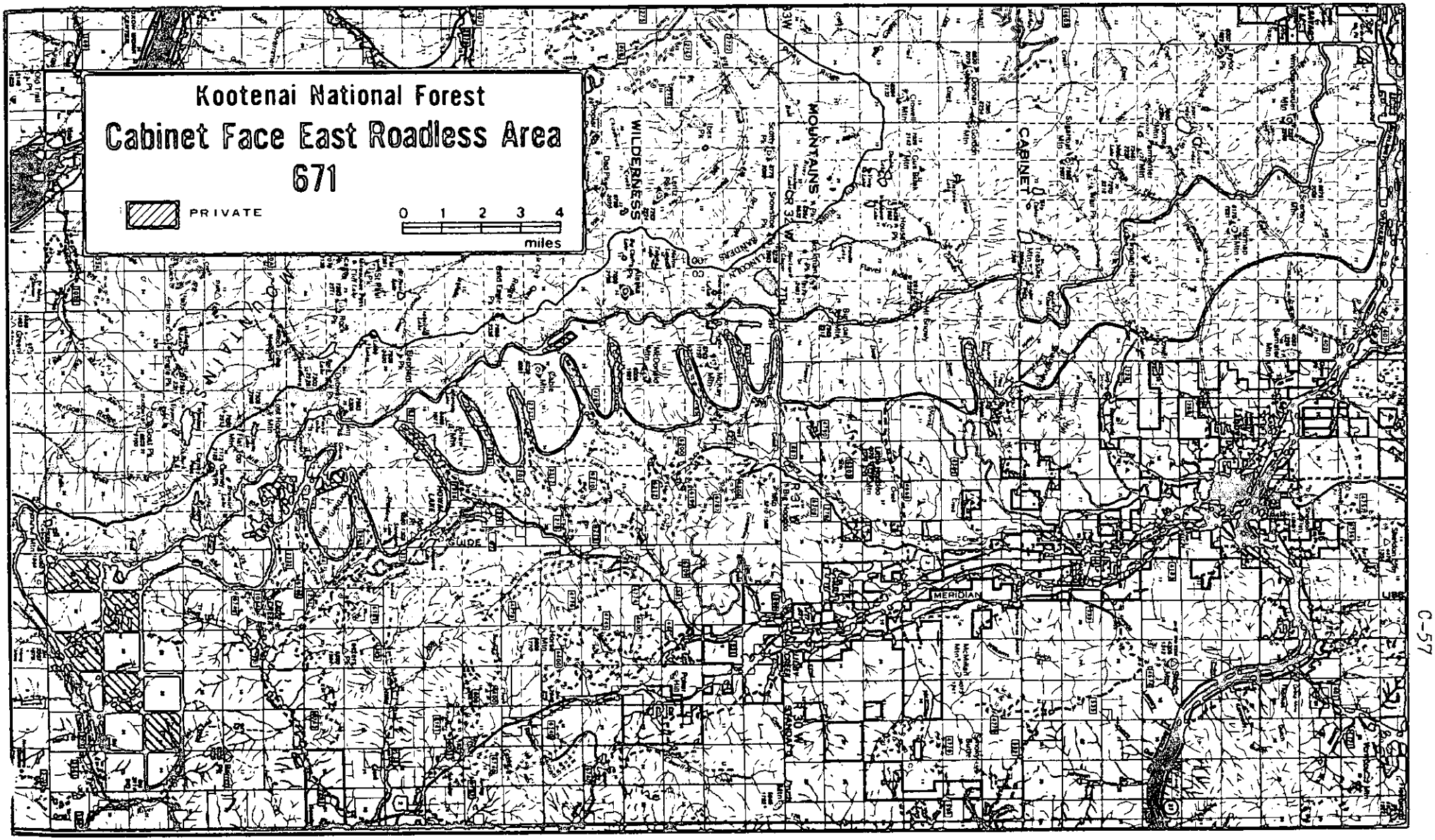
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Cabinet Face West roadless area would contribute to the economic base. 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 mix of emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Cabinet Face West Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	8.1	6.7	8.1	9.8	0	10.4	10.9	8.2	8.0	8.0	0	0	0	6.7
Roadless MAcres		6.4	1.8	1.8	2.7	.5	4.6	.5	0	1.4	1.3	1.3	4.5	5.5	5.7	3.7
Recreation																
Prim./Semiprim.MRVDs		28	33	29	33	33	28	33	33	27	32	32	2.1	3.0	2.8	35
Semiprim. Motor.MRVDs		18	20	9	0	1	15	0	0	19	1	1	2.7	1.4	1.8	0
Timber																
Suitable MAcres		4.4	.9	2.4	0	.6	6.3	0	0	1.2	1.5	1.5	6.3	5.4	5.2	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	.7	.7	.7	0	0	20.0	0	0	0	0	3.0	21.0	21.0	21.0	0
	5	0	0	0	0	0	8.6	0	0	8.9	.6	0	26.0	26.0	0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	.05	.05	.05	0	0	.8	0	0	0	0	.1	.9	.9	1.0	0
	5	0	0	0	0	0	.3	0	0	.5	.04	0	1.2	1.1	0	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		4	4	4	0	0	3	0	0	3	1	1	4	4	2	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		6.4	9.9	8.5	10.9	10.3	4.6	10.0	10.0	9.6	9.3	9.3	4.5	5.5	5.7	10.0
Wildlife - Big Game																
Summer Range MAcres		3.6	.5	1.8	0	.1	3.0	0	0	0	0	0	5.4	2.7	3.5	0
Winter Range MAcres		0	0	0	0	0	0	0	0	.1	.2	.2	0	0	0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE TO THIS ROADLESS AREA														


Kootenai National Forest
Cabinet Face East Roadless Area
671
PRIVATE
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miles
CABINET
MOUNTAINS
WILDERNESS
MERIDIAN
GUIDE

KOOTENAI NATIONAL FOREST

Cabinet Face East - 01671 **State: Montana**

Gross Acres: 54,800 **Net Acres: 50,400**

I. Description

The area is located along the eastern edge of the Cabinet Mountain Wilderness, extending about 36 miles south from the town of Libby. The average width is approximately 2 miles (see map). The roadless area is accessible from the many trails and roads off U.S. Highway 2, leading up the many drainages of the Cabinets.

Topography is a row of rugged canyons for which the Cabinet Mountains derived its name. Topographic relief is approximately 5,000 feet, ranging from a relatively low elevation of 3,600 feet at Big Cherry Creek to over 7,000 feet on Cable Mountain. Most of the area is steep (slopes over 55 percent) with a highly dissected drainage pattern. The higher elevations are rugged, steep, rocky and sparsely timbered. The lower elevation stream bottoms are timbered.

The surrounding area includes the Cabinet Mountains Wilderness on the western edge and National Forest land managed for timber and wildlife on the eastern edge. Opportunities for solitude are plentiful both within the roadless area and to the west within the existing Cabinet Mountains Wilderness.

Douglas-fir and Western Spruce Fir Forest ecosystems are represented.

Attractions to Cabinet Face East include the numerous hiking trails, opportunities for snowmobiling and roaded crosscountry skiing (not inside the roadless area boundary), old mining sites, the wildlife and the views offered. Current use is considered moderate (12,000 RVD's per year) serving primarily as entry into the Cabinet Mountains Wilderness.

II. Capability

A. Natural Integrity and Appearance

The roadless area boundary excludes most improvements and all roads, leaving the inventoried area very natural appearing.

The existing Scenery Mountain Lookout is the most noticeable man-made feature within the roadless area and it is located on the edge of the Cabinet Mountains Wilderness. An exception to allow its continued use would be necessary if the area were designated wilderness.

B. Opportunities for Solitude

The northern half of the roadless area offers good opportunities for solitude because of forested slopes and lack of roads. The southern half offers moderate opportunities for solitude because of the existing low standard roads that penetrate within the steep canyons. If the roads were closed, opportunities for solitude would be increased.

C. Primitive Recreation Opportunities — Cabinet Face East-01671

Primitive recreation opportunities include hiking, hunting, stream fishing, horseback riding and snowmobiling on the existing roads (outside the inventoried roadless area).

Challenging experiences are available such as rock climbing on the steep rock faces and crosscountry ski touring, primarily in the south half.

D. Other Features

Special features include grizzly bear habitat, goats and moose, and views of historic mining activity. A Research Natural Area candidate is also located in the lower portion of the Parmenter Creek drainage.

E. Manageability and Boundaries

The area is a combination of four roadless areas inventoried during the RARE II effort. The recommendations were for nonwilderness but the areas have been managed as roadless and, as such, have maintained their wilderness character.

Gross Acres	Net Acres	
18200	18000	RARE II inventory
+36600	+32400	Combined with former Cabinet Face East (West), Cabinet Face, and Barren Peak roadless areas.
54800	50400	1983 Roadless Inventory

The Scenery Mountain lookout, an electronic site on Indian Head Mountain, and about 4,400 acres of private land constitute the major nonconforming uses in the area. The private lands include the checkerboard ownership pattern between the Forest Service and Plum Creek Timberland, Incorporated, and twelve patented mining claims.

This long, linear roadless area has a boundary which is easily defineable in some places good and in other places, less so. Throughout its entire length the boundary would produce a net gain in the manageability of the wilderness through increased size relative to its border.

The least desireable parts of the inventoried roadless boundary are the narrow corridors drawn to exclude the roads in Bear, Cable, Poorman, Ramsey, and Libby Creeks. In its present configuration, this boundary would allow nonconforming uses well within the topographic confines of a potential wilderness. A wilderness boundary that closed off the existing roads in Granite, Leigh, Snowshoe, Big Cherry, Bear, Cable, Poorman, Ramsey, and Libby Creeks at the entrance to the canyons would be a more desirable location for a wilderness boundary. Many of these roads are currently closed on a seasonal basis to provide grizzly bear security.

Approximately 20,000 acres have existing oil & gas leases.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential to provide approximately 19,000 RVD's of roadless recreation. Current recreation use consists primarily of hunting, hiking, crosscountry skiing, and snowmobiling and is estimated at approximately 12,000 RVD's per year. All of these uses except snowmobiling would be compatible with a wilderness area. Snowmobile use is currently popular on the Bear, Cable, Poorman, and Ramsey Creek roads which are outside the inventoried roadless area boundary. Some off-road use is occurring in these drainages and potential conflicts with snowmobiling could result from a wilderness classification. The proposed Great Northern Ski Area is also located within a portion of the roadless area. This ski area proposal would be incompatible with a wilderness designation.

2. Wildlife and Fish

Cabinet Face East is an important wildlife area containing occupied grizzly habitat, elk winter and summer range, black bear habitat, moose and goat habitat. Some winter range does present management opportunities, particularly habitat burning along the south facing slopes on Lower Parmenter Creek. However, biologists feel that, overall, a wilderness classification would not significantly affect the wildlife habitat situation in the area even though it would prohibit intensive wildlife management practices such as habitat burning.

This roadless area engulfs many important stream reaches that exit the Cabinet Wilderness such as Cedar, Parmenter, Flower, Granite, Deep, Smearl, Leigh, Big Cherry, and Fourth of July Creeks. Brook, cutthroat, and/or rainbow trout are found in most of these streams.

3. Timber

Approximately 22,000 acres are suitable timberland capable of producing at least 20 cubic feet per year of timber growth. Over 90% of this timber resource is on slopes in excess of 55%. Road construction will be difficult and costly and logging will require the use of cable and helicopter yarding methods.

4. Minerals

The mineral potential in some of the area is high; in fact, the east face of the Cabinets is the most prospected, explored, and developed region in northwestern Montana and has resulted in twelve (12) patented mining properties. There are approximately 490 other claims in the area. About 8,600 acres are considered to have high mineral potential with the remainder having low to moderate potential. Mineral exploration is still occurring today (1984). The oil and gas potential is considered moderate. There are 20,000 acres of existing leases.

5. Cultural Resource

There are several known historic cultural sites, primarily the remains of wide-scale mining activity in the early 1900's. There are no known prehistoric sites and based upon surveys done in similar areas, the probability of prehistoric sites occurring is considered low.

6. Water

The Flower Creek watershed which supplies the town of Libby is located within this roadless area. Mean annual precipitation for the area varies from 25 to 95 inches while runoff varies from 5 to 52 inches, depending on elevation. Water quality can be characterized as excellent except during the spring snowmelt peak (May-June).

B. Other Resources

1. Range

There are no livestock grazing allotments. The grazing potential is all transitory range and considered negligible.

C. Resource Situation

Cabinet Face East 01671

Table 1

Category	Unit	
Gross Acres	Acres	54800
Net Acres	Acres	50400
Recreation		
Semiprim. Motorized	RVDs	1000
Semiprim. Nonmotor.	RVDs	11000
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	22200
Standing Volume	MMBF	228
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	50000
Situation 2	Acres	400
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat)		
Summer Range Total	Acres	18000
Winter Range Total	Acres	0
Special Uses Existing	No.	2
Existing Facilities	No.	1

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	6
Stream Habitat	Acres	-
Lakes	No.	1
Lake Habitat	Acres	10
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	0
High	Acres	8600
Moderate	Acres	27900
Low	Acres	13600
Mining Claims	No.	490
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	50400
Low	Acres	0
Unknown	Acres	0
Oil & Gas Leases		
Leases & Applics.-	No.	26
Existing leases -	Acs.	20000

D. Management Considerations

1. Land Use Authorizations

There are several special uses including an SCS snow course and an electronic site on Indian Head Mountain. Exceptions would be needed to continue these existing uses if the area were to be designated wilderness. Oil & Gas leases also exist.

2. Fire

Fire history is moderate (21 fires in the last 20 years). The fuels situation consists of dense conifers with thick, downed, woody material as ground fuels in the timbered areas (Fuel Model G) to sparse ground fuels in the non-timbered areas on the higher ridges.

3. Insect and Disease

The mountain pine beetle is the most evident insect situation and the Barren Peak Ridge (southern tip) and Cedar and Flower Creeks have the highest potential for mountain pine beetle problems. The Barren Peak Ridge is considered to be the highest lodgepole pine risk. The lower elevations along the eastern boundary have some current insect activity (1983).

4. Non-Federal Lands

There are 4,400 acres of private land in the roadless area, including the 12 patented mining claims mentioned earlier, and some checkerboard ownership on the Barren Peak Ridge (southern tip). This checkerboard ownership is predominantly Plum Creek Timberlands, Inc. property (previously known as Burlington Northern) and they have indicated a desire to trade these corporate lands for other suitable National Forest lands.

The 12 patented mining properties present a "cloud" on the potential wilderness resource and are the reason that the existing Cabinet Wilderness Boundary is located where it is.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The Cabinet Face East roadless area adjoins the existing Cabinet Mountains Wilderness which is now receiving locally heavy use, particularly around the more accessible lakes. This roadless area is approximately 150 miles from population centers such as Spokane, Washington, and approximately 200 miles from Missoula, Montana.

B. 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.

C. Public Interest

Unroaded management for the East Face of the Cabinets has been a concern for many years, both because of the popularity of the routes through the area into the wilderness and because of the panoramic views of the area from along the Highway 2 travel corridor. Many of the roaded drainages are popular travel routes and initial attempts to close them seasonally for grizzly bear protection met with local opposition. The roads are now closed and no overt opposition has been voiced.

Over 2600 public comments were received during the RARE II effort. Public opinion was divided on a wilderness classification for the area (43% in favor, 54% opposed, 3% uncommitted). RARE II recommended a 400 acre wilderness addition. The Montana Wilderness Association's Alternative "W" (1978) recommended wilderness for Cabinet Face East. Recent concerns have also been expressed about the affects of wilderness on a proposed ski area located in the southern half of the roadless area. On the other hand, local concern has often been expressed for maintaining the area in a roadless state.

A portion of the area (approximately 17,000 acres) was included in both the Governor's wilderness recommendations for Montana and the legislative proposal for Montana wilderness in June, 1984.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Cabinet Face East Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	35.6	34.9	22.8	33.3	.8	36.2	.2	0	41.2	27.1	27.1	28.2	34.9	35.6	32.5
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	15.6	15.9	9.7	16.7	2.9	14.2	0	0	8.8	2.9	2.9	23.0	16.3	15.6	0
Wilderness															
Recommended Wilderness	0	.4	17.9	.4	46.7	0	50.2	50.4	.4	20.4	20.4	0	0	0	17.9
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	1.0	1.0	1.2	1.0	1.2	0	0	0	0	0	1.6	2.1	.8	0
Decade 5:	15.6	15.9	9.7	16.7	2.9	14.2	0	0	8.8	2.9	2.9	23.0	16.3	15.6	0
Roadless - Decade 1:	50.4	49.4	31.8	49.2	2.7	49.2	.2	0	50.0	29.9	29.9	48.8	48.3	49.6	32.5
Decade 5:	35.6	34.5	22.8	33.3	.8	36.2	.2	0	41.2	27.1	27.1	28.2	34.9	35.6	32.5
Recommended Wilderness	0	.4	17.9	0.4	46.7	0	50.2	50.4	.4	20.4	20.4	0	0	0	17.9
Total Acres- Cab. Face East	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4	50.4

B. Impacts

Cabinet Face East-01671

1. Designation: Wilderness
Management Emphasis: Wilderness

Cabinet Face East is recommended for wilderness in Alternatives G and H. Alternatives C, E, J, K, and O recommend significant amounts of wilderness (35%, 92%, 40%, 40%, and 35%, respectively). 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 solitude opportunities available in the northern portion would be maintained as would the primitive recreation opportunities. Snowmobiling would be prohibited completely in Alternatives E, G, and H but would not be significantly affected by the other wilderness alternatives because the recommended wilderness is not located in areas currently used by snowmobilers.

There are approximately 22,000 acres of suitable timberland located in the roadless area. The following chart displays the amount of suitable timberland that would lie within recommended wilderness in each alternative.

Acres of Suitable Timberland in Wilderness
(M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	10	0	16.5	0	22.2	22.2	0	10	10	0	0	0	10

Opportunities to manage the timber resource would be foregone in Alternatives G and H and to lesser degrees in Alternatives C, E, J, K, and O.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear by prohibiting roading thereby reducing sharp increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Summer range management by timber harvest would not occur, and thus opportunities to improve forage would be foregone. However, as with grizzlies, security for big game would be afforded by wilderness management which tends to reduce the impacts of human activities.

Wilderness restricts the exploration for, and removal of, mineral resources from the area. This would affect approximately 8,600 acres rated high for mineral potential. If valid mining claims exist, mineral development could negate a wilderness designation. The existing oil and gas leases would be withdrawn if no discoveries were made before the end of the lease period. This restriction is not considered significant in that the oil and gas potential is rated moderate.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative except H designates a portion of the area to these management emphases. The following chart displays the percent designated to roadless management in each alternative.

Percent of the Roadless Area Designated to Roadless Management

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
70	69	45	66	1	71	<1	0	81	53	53	55	69	70	64

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained by these emphases as well as the semi-primitive recreation opportunities. Old growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game will be provided.

Like wilderness, roadless designations 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, making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. Mineral development could negate a roadless designation.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities.

3. Designation: Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

Every Alternative except Aleternatives G, H, and O, designate a portion of the area to this mix of management emphases. The following chart displays the percent of the area designated to developmental activities by alternative.

Percent of Roadless Area Designated for Development Activities

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30	31	19	33	5	28	0	0	17	5	5	45	32	30	0

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 most alternatives, activity is scheduled to occur during the first decade, in the form of timber harvest and road building. Expected miles of road built in the first decade range from 0 to 11, depending on the alternative. (See Table 3 at the end of this discussion).

As development occurs, the naturalness of the area will be impacted by cutting units, roads, and other evidence of human modifications. Activities conducted along the slopes would be highly visible from Libby and from Highway 2, a major travel corridor. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

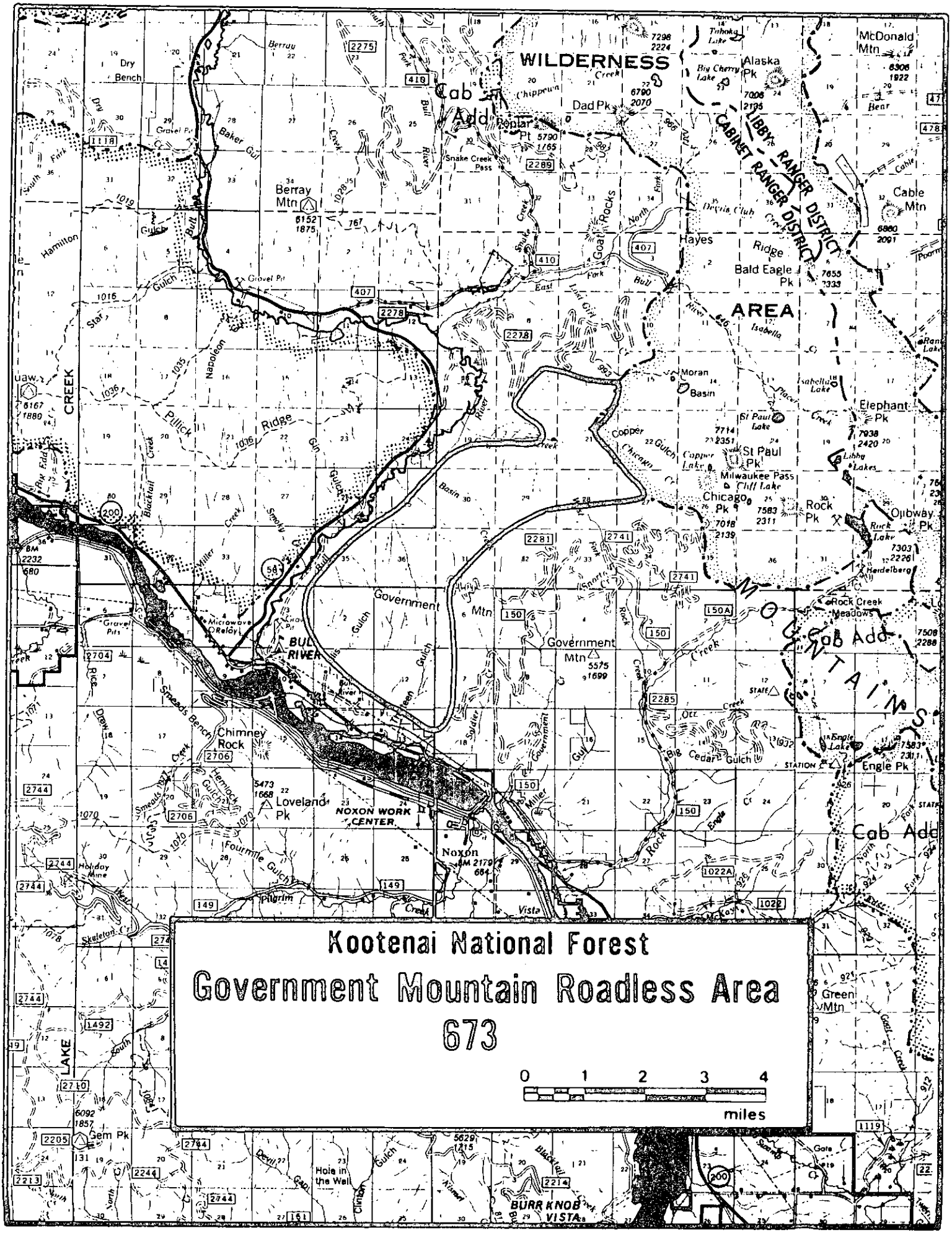
Cabinet Face East-01671

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long-term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Forests. Timber from the Cabinet Face East roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Cabinet Face East Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	.4	17.9	.4	46.7	0	50.2	50.4	.4	20.4	20.4	0	0	0	17.9
Roadless MAcres		35.6	34.9	22.8	33.3	.8	36.2	.2	0	41.2	27.1	27.1	28.2	34.9	35.6	32.5
Recreation																
*Prim./Semiprim.*KRVDs		115	114	149	151	143	155	151	151	156	173	173	121	151	115	184
Semiprim. Motor.MRVDs		76	78	41	61	14	50	5	0	107	6	6	93	54	75	0
Timber																
Suitable MAcres		15.6	15.9	9.7	16.7	2.9	14.2	0	0	8.8	2.9	2.9	22.0	16.3	15.6	0
Volume (MMBF)	1	0	.9	.9	25.4	.9	25.0	0	0	0	0	0	2.0	26.0	3.0	0
	3	15.0	25.0	17.0	32.9	.03	18.0	0	0	2.4	.03	.03	32.0	36.0	35.0	0
	5	27.0	12.0	0	44.4	0	34.0	0	0	16.7	10.8	10.8	38.0	50.0	17.0	0
Harvest Acres - MAcres	1	0	1.0	1.0	1.2	1.0	1.2	0	0	0	0	0	1.6	2.1	.8	0
	3	1.9	2.3	1.0	3.2	.003	.8	0	0	.2	.03	.03	3.1	2.6	2.6	0
	5	1.4	5.0	1.0	2.0	0	1.5	0	0	2.8	.5	.5	2.0	2.3	.8	0
Roads																
Roads Constructed First Decade - Miles		0	5	5	6	5	6	0	0	0	0	0	6	11	4	0
Total Road Miles Needed by Fifth Decade - Miles		27	27	11	49	5	35	0	0	28	10	10	60	39	23	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		35.6	35.3	40.7	33.7	47.5	36.2	50.4	50.4	41.6	47.5	47.5	28.2	34.9	35.6	50.4
Wildlife - Big Game																
Summer Range MAcres		13.3	13.5	7.3	11.2	1.9	9.9	0	0	2.0	1.1	1.1	16.6	9.8	13.3	0
Winter Range MAcres		0	0	0	0	0	0	0	0	.2	.1	.1	0	0	0	0
Minerals																
Hardrock-Very High/ High Potential - Accessible MAcres		6.5	6.4	6.0	6.5	4.5	3.3	0	0	6.4	1.7	1.7	4.0	4.0	6.5	0
Oil & Gas-Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


WILDERNESS
AREA
CABINET RANGER DISTRICT
LIBBY RANGER DISTRICT
Cab Add
Dry Bench
Berray Mtn
Dad Pk
Alaska Pk
McDonald Mtn
Cable Mtn
Hayes Ridge
Bald Eagle Pk
Moran Basin
Elephant Pk
St Paul Pk
Chicago Pk
Rock Pk
Ojibway Pk
Engle Pk
Government Mtn
Chimney Rock
Loveland Pk
NOXON WORK CENTER
Noxon
BULL RIVER
Green Mtn
Gem Pk
Hole in the Wall
BURR KNOB
VISTA
Kootenai National Forest
Government Mountain Roadless Area
673
0 1 2 3 4
miles

KOOTENAI NATIONAL FOREST

Government Mountain - 01673 **State: Montana**

Gross Acres: 8,600 **Net Acres: 8,600**

I. Description

This roadless area is located immediately northeast of the confluence of the Bull and Clark Fork Rivers (State Highway 56 and 200) and the lack of roads and trails off of these highways makes the accessibility poor.

The area is primarily a ridge top and sidehill setting with steep and rocky slopes, exposed during the 1910 burn and reforested in a mosaic of conifers and hardwoods.

Ellis Gulch, Thirteen Gulch, Basin Creek, a portion of Copper Creek, and several other tributaries of both the Bull River and the Cabinet Gorge Reservoir drain from this area.

The ecosystem represented is Cedar Hemlock Pine Forest.

The area contains grizzly habitat and is an important wintering range for elk. The views of the Clark Fork and Bull River Valleys are the area's other attractions.

Existing use is primarily hunting in the fall and is considered light.

II. Capability

A. Natural Integrity and Appearance

The roadless area has a natural appearance and a high degree of natural integrity because of the lack of manmade features including trails.

B. Opportunities for Solitude

Opportunities for solitude are low on the slopes facing into the Bull River and Clark Fork valleys but the deep drainages within the roadless area offer some moderate solitude opportunities.

C. Primitive Recreation Opportunities

Primitive recreation opportunities are primarily hunting and hiking which offer a high degree of challenge because of the lack of trails.

Special features include the grizzly bear and the interesting vegetative patterns interspersed with rock cliffs especially in the fall.

D. Manageability and Boundaries — Govt. Mtn. 01673

The Government Mountain roadless area was evaluated in the 1979 RARE II Final EIS. The area was designated for nonwilderness uses. The roadless area boundaries have remained the same since 1979.

Gross Acres	Net Acres	
8611	8611	RARE II inventory
8600	8600	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification for the area are the existing oil & gas leases.

The lower elevational boundaries primarily adjoin private property which would yield identifiable and manageable boundaries. The eastern edge adjoins the existing Cabinet Mountains Wilderness. Existing roads and timber harvested areas are located in the vicinity of Government Mountain which make the roadless boundary less manageable. Adjustments could be made to yield a more manageable wilderness boundary.

III. Availability

A. Significant Resource Potentials

1. Recreation

The wilderness recreation potential of the area is an estimated 2,600 RVD's per year. Current use is estimated to be 500 RVD's per year.

2. Wildlife and Fish

The area contains important grizzly habitat and elk winter range. Management opportunities exist on the south slope of the area, in Ellis and Thirteen Gulches.

This area contains some small tributaries to Bull River and Cabinet Gorge Reservoir. Small populations of cutthroat and brook trout may occur where the gradient is not too steep.

3. Timber

Approximately 5,700 acres of suitable timberland are located within the roadless area and occur primarily in the northern portion. These timberlands are capable of growing more than 20 cubic feet per acre per year but are located on slopes steeper than 55%. Road construction would be difficult and costly and timber harvesting would require cable or helicopter logging.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area and no grazing potential.

2. Minerals

Govt. Mtn. 01673

The mineral potential is considered low to moderate because the Chicago Peak mineral exploration is occurring approximately 2 miles to the east. The oil and gas potential is moderate.

3. Cultural Resources

There are no known historic or prehistoric cultural sites in the area. Based on surveys in similar areas, the probability of sites occurring is considered low.

4. Water

Mean annual precipitation varies from about 32 to 103 inches, and runoff varies from about 10 to 55 inches, both depending on elevation. Water quality is characterized as pristine except during peak runoffs.

C. Resource Situation

Government Mtn. 01673

Table 1

Category	Unit	
Gross Acres	Acres	**8600**
Net Acres	Acres	**8600**
Recreation		
Semiprim. Nonmotor.	RVDs	**1000**
Range		
Suitable Acres	Acres	**0**
AUMs	AUMs	**0**
Timber		
Tentative Suitable	Acres	**5700**
Standing Volume	MMBF	**54**
Corridors		
Existing & Potential	No.	**0**
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	**8600**
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat)		
Summer Range Total	Acres	**1900**
Winter Range Total	Acres	**2200**
Special Uses Existing	No.	**0**
Existing Facilities	No.	**0**

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	**0**
Minerals		
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	**1600**
Low	Acres	**7000**
Mining Claims	No.	**100**
Oil & Gas Potential		
Very High	Acres	
High	Acres	
Moderate	Acres	**8600**
Low	Acres	
Unknown	Acres	
Oil & Gas Leases		
Leases	No.	**6**
Leased Acres	Acres	**8600**

D. Management Considerations Govt. Mtn. 01673

1. Land Use Authorizations

There are no special uses. Oil & gas leases exist.

2. Fire

Fire occurrence is low (1 fire in the last 10 years) and the fuels situation is conifer stands with thick, downed woody materials as ground fuel.

3. Insect and Disease

The insect potential is primarily the Mountain Pine Beetle which could occur in some stands located in the center of the area. There is no insect activity occuring at this time, however.

4. Non-Federal Lands

There are no private lands.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The Government Mountain roadless area is approximately 100 miles from Spokane, Washington and is adjacent to the Cabinet Mountains Wilderness which receives more than 18,000 RVD's per year. This recreation use is projected to steadily increase.

B. 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.

C. Public Interest

During the RARE II public review period, over 1,300 people commented on the area, most of whom (86%) were opposed to wilderness in the area. RARE II thus recommended non-wilderness. During the Unit Planning process (Bull River-Clark Fork Unit Plan), no expressions were received in support of wilderness nor have there been recent expressed concerns.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Government Mountain Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	3.6	3.6	3.6	3.6	3.3	3.6	1.1	0	3.6	5.6	5.6	2.8	3.7	3.6	8.6
Nonwilderness (Some Development)															
Big Game Winter Range	0	0	0	0	0	0	0	0	1.5	1.5	1.5	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	4.8	4.8	4.9	5.0	4.2	5.0	1.3	0	3.5	1.5	1.5	5.6	4.9	5.0	0
Wilderness															
Recommended Wilderness	0	0	0	0	1.1	0	6.2	8.6	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	0	0	0	.1	0	0	.1	0	0	0
Decade 5:	4.8	4.8	4.9	5.0	4.2	5.0	1.3	0	3.5	1.5	1.5	5.6	4.9	5.0	0
Roadless - Decade 1:	8.6	8.6	8.6	8.6	7.5	8.6	2.3	0	8.5	8.6	8.6	8.5	8.6	8.6	8.6
Decade 5:	3.6	3.6	3.6	3.6	3.3	3.6	1.1	0	5.1	7.1	7.1	2.8	3.7	3.6	8.6
Recommended Wilderness	0	0	0	0	1.1	0	6.2	8.6	0	0	0	0	0	0	0
Total Acres- Government Mtn.	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6

B. Impacts Govt. Mtn. 01673

1. **Designation: Wilderness**
Management Emphasis: Wilderness

Portions or all of the Government Mountain roadless area is recommended for wilderness in Alternatives E, G, and H. Since the area is contiguous to the Cabinet Mountains Wilderness, the alternatives recommend additions to this system and vary in the amount added: Alternative E recommends less than 25 percent of the roadless area be added, Alternative G recommends 72 percent and alternative H recommends 100 percent of the area. 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 as well as expanding the existing Cabinet Mountains Wilderness system. The naturalness of the area will be maintained along with the primitive recreation opportunities.

About 5,700 acres of tentatively suitable timberland are in the Government Mountain roadless area. The following chart displays the amount of timberland included within the proposed wilderness for each alternative.

Acres of Suitable Timberland in Wilderness
(M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	.9	0	4.4	5.7	0	0	0	0	0	0	0

Opportunities to manage the timber resource would be essentially forgone in Alternatives G and H. In Alternative E, 16 percent of the timberland is unavailable for management.

Grizzly bear habitat covers the entire roadless area. Wilderness management would provide security for the bear from roading and related increases in human activity in the area. However, increases in forage through management activities such as burning and timber harvest would not occur.

Opportunities to manage the big game winter range, primarily on the south slopes of Ellis and Thirteen Gulches, would be forgone. Winter range could decrease in the short-term but should increase in the longer-term by wild fire and/or insect and disease infestations which would create openings. Summer range management activities would also not occur in Alternative H and to a lesser degree in Alternatives G and E. Summer range habitat would not be improved or maintained, but wilderness management would provide security, i.e., lack of access and human activity in the area which would be advantageous to big game.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry for mining since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that most of the mineral potential is low (approximately 1,600 acres are considered moderate) and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting would continue. A majority of the timberland would not be available in Alternatives G and H thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every alternative, except Alternative H, designates a portion of the area to these emphases. The following chart displays the percent of the area designated for roadless management.

Percent of the Area Designated Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
41	41	41	41	38	41	12	0	41	65	65	32	43	41	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within the area will be maintained with these emphases as will the primitive recreation opportunities available in the area. Old growth timber wildlife habitat and grizzly habitat will be protected. Security for big game will be maintained.

Like wilderness, roadless designations 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, making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Some Development)**
   Management Emphasis: Big Game Winter Range

Alternatives I, J, and K designate about 1,500 acres to this management emphasis. This emphasis is located primarily in the Ellis and Thirteen Gulch portions of the area. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
   Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Almost every alternative designates a portion of the area to this emphasis. The following chart displays the percent of the area designated to developmental activities.

Percent of the Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
55	55	56	58	48	58	15	0	40	17	17	65	56	58	0

No activities are scheduled to occur in the first decade in any Alternative except I and L. (See Table 3 at the end of this discussion). By the end of the fifth decade, from 1 to 16 miles of road would be in place, depending on the alternative.

By the third decade, the naturalness of the area will be impacted by timber cutting units, roads, and other evidence of man's modifications. Activities conducted on slopes in the area would be highly visible from Highway 56 and the Bull Lake Valley. Roading forgoes the opportunity to consider the area for wilderness in the long term, and reduces the opportunity for primitive recreation and experiences of solitude.

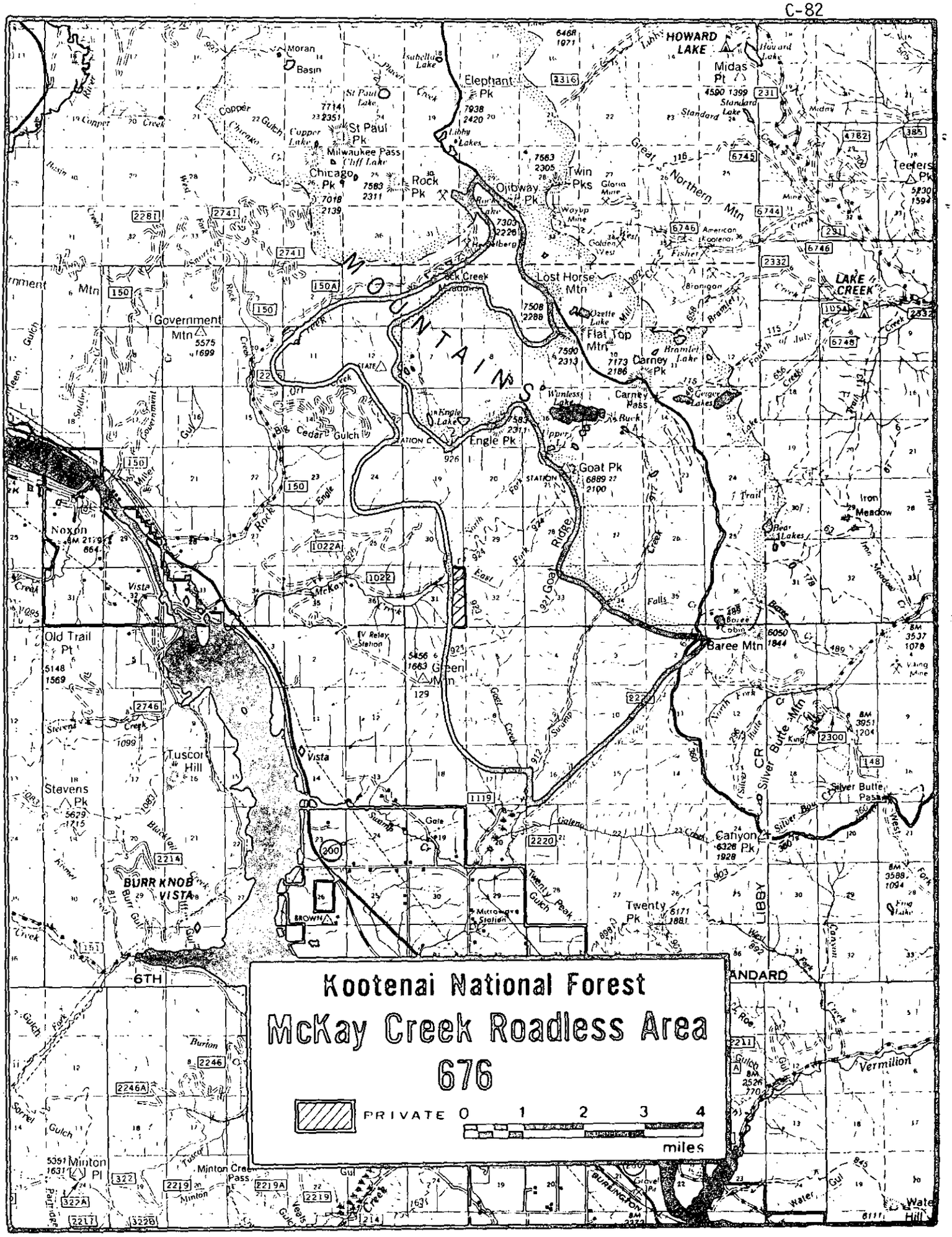
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and in the long-term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Government Mountain roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Government Mountain Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	1.1	0	6.2	8.6	0	0	0	0	0	0	0
Roadless MAcres		3.6	3.6	3.6	3.6	3.3	3.6	1.1	0	3.6	5.6	5.6	2.8	3.7	3.6	8.6
Recreation																
Prim./Semiprim.MRVDs		20	20	20	22	25	24	24	26	22	25	25	18	22	22	34
Semiprim. Motor.MRVDs		16	16	16	12	8	8	4	0	10	8	8	17	11	12	0
Timber																
Suitable MAcres		4.8	4.8	4.9	5.0	4.2	5.0	1.3	0	3.5	1.5	1.5	5.5	4.9	5.0	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	.08	0	0	.01	0	0	0
	3	6.0	6.0	7.0	40.5	7.0	6.0	.1	0	25.3	2.6	2.6	34.0	24.0	24.0	0
	5	0	0	0	22.2	0	23.0	0	0	16.3	3.6	3.6	8.0	23.0	0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	.1	0	0	.1	0	0	0
	3	.8	.9	1.0	2.3	1.0	.8	.8	0	1.0	.4	.4	1.4	1.6	1.6	0
	5	0	0	0	1.1	0	1.1	0	0	1.1	.2	.2	.5	1.1	0	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Total Road Miles Needed by Fifth Decade		6	10	11	11	10	10	1	0	15	4	4	16	11	11	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		3.6	3.6	3.6	3.6	4.4	3.6	7.3	8.6	3.6	5.6	5.6	2.8	3.7	3.6	8.6
Wildlife - Big Game																
Summer Range MAcres		3.2	3.2	3.3	2.3	1.6	1.5	.9	0	0	0	0	3.4	2.3	2.3	0
Winter Range MAcres		0	0	0	.05	0	0	0	0	2.0	1.5	1.5	0	0	0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE TO THIS ROADLESS AREA														


Kootenai National Forest
McKay Creek Roadless Area
676
PRIVATE
0 1 2 3 4
miles
HOWARD LAKE
Midas Pt
Elephant Pk
St Paul Pk
Milwaukee Pass
Chicago Pk
Rock Pk
Ojibway Pk
Twin Pks
Great Northern Mtn
Teelers Pk
LAKE CREEK
Lost Horse Mtn
Government Mtn
Flat Top Mtn
Carney Pk
Carney Pass
Engle Pk
Goat Pk
Iron Meadow
Noxon
Old Trail Pt
Baree Mtn
Green Mtn
Tuscor Hill
Stevens Pk
Silver Butte Pass
Canyon Pk
BURR KNOB
Twenty Pk
LIBBY
6TH
Vermilion
Minton Pl
Minton Creek Pass
Wate Hill

McKay Creek - 01676 State: Montana

Gross Acres: 13,600 Net Acres: 13,500

I. Description

This area is located on the southwestern corner of the Cabinet Mountains Wilderness, extending north along the west face of the Cabinets from the Swamp Creek drainage to Rock Creek. Access to the area is good from the Clark Fork River valley via the Rock Creek, McKay Creek, and Swamp Creek roads.

The area includes sidehill and ridgetop features along with steep sided streambottom topography. This roadless area includes the lower portion of Swamp Creek, Goat Creek, most of the headwaters of McKay Creek, and some small unamed tributaries of both Rock and McKay Creeks. The area is generally tree-covered but overall timber productivity is fair to poor.

Except for the Cedar Gulch drainage, the roadless area is surrounded by a minimum of forest management activities. A BPA powerline corridor and maintenance road separates the McKay roadless area from the Galena roadless area (#677) to the southeast.

The represented ecosystems are Western Ponderosa Forest, Douglas-fir Forest, Cedar Hemlock Pine Forest, and Western Spruce Fir Forest.

The roadless area contains grizzly bear and mule deer habitats. The streamside trail experience up Swamp Creek and the access points into the Cabinet Mountains Wilderness are the area's other attractions.

Current use is considered moderate (3,000 RVD's) and consists of hunting in the fall and hiking along the trails leading into Wanless Lake, a popular destination point in the Cabinet Wilderness.

II. Capability

A. Natural Integrity and Appearance

The area's natural integrity and appearance are high with trails being the only manmade feature.

B. Opportunities for Solitude

Opportunities for solitude are many and of a high quality, especially in the Swamp Creek and Rock Creek areas.

C. Primitive Recreation Opportunities

Primitive recreation opportunities include hunting, hiking, and fishing.

D. Other Features

Wildlife observation and skiing into Rock Creek are among the challenges offered by the area. The opportunities to view wildlife in Rock Creek and Goat Ridge are also special features.

E. Manageability and Boundaries

The McKay Creek roadless area was identified during the RARE II inventory. The recommendation made at that time was a wilderness classification for the area, listed as an addition to the existing Cabinet Mountains Wilderness.

Gross Acres	Net Acres	
11900	11800	RARE II inventory
+2700	+2700	Additional acres identified that meet roadless criteria and data base adjustment
13600	13500	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification are the existing oil & gas leases.

An opportunity exists to improve the manageability of the boundary, without detracting from the quality of the area, by placing it on topographic features. Otherwise, the area enhances the Cabinet Wilderness boundary by providing depth and solitude. Other opportunities are available to separate out potential resource conflicts that are inherent with the high mineral potential in Big Cedar Gulch and with timber production potential in the bottom of McKay and Goat Creeks.

III. Availability

A. Significant Resource Values

1. Recreation

It is estimated that the area could provide about 4,200 RVD's of wilderness recreation. Current use is estimated to be 3,000 RVD's.

2. Wildlife and Fish

The roadless area is considered important fall grizzly bear range and the Goat Ridge area is considered prime mule deer habitat.

Swamp Creek is a significant fishery containing brook and cutthroat trout.

3. Timber

Approximately 7,400 acres are classified as suitable timberland which is capable of producing 20 cubic feet per acre per year of timber growth. Over 90 percent of this timberland is situated on slopes in excess of 55 percent. Road construction would be difficult and costly, and logging will require the use of cable and helicopter yarding methods. Most of this timberland is in Goat Creek and the bottom of McKay Creek.

4. Minerals

The mineral potential is considered high to moderate in the western edge of the roadless area (Big Cedar Gulch south to Goat Creek). This involves about 2600 acres. The oil and gas potential is considered moderate and there are existing oil and gas leases.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area and all grazing potential is considered transitory.

2. Cultural Resource

There are no known historic or prehistoric cultural sites in the area. Based on surveys in similar areas, the probability of prehistoric sites occurring is considered low.

3. Water

Precipitation varies from about 39 to 110 inches and runoff from 14 to 62 inches, depending on elevation (range of 5,000 feet). Water quality in the area can be expected to be very high except during high runoff events which occur during spring snowmelt.

C. Resource Situation McKay Cr. 01676

Table 1

Category	Unit	
Gross Acres	Acres	13600
Net Acres	Acres	13500
Recreation		
Semiprim. Nonmotor.	RVDs	3000
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	7400
Standing Volume	MMBF	74
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	13500
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat)		
Summer Range Total	Acres	11800
Winter Range Total	Acres	600
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	3
Stream Habitat	Acres	-
Lakes	No.	-
Lake Habitat	Acres	-
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	400
High	Acres	2200
Moderate	Acres	1600
Low	Acres	9300
Mining Claims	No.	100
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	13500
Low	Acres	0
Unknown	Acres	0
Oil & Gas Leases		
Lease Applications	No.	8
Existing leases	Acs.	8400

D. Management Considerations

1. Land Use Authorizations

No special uses exist but there are oil & gas leases.

2. Fire

The area has had a low occurrence of fire (no fires in the last 10 years). The fuels situation is considered dense conifer stands with thick, downed woody materials as ground fuel.

3. Insect and Disease

The area contains a limited amount of mature lodgepole which is susceptible to mountain pine beetle. No insect activity is presently occurring in the area.

4. Non-Federal Lands

There are 100 acres of private land located in McKay Creek on the western edge of the roadless area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area abuts the Cabinet Mountains Wilderness. Spokane, Washington (140 miles) and Missoula, Montana (180 miles) are the closest large population centers.

B. 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.

C. Public Interest

During the RARE II public review period, over 2,500 people addressed comments about the area. A majority of the responses (58%) supported a wilderness classification for the area. RARE II recommended 6700 acres as wilderness. The Montana Wilderness Association's Alternative "W" (1978) recommended that McKay Creek be wilderness. During the issue scoping segment of the Unit Planning process, concern for the protection of the primitive quality of Swamp and Goat Creek was expressed. Approximately 5000 acres were recommended for wilderness in the June, 1984, Montana Wilderness Bill. The Governors Wilderness Recommendation included approximately 6000 acres.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for McKay Creek Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	7.5	3.1	4.2	6.8	1.7	7.0	0	0	1.9	1.5	1.5	6.4	7.1	7.5	8.5
Nonwilderness (Some Development)															
Big Game Winter Range	0	0	0	0	0	0	0	0	.2	.3	.3	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	5.8	3.6	4.3	0	1.2	6.3	0	0	5.1	4.8	4.8	7.0	6.3	5.8	0
Wilderness															
Recommended Wilderness	0	6.7	5.0	6.7	10.5	0	13.5	13.5	6.3	6.7	6.7	0	0	0	5.0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	0	0	0	.5	0	0	0	0	0	0
Decade 5:	5.8	3.6	4.3	0	1.2	6.3	0	0	5.1	4.3	4.3	7.0	6.3	5.8	0
Roadless - Decade 1:	13.5	6.8	8.5	6.8	3.0	13.5	0	0	6.7	6.8	6.8	13.5	13.5	13.5	8.5
Decade 5:	7.5	3.1	4.2	6.8	1.7	7.0	0	0	1.9	2.5	2.5	6.4	7.1	7.5	8.5
Recommended Wilderness	0	6.7	5.0	6.7	10.5	0	13.5	13.5	6.3	6.7	6.7	0	0	0	5.0
Total Acres- McKay Creek	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5

B. Impacts McKay Cr. 01676

1. Designation: Wilderness
Management Emphasis: Wilderness

The entire roadless area is recommended for wilderness in Alternatives G and H. Alternatives B, C, D, E, I, J, K, and O recommend 49%, 37%, 48%, 77%, 46%, 49%, 49%, and 37% of the area, respectively, for 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.

The wilderness management emphasis will protect the primitive characteristics of the area. This includes the inherent naturalness of the roadless area and the primtive recreation opportunities available. The solitude offered by the Swamp Creek and Rock Creek areas will also be maintained. Old-growth timber and associated wildlife habitat will be protected.

About 7,400 acres of suitable timberland is contained within the roadless area. The following chart displays the acres of suitable timberland that would be included within recommended wilderness, by alternative.

Acres of Suitable Timberland in Wilderness
(M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	2.7	2.8	2.7	6.2	0	7.4	7.4	2.7	2.7	2.7	0	0	0	2.8

Opportunities to manage the timber resource would be foregone completely in Alternatives G and H, and to lesser extents in Alternatives B, C, D, E, I, J, K, and O.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear by prohibiting roading, thereby reducing increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big game summer range habitat through timber harvest would be foregone. However, as with the grizzly bear, security for big game would be provided by wilderness because of the limit on access into the area.

Wilderness restricts the exploration for, and removal of, mineral resources. Under the Wilderness Act, the lands would be withdrawn from mineral entry if no valid mining claims exist. This affects the approximately 2,600 acres considered to have high mineral potential. If valid mining claims existed, their development could negate a wilderness designation. The existing oil and gas leases would be honored and if no discoveries occur, the land would be withdrawn from mineral leasing. This restriction is not considered significant to oil and gas because the potential is moderate.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each Alternative except G and H designate at least a portion of the roadless area to these management emphases. The following chart displays the percent of the area designated to roadless management in each alternative.

Percent of the Roadless Area Designated Roadless Management

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
55	22	31	50	12	51	0	0	14	11	11	47	52	55	62

There are few, if any, ground-disturbing management activities specifically associated with roadless management. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained within these emphases as will the primitive recreation opportunities available. Old-growth timber, grizzly habitat, and security for big game will be maintained and protected.

Like wilderness, roadless designations 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, making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. Mineral development could negate a roadless designation.

The social and economic effects are primarily the benefits of semiprimitve recreation opportunities. Timber would not be available for harvest under these emphases.

3. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems

Every alternative except D, G, H, and O designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to developmental emphases, by alternative.

Percent of the Roadless Area Designated for Developmental Activities

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
42	26	31	0	8	46	0	0	39	35	35	51	46	42	0

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.

No timber harvest or road building is scheduled to occur in the first decade in any alternative except I. By the third decade, however, the naturalness of the area will be impacted by cutting units, roads, and other evidence of human modifications in all alternatives except D, G, H, and O. Portions of the area can be seen from Highway 200. Activities conducted in these portions would impact the view. Expected miles of road in place by the fifth decade vary by alternative but range from 5 miles to 36 miles. (See Table 3 at the end of this discussion). Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

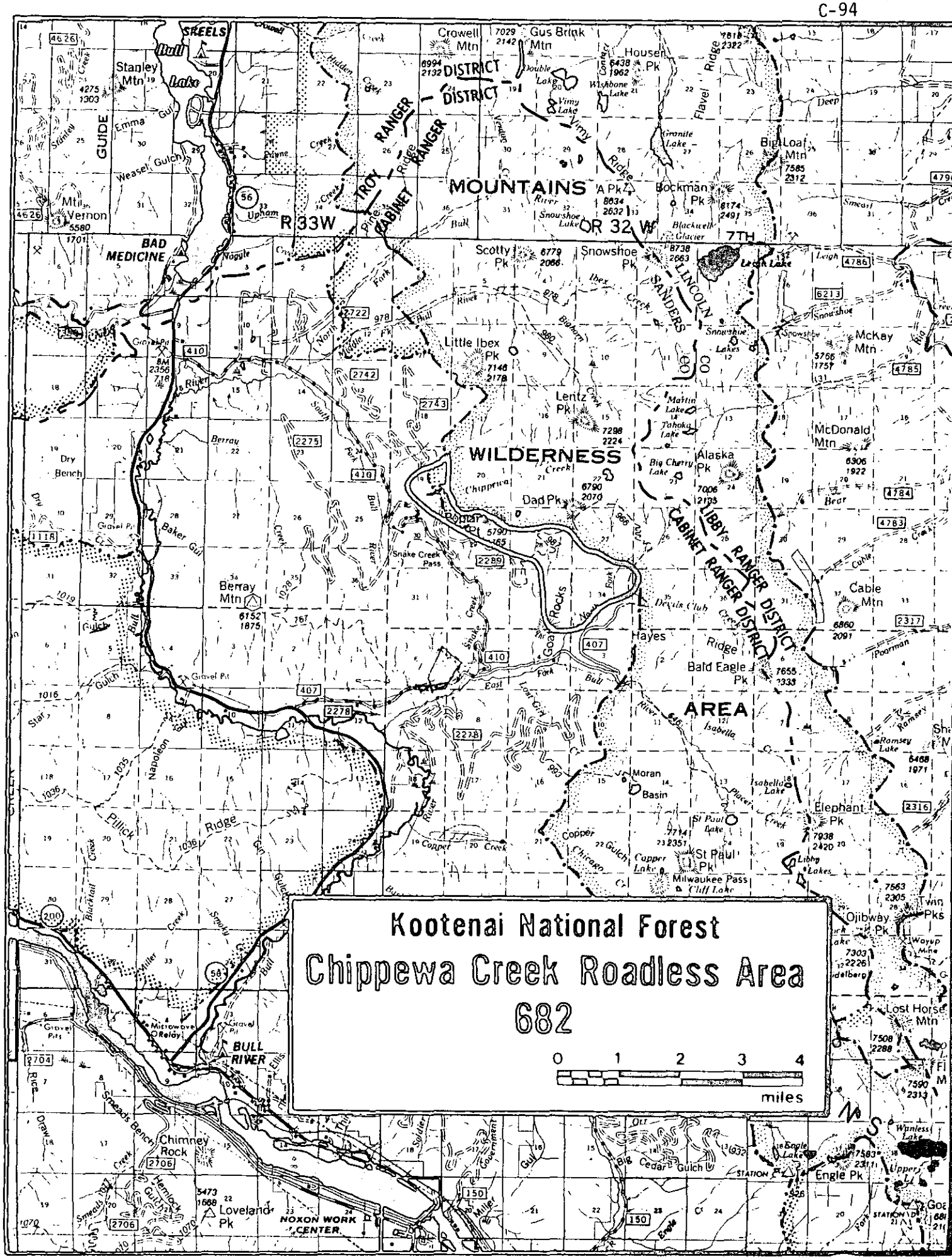
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 McKay Creek roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for McKay Creek Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	6.7	5.0	6.7	10.5	0	13.5	13.5	6.3	6.7	6.7	0	0	0	5.0
Roadless MAcres		7.5	3.1	4.2	6.8	1.7	7.0	0	0	1.9	1.5	1.5	6.4	7.1	7.5	8.5
Recreation																
Prim./Semiprim.MRVDs		32	34	34	40	40	31	40	40	35	37	37	29	31	32	49
Semiprim. Motor.MRVDs		25	14	17	0	4	27	0	0	10	6	6	30	26	26	0
Timber																
Suitable MAcres		5.8	3.6	4.3	0	1.2	6.3	0	0	5.1	4.8	4.8	7.0	6.1	5.8	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	3.6	0	0	0	0	0	0
	3	19.5	33.3	16.3	0	4.0	16.0	0	0	30.1	26.5	8.0	23.0	16.0	16.0	0
	5	21.3	3.5	3.5	0	0	21.0	0	0	4.2	7.4	5.4	13.0	21.0	25.0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	.5	0	0	0	0	0	0
	3	1.5	1.9	1.3	0	.5	1.2	0	0	1.3	1.3	.8	1.0	1.3	1.3	0
	5	.8	.2	.2	0	0	0.9	0	0	.6	1.1	.7	.5	.9	1.0	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		28	20	22	0	5	33	0	0	22	24	24	36	33	30	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		7.5	9.8	9.2	13.5	12.2	7.0	13.5	13.5	8.2	8.2	8.2	6.4	7.1	7.5	13.5
Wildlife - Big Game																
Summer Range MAcres		5.0	2.9	3.4	0	.7	5.5	0	0	1.2	0	0	6.0	5.2	5.0	0
Winter Range MAcres		0	0	0	0	0	0	0	0	.7	1.6	1.6	0	0	0	0
Minerals																
Hardrock-Very High/ High Potential - Accessible MAcres		1.5	1.5	.9	0	.04	.9	0	0	1.5	1.5	1.5	.9	.9	1.5	0
Oil & Gas-Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Chippewa Creek Roadless Area
682
0 1 2 3 4
miles
SHEELS
Bull
Lake
Stanley Mtn
GUIDE
Emma
Weaser Gulch
Mt. Vernon
BAD MEDICINE
Crowell Mtn
Gus Brink Mtn
Housen Pk
DISTRICT
DISTRICT
TROY RANGER
CABINET RANGER
MOUNTAINS
R 33W
R 32 W
7TH
Big Loaf Mtn
Bockman Pk
Scotty Pk
Snowshoe Pk
LINCOLN
SANDERS
CO
Little Ibex Pk
McKay Mtn
Lentz Pk
McDonald Mtn
WILDERNESS
Alaska Pk
Dad Pk
LIBBY RANGER DISTRICT
CABINET RANGER DISTRICT
Berray Mtn
Cable Mtn
Hayes
Bald Eagle Pk
AREA
Moran Basin
Elephant Pk
St Paul Pk
Milwaukee Pass
Ojibway Pk
Twin Pks
Lost Horse Mtn
BULL RIVER
Chimney Rock
Loveland Pk
NOXON WORK CENTER
Engle Pk

KOOTENAI NATIONAL FOREST

Chippewa Creek - 01682 **State:** Montana

Gross Acres: 2,300 **Net Acres:** 2,300

I. Description

The area is located immediately adjacent to the west side of the Cabinet Mountains Wilderness, roughly between Chippewa Creek and the North Fork of the East Fork of Bull River. Access to the roadless area is provided from State Highway 56 via the South Fork and East Fork Bull River Roads. A trail leading to Dad Peak within the Cabinets runs through the area.

The area is a high ridgetop situation, generally steep with rocky shallow soils. Vegetation is relatively sparse on the south-facing slopes. Portions of Chippewa, Devil's Club, and Snake Creeks drain into the Bull River drainage.

The area is bordered by roads and clearcuts on the northwestern and southeastern edges and by the Cabinet Mountains Wilderness to the east.

The ecosystem represented is Douglas-Fir Forest.

The area contains grizzly bear habitat, black bears, bighorn sheep, mountain goats, elk, and mule deer.

Dispersed recreation use is light, and is mainly hunting in the Fall.

II. Capability

A. Natural Integrity and Appearance

The overall natural integrity and appearance is high with only the Dad Peak Trail crossing the roadless area.

B. Opportunities for Solitude

Opportunities for solitude are considered moderate because the area faces into the developed Bull River Valley.

C. Primitive Recreation Opportunities

Recreation opportunities include hiking and hunting.

Hiking in the Goat Rocks provides the area's most challenging experience. The goat winter range is another special feature in the area.

D. Manageability and Boundaries Chippewa Cr. 01682

Chippewa Creek roadless area was identified during the RARE II inventory and the recommendation at that time was for a portion to be wilderness designation, as an addition to the existing Cabinet Mountains Wilderness. The recent inventory has identified additional acres for the area.

Gross Acres	Net Acres	
1000	1000	RARE II inventory
+1300	+1300	Additional acres identified that meet roadless criteria.
2300	2300	1983 roadless inventory

There are no nonconforming uses that would conflict with a wilderness classification for the area.

The compact area enhances the existing wilderness boundary by providing more depth but the manageability of the roadless area's boundary is more difficult as it does not follow well defined, topographic features.

III. Availability

A. Significant Resource Values

1. Recreation

It is estimated that the area could provide about 600 RVD's of wilderness recreation per year. This would be a contribution to the RVD capacity of the Cabinet Mountains Wilderness. Current use is estimated to be about 300 RVD's per year.

2. Wildlife

The area contains bighorn sheep, mountain goats, and what is considered some of the best mule deer habitat on the Forest. There are no significant management opportunities to enhance this habitat.

3. Timber

The area contains 1,600 acres of tentatively suitable timberland capable of producing more than 20 cubic feet per acre per year of timber growth. This is located on slopes in excess of 55% where road building would be difficult and costly. Logging will require cable or helicopter yarding methods.

B. Other Resources

1. Fisheries

There are no significant fisheries in the area.

2. Range

There are no livestock grazing allotments in the area and the grazing potential is considered all transitory.

3. Minerals

The mineral potential is low and the oil and gas potential is moderate. There are three oil and gas lease applications pending.

4. Cultural Resources

There are no known historic or prehistoric cultural sites in the area. Based on surveys in similar locations, the probability of prehistoric sites occurring is considered low.

5. Water

Mean annual precipitation for the area averages about 60+ inches, varying between about 57 and 97 inches depending on elevation. Except during periods of high runoff in the spring, the water quality is considered excellent.

C. Resource Situation

Chippewa 01682

Table 1

Category	Unit	
Gross Acres	Acres	2300
Net Acres	Acres	2300
Recreation		
Semiprim. Nonmotor.	RVDs	300
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	1600
Standing Volume	MMBF	20
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	2300
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat)		
Summer Range Total	Acres	1500
Winter Range Total	Acres	200
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	2300
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	2300
Low	Acres	0
Unknown	Acres	0
Oil & Gas Leases		
Lease Applications	No.	3
Acres Applied For	Acs.	2300

D. Management Considerations

1. Land Use Authorizations

There are no special uses.

2. Fire

The area has had a low occurrence of fire (1 fire in the last 10 years). The fuels situation currently is predominantly dense conifer with thick accumulations of ground fuels.

3. Insect and Disease

About 10% of the timber stands contain high risk lodgepole pine but there is no current insect and disease activity in the area.

4. Non-Federal Lands

There are no private lands in the roadless area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area abuts the existing Cabinet Mountains Wilderness. Spokane, Washington (120 miles) and Missoula, Montana (160 miles) are the nearest large population centers.

B. 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.

C. Public Interest

During the RARE II public review period, about 2,500 people directed comments to the area. A majority (58%) expressed support for a wilderness classification for the area. RARE II recommended approximately 400 acres as wilderness.

Chippewa was included in both the Governor's wilderness recommendation to the State Congressional Delegation (2100 acres) and in that Delegation's Montana Wilderness Bill proposal to Congress (1350 acres), in June, 1984.

The area currently receives light recreation use, primarily hunting in the Fall.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Chippewa Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	1.1	.6	.6	.6	.6	.6	0	0	.4	.5	.5	.5	1.0	.6	1.9
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	1.2	1.2	1.2	1.2	1.2	1.7	0	0	1.5	1.4	1.4	1.8	1.3	1.7	0
Wilderness															
Recommended Wilderness	0	.4	.4	.4	.4	0	2.3	2.3	.4	.4	.4	0	0	0	.4
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	.1	.1	.1	.1	.1	.3	0	0	.1	.1	.1	.3	.1	.1	0
Decade 5:	1.2	1.2	1.2	1.2	1.2	1.7	0	0	1.5	1.4	1.4	1.8	1.3	1.7	0
Roadless - Decade 1:	2.2	1.6	1.6	1.6	1.6	2.0	0	0	1.8	1.8	1.8	2.0	2.2	2.2	1.9
Decade 5:	1.1	.6	.6	.6	.6	.6	0	0	.4	.5	.5	.5	1.0	.6	1.9
Recommended Wilderness	0	.4	.4	.4	.4	0	2.3	2.3	.4	.4	.4	0	0	0	.4
Total Acres- Chippewa	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

B. Impacts Chippewa Cr. 01682

1. Designation: Wilderness
Management Emphasis: Wilderness

The Chippewa Creek roadless area is recommended for wilderness in its entirety in Alternatives G and H. Alternatives B, C, D, E, I, J, K, and O each recommend 17% of the area as wilderness (400 acres). 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 character of the area and will maintain the primitive recreation opportunities present which include hunting and hiking. A wilderness classification for Chippewa Creek would also add to the existing Cabinet Mountains.

There are 1,600 acres of suitable timberland in the roadless area. The following chart displays the acres of suitable timberland contained in wilderness in each alternative.

Acres of Suitable Timberland in Wilderness
(M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	.4	.4	.4	.4	0	1.6	1.6	.4	.4	.4	0	0	0	.4

Opportunities to manage the timber resource would be foregone completely in Alternatives G and H, and to lesser extents in Alternatives B, C, D, E, J, K, and O.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear by prohibiting roading, thereby reducing increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big game summer range through timber harvest would be unavailable but, as with grizzly, wilderness classification would provide security for big game by limiting human access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The oil and gas lease applications would not be processed and the land withdrawn from mineral leasing. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
   Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternatives G and H, designate a portion of the area to these management emphases. The following chart displays the percent of the area designated roadless management by alternative.

Percent of Area Designated Roadless Management

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
47	26	26	26	26	26	0	0	17	21	21	21	43	26	82

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and hiking.

The roadless character of the area would be maintained in these emphases as would the semi-primitive recreation opportunities. Old growth habitat will also be maintained and grizzly habitat will be protected. Security for big game would be maintained.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. Designation: Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

Each alternative except G, H, and O designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to developmental activities, by alternative.

Percent of Area Designated for Developmental Activities
By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
52	52	52	52	52	73	0	0	65	60	60	78	56	73	0

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.

Under these emphases, the naturalness of the area will be impacted by harvest cutting units, roads, and other evidence of human modifications. The area is readily seen from Highway 56 and the Bull Lake Valley. Activities conducted would be highly visible and would impact the view. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experience of solitude. Under most alternatives, some activity would occur within the first decade: By the end of the fifth decade, 5 to 6 miles of road would be in place. (See Table 3 at the end of this discussion).

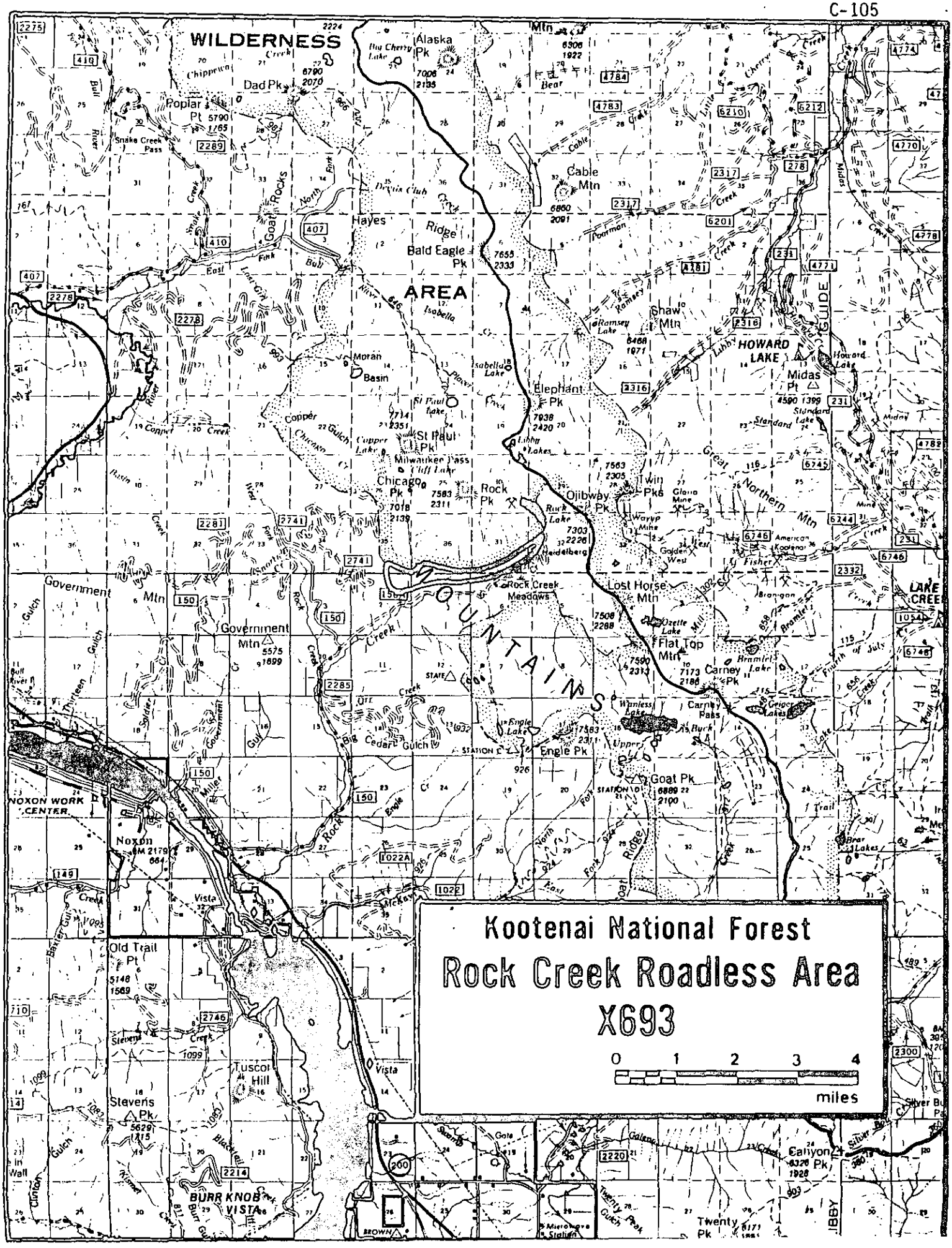
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long-term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Chippewa Creek roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs for Chippewa Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	.4	.4	.4	.4	0	2.3	2.3	.4	.4	.4	0	0	0	.4
Roadless MAcres		1.1	.6	.6	.6	.6	.6	0	0	.5	.6	.6	.5	1.0	.6	1.9
Recreation																
Prim./Semiprim.MRVDs		4	4	4	4	4	4	7	7	5	5	5	7	5	5	6
Semiprim. Motor.MRVDs		5	5	5	5	5	6	0	0	0	0	0	7	5	5	0
Timber																
Suitable MAcres		1.2	1.3	1.3	1.3	1.3	1.6	0	0	1.5	1.4	1.4	1.6	1.3	1.6	0
Volume (MMBF)	1	1.3	1.3	1.3	1.3	1.0	5.0	0	0	1.3	1.3	1.3	5.0	1.3	1.3	0
	3	2.3	2.3	2.3	2.3	2.0	2.0	0	0	2.3	2.3	2.3	2.5	2.3	8.0	0
	5	3.4	3.4	3.4	3.4	3.0	4.0	0	0	5.5	2.8	2.8	4.0	3.4	3.3	0
Harvest Acres - MAcres	1	.1	.1	.1	.1	.1	.3	0	0	.1	.1	.1	.3	.1	.1	0
	3	.09	.09	.09	.09	.09	.1	0	0	.1	.09	.09	.1	.1	.5	0
	5	.1	.1	.1	.1	.1	.1	0	0	.2	.1	.1	.1	.1	.1	0
Roads																
Roads Constructed First Decade - Miles		1	1	1	1	1	2	0	0	1	1	1	2	1	1	0
Total Road Miles Needed by Fifth Decade - Miles		5	5	5	5	5	6	0	0	5	5	5	6	5	6	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		1.1	1.0	1.0	1.0	1.0	.6	2.3	2.3	.9	1.0	1.0	.5	1.0	.6	2.3
Wildlife - Big Game																
Summer Range MAcres		1.0	1.0	1.0	1.0	1.0	1.1	0	0	0	0	0	1.5	.9	1.0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Rock Creek Roadless Area
X693
0 1 2 3 4
miles
WILDERNESS
AREA
MOUNTAINS
HOWARD LAKE
Alaska Pk
Dad Pk
Poplar Pt
Cable Mtn
Hayes Ridge
Bald Eagle Pk
Shaw Mtn
Moran Basin
Elephant Pk
St Paul Pk
Chicago Pk
Rock Pk
Ojibway Pk
Twin Pks
Midas Pt
Government Mtn
Rock Creek Meadows
Lost Horse Mtn
Flat Top Mtn
Carney Pk
Carney Pass
Engle Pk
Goat Pk
Great Northern Mtn
NOXON WORK CENTER
Noxon
Vista
Old Trail Pt
Tuscor Hill
Stevens Pk
BURR KNOB VISTA
Twenty Pk
Galiyon Pk
LAKE CREEK
LIBBY

Rock Creek - X1693 State: Montana

Gross Acres: 400 Net Acres: 400

I. Description

The Rock Creek roadless area is located on the southwestern edge of the Cabinet Mountain Wilderness, in the Rock Creek drainage, and is surrounded by the Cabinets on three sides. Access is provided via State Highway 200 and the Rock Creek Road.

The area is primarily steep rugged cliffs with no productive timberlands.

The represented ecosystems are Douglas-fir, Cedar Hemlock, and Western Spruce Fir Forests.

The Rock Creek drainage is a major destination point for recreationists entering the Cabinet Mountains Wilderness. Mountain goats are another known attraction in this area.

II. Capability

A. Natural Integrity and Appearance

The natural integrity is high with no manmade features to detract from the area's natural appearance.

B. Opportunities for Solitude

When the adjacent Rock Creek Road is closed, opportunities for solitude are high. Opportunities are less so when the road is open for mining access to the adjacent Heidelberg Mine located on the eastern edge of this roadless area.

C. Primitive Recreation Opportunities

Primitive recreation opportunities include hiking, viewing and wildlife observation. In fact, the mountain goat wintering range is the area's special feature.

D. Manageability and Boundaries

The Rock Creek roadless area was identified in the 1983 roadless inventory.

The nonconforming uses that would conflict with a wilderness designation for the area are the existing oil & gas leases.

The area is well-defined by a primitive road and the existing Cabinet Mountains Wilderness, making for an easily managed boundary. In addition, the roadless area enhances the existing wilderness boundary by adding more depth.

III. Availability Rock Cr. 01X693

A. Significant Resource Potentials

1. Recreation

The area has the potential of providing about 200 RVD's of wilderness recreation to the existing use in the Cabinets.

2. Wildlife

The area contains grizzly bear and mountain goat habitats but there is no need for enhancement.

3. Minerals

The mineral potential is considered high while oil and gas potential is moderate.

B. Other Resources

1. Fisheries

There are no significant fisheries but tributaries to Rock Creek (cutthroat trout) pass through this area.

2. Range

There are no livestock grazing allotments in the area and livestock potential is nil.

3. Timber

There are no productive timberlands in this roadless area.

4. Cultural Resource

There is one historic cultural site and no identified prehistoric sites in the area. Based upon surveys done in similar areas, the probability of prehistoric sites occurring is considered low.

5. Water

This area includes several small intermittent tributaries draining south into Rock Creek. Mean annual precipitation for the area is about 48 inches, with about 20 inches of this showing up as runoff.

C. Resource Situation Rock Cr. 01X693

Table 1

Category	Unit	
Gross Acres	Acres	400
Net Acres	Acres	400
Recreation		
Semiprim. Nonmotor.	RVDs	200
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	0
Standing Volume	MMBF	0
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	400
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat)		
Summer Range Total	Acres	400
Winter Range Total	Acres	0
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	100
High	Acres	100
Moderate	Acres	200
Low	Acres	
Mining Claims	No.	30
Oil & Gas Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	400
Low	Acres	0
Unknown	Acres	0
Oil & Gas Leases		
Lease Applications	No.	2
Existing leases	Acs.	160

D. Management Considerations

1. Land Use Authorizations

There are no special uses and only one oil & gas lease.

2. Fire

The area has had a low fire occurrence history in the past (no fires in the last 10 years). The current fuels situation is primarily sparse undergrowth with a thin layer of ground fuels.

3. Insect and Disease

There are no lodgepole pine or spruce stands susceptible to insect attack.

4. Non-Federal Lands

There are no private lands in the defined area.

IV. Need

Rock Cr. 01693

A. Proximity to Other Wilderness and to Population Centers

The area abuts the existing Cabinet Mountains Wilderness. Spokane, Washington (160 miles) and Missoula, Montana (200 miles) are the nearest large population centers.

B. 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.

C. Public Interest

Rock Creek was not inventoried during the RARE II effort. Concerns have been expressed in past planning efforts for maintaining the primitive qualities of the Rock Creek area.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Rock Creek Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	.4	.4	.4	.4	.4	.4	0	0	.4	.4	.4	.4	.4	.4	.4
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	.4	.4	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	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	0	0	0
Roadless - Decade 1:	.4	.4	.4	.4	.4	.4	0	0	.4	.4	.4	.4	.4	.4	.4
Decade 5:	.4	.4	.4	.4	.4	.4	0	0	.4	.4	.4	.4	.4	.4	.4
Recommended Wilderness	0	0	0	0	0	0	.4	.4	0	0	0	0	0	0	0
Total Acres- Rock Creek	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4

B. Impacts

1. Designation: Wilderness
Management Emphasis: Wilderness

The Rock Creek roadless area is recommended for wilderness in its entirety in Alternatives G and H. No other alternative recommends wilderness for the area beacuse of the high mineral potential. 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.

A wilderness classification will preserve the naturalness of the area and contribute to the wilderness qualities in the adjacent Cabinet Mountains Wilderness. Opportunities for solitude will be protected and the primitive recreation experiences available in the area will be maintained.

Opportunities to enhance grizzly habitat and the big game summer range would be foregone in this emphasis. On the other hand, wilderness would provide security for grizzlies and other wildlife by limiting access into the area.

There are no suitable timberlands in the area.

Wilderness restricts the exploration for, and removal of, mineral resources. This is significant in the area because a portion is rated high in mineral potential. Considerable exploration activity has been conducted in the vicinity and operating plans by ASARCO are being developed, pending validation of their claims in the area. The existing oil and gas leases would be honored but if no discoveries were made by the end of the lease period the land would be withdrawn from mineral leasing. However, the oil and gas potential is rated moderate and not considered significant to the area. Mineral development in this roadless area could negate a wilderness designation.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, and wilderness. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Those publics valuing wilderness would be supported by this management emphasis.

2. Designation: Nonwilderness(Roadless)
Management Emphasis: Semiprimitive Nonmotorized Recreation

All alternatives, except G and H, designate the area to this management emphasis. There are few, if any, ground-disturbing management activities specifically associated with roadless management. Activities are associated primarily with dispersed recreation including hunting and fishing.

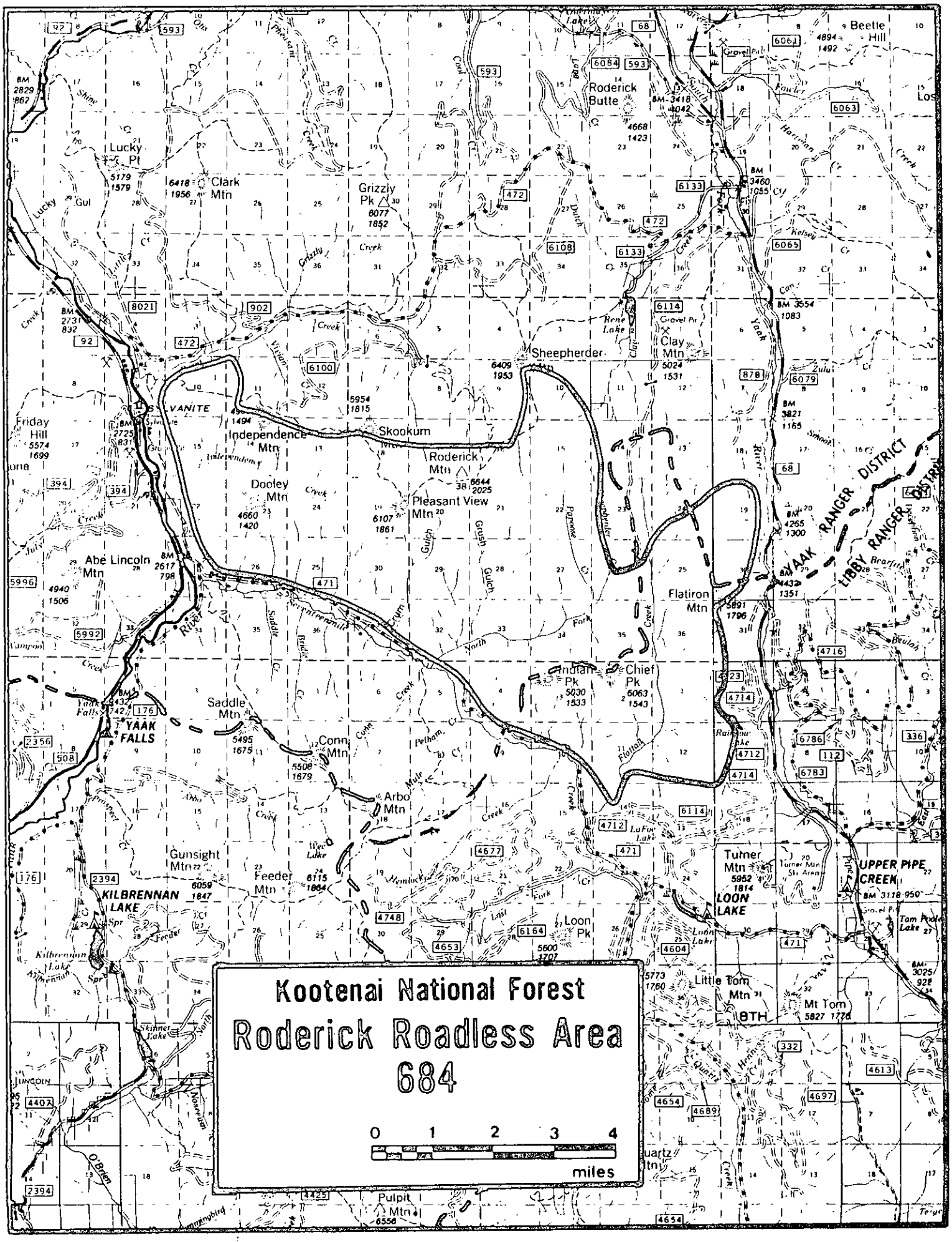
The roadless character of the area will be maintained in this emphasis: Primitive recreation opportunities will be maintained; solitude will be provided; grizzly habitat will be protected; and security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. Mineral development in this roadless area could negate a roadless or nonwilderness designation.

The social and economic effects are primarily the benefits of semiprimitive recreation oppportunities.

Table 3. Decadal Outputs by Alternative for Rock Creek Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	.4	.4	0	0	0	0	0	0	0
Roadless MAcres		.4	.4	.4	.4	.4	.4	0	0	.4	.4	.4	.4	.4	.4	.4
Recreation																
Prim./Semiprim.MRVDs		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Semiprim. Motor.MRVDs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber																
Suitable MAcres		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
Wildlife - Big Game																
Summer Range MAcres		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Winter Range MAcres		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minerals																
Hardrock-Very High/ High Potential Accessibility MAcres		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oil & Gas-Very High/ High Potential Accessibility MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Roderick Roadless Area
684
0 1 2 3 4
miles
YAAK RANGER DISTRICT
LIBBY RANGER DISTRICT
Beetle Hill
Roderick Butte
Lucky Pt
Clark Mtn
Grizzly Pk
Sheepherder Mtn
Clay Mtn
VANITE
Friday Hill
Independence Mtn
Skookum
Roderick Mtn
Dooley Mtn
Pleasant View Mtn
Abe Lincoln Mtn
Flatiron Mtn
Indian Pk
Chief Pk
Saddle Mtn
YAAK FALLS
Conn Mtn
Arbo Mtn
Gunsight Mtn
Feeder Mtn
KILBRENNAN LAKE
Turner Mtn
LOON LAKE
UPPER PIPE CREEK
Loon Pk
Little Tom Mtn
Mt Tom
Pulpit Mtn

Roderick - 01684 State: Montana

Gross Acres: 24,800 Net Acres: 24,800

I. Description

The area is located in the northwestern corner of the Forest, lying roughly between the Yaak River on the west to the Pipe Creek Divide to the east. Access to the area is provided via the Yaak River and Pipe Creek Roads.

The area is characterized as having moderate to steep slopes, generally forested, dominated by Roderick Mountain (6,600 feet) and the Independence Mountain (4,900 feet) ridgeline on the northern edge. Also contained within the roadless area are numerous low-elevation streambottoms. Independence, Flattail, and North Fork Seventeen Mile Creeks, Crum Gulch and several other unnamed first order tributaries to Seventeen Mile are all included.

Timber harvest activities such as roads and clearcuts and inhabited private lands completely surround the area.

Represented ecosystems include Douglas Fir Forest and Cedar Hemlock Pine Forest.

The grizzly bear population and big game herds, as well as the ridgetop hiking opportunities, are the area's primary attractions.

Current use is considered light (4,000 RVD's) and consists primarily of hunting in the fall.

II. Capability

A. Natural Integrity and Appearance

The natural integrity is high. There are a few miles of trails and the remains of two lookouts but, owing to the large area, these manmade features do not detract from the natural appearance.

B. Opportunities for Solitude

Opportunities for solitude are high and numerous, again because of the area's large size. Opportunities are especially good along the North Fork of Seventeen Mile, Flattail, Papoose, and Idependence Creeks.

C. Primitive Recreation Opportunities

Primitive recreation opportunities are numerous and include hunting, hiking, big game observation, nontechnical mountain climbing, crosscountry travel, and fishing. Crosscountry hiking across a large area is the most challenging experience the area offers.

D. Other Features

Among the area's special features are the moose winter range on the south face of Seventeen Mile and the long, straight fault-associated Flattail Creek.

E. Manageability and Boundaries Roderick 01684

The Roderick roadless area was identified in the RARE II inventory. The recommendation at that time was nonwilderness with most of the area going to developmental uses. Additional acreage was identified in the 1983 inventory which greatly increased the area's roadless capacity.

Gross Acres	Net Acres	
1600	1600	RARE II inventory
+20300	+20300	Area remaining roadless after RARE I and not developed in the interim
+2900	+2900	Additional acres identified that meet roadless criteria
24800	24800	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification for the area are the remains of two lookouts and existing oil & gas leases.

Overall, the roadless boundary is well-situated along topographic features making for an easily managed boundary. There are a few places, such as areas north of Skookum Mountain, where the boundary was formed to avoid clearcuts and other developments. The area's large size offers opportunities to make adjustments to the boundary without detracting from the overall wilderness quality.

III. Availability

A. Significant Resource Potential

1. Recreation

The area has the potential to provide 7,600 RVD's of wilderness recreation per year. Current use is estimated at 4,000 RVD's per year.

2. Wildlife and Fish

Roderick contains some of the best grizzly bear habitat in the Yaak. Big game winter range also exists, supporting moose and whitetail deer. Burning opportunities in winter range along the south aspects of the area are considered desireable to enhance this wildlife habitat.

This area includes tributaries to Seventeen Mile Creek and the Yaak River. Although not documented, it is assumed some of the larger streams support resident populations of trout and possible spawning opportunities for the downstream fisheries.

3. Timber

There are approximately 21,200 acres of tentatively suitable timberland which is capable of producing more than 20 cubic feet per acre per year of timber growth. Approximately 50% of this timberland is located on slopes greater than 55%. Road construction would be difficult and costly and logging would require the use of cable or helicopter yarding methods. The remainder of the area has slopes ranging from 20 to 55% where road construction would be less difficult and costly.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area and grazing potential is considered all transitory.

2. Minerals

The mineral potential is low and the oil and gas potential is considered moderate.

3. Cultural Resources

There are six historic cultural sites but no prehistoric sites identified in the area. Based on surveys in similar areas, the probability of prehistoric sites occurring is considered low.

4. Water

Mean annual precipitation for the area averages about 50 inches, but this varies from 25 to 80 inches depending on elevation. Streams in this area usually peak between mid-May to June. Water quality remains high year-round.

C. Resource Situation

Roderick 01684

Table 1

Category	Unit	
Gross Acres	Acres	24800
Net Acres	Acres	24800
Recreation		
Semiprim. Nonmotor.	RVDs	4000
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	21200
Standing Volume	MMBF	133
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	24800
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Goat)		
Summer Range Total	Acres	17800
Winter Range Total	Acres	6000
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	-
Stream Habitat	Acres	-
Lakes	No.	-
Lake Habitat	Acres	-
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	-
Low	Acres	24800
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	24800
Low	Acres	-
Unknown	Acres	-
Oil & Gas Leases		
Leases	No.	8
Leased Acres	Acres	19700

D. Management Considerations

1. Land Use Authorizations

There are no special uses but oil & gas leases exist.

2. Fire

The area has had a low fire occurrence (4 fires in the last 10 years). The fuels situation is a combination of dense conifer stands in the drainage bottoms and open stands on the ridges and harsher south-facing aspects. Ground fuels vary from downed, woody material in the dense conifer stands to grasses and forbs in the open stands.

3. Insect and Disease

The area does contain some high risk lodgepole pine stands and some insect and disease activity is occurring in the west quarter of the area. The remaining area has minimal Mountain Pine Beetle activity at this time.

4. Non-Federal Lands

There are no private lands.

V. Need

A. Proximity to Other Wilderness and to Population Centers

The area is located about 20 miles north of the Cabinet Mountains Wilderness. Spokane, Washington (170 miles) and Missoula, Montana (220 miles) are the nearest large population centers.

B. 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.

B. Public Interest

During the RARE I and II processes, public input revealed divided opinions about the area. Over 1,100 people commented on the area in RARE II, most of whom (84%) were opposed to a wilderness classification. RARE II recommended non-wilderness. The Montana Wilderness Association's Alternative "W" recommended that the area be placed in a further planning category. During the Unit Planning process, little support for wilderness was expressed and no recent expressions have been made.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Roderick Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	5.7	5.2	5.2	5.7	3.0	6.6	0	0	6.9	10.7	10.7	4.7	5.4	5.5	24.8
Nonwilderness (Some Development)															
Big Game Winter Range	0	0	0	0	0	0	0	0	7.5	11.0	11.0	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	19.1	19.4	19.4	19.1	2.1	18.2	0	0	10.4	3.1	3.1	20.1	19.4	19.3	0
Wilderness															
Recommended Wilderness	0	0	0	0	19.7	0	24.8	24.8	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	.5	0	1.4	0	0	0	0	0	.7	0	0	0
Decade 5:	19.1	19.4	19.4	19.1	2.1	18.2	0	0	10.4	14.1	14.1	20.1	19.4	19.3	0
Roadless - Decade 1:	24.8	24.8	24.8	24.3	5.1	23.4	0	0	24.8	24.8	24.8	24.1	24.8	24.8	24.8
Decade 5:	5.7	5.2	5.2	5.7	3.0	6.6	0	0	6.9	10.7	10.7	4.7	5.4	5.5	24.8
Recommended Wilderness	0	0	0	0	19.7	0	24.8	24.8	0	0	0	0	0	0	0
Total Acres- Roderick	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8	24.8

B. Impacts

Roderick 01684

1. Designation: Wilderness
Management Emphasis: Wilderness

The Roderick roadless area is recommended for wilderness in its entirety in Alternatives G and H, while Alternative E recommends that 79% of the area (19,700 acres) be 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.

A wilderness classification would preserve the naturalness of the area and maintain the opportunities for solitude along the North Fork of Seventeen Mile, Flattail, Papoose, and Independence Creeks. The primitive recreation opportunities would also be maintained.

There are 21,200 acres of suitable timberland located in the area. The following chart displays the acres of suitable timberland located in wilderness, in each alternative.

Acres of Suitable Timberland in Wilderness
(M Acres)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	18.6	0	21.2	21.2	0	0	0	0	0	0	0

Opportunities to manage the timber resource would be foregone completely in Alternatives G and H and to a large extent in Alternative E.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear by prohibiting roading, thereby reducing increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Improvement of the big-game winter range by burning would not be allowed under a wilderness classification. Also, the management of the big-game summer range through timber harvest would not occur. Wilderness would, however, provide security for big game by limiting access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry for mining since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. Designation: Nonwilderness (Roadless)
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternatives G and H, designate a portion of the area to these emphases. The following chart displays the percent of the area designated to roadless management, by alternative.

Percent Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
23	21	21	23	12	26	0	0	27	43	43	19	21	22	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within these emphases will be maintained as well as semiprimitive recreation opportunities. Old growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game will be maintained.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest in this emphasis.

3. Designation: Nonwilderness (Some Development)
Management Emphasis: Big Game Winter Range

Alternatives I, J, and K designate from 7,500 acres to 11,000 acres, depending on the alternative, to this management emphasis. This emphasis is located primarily along the south facing slope of Seventeen Mile Creek. The intent is to manage winter range habitat for the benefit of elk, deer, and moose. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. Designation: Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. The following chart displays the percent of the area designated to these emphases in each alternative.

Percent of Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
77	78	78	77	8	73	0	0	41	12	12	81	78	77	0

Alternatives D, F, and L have activities scheduled to occur in the first decade. (See Table 3 at the end of this discussion). The remaining Alternatives with these emphases do not have activities planned until the third decade. In all alternatives except G, H, and O, it is expected that from 6 to 83 miles of road will be in place in thirty years.

The naturalness of the area will be impacted by timber harvest units, roads, and other evidence of man's modifications. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

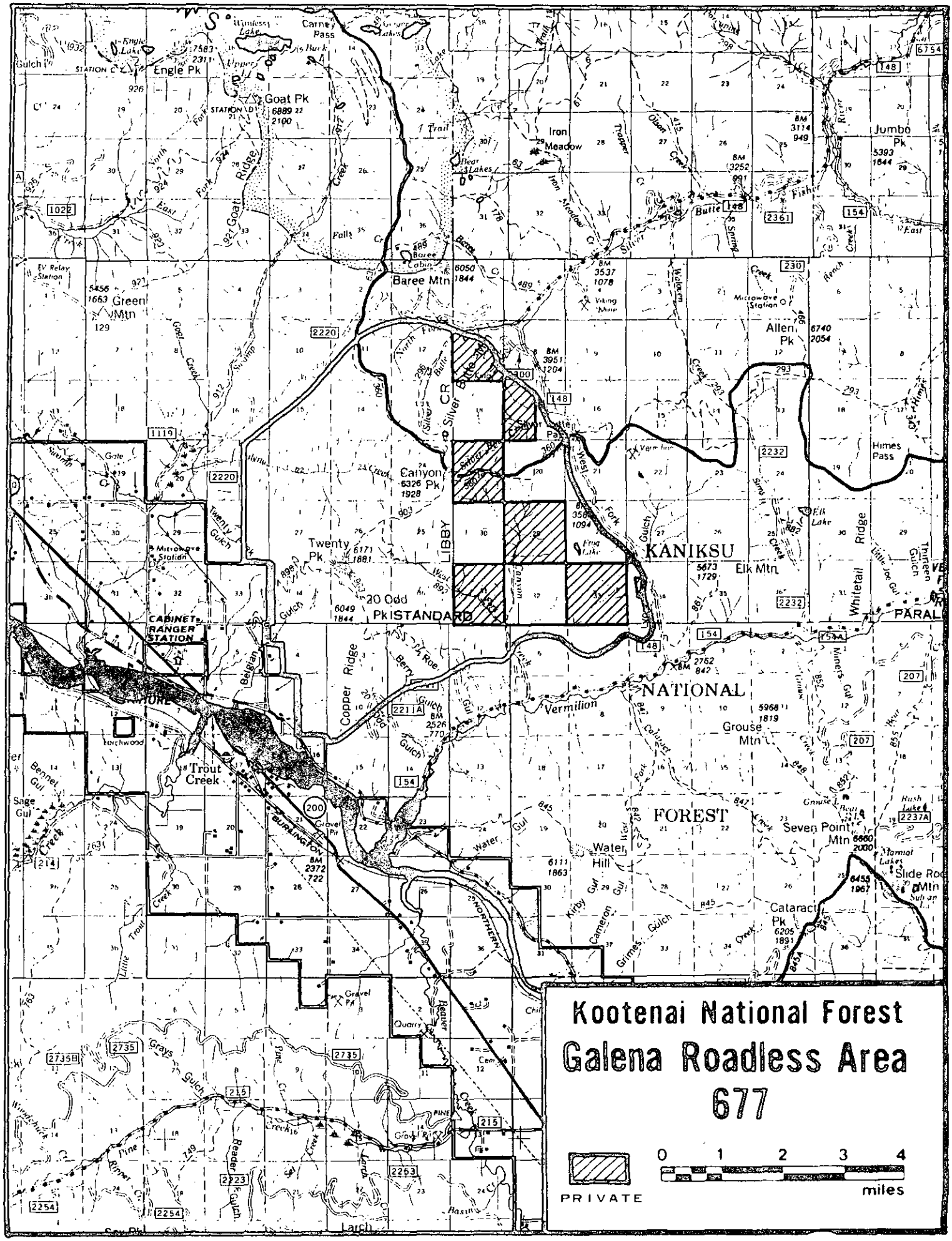
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Forests. Timber from the Roderick roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Roderick Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	19.7	0	24.8	24.8	0	0	0	0	0	0	0
Roadless MAcres		5.7	5.2	5.2	5.7	3.0	6.6	0	0	6.9	10.7	10.7	4.7	5.4	5.5	24.8
Recreation																
Prim./Semiprim.MRVDs		47	46	46	42	73	52	75	75	44	44	44	5.2	4.7	4.8	99
Semiprim. Motor.MRVDs		55	56	56	64	7	49	0	0	38	58	58	4.4	5.4	5.3	0
Timber																
Suitable MAcres		19.1	19.4	19.4	19.1	2.1	18.2	0	0	10.4	1.3	1.3	20.1	19.4	19.3	0
Volume (MMBF)	1	0	0	0	.3	0	26.0	0	0	0	0	0	6.0	0	0	0
	3	43.0	43.0	43.0	35.7	13.0	14.0	0	0	18.5	11.2	5.7	37.0	43.0	43.0	0
	5	30.0	30.0	30.0	35.4	0	48.0	0	0	28.0	4.2	2.2	53.0	79.0	39.0	0
Harvest Acres - MAcres	1	0	0	0	.5	0	1.4	0	0	0	0	0	.7	0	0	0
	3	3.6	3.6	3.6	2.8	.7	.6	0	0	.8	1.3	1.1	2.3	3.6	3.6	0
	5	1.4	1.4	1.4	1.9	0	2.5	0	0	1.5	.9	.4	2.7	5.4	1.9	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	3	0	10	0	0	0	0	0	5	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		50	50	50	83	6	72	0	0	28	12	12	72	77	53	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		5.7	5.2	5.2	5.7	22.7	6.6	24.8	24.8	6.9	10.7	10.7	4.7	5.4	5.5	24.8
Wildlife - Big Game																
Summer Range MAcres		8.1	8.3	8.3	8.1	1.0	8.4	0	0	.6	.7	.7	1.5	7.8	7.7	0
Winter Range MAcres		1.6	1.6	1.6	3.3	0	0	0	0	7.5	12.1	12.1	0	1.6	1.6	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Galena Roadless Area
677
PRIVATE
0 1 2 3 4
miles
Engle Pk
Goat Pk
Iron Meadow
Jumbo Pk
Baree Mtn
Green Mtn
Allen Pk
Himes Pass
Canyon Pk
Twenty Pk
20 Odd Pk
KANIKSU
Elk Mtn
STANDARD
CABINET RANGER STATION
NATIONAL
FOREST
Vermilion
Grouse Mtn
Trout Creek
Seven Point Mtn
Water Hill
Cataract Pk
Slide Rock Mtn
LIBBY
Silver Butte
Copper Ridge
Goat Ridge
Whitetail Ridge
Twenty Gulch
Bennet Gul
Sage Gul
Grays Gulch
Reader Gulch
Larch
BURLINGTON
NORTHERN

KOOTENAI NATIONAL FOREST

Galena - 01677 State: Montana

Gross Acres: 17,500 Net Acres: 15,500

I. Description

The area is located immediately south of the Cabinet Mountains Wilderness, separated from the Wilderness by the BPA transmission line. Major drainages include Galena Creek and Canyon Creek. Access to the area is from the Clark Fork Valley, the Vermilion Road, and the Silver Butte Road. Trails include one up Canyon Creek and a system along the ridgeline connecting Canyon Peak, Twenty Peak, and Twenty Odd Peak.

The area is primarily steep and rocky. Several named and unnamed tributaries and streams originate in this area; Galena Creek, two forks of Silver Butte, Canyon Creek, and Belgian, Roe, Berry, and Odd Gulches. Canyon Peak (6,326 feet) and Twenty Peak (6,171 feet) dominate the area. Vegetation is generally sparse due primarily to thin soils and extreme climatic conditions on the south slopes. Some timber potential exists in Canyon Creek.

Except for the private lands bordering the area on the southwest, the area surrounding Galena is relatively undeveloped.

The represented ecosystems are Western Ponderosa Forest and Douglas-fir Forest.

The area contains grizzly and elk. The views of the Clark Fork Valley are the area's other attractions.

Existing use is considered light (1,000 RVD's), consisting of hunting and berry picking.

II. Capability

A. Natural Integrity and Appearance

The natural integrity and appearance is generally intact with trails being the only manmade intrusion.

B. Opportunities for Solitude

Excellent opportunities for solitude exist in the Galena and Canyon Creek drainages and the Silver Butte drainage. Elsewhere, opportunities are moderate because of the proximity of the Clark Fork Valley.

C. Opportunities for Primitive Recreation

The elk herd provides excellent hunting in a primitive setting as well as primitive hiking experiences. Another challenging primitive recreational experience would include wildlife observation.

D. Other Features

Perhaps the most notable feature is the extensive upper elevation open ridges, providing hiking and viewing experiences.

E. Manageability and Boundaries

The Galena roadless area was identified in the RARE II inventory and at that time, the recommendation was a nonwilderness designation for the area. The area was subsequently allocated to primarily nondevelopmental uses.

Gross Acres	Net Acres	
17000	15000	RARE II inventory
-1400	-1400	Timber sale activity
+1900	+1900	Addition of the former Canyon Peak roadless area.
17500	15500	1983 roadless inventory

There are 2,000 acres of private land within the area boundary creating a potential nonconforming use situation. The lands have been identified as desireable to acquire because of the grizzly habitat.

The boundary is generally well-defined by roads on the west and east and by a BPA powerline corridor in the north. To the south, the boundary is less well-defined, determined by past logging patterns.

III. Availability

A. Significant Resource Potentials

1. Recreation

It is estimated that the area could provide about 4,700 RVD's of wilderness recreation per year. Current use is estimated to be 1,000 RVD's.

2. Wildlife

The area contains grizzly bear and excellent mule deer habitat. Big-game winter range management opportunities exist on the south slope of Twenty Odd Peak. Opportunities are available to delete this winter range area and still have a manageable wilderness boundary.

3. Timber

Approximately 6,000 acres are suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. Over 90% of this timberland will be difficult and costly to road and log, requiring cable or helicopter yarding methods.

4. Minerals

The mineral potential is considered moderate to high on the eastern boundary. Oil and gas potential is moderate.

B. Other Resources Galena 01677

1. Fisheries

There are no significant fisheries in this area.

2. Range

There are no livestock grazing allotments in the area and the grazing potential is transitory range.

3. Cultural Resource

There are two identified historic cultural sites in the area and no identified prehistoric sites. Based upon surveys in similar areas, the probability of prehistoric sites occurring is considered low.

4. Water

Average annual precipitation for the entire area is about 43 inches, depending on elevation. Runoff varies from about 13 to 23 inches, varying with elevation and aspect within the area. Except during occasional mid-winter runoff events, the water quality is considered excellent.

C. Resource Situation Galena 01677

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	17500			
Net Acres	Acres	15500			
Recreation					
Semiprim. Nonmotor.	RVDs	1000	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	6000	Existing	No.	0
Standing Volume	MMBF	61			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	0
Wildlife - T&E			High	Acres	2600
Grizzly Bear Habitat			Moderate	Acres	0
Situation 1	Acres	12500	Low	Acres	12900
Situation 2	Acres	1500	Mining Claims	No.	50
Situation 3	Acres	0	Oil & Gas Potential		
			Very High	Acres	0
Wildlife - Big Game (Elk, Deer)			High	Acres	0
			Moderate	Acres	15500
Summer Range Total	Acres	11800	Low	Acres	0
Winter Range Total	Acres	1600	Unknown	Acres	0
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	8
			Leased Acres	Acres	15500
Existing Facilities	No.	0			

D. Management Considerations Galena 01677

1. Land Use Authorizations

There are no special uses. There are existing oil & gas leases.

2. Fire

The area has had low fire occurrence (4 fires in the last 10 years). The fuels situation varies with areas of both sparse and thick ground fuels.

3. Insect and Disease

The insect and disease situation is stable with limited stands of susceptible lodgepole pine and no insect and disease activity occurring.

4. Non-Federal Lands

Two thousand acres of private land belong to Plum Creek Timberlands, Inc. (formerly known as Burlington Northern Timberlands, Inc.) and have been included because the proposed Forest Land Adjustment Plan identified these lands as "desir able to acquire" to protect grizzly habitat and roadless recreation opportunities. If these private lands become unavailable for acquisition, the roadless area boundary should be adjusted to exclude them.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is adjacent to the existing Cabinet Mountains Wilderness, separated only by the BPA powerline corridor. The nearest large population centers are Spokane, Washington, (130 miles) and Missoula, Montana, (140 miles).

B. Contribution to National Wilderness Preservation System

This area is representative of grizzly bear ecosystems which are uncommon in the existing wilderness system.

C. Public Interest

During the 1970 RARE I inventory, little support was expressed for a wilderness classification for the area. During the 1977 RARE II public review period, over 2,400 people commented on the Galena area, most of whom (60%) expressed support for wilderness. RARE II recommended non-wilderness. The Montana Wilderness Association's Alternative "W" (1978) recommended wilderness for the area.

V. Alternatives and Environmental Consequenses

A. 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.

Table 2. Management Emphasis by Alternative for Galena Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M ACRES)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	8.3	8.3	8.3	8.3	1.7	8.6	0	0	11.9	12.2	12.2	8.2	8.3	8.3	14.1
Nonwilderness (Some Development)															
Big Game Winter Range	1.3	1.3	1.3	1.3	.4	1.3	0	0	1.7	1.6	1.6	1.3	1.3	1.3	1.3
Nonwilderness (Developed)															
Timber Harvest With *Wildlife and/or* Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	5.9	5.9	5.9	5.9	0.7	5.6	0	0	1.9	1.6	1.6	6.0	5.9	5.9	0
Wilderness															
Recommended Wilderness	0	0	0	0	12.7	0	15.5	15.5	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	0	0	0	.1	0	0	0	0	0	0
Decade 5:	7.2	7.2	7.2	7.2	0.7	6.9	0	0	1.9	1.6	1.6	7.3	7.2	7.2	0
Roadless - Decade 1:	15.5	15.5	15.5	15.5	2.8	15.5	0	0	15.4	13.9	13.9	15.5	15.5	15.5	15.5
Decade 5:	8.3	8.3	8.3	8.3	2.1	8.6	0	0	13.6	13.9	13.9	8.2	8.3	8.3	15.5
Recommended Wilderness	0	0	0	0	12.7	0	15.5	15.5	0	0	0	0	0	0	0
Total Acres- Galena	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5

B. Impacts

Galena 01677

1. Designation: Wilderness
Management Emphasis: Wilderness

The Galena roadless area is recommended for wilderness in its entirety in Alternatives G and H, while Alternative E recommends 12,700 acres, 81% of the area, for 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 in the Galena, Canyon, and Silver Butte drainages. The quality roadless hunting and hiking opportunities will also be maintained.

There are approximately 6,000 acres of suitable timberland in the Galena area. The following chart displays the amount of suitable timberland that would be contained within proposed wilderness, in each alternative.

Acres of Suitable Timberland in Wilderness (thousands)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	4.9	0	6.0	6.0	0	0	0	0	0	0	0

Opportunities to manage the timber resource would be foregone in Alternatives G and H and to a lesser extent in Alternative E.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear from roading and related increases in human activity in the area. However, increases in forage through management activities such as burning and timber harvest would not occur.

Opportunities to enhance the winter range on the south facing slopes would be unavailable in a wildernress classification. Timber harvest in order to improve the 11,800 acres of summer range would also not occur. Wilderness, however, would provide security for big game by limiting access thereby reducing human activity.

Wilderness will restrict the exploration for, and removal of, mineral resources. This would affect approximately 2,600 acres of land rated high for mineral potential. Under the Wilderness Act, the land would be withdrawn from mineral entry unless valid mining claims exist. If development occurs on a valid mining claim, it could negate the wilderness designation. The existing oil and gas leases would be honored, however. This restriction can be considered significant in the high mineral potential areas but less significant with respect to oil and gas where the potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, and to a large extent in E, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Prescriptions: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every Alternative, except Alternative G and H, designate a portion of the Galena area to these management emphases. The following chart displays the percent designated to roadless management, by alternative.

Percent of Roadless Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
53	53	53	53	10	55	0	0	76	78	78	52	53	53	90

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated with dispersed recreation including hunting and fishing.

The roadless character within this emphasis will be maintained as well as the semiprimitive recreation opportunities. Old-growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game animals would be maintained.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. If mineral development occurs, it could negate the roadless designation.

Social and economic benefits are related primarily to semiprimitive recreation. Timber would not be available for harvest in this emphasis.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

All Alternatives, except G and H, designate a portion of the area to this emphasis, ranging from 400 acres to 1,700 acres. This emphasis is located primarily on slopes facing south into the Clark Fork valley. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphasis: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

Every alternative, except Alternatives G, H, and O, designated a portion of the area to these developmental management emphases. The following chart displays the percent of the area designated to development activities, by alternative.

Percent Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
38	38	38	38	5	36	0	0	12	10	10	38	38	38	0

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.

Only Alternative I scheduled any developmental activities in decade one, and then only 100 acres. (See Table 3 which follows this discussion.) By the third decade, however, harvest would be occurring in all alternatives except G, H and O. By the fifth decade, total miles of road in place would range from 4 to 23, depending on the alternative.

By the third decade, the naturalness of the area will be impacted by harvest activities, roads, and other evidence of human modifications in Alternatives A, B, C, D, F, L, M, and N. Activities conducted along the south-facing slopes would be highly visible from Highway 200. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude. In Alternatives E, I, J, and K, the impacted area would be less and the naturalness of the interior area would still be protected.

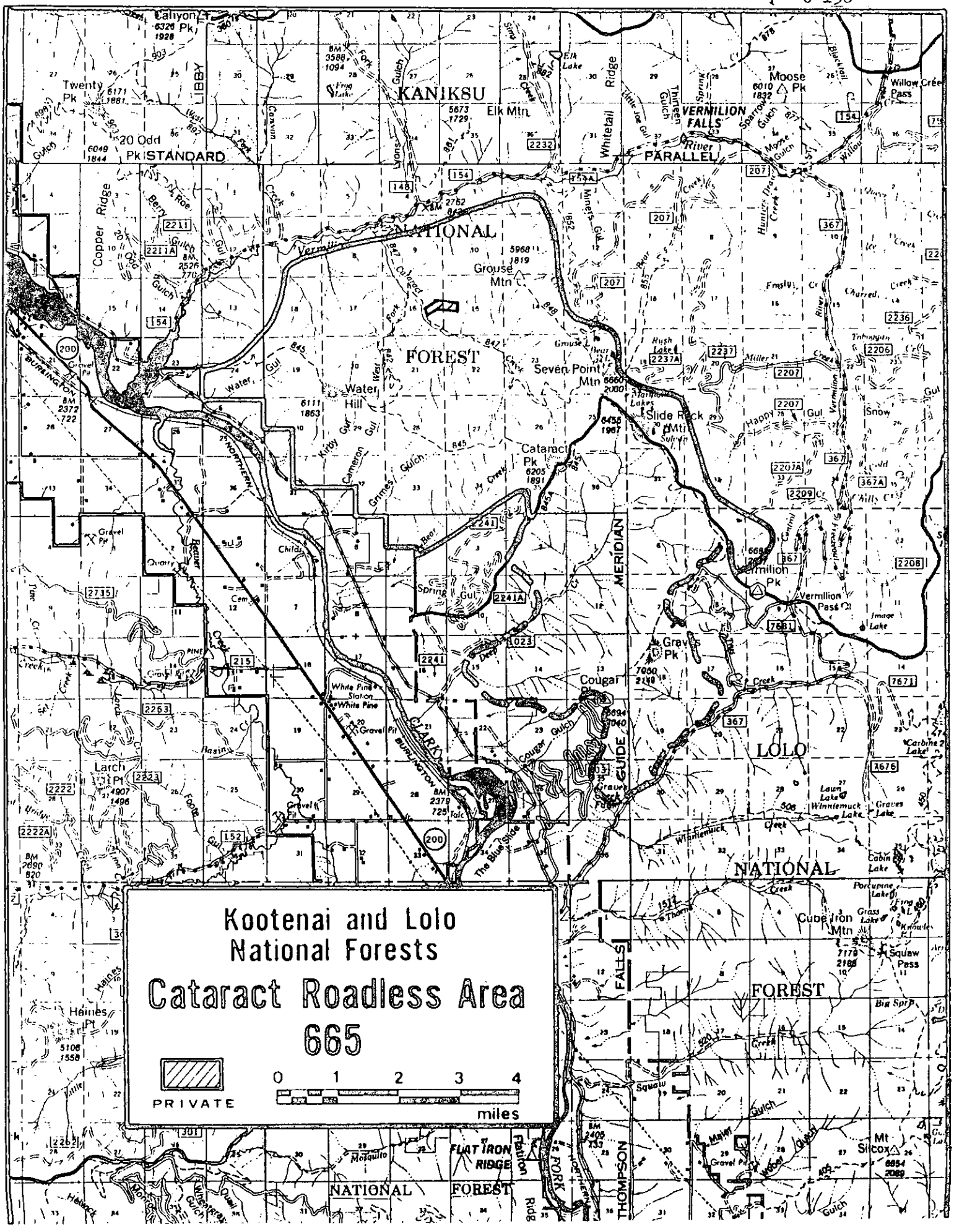
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Forests. Timber from the Galena roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Galena Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	0	0	12.3	0	15.5	15.5	0	0	0	0	0	0	0
Roadless MAcres		8.3	8.3	8.3	8.3	1.7	8.6	0	0	11.9	12.2	12.2	8.2	8.3	8.3	14.1
Recreation																
Prim./Semiprim.MRVDs		36	36	36	39	45	40	46	46	43	44	44	34	38	38	57
Semiprim. Motor.MRVDs		30	30	30	25	5	26	0	0	26	24	24	35	27	28	7
Timber																
Suitable MAcres		5.9	5.9	5.9	5.9	0.7	5.6	0	0	1.9	1.6	1.6	6.0	5.6	5.9	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	.06	0	0	0	0	0	0
	3	28.0	28.0	27.0	23.1	10.0	18.0	0	0	0	2.6	2.6	27.0	32.0	32.0	0
	5	5.0	5.0	5.0	39.4	0	14.0	0	0	5.2	0	0	4.0	21.0	5.0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	.1	0	0	0	0	0	0
	3	1.9	1.9	1.8	1.7	.7	1.5	0	0	0	.3	.3	1.5	2.1	2.1	0
	5	.2	.2	.2	2.0	0	.6	0	0	.3	0	0	.2	.9	.2	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		14	14	13	23	4	16	0	0	6	1	1	17	17	14	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		8.3	8.3	8.3	8.3	14.0	8.6	15.5	15.5	11.9	12.2	12.2	8.2	8.3	8.3	14.1
Wildlife - Big Game																
Summer Range MAcres		4.6	4.6	4.6	3.6	.2	3.8	0	0	0	0	0	5.6	4.0	4.6	0
Winter Range MAcres		1.3	1.3	1.3	1.3	0.4	1.3	0	0	1.6	1.6	1.6	1.3	1.3	1.3	1.3
Minerals																
Hardrock-Very High/ High Potential - Accessible MAcres		1.8	1.8	1.8	1.8	0	.4	0	0	.06	.06	.06	.4	1.8	1.8	0
Oil & Gas-Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														



Kootenai and Lolo National Forests

Cataract Roadless Area 665

Cataract - 01665 State: Montana

Total Gross Acres: 27,700 Total Net Acres: 27,600

Kootenai --------- 17,800 Kootenai ---------- 17,700
Lolo ---------- 9,900 Lolo ---------- 9,900

I. Description

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 ridgeline trail between Cataract Peak and Water Hill, and a ridgeline trail from Grouse Mountain to Seven Point Lakes.

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 Kootenai portion 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, whitepine, 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 lower gradient streams which attracts current use.

The area is presently used for hunting, fishing, and hiking and is characterized as light (1,000 RVD's).

II. Capability

A. Natural Integrity and Appearance

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 Vermilion River road 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 faces 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 crosscountry 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 valley.

E. 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.

	Gross Acres	*Net Acres*	
Total Acres	28100	28000	1979 RARE II EIS
Kootenai Acres	18200	18100	
Lolo Acres	9900	9900	
Total Acres	27700	27600	1983 Roadless Inv.
Kootenai Acres	17800	17700	
Lolo Acres	9900	9900	

The 100 acre patented mining claim in Cataract Creek and the existing oil & gas leases are the major nonconforming uses 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.

III. Availability

A. 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 16,700 acres of suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. Over 90% of this timberland is located on slopes in excess of 55% . 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 or very high mineral potential in both portions of the area.

There are a total of 10 oil and gas leases on all portions of the area. The oil and gas potential is considered moderate.

B. 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 8-45 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.

C. Resource Situation Cataract 01665

Table 1

Category	Unit	Kootenai	Lolo	Total
Gross Acres	Acres	17800	9900	27700
Net Acres	Acres	17700	9900	27600
Recreation				
Semiprim. Nonmotor.	RVDs	1000	7400	8400
Roaded Natural	RVDs	0	24750	24750
Range				
Suitable Acres	Acres	0	0	0
AUMs	AUMs	0	0	0
Timber				
Suitable Acres	Acres	9900	6800	16700
Standing Volume	MMBF	59	51	110
Corridors				
Existing & Potential	No.	0	0	0
Wildlife - T&E				
Grizzly Bear Habitat				
Situation 1	Acres	17200	8000	25200
Situation 2	Acres	-	-	-
Situation 3	Acres	-	-	-
Wildlife - Big Game (Elk, Deer)				
Summer Range Total	Acres	4500		4500
Winter Range Total	Acres	1600	300	1900
Special Uses Existing	No.	0	0	0
Existing Facilities	No.	0	0	0
Significant Fisheries				
Stream Miles	Miles	4	2	6
Stream Habitat	Acres	-	2	2
Lakes	No.	-	-	-
Lake Habitat	Acres	-	-	-
Water Developments				
Existing	No.	0	1	1
Minerals				
Hardrock Potential				
Very High	Acres	0	9300	9300
High	Acres	800	600	1400
Moderate	Acres	400	-	400
Low	Acres	16200	-	16200
Mining Claims	No.	75	58	133
Oil & Gas Potential				
Very High	Acres	0	0	0
High	Acres	0	0	0
Moderate	Acres	17700	9900	27600
Low	Acres	0	0	0
Unknown	Acres	0	0	0
Oil & Gas Leases				
Leases	No.	6	4	10
Leased Acres -	Acres	17700	9900	27600

D. Management Considerations

1. Land Use Authorizations

There are no special uses. There are existing oil & gas leases.

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.

IV. Need

A. 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 18,000 RVD's per year and this use is beginning to increase rapidly.

The Cataract area is approximately 125 miles fromm both Missoula, Montana and the Spokane, Washington areas.

B. 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.

C. 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. Analysis revealed a divided opinion; 54% opposed and 43% favored wilderness classification. RARE II recommended non-wilderness. The Montana Wilderness Association's Alternative "W" (1978) recommended that the area be wilderness.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Cataract Roadless Area, Kootenai and Lolo National Forests.

	ALTERNATIVES (M Acres)														
Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Lolo National Forest	e	c	c	c	f	c	b	g	a	d	d	e	e	e	c
MANAGEMENT EMPHASIS															
Nonwilderness (Roadless)															
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
Nonwilderness (Some Dev.)															
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
Nonwilderness (Developed)															
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
Summary of Management Emphasis:															
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-Cataract	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

B. Impacts

1. Designation: Wilderness
Management Emphasis: Wilderness

The Cataract roadless area is recommended for wilderness in its entirety in Alternative H. Alternatives E and G recommend 12,300 (44%) and 17,700 acres (64%) of wilderness respectively. The wilderness recommendations in Alternatives E and G are located on the Kootenai portion of the area. 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 will be maintained as will the high degree of solitude offered within the Cataract drainage. The quality roadless hunting opportunities available in the area will also be protected.

There are about 16,700 acres of suitable timber lands within the area, with about 9900 acres located in the Kootenai portion and 6800 acres in the Lolo. As can be seen in the following chart, all 16,700 acres of suitable timberland would be within designated wilderness in Alternative H, about 9900 acres would be located in wilderness in Alternative G, and about 8200 acres would be located in wilderness in Alternative E.

Acres of Suitable Timberland in Wilderness (thousands)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	8.2	0	9.9	16.7	0	0	0	0	0	0	0

Opportunities to manage the timber resource would be foregone entirely in Alternative H and to a lesser extent in 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 1900 acres) with planned ignitions would be foregone. Likewise, opportunities to create openings in big game summer range would be prohibited.

Wilderness will restrict the exploration for, and removal of, mineral resources. This affects about 10,700 acres of land considered high in mineral potential. Under the Wilderness Act, the land would be withdrawn from mineral entry if no valid mining claims exist. The existing oil and gas leases would be honored, however. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing. If valid claims existed and development occurred, the wilderness designation could be negated.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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. Semi-primitive recreation activities such as hunting in a roadless setting would continue. Timberland 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.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive/Semiprimitive Nonmotorized Recreation, Viewing, Minimum Use Areas

As can be seen in the following chart, all alternatives, except Alternative H, contain roadless designations. 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.

Percent of Roadless Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
71	51	51	51	42	49	27	0	56	78	78	63	71	71	74

The roadless character within these emphases will be maintained as well as semi-primitive recreation opportunities. Old growth timber 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 designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. A mineral development could negate a roadless designation.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. Designation: Nonwilderness (Some Development)
Management Emphasis: Big Game Winter Range

About 3% of the area, or 700 acres, is designated Big Game Winter Range in most Alternatives except J and K where 8% of the area, or 2,100 acres are designated, and in Alternatives G and H where no winter range is designated. 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.

4. Designation: Nonwilderness (Developed)
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 these emphases. They range from 31% of the area in Alternatives B and C, 25% in Alternative A, 10% in Alternative E, to 7% 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.

No timber harvest or road building is scheduled to take place during the first decade. (See Table 3 at the end of this discussion.) In all alternatives except H, development would occur by the third decade with about 1 to 2 MMBF annual harvest, depending on the alternative. Anywhere from 1 to 20 miles of road would be required to harvest this amount, again depending on the alternative.

The wilderness resource and roadless character of the area would be maintained in the first ten years under all alternatives but, by the fifth decade, developmental activities would alter the naturalness of the area. Harvest units, roads, and other evidence of development would be present to modify the landscape. This evidence would be highly visible from Highway 200. Roading precludes 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but should be addressed by the efforts to mitigate the impacts.

Table 3, Part One. Decadal Outputs by Alternative for Cataract Roadless Area, Kootenai and Lolo National Forests.

ALTERNATIVES

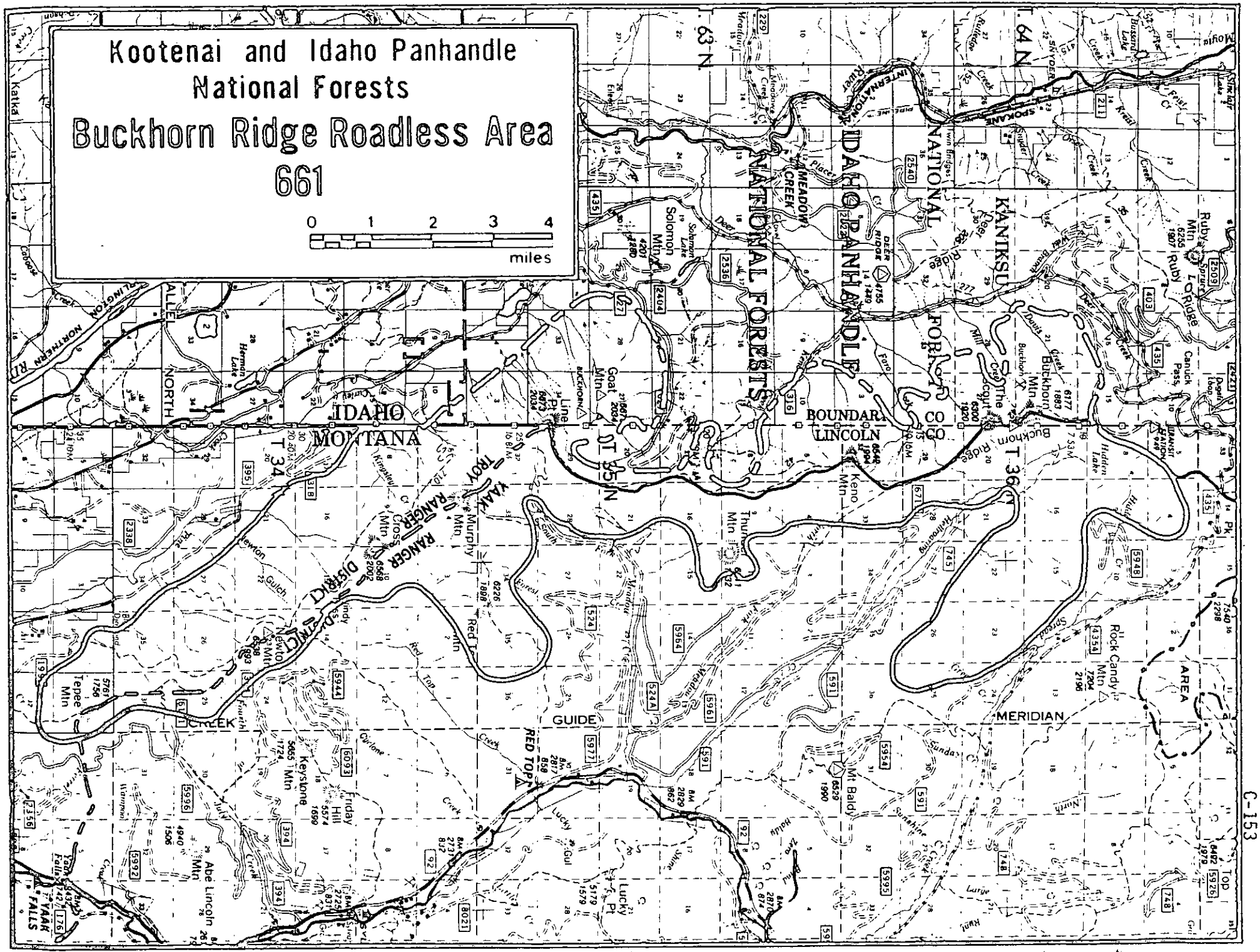
Kootenai National Forest Lolo National Forest	A e	B c	C c	D c	E f	F c	G b	H g	I a	J d	K d	L e	M e	N e	O c
OUTPUT CATEGORIES DECADE															
Rec. Wilderness MAcres															
Kootenai	0	0	0	0	12.3	0	17.7	17.7	0	0	0	0	0	0	0
Lolo	0	0	0	0	0	0	0	9.9	0	0	0	0	0	0	0
Total	0	0	0	0	12.3	0	17.7	27.6	0	0	0	0	0	0	0
Roadless MAcres															
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	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
Total	19.4	14.0	14.0	14.1	11.2	13.5	6.7	0	14.9	21.4	21.4	17.0	19.2	19.4	20.4
Recreation															
Prim./Semiprim.MRVDs															
Kootenai	43	50	42	47	52	50	53	53	33	34	34	31	44	41	68
Lolo*	27	16	13	15	25	17	20	21	3	19	19	25	29	26	14
Total	70	66	55	62	77	67	73	74	36	53	53	56	73	67	82
Timber															
Suitable MAcres															
Kootenai	5.2	6.4	6.4	6.3	3.9	6.8	0	0	3.3	1.8	1.8	7.6	4.9	5.2	0
Lolo*	1.9	6.4	6.4	6.4	1.9	6.4	3.1	0	1.9	6.4	6.4	1.9	1.9	1.9	6.4
Total	7.1	12.8	12.8	12.7	5.8	13.2	3.1	0	5.5	8.2	8.2	9.5	6.8	7.1	6.4
Volume (MMBF)															
Kootenai 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lolo*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kootenai 3	1.5	10.0	10.0	16.0	1.5	9.0	0	0	0	0	0	9.0	10.0	22.0	0
Lolo*	7.7	24.0	24.0	24.0	7.7	24.0	12.0	0	7.7	24.0	24.0	7.7	7.7	7.7	24.0
Kootenai 5	0	0	0	26.0	0	3.0	0	0	22.9	0	0	20.0	5.0	0	0
Lolo*	7.7	24.0	24.0	24.0	7.7	24.0	12.0	0	7.7	24.0	24.0	7.7	7.7	7.7	24.0
Harvest Acres - MAcres															
Kootenai 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lolo*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kootenai 3	.1	.5	.5	1.0	.1	.4	0	0	0	0	0	.4	.5	1.3	0
Lolo*	1.0	3.0	3.0	3.0	1.0	3.0	2.0	0	1.0	3.0	3.0	1.0	1.0	1.0	3.0
Kootenai 5	0	0	0	1.3	0	.1	0	0	1.3	0	0	1.6	.2	0	0
Lolo*	1.0	3.0	3.0	3.0	1.0	3.0	2.0	0	1.0	3.0	3.0	1.0	1.0	1.0	3.0

* Estimated Outputs

Table 3, Part Two. Decadal Outputs by Alternative for Cataract Roadless Area, Kootenai and Lolo National Forests.

	ALTERNATIVES														
Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Lolo National Forest	e	c	c	c	f	c	b	g	a	d	d	e	e	e	c
OUTPUT CATEGORIES															
Roads															
Roads Constructed First Decade - Miles															
Kootenai	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lolo*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles															
Kootenai	1	1	1	21	1	15	0	0	2	0	0	16	2	2	0
Lolo*	10	35	35	35	10	35	17	0	10	35	35	10	10	10	35
Total	11	36	36	56	11	50	17	0	12	35	35	26	12	12	35
Wildlife - T&E															
Grizzly Bear Habitat MAcres (w/o activity)															
Kootenai	11.8	10.6	10.6	10.7	15.9	10.1	17.7	17.7	13.6	13.8	13.8	9.4	11.6	11.8	17.0
Lolo*	7.6	3.4	3.4	3.4	7.6	3.4	6.7	9.9	1.3	7.6	7.6	7.6	7.6	7.6	3.4
Total	19.4	14.0	14.0	14.1	23.5	13.5	24.4	27.6	14.9	21.4	21.4	17.0	19.2	19.4	20.4
Wildlife - Big Game															
Summer Range MAcres															
Kootenai	3.6	3.9	3.9	3.5	1.0	3.6	0	0	0	0	0	6.7	1.6	1.6	0
Lolo*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3.6	3.9	3.9	3.5	1.0	3.6	0	0	0	0	0	6.7	1.6	1.6	0
Winter Range MAcres															
Kootenai	.7	.7	.7	.7	.7	.7	0	0	.8	2.1	2.1	.7	.7	.7	.7
Lolo*	.3	.1	.1	.1	.3	.1	.6	0	.3	.1	.1	.3	.3	.3	.1
Total	1.0	.8	.8	.8	1.0	.8	.6	0	1.1	2.2	2.2	1.0	1.0	1.0	.8
Minerals															
Hardrock-Very High/ High Potential - Accessible MAcres															
Kootenai	.8	.2	.2	.2	0	.2	0	0	.01	.01	.01	.2	.2	.8	0
Lolo*	9.6	8.4	8.4	8.4	8.4	8.4	8.4	0	9.6	8.4	8.4	8.4	8.4	8.4	8.4
Total	10.4	8.6	8.6	8.6	8.4	8.6	8.4	0	9.6	8.4	8.4	8.6	8.6	9.2	8.4
Oil & Gas-Very High/ High Potential - Accessible MAcres															
Kootenai		NOT APPLICABLE IN THIS ROADLESS AREA													
Lolo															
Total															

* Estimated Outputs


Kootenai and Idaho Panhandle
National Forests
Buckhorn Ridge Roadless Area
661
0 1 2 3 4
miles
IDAHO
MONTANA
BOUNDARY
LINCOLN
CO
CO
IDAHO PANHANDLE NATIONAL FORESTS
KANIKSU NATIONAL FOREST
T. 64 N.
T. 63 N.
T. 65 N.
T. 34 N.
T. 36 N.
Buckhorn Mtn
Buckhorn Ridge
Goat Mtn
Solomon Mtn
Keno Mtn
Thunder Mtn
Murphy Mtn
Cross Mtn
Newton Mtn
Tepee Mtn
Keystone Mtn
Friday Hill
Abe Lincoln Mtn
Lucky Pt
Mt Baldy
Rock Candy Mtn
Ruby Mtn
Canuck Pass
Herman Lake
Hudson Lake
Solomon Lake
Meadow Creek
Deer Ridge
Red Top
Guide
Meridian
Yaak Falls
Yaak Ranger District
Troy Ranger District
Area

KOOTENAI & IDAHO PANHANDLE NATIONAL FORESTS

Buckhorn Ridge 01661		State: Montana & Idaho	
Total Gross Acres:	31,600	Total Net Acres:	31,600
Kootenai ----------	22,000	Kootenai ----------	22,000
Idaho Panhandle -------	9,600	Idaho Panhandle ---	9,600

I. Description

The Buckhorn Ridge roadless area is located along the Idaho-Montana border, along the divide between the Moyie and Yaak Rivers, in the northwest corner of the Forest. Part of the area (about 9,600 acres), extends into the Idaho Panhandle National Forest (see map). The southern section is formed by Newton Ridge while the northern section is formed by the Spread Creek Road, which divides this roadless area from the Northwest Peaks roadless area to the north. Access is available from several roads ending in trails off of the Yaak Road (No. 508), particularly Pine Creek, Fourth of July Creek, Meadow Creek, Hellroaring Creek, and Spread Creek.

The geography and topography are characterized by a high elevation ridgeline (6,500 feet elevation) with broad, open, grassy sideslopes and timbered basins divided by spur ridges. The area includes headwater areas for Pine, Meadow, Hellroaring, Red Top and Spread Creeks of the Kootenai National Forest and Deer Creek of the Idaho Panhandle.

The area is surrounded by some developments, especially roads and clearcuts.

The area contains representatives of the Cedar Hemlock Pine Forest and Western Spruce Fir Forest ecosystems.

The area contains grizzly habitat, though the extent and use is not known. The ridgetop hiking experience is another of the area's attractions.

The area presently receives recreation use in the form of hunting, cross country skiing, hiking, snowmobiling and nature photography. Approximately 600 RVD's annually are associated with the area.

II. Capability

A. Natural Integrity and Appearance

There are many miles of recreation trails within the Kootenai portion of the area which constitutes the only significant manmade feature affecting the natural integrity and appearance. On the Idaho Panhandle side, however, signs of past fire and subsequent grazing and salvage harvest are visible. Numerous mining remains, tailings, adits, and cabins are also present.

B. Opportunities for Solitude

Opportunities for solitude vary throughout the area. There are many places along the trails and within the ridgetop meadows where roads and clearcuts are highly visible just outside the area boundary. These developed areas receive very little use however, so the loss of solitude is primarily just the visual impacts themselves. Most of the side draws and upper spruce basins remaining in the area are well-timbered, producing good solitude. Sounds along the Deer Creek road on the Idaho Panhandle side can be heard from the ridgetops.

C. Primitive Recreation Opportunities

As one of the longer stretches of open grassy ridge on the Forests, the Buckhorn Ridge area provides many opportunities for primitive recreation. It now receives use from archery and rifle hunters, hikers, skiers, and photographers.

The most unique challenge Buckhorn Ridge offers is its relatively great length in terms of hiking or skiing. Hunting big game animals including black bear, is also considered a challenge by many.

D. Other Features

Special features include grizzly bears and associated subalpine habitats.

There is some historical evidence of old lookout stations on Newton and Red Top Mountains.

2. *Manageability and Boundaries*

The Buckhorn Ridge area was inventoried during RARE II. The area was recommended for a nonwilderness designation but essentially managed as roadless in the Unit Plan designations. As such, the area has been maintained and, in fact, enlarged with the inclusion of additional roadless acres.

	Gross Acres	Net Acres	
Total Acres	8500	8500	1979 RARE II EIS
Kootenai Acres	3000	3000	
Idaho Panhandle Acres	5500	5500	
Total Acres	31600	31600	1983 Roadless Inven
Kootenai Acres	22000	22000	
Idaho Panhandle Acres	9600	9600	

The nonconforming uses are the existing oil & gas leases.

The Buckhorn Ridge roadless area has a long boundary relative to its size, due to a long serpentine configuration. The manageability of its boundary is, therefore, less than ideal, although for the most part, the boundary consists of clearcuts and road edges which are identifiable and recognizable on the ground. There is little that could be done to improve this boundary that would not also appreciably affect the size of the roadless area.

II. Availability

Buckhorn Ridge 01661

A. Significant Resource Potentials

1. Recreation

About 9,450 RVD's of wilderness recreation per year could be provided. The area around Hidden Lake, in the northern part of the area, receives some snowmobile use. Current total recreation use is estimated to be 600 RVD's per year.

2. Wildlife and Fish

The area contains grizzly habitat, mule deer and elk summer range, and some moose habitat. The area around Newton Ridge contains winter range on the lower south-facing slopes.

The fish resource is supported by the headwaters of Hellroaring, Spread, North Fork Meadow, South Fork Meadow, and Red Top Creeks and are all tributaries to the Yaak River which supports rainbow, cutthroat, and brook trout. Pine Creek, a brook trout stream, has numerous tributaries within the area boundary. Hidden Lake, a cutthroat fishery, is also in this roadless area.

3. Minerals

Mining claims are present on both the Kootenai and Idaho Panhandle portions of the area although the potential is rated as moderate to low. There are seven oil and gas leases and the oil and gas potential is considered moderate.

4. Timber

There are 15,000 acres of timberland. Most of this timberland is located on slopes greater than 40% (half is located on slopes greater than 55%). Road construction will be difficult and costly. Logging will require the use of cable and helicopter yarding methods.

B. Other Resources

1. Cultural Resource

Cultural resource potential for prehistoric sites is considered low, based on surveys done in similar areas. Known historic sites include four former lookouts, a Forst Service work campsite, a guard station on Pine Creek, and several mining adits.

2. Water

Mean annual precipitation for the area varies between 65 and 80 inches, depending on elevation. Runoff varies between 45-65 inches, varying by elevation, with most of this amount appearing as streamflow in April-June. The water quality is rated high, even during the peak runoff periods.

C. Resource Situation Buckhorn Ridge 01661

Table 1

Category	Unit	Kootenai	Idaho Panhandle	Total
Gross Acres	Acres	22000	9600	31600
Net Acres	Acres	22000	9600	31600
Recreation				
Semiprim. Nonmotor.	RVDs	600	4	604
Roaded Natural			37	37
Range				
Suitable Acres	Acres	0	0	0
AUMs	AUMs	0	0	0
Timber				
Tentative Suitable	Acres	10600	4400	15000
Standing Volume	MMBF	69	11	80
Corridors				
Existing & Potential	No.	0	0	0
Wildlife - T&E				
Grizzly Bear Habitat				
Situation 1	Acres	22000	5700	27700
Situation 2	Acres	0	3800	3800
Situation 3	Acres	0		
Wildlife - Big Game (Elk, Deer)				
Summer Range Total	Acres	14000	-	14000
Winter Range Total	Acres	1300	-	1300
Special Uses Existing	No.	0	0	0
Existing Facilities	No.	0	0	0
Significant Fisheries				
Stream Miles	Miles	0	0	0
Stream Habitat	Acres	0	0	0
Lakes	No.	0	0	0
Lake Habitat	Acres	0	0	0
Water Developments				
Existing	No.	0	0	0
Minerals				
Hardrock Potential				
Very High	Acres	-	-	-
High	Acres	-	-	-
Moderate	Acres	300	-	300
Low	Acres	21700	9600	31300
Mining Claims	No.	10	45	55
Oil & Gas Potential				
Very High	Acres	-	-	-
High	Acres	-	-	-
Moderate	Acres	22000	9600	31600
Low	Acres	-	-	-
Unknown	Acres	-	-	-
Oil & Gas Leases				
Leases	No.	7	-	7
Leased Acres	Acres	5700	-	5700

D. Management Considerations

1. Land Use Authorizations

There are no special uses but some oil & gas leases exist.

2. Fire

The area has had moderate fire occurrences. The fuels situation is predominantly dense conifer with downed woody materials as ground fuels on the lower slopes and light ground fuels on the upper slopes and barren ridges.

3. Insect and Disease

Except for some patches of mature lodgepole in the upper reaches of Meadow Creek and Red Top Creek, the insect and disease situation is stable with no activity presently occurring.

4. Non-Federal Lands

There are no private lands.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The Buckhorn Ridge roadless area is approximately 25 air miles from the Cabinet Mountains Wilderness which is receiving increasingly heavy use in addition to minerals exploration.

Buckhorn Ridge is one of the closest Kootenai roadless areas to Coeur d'Alene, Idaho and Spokane, Washington metropolitan areas.

B. 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. In existing wilderness within the immediate area, there is very little representation of the gentle, grassy, and extensive ridges found in the Buckhorn area. Most terrain in existing wilderness is steep, rocky, barren ridges or heavily covered with tree growth.

C. Public Interest

Previous public input on the Buckhorn area was obtained from the RARE II study and the Rock Candy-Lick Mountain Unit Plan during the Unit Planning process. Over 2100 respondents addressed the Buckhorn area during the RARE II public review period with about 89% opposed to wilderness for the area. RARE II recommended non-wilderness.

There has not been any concerted effort by any major proponent of wilderness towards the Buckhorn Ridge area specifically.

The area is presently used for roadless forms of recreation, hunting, nature photography, hiking, skiing, etc.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Buckhorn Ridge Roadless Area , Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES (M Acres)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Kootenai National Forest	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
Idaho Panhandle National For.															
MANAGEMENT EMPHASIS															
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas															
Kootenai:	14.5	14.6	14.3	14.1	14.7	14.9	0	0	15.1	18.2	18.2	11.4	14.3	14.2	22.0
Idaho Panhandle NF:	5.9	5.9	5.9	5.8	5.5	5.9	0	0	6.8	6.6	6.6	5.9	5.9	5.9	8.6
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems															
Kootenai:	7.5	7.4	7.8	7.9	7.3	7.1	0	0	6.8	3.8	3.8	10.6	7.8	7.5	0
Idaho Panhandle NF:	3.7	3.7	3.7	3.8	4.1	3.7	0	0	2.8	3.0	2.9	3.7	3.7	3.7	1.0
Wilderness															
Recommended Wilderness															
Kootenai	0	0	0	0	0	0	22.0	22.0	0	0	0	0	0	0	0
Idaho Panhandle	0	0	0	0	0	0	9.6	9.6	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:															
Kootenai:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho Panhandle NF:	2.9	3.9	3.2	3.5	2.2	2.9	0	0	1.0	.1	.2	2.9	2.9	2.9	.9
Decade 5:															
Kootenai:	7.5	7.4	7.8	7.9	7.3	0	0	0	6.8	3.8	3.8	10.6	7.8	7.5	0
Idaho Panhandle NF:	6.8	7.1	7.4	7.0	7.3	6.8	0	0	3.4	2.6	3.5	6.8	6.8	6.8	3.6
Roadless - Decade 1:															
Kootenai:	22.0	22.0	22.0	22.0	22.0	22.0	0	0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Idaho Panhandle NF:	6.7	5.7	6.4	6.1	7.4	6.7	0	0	8.6	9.5	9.4	6.7	6.7	6.7	8.7
Decade 5:															
Kootenai:	14.5	14.6	14.3	14.1	14.7	22.0	0	0	15.1	18.2	18.2	11.4	14.3	14.5	22.0
Idaho Panhandle NF:	2.8	2.5	2.2	2.6	2.3	2.8	0	0	6.2	7.0	6.1	0	0	0	6.0
Recommended Wilderness															
Kootenai	0	0	0	0	0	0	22.0	22.0	0	0	0	0	0	0	0
Idaho Panhandle NF	0	0	0	0	0	0	9.6	9.6	0	0	0	0	0	0	0
Total Acres - Kootenai	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Acres - Idaho Panhandle	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Total Acres - Buckhorn Ridge	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6

B. Impacts Buckhorn Ridge 01661

1. Designation: Wilderness
Management Emphasis: Wilderness

The Buckhorn Ridge area is designated wilderness in its entirety in Alternatives G and H (both Kootenai and Idaho portions). No other alternative recommends wilderness for the area. 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 primitive characteristics of the area. The naturalness of the area will be maintained along with the opportunities for solitude in the upper draws and spruce basins. Primitive recreation opportunities would be maximized as well as protection of old-growth timber and associated wildlife habitat.

There are about 15,000 acres of suitable timberland within the area. The following chart displays the suitable acres that would be included in proposed wilderness.

Acres of Suitable Timberland in Wilderness (thousands)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	15	15	0	0	0	0	0	0	0

Opportunities to manage the timber resource would be foregone in Alternatives G and H, as would opportunites to manage big game summer range habitat through tree removal.

Grizzly bear habitat (Cabinet-Yaak Ecosystem; Situation 1 - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear from roading and related increases in human activity. However, increases in forage through timber harvest or burning would not occur.

Wilderness restricts opportunity for the exploration and development of the mineral and oil and gas resources. Under the Wilderness Act, the land would be withdrawn from mineral entry for mining since no valid mining claims exist. The entire areas is considered to have moderate oil and gas potential, with 7 leases. The existing oil and gas leases would be honored. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 on the project.

Social and economic effects would center around the resource values of primitive recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supportive of this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
   Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

The amount of nonwilderness/roadless management in the Buckhorn Ridge roadless area is dependent on the goals and objectives for a particular alternative. The following chart shows the percent designated roadless management in each alternative.

Percent of Roadless Area Designated Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
64	64	63	62	63	65	0	0	69	78	78	54	63	64	96

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation, hiking, and hunting, along the ridgeline.

The roadless character within these emphases will be maintained as well as the semi-primitive recreation opportunities. Old-growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game would be maintained.

Like wilderness, roadless designations require stiffer requirements for conducting activities, requirements that are designed to protect the qualities inherent in a roadless designation. Restrictions on access and mode of travel are major limitations for conducting activities, often making the activity more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities.

3. **Designation: Nonwilderness (Developed)**
   Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use Due to Steep Slopes or Regeneration Problems.

The following chart displays the percent of the Buckhorn Ridge area allocated to these emphases in each alternative.

Percent of Area Designated to Developmental Activities
By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
35	35	36	37	36	34	0	0	30	21	21	45	36	35	4

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.

Timber harvest during the first decade would occur primarily on the Idaho Panhandle portion of the area at the rate of about 1 MMBF per year. (See Table 3 which follows this discussion). About 15 miles of road would be constructed during the first decade. No harvest would occur on the Kootenai portion until the third decade. By the fifth decade, combined timber production could reach about 5.0 MMBF per year in some alternatives, with a road system totalling about 20 miles. Most harvest would occur in big game summer range habitat which requires coordination with wildlife needs. (See Table 3).

The naturalness of the area will be impacted by harvest units, roads, and other evidence of human modifications. Activities conducted along the south slopes of Newton Ridge would be highly visible from U.S. Highway 2. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big-game cover and security. Activities conducted in big-game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long-term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Forests. Timber from the Buckhorn Ridge roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3, Part One. Decadal Outputs by Alternative for Buckhorn Ridge Roadless Area, Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES

Kootenai National Forest Idaho Panhandle Nat. For.	A 2	B 4	C 6	D 1	E 5	F 2	G 10	H 3	I 8	J 11	K 12	L 2	M 2	N 2	O 9
OUTPUT CATEGORY DECADE															
Rec. Wilderness MAcres															
Kootenai	0	0	0	0	0	0	22.0	22.0	0	0	0	0	0	0	0
Idaho Panhandle	0	0	0	0	0	0	9.6	9.6	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	31.6	31.6	0	0	0	0	0	0	0
Roadless MAcres															
Kootenai	14.5	14.6	14.3	14.1	14.7	14.9	0	0	15.1	18.2	18.2	11.4	14.3	14.5	22.0
Idaho Panhandle	5.9	5.9	5.9	5.8	5.5	5.9	0	0	6.8	6.8	6.8	5.9	5.9	5.9	8.6
Total	20.4	20.5	20.2	19.9	20.2	20.8	0	0	21.9	25.0	25.0	17.3	20.2	20.4	30.6
Recreation															
Prim./Semiprim.MRVDs															
Kootenai	63	63	65	67	62	67	66	66	78	82	82	51	66	66	88
Idaho Panhandle*	3	3	3	3	3	3	5	5	3	3	3	3	3	3	3
Total	66	66	68	70	65	70	71	71	81	85	85	54	69	69	91
Semiprim. Motor.MRVDs															
Kootenai	29	30	26	22	32	23	0	0	3	4	4	44	24	24	0
Idaho Panhandle*	2	2	2	2	2	2	0	0	2	2	2	2	2	2	2
Total	31	32	28	24	34	25	0	0	5	6	6	46	26	26	2
Timber															
Suitable MAcres															
Kootenai	7.5	7.4	7.7	7.9	7.3	7.1	0	0	6.8	3.8	3.8	10.6	7.7	7.5	0
Idaho Panhandle*	3.7	3.7	3.7	3.8	4.1	3.7	0	0	2.8	3.0	2.9	3.7	3.7	3.7	1.0
Total	11.2	11.1	11.4	11.7	11.4	10.8	0	0	9.6	6.8	6.7	14.3	11.4	11.2	1.0
Volume (MMBF)															
Kootenai 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho Panhandle*	5.0	10.0	10.0	10.0	5.0	5.0	0	0	3.0	1.0	2.0	5.0	5.0	5.0	1.0
Kootenai 3	0	0	0	2.1	0	0	0	0	2.0	3.0	3.0	0	0	0	0
Idaho Panhandle*	5.0	10.0	10.0	10.0	5.0	5.0	0	0	3.0	1.0	2.0	5.0	5.0	5.0	1.0
Kootenai 5	.3	.3	.3	51.3	.3	0	0	0	50.1	.3	.4	31.0	.3	.3	0
Idaho Panhandle*	5.0	10.0	10.0	10.0	5.0	5.0	0	0	3.0	1.0	2.0	5.0	5.0	5.0	1.0
Harvest Acres - MAcres															
Kootenai 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho Panhandle*	.4	.7	.7	.7	.2	.4	0	0	.2	.1	.2	.4	.4	.4	.1
Kootenai 3	0	0	0	.3	0	0	0	0	.3	.4	.4	0	0	0	0
Idaho Panhandle*	.4	.7	.7	.7	.2	.4	0	0	.2	.1	.2	.4	.4	.4	.1
Kootenai 5	.1	.1	.1	2.9	.1	0	0	0	2.8	.1	.1	1.6	.1	.1	0
Idaho Panhandle*	.4	.7	.7	.7	.2	.4	0	0	.2	.1	.2	.4	.4	.4	.1

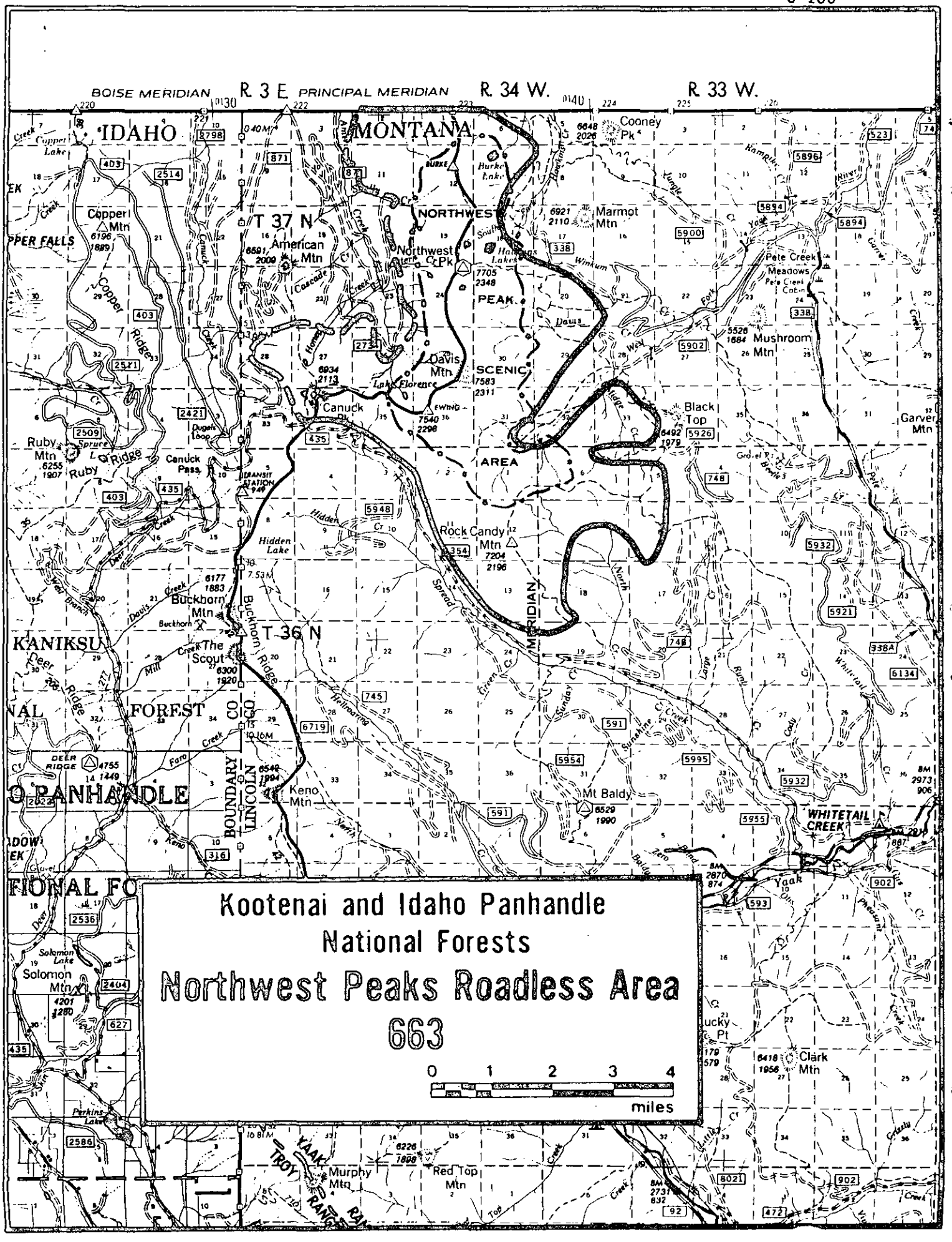
* Estimated outputs

Table 3, Part Two. Decadal Outputs by Alternative for Buckhorn Ridge Roadless Area, Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES

Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
OUTPUT CATEGORY															
Roads															
Roads Constructed First Decade - Miles															
Kootenai	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho Panhandle*	2	5	5	5	5	2	0	0	5	4	4	2	2	2	4
Total	2	5	5	5	5	2	0	0	5	4	4	2	2	2	4
Total Road Miles Needed by Fifth Decade - Miles															
Kootenai	1	1	1	11	1	0	0	0	8	3	3	3	1	1	0
Idaho Panhandle*	10	15	15	15	7	10	0	0	7	6	8	10	10	10	6
Total	11	16	16	26	8	10	0	0	15	9	11	13	11	11	6
Wildlife - T&E															
Grizzly Bear Habitat MAcres (w/o activity)															
Kootenai	14.5	14.6	14.3	14.1	14.7	14.9	22.0	22.0	15.1	18.2	18.2	11.4	14.3	14.5	22.0
Idaho Panhandle*	5.9	5.9	5.9	5.8	5.5	5.9	9.5	9.5	6.8	6.8	6.8	5.9	5.9	5.9	8.6
Total	20.4	20.5	20.2	19.9	20.2	20.8	31.5	31.5	21.9	25.0	25.0	17.3	20.2	20.4	30.6
Wildlife - Big Game															
Summer Range MAcres															
Kootenai	5.7	5.9	5.2	4.0	6.3	4.6	0	0	0	0	0	8.7	4.6	5.7	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	5.7	5.9	5.2	4.0	6.3	4.6	0	0	0	0	0	8.7	4.6	5.7	0
Winter Range MAcres															
Kootenai	0	0	0	.3	0	0	0	0	.5	.6	.6	0	0	0	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	.3	0	0	0	0	.5	.6	.6	0	0	0	0
Minerals and Oil/Gas -Very High/ High Potential Accessibility MAcres															
Kootenai	NOT APPLICABLE IN THIS ROADLESS AREA														
Idaho Panhandle*															
Total															

& Estimated Outputs


BOISE MERIDIAN
R. 3 E.
PRINCIPAL MERIDIAN
R. 34 W.
R. 33 W.
IDAHO
MONTANA
T 37 N
T 36 N
NORTHWEST
PEAK
SCENIC
AREA
Cooney Pk
Marmot Mtn
Copper Mtn
American Mtn
Northwest Pk
Davis Mtn
Canuck
Canuck Pass
Ruby Mtn
Black Top
Garver Mtn
Mushroom Mtn
Pete Creek Meadows
Rock Candy Mtn
Hidden Lake
Buckhorn Mtn
The Scout
KANIKSU
FOREST
DEER RIDGE
Keno Mtn
Mt Baldy
WHITETAIL CREEK
Yaak
Solomon Mtn
Clark Mtn
Murphy Mtn
Red Top Mtn
BOUNDARY CO
LINCOLN CO
Kootenai and Idaho Panhandle
National Forests
Northwest Peaks Roadless Area
663
0 1 2 3 4
miles

Northwest Peaks - 01663 State: Montana and Idaho

Total Gross Acres:	19,100	Total Net Acres:	19,100
Kootenai	13,400	Kootenai	13,400
Idaho Panhandle	5,700	Idaho Panhandle	5,700

I. Description

This roadless area is located in the extreme northwest corner of the Kootenai National Forest, bordered by Canada to the north and Idaho to the west. Part of the area extends into the Idaho Panhandle.

Access to the area is provided via the Yaak River Road leading in from U.S. Highway 2. Destination points via trails from the Pete Creek Road include Hawkins Lake and Northwest Peak, and the ridgeline running along Rock Candy Mountain and Black Top Mountain.

The area is characterized as a high ridgeline setting with a generally rough topography. The highest points are Northwest Peak (7700 feet), Davis Mountain (7500 feet), and Ewing Mountain (7500 feet), all of which are in the existing Northwest Peaks Scenic Area. The lowest elevation is around 6000 feet. Subalpine and alpine in character, timber is generally stunted and scattered. There is some suitable timber land on the southern edge. Species include Engelmann spruce, alpine fir, whitebark pine, and alpine larch. Headwater sections for Spread and Hawkins Creek and found in this area, as are Seven Lakes. Named lakes include Hawkins and Burke.

Timber harvest and road building are most noticeable on the Idaho side, but can be seen from all high points of the area.

The ecosystems represented in this area are Western Spruce Fir Forest and Cedar Hemlock Pine Forest.

A variety of wildlife inhabit the area including grizzly bear, whitetail and mule deer, elk, and moose. Views from Northwest Peak, Davis and Ewing Mountains are another special attraction.

Use is primarily considered light with hiking, hunting and snowmobiling the primary activities (1,000 RVDs).

II. Capability

A. Natural Integrity and Appearance

Outside of a few miles of trail and the remains of the old (1930's) Northwest Peak lookout, the roadless area rates high in natural integrity and appearance.

B. Opportunities for Solitude

Opportunities for solitude rate high in the upper West Fork Yaak basins, and relatively high throughout the area because nonwilderness use outside the area is very light. However, like many places on the Forest, as one climbs to higher elevations such as one of the high peaks, solitude lessens with views of surrounding developed forest lands.

C. Primitive Recreation Opportunities Northwest Peaks 01663

Hiking, fishing in one of three alpine lakes, and hunting elk, deer and bear in a wild setting are some of the opportunities for primitive recreation.

Rugged cross-country travel, rock climbing and ski mountaineering are challenging experiences offered.

D. Other Features

One special feature is the extensive stand of alpine larch in the Northwest Peak area. The area is also recognized as grizzly habitat.

E. Manageability and Boundaries

The Northwest Peak roadless area was identified during the RARE II inventory. The recommendation was a nonwilderness classification and the area was allocated primarily to nondevelopmental uses.

	Gross Acres	Net Acres	
Total Acres	14450	14450	1979 RARE II EIS
Kootenai Acres	8750	8750	
Idaho Panhandle Acres	5670	5670	
Total Acres	19100	19100	1983 Roadless Inven.
Kootenai Acres	13400	13400	
Idaho Panhandle Acres	5700	5700	

The nonconforming uses are the remains of the old Northwest Peak lookout, and the existing oil & gas leases.

The manageability of boundaries surrounding a Northwest Peak wilderness would vary from good to poor. Due to rugged terrain and vegetation, there would be little problem with motorized use, but in terms of solitude within the area, the boundary and development outside it could have some negative impact. Use of roads and cutting units along the outside of the roadless area is presently very light so the impacts are probably negligible.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential of providing 3,900 RVD's of wilderness recreation per year. Snowmobilers currently use the area. Current use is estimated to be 1,000 RVD's per year.

2. Wildlife and Fish

The area contains big game summer range and some big game winter range. However, the amount in question is not considered significant by Forest biologists.

Burke Lake, which supports up to three pound rainbow and the two Hawkins Lakes (excellent cutthroat fisheries) are in this roadless area. Also numerous streams that form the headwaters of the West Fork of Yaak River begin within this area.

3. Timber

The area contains 5,600 acres of tentatively suitable timberland capable of producing at east 20 cubic feet/acre/year of timber growth. The majority of this timber land is located on slopes steeper than 40%. Road construction will be difficult and costly and logging will require the use of cable and helicopter yarding methods.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area and little in the way of grazing potential is present.

2. Minerals

The mineral potential in the area is considered low and the oil and gas potential is moderate. There is one oil and gas lease.

3. Cultural Resources

Cultural resources include one historic site, the Northwest Peak Lookout. Prehistoric sites have not been identified but based on previous surveys in similar situations, it is estimated that the probability of prehistoric sites being located in the area is low.

4. Water

Average annual precipitation in the area varies from 50 to 80 inches, depending on elevation, with about 22 to 45 inches running off to show up as streamflow. Water quality is high with cold temperatures and a general lack of nutrients or pollutants.

C. Resource Situation

Northwest Peaks 01663

Table 1

Category	Unit	Kootenai	Idaho Panhandle	Total
Gross Acres	Acres	13400	5700	19100
Net Acres	Acres	13400	5700	19100
Recreation				
Semiprim. Nonmotor.	RVDs	40	1000	1040
Range				
Suitable Acres	Acres	0	0	0
AUMs	AUMs	0	0	0
Timber				
Tentative Suitable	Acres	3700	1900	5600
Standing Volume	MMBF	26	13	39
Corridors				
Existing & Potential	No.	0	1	1
Wildlife - T&E				
Grizzly Bear Habitat				
Situation 1	Acres	13400	5700	19100
Situation 2	Acres	0	0	0
Situation 3	Acres	0	0	0
Wildlife - Big Game (Elk, Deer)				
Summer Range Total	Acres	9000	0	9000
Winter Range Total	Acres	0	0	0
Special Uses Existing	No.	1	0	1
Existing Facilities	No.	0	0	0
Significant Fisheries				
Stream Miles	Miles	0	0	0
Stream Habitat	Acres	0	0	0
Lakes	No.	2	0	2
Lake Habitat	Acres	53	0	53
Water Developments				
Existing	No.	0	0	0
Minerals				
Hardrock Potential				
Very High	Acres	-	-	-
High	Acres	-	-	-
Moderate	Acres	-	-	-
Low	Acres	13400	5700	19100
Mining Claims	No.	0	0	0
Oil & Gas Potential				
Very High	Acres	-	-	-
High	Acres	-	-	-
Moderate	Acres	13400	5700	19100
Low	Acres	-	-	-
Unknown	Acres	-	-	-
Oil & Gas Leases				
Leases	No.	1	0	1
Leased Acres	Acres	6500	-	6500

D. Management Considerations

1. Land Use Authorizations

Special uses in the area include the Hawkins Lake snow course.

2. Fire

The area has had low fire occurrence (1 fire in the last 20 years). The fuels situation is considered both dense conifer stands with accumulations of downed, woody material on the lower slopes and thin layers of ground fuels on the upper slopes.

3. Insect and Disease

The insect and disease situation is stable with no high risk lodgepole pine stands or current insect activity in the area.

4. Non-Federal Lands

There are no private lands.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

There are no other wilderness areas in close proximity to Northwest Peak. Sixty-five road miles away, the Cabinet Mountains Wilderness receives increasingly heavy use (presently over 18,000 RVDs).

Northwest Peak is reached via the Yaak River Valley, an area of growing interest to Coeur d'Alene, Idaho and Spokane, Washington areas, 150 miles to the southwest.

B. 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.

C. Public Interest

During the RARE II public review period, almost 2,000 people commented on Northwest Peaks, 87% of which were opposed to a wilderness classification for the area. There have been no recent expressions favoring wilderness in Northwest Peaks but public support has always been strong for maintaining the Scenic Area designation for the area. RARE II recommended non-wilderness.

The area is a popular hiking and hunting area.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Northwest Peaks Roadless Area, Kootenai and Idaho Panhandle National Forests.

	ALTERNATIVES (M Acres)														
Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
MANAGEMENT EMPHASIS															
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas															
Kootenai:	9.5	9.5	9.5	9.5	9.5	9.5	.2	0	13.0	13.6	13.6	9.8	9.5	9.5	13.6
Idaho Panhandle NF:	4.1	4.2	4.2	4.8	4.2	4.1	0	0	4.2	4.4	4.4	4.1	4.1	4.1	4.9
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems															
Kootenai:	3.7	3.7	3.7	3.7	3.7	3.7	0	0	.6	0	0	3.3	3.7	3.7	0
Idaho Panhandle NF:	1.6	1.5	1.5	.9	.8	1.6	0	0	1.5	1.3	1.1	1.6	1.6	1.6	.8
Wilderness															
Recommended Wilderness															
Kootenai	0	0	0	0	0	0	13.4	13.2	0	0	0	0	0	0	0
Idaho Panhandle	0	0	0	0	0	0	5.7	5.7	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:															
Kootenai:	.3	0	.3	.4	0	.4	0	0	0	0	0	0	0	.3	0
Idaho Panhandle NF:	1.0	.7	.7	.8	.7	1.0	0	0	.7	.3	0	1.0	1.0	1.0	.7
Decade 5:															
Kootenai:	3.7	3.7	3.7	3.7	3.7	3.7	0	0	.6	0	0	3.3	3.7	3.7	0
Idaho Panhandle NF:	3.5	3.3	3.4	2.8	2.7	3.5	0	0	2.7	3.7	1.9	3.5	3.5	3.5	2.7
Roadless - Decade 1:															
Kootenai:	13.1	13.4	13.1	13.1	13.4	13.0	.2	0	13.4	13.4	13.4	13.4	13.4	13.1	13.4
Idaho Panhandle NF:	4.7	5.0	5.0	0	5.0	6.7	0	0	5.0	5.4	5.7	6.7	6.7	6.7	0
Decade 5:															
Kootenai:	9.7	9.7	9.7	9.7	9.7	9.7	.2	0	12.8	13.4	13.4	10.1	9.7	9.7	13.4
Idaho Panhandle NF:	2.2	2.4	2.2	2.9	3.0	2.2	0	0	3.0	2.0	3.8	2.2	2.2	2.2	3.0
Recommended Wilderness															
Kootenai	0	0	0	0	0	0	13.2	13.4	0	0	0	0	0	0	0
Idaho Panhandle NF	0	0	0	0	0	0	5.7	5.7	0	0	0	0	0	0	0
Total Acres - Kootenai	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
Total Acres - Idaho Panhandle	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Total Acres - Northwest Peaks	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1

B. Impacts

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1. Designation: Wilderness
Management Prescription: Wilderness

The Northwest Peaks roadless area is recommended for wilderness in its entirety in Alternative H and essentially so in Alternative G. No other alternative recommends wilderness for the area. 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 as will the opportunities for solitude, especially in the upper West Fork Yaak basins. Primitive recreation opportunities would be maximized as well as protection of old-growth timber and associated wildlife habitat.

There are about 5,600 acres of suitable timberland in the area. The following chart shows the acres of suitable timberland that would be contained in proposed wilderness, by alternative.

Acres of Suitable Timberland in Wilderness (Thousands)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	5.6	5.6	0	0	0	0	0	0	0

Opportunities to manage the timber resource would be foregone in Alternatives G and H.

Grizzly bear habitat (situation I - critical to the recovery of the species) covers the entire roadless area. Wilderness management would provide security to the bear from roading and related increases in human activity in the area. However, increases in forage through management activities such as burning and timber harvest would not occur.

Wilderness management would not permit the management of big game summer range, about 9,000 acres, to improve forage through timber harvest. However, wilderness management would provide security by limiting access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. Designation: Nonwilderness (Roadless)
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

The following chart shows the percent of the roadless area designated to roadless management, in each alternative.

Percent of the Roadless Area Designated Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
70	70	70	74	70	70	2	0	89	93	93	72	70	70	95

There are few, if any, ground-disturbing management activities specifically associated with unroaded management. Activities are associated primarily with dispersed recreation, including hiking, hunting, and fishing.

The roadless character within the area would be maintained under these emphases, as well as the primitive recreation opportunities. Old growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game would be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration and development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest in these emphases.

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3. Designation: Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

The following chart shows the percent of the area designated to activities where timber harvesting and road building would occur.

Percent of the Roadless Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
27	27	27	23	23	27	0	0	10	6	5	25	25	25	4

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 most alternatives, some development is scheduled to occur during the first decade. (See Table 3 at the end of this discussion). Total road miles expected to be constructed range from 0 in Alternatives G and H, to 35 miles in Alternative N.

The naturalness of the area will be impacted by harvest cutting units, roads and other evidence of human modifications. Roading foregoes the opportunity to consider the area for wilderness in the long term and reduces the opportunity for primitive recreation and solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big-game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Forests. Timber from the Northwest Peaks roadless area would contribute to the economic base. 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 these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3, Part One. Decadal Outputs by Alternative for Northwest Peaks Roadless Area, Kootenai and Idaho Panhandle National Forests.

ALTERNATIVES

Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
OUTPUT CATEGORY DECADE															
Rec. Wilderness MAcres															
Kootenai	0	0	0	0	0	0	13.2	13.4	0	0	0	0	0	0	0
Idaho Panhandle*	0	0	0	0	0	0	5.7	5.7	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	18.9	19.1	0	0	0	0	0	0	0
Roadless MAcres															
Kootenai	9.5	9.5	9.5	9.5	9.5	9.5	.4	0	13.0	13.6	13.6	9.8	9.5	9.5	13.6
Idaho Panhandle*	4.1	4.2	4.2	4.8	4.2	4.1	0	0	4.2	4.4	4.4	4.1	4.1	4.1	4.9
Total	13.6	13.7	13.7	14.3	13.7	13.6	.4	0	17.2	18.0	18.0	13.9	13.6	13.6	18.5
Recreation															
Prim./Semiprim.MRVDs															
Kootenai	38	38	40	40	42	41	41	41	54	53	53	40	40	42	56
Idaho Panhandle*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	39	39	41	41	43	42	42	42	55	54	54	41	41	43	57
Semiprim. Motor.MRVDs															
Kootenai	18	18	18	15	15	14	0	0	0	11	11	17	15	12	0
Idaho Panhandle*	2	2	2	2	2	2	0	0	2	2	2	2	2	2	0
Total	20	20	29	17	17	16	0	0	2	13	13	19	17	14	0
Timber															
Suitable MAcres															
Kootenai	3.7	3.7	3.7	3.7	3.7	3.7	0	0	.6	0	0	3.3	3.7	3.7	0
Idaho Panhandle*	2.0	2.0	2.0	1.0	1.0	2.0	0	0	2.0	1.0	1.0	2.0	2.0	2.0	1.0
Total	5.7	5.7	5.7	4.7	4.7	5.7	0	0	2.6	1.0	1.0	5.3	5.7	5.7	1.0
Volume (MMBF)															
Kootenai 1	3.8	0	3.8	5.6	0	6.0	0	0	0	0	0	0	0	4.0	0
Idaho Panhandle*	.4	.1	.1	.4	.1	.4	0	0	.1	.1	0	.4	.4	.4	.1
Kootenai 3	8.0	7.0	8.0	7.8	7.0	8.0	0	0	0	0	0	7.0	7.0	8.0	0
Idaho Panhandle*	.4	.1	.1	.4	.1	.4	0	0	.1	.1	0	.4	.4	.4	.1
Kootenai 5	3.7	3.0	3.7	13.1	5.0	13.0	0	0	0	0	0	9.0	12.0	13.0	0
Idaho Panhandle*	.4	.1	.1	.4	.1	.4	0	0	.1	.1	0	.4	.4	.4	.1
Harvest Acres - MAcres															
Kootenai 1	.3	0	.3	.4	0	.4	0	0	0	0	0	0	0	.3	0
Idaho Panhandle*	.2	.1	.1	.2	.1	.2	0	0	.1	.1	0	.2	.2	.2	.1
Kootenai 3	.9	.9	.9	.9	.9	.9	0	0	0	0	0	.5	.9	.9	0
Idaho Panhandle*	.2	.1	.1	.2	.1	.2	0	0	.1	.1	0	.2	.2	.2	.1
Kootenai 5	.2	.2	.2	.8	.3	.8	0	0	0	0	0	.5	.7	.8	0
Idaho Panhandle*	.2	.1	.1	.2	.1	.2	0	0	.1	.1	0	.2	.2	.2	.1

* Estimated outputs

Table 3, Part Two. Decadal Outputs by Alternative for Northwest Peaks Roadless Area, Kootenai and Idaho Panhandle National Forests.

	ALTERNATIVES														
Kootenai National Forest	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Idaho Panhandle Nat. For.	2	4	6	1	5	2	10	3	8	11	12	2	2	2	9
OUTPUT CATEGORY															
Roads															
Roads Constructed First Decade - Miles															
Kootenai	2	0	2	2	0	2	0	0	0	0	0	0	0	2	0
Idaho Panhandle*	4	2	2	3	2	4	0	0	2	2	0	4	4	4	2
Total	6	2	4	5	2	6	0	0	2	2	0	4	4	6	2
Total Road Miles Needed by Fifth Decade - Miles															
Kootenai	12	11	12	15	1	15	0	0	5	0	0	11	14	15	0
Idaho Panhandle*	20	20	20	10	10	20	0	0	20	10	10	20	20	20	10
Total	32	31	32	25	21	35	0	0	25	10	10	31	34	35	10
Wildlife - T&E															
Grizzly Bear Habitat MAcres (w/o activity)															
Kootenai	9.5	9.5	9.5	9.5	9.5	9.5	13.6	13.6	13.0	13.6	13.6	9.9	9.5	9.5	13.6
Idaho Panhandle*	4.1	4.2	4.2	4.8	4.2	4.1	5.7	5.7	4.2	4.4	4.4	4.1	4.1	4.1	4.9
Total	13.6	13.7	13.7	14.3	13.7	13.6	18.9	19.1	17.2	18.0	18.0	13.9	13.6	13.6	18.5
Wildlife - Big Game															
Summer Range MAcres															
Kootenai	3.7	3.7	3.7	2.9	2.9	2.8	0	0	0	0	0	3.3	2.9	3.7	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3.7	3.7	3.7	2.9	2.9	2.8	0	0	0	0	0	3.3	2.9	3.7	0
Winter Range MAcres															
Kootenai	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idaho Panhandle*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minerals/Oil & Gas															
Very High/ High Potential - Accessible MAcres															
Kootenai	NOT APPLICABLE IN THIS ROADLESS AREA														
Idaho Panhandle*															
Total															

* Estimated outputs

Kootenai National Forest Plan

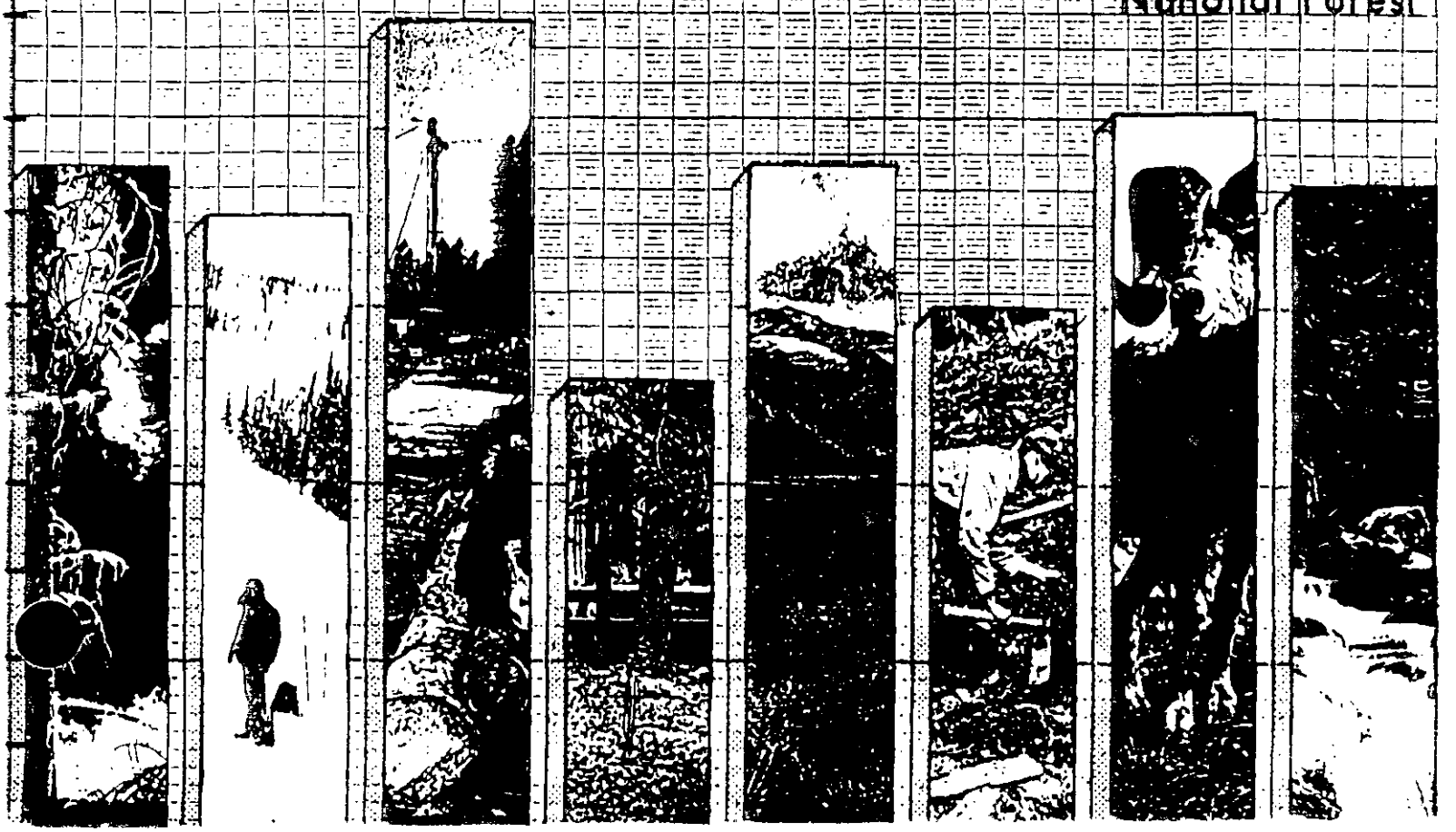
Final Environmental Impact Statement

Appendix C-Inventoried Roadless Areas - Volume 2

United States
Department
of Agriculture

Forest Service

Kootenai
National Forest



FINAL

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

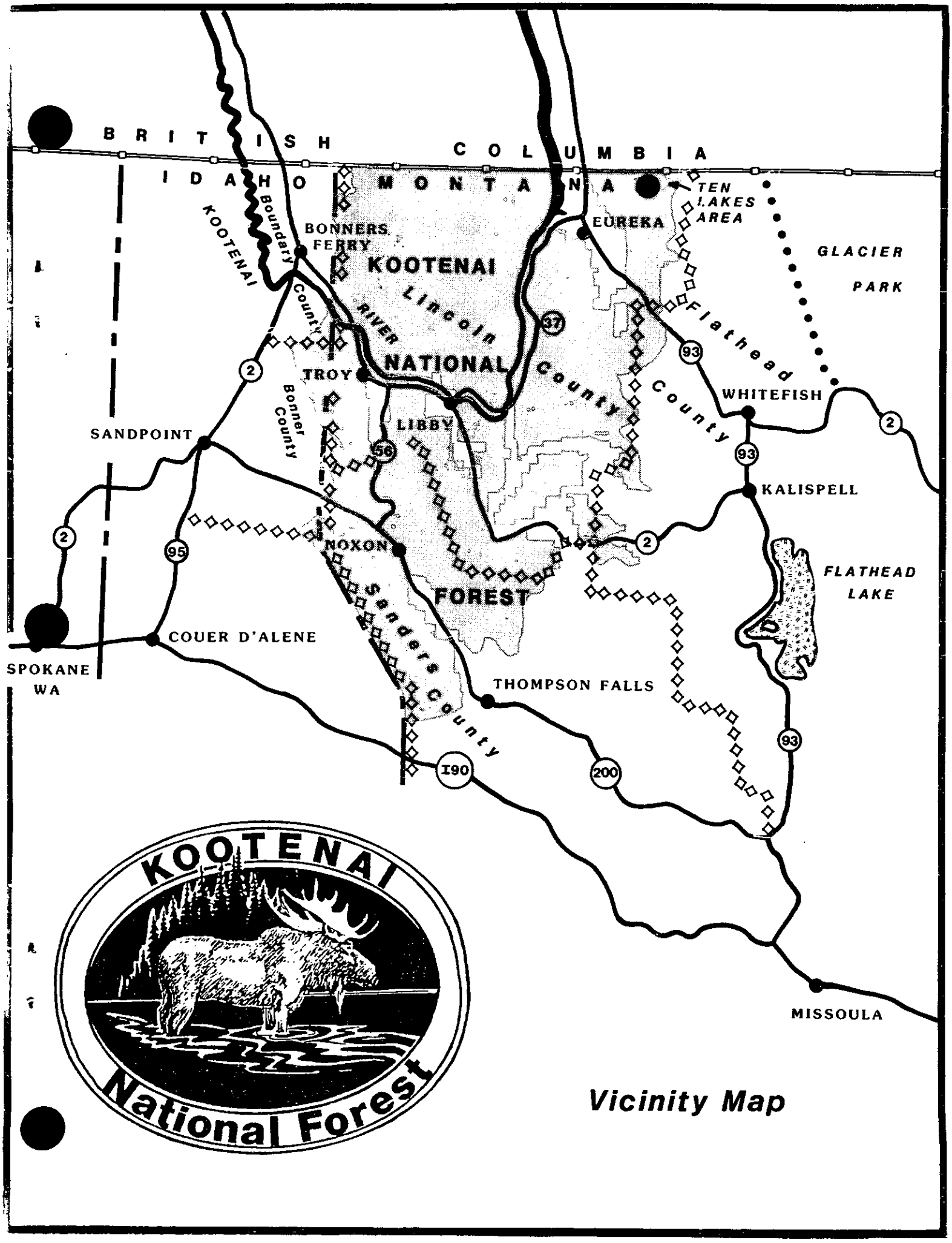
KOOTENAI NATIONAL FOREST PLAN

APPENDIX C

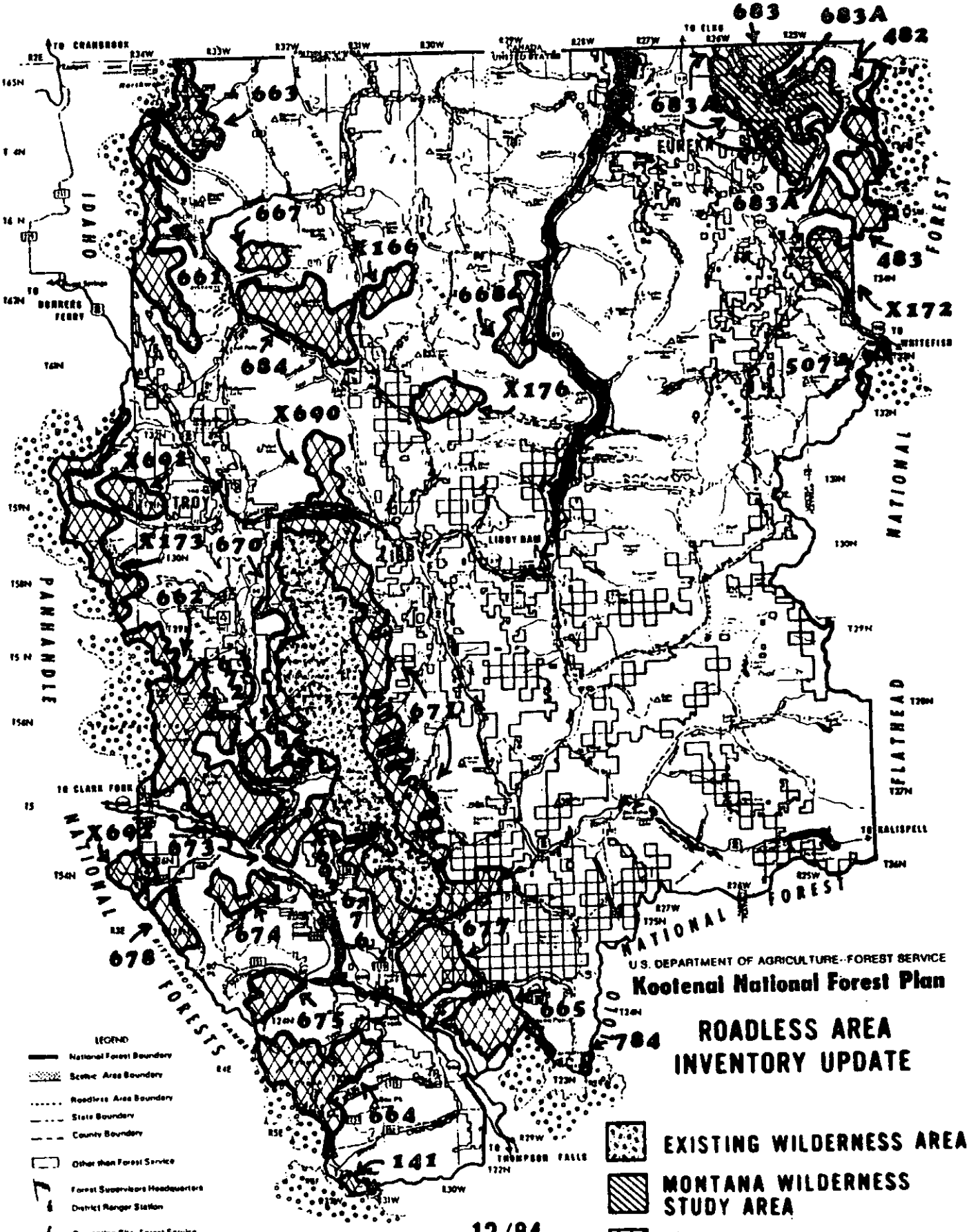
ROADLESS AREA DESCRIPTIONS
AND EVALUATIONS

KOOTENAI NATIONAL FOREST

VOLUME 2



Vicinity Map


683
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EUREKA
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X166
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483
X172
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X690
X692
TROY
LIBBY DAM
X173
670
662
671
X694
673
674
677
678
675
665
784
664
141
THOMPSON FALLS
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FOREST
NATIONAL
FOREST
LOLO
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FORESTS
U.S. DEPARTMENT OF AGRICULTURE--FOREST SERVICE
Kootenai National Forest Plan
ROADLESS AREA
INVENTORY UPDATE
EXISTING WILDERNESS AREA
MONTANA WILDERNESS STUDY AREA
OTHER ROADLESS AREAS
CONTIGUOUS ROADLESS AREAS ON ADJACENT FORESTS
LEGEND
National Forest Boundary
Scenic Area Boundary
Roadless Area Boundary
State Boundary
County Boundary
Other than Forest Service
Forest Supervisors Headquarters
District Ranger Station
Recreation Site, Forest Service
Permanent Lookout Station
U S Highway
State Highway
SCALE
12/84

APPENDIX C

This Appendix is arranged with the Roadless Areas in the same order as they are presented in the EIS. The following Table of Contents is arranged with the Roadless Areas in alphabetical order for the readers convenience.

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APPENDIX C

Inventoried Roadless Area Descriptions and Evaluations

Introduction

This appendix discusses each roadless area on the Kootenai that has been studied for wilderness designation. Each discussion includes a description of the area, the resources present, current use and public interest, how each Forest Plan alternative designated the area, the effects of each alternative on the roadless area, and the expected outputs associated with the area in each alternative.

Summary of Changes that occurred between the Draft and Final EIS

There were no changes in the actual inventory of the Inventoried Roadless Areas between the Draft and Final EIS. There was some new mineral potential information received concerning the Scotchman Peak Roadless Area and it is presented in that roadless area discussion. The Final Plan (Alt. JF) recommends 12,000 acres additional wilderness on Pellick Ridge in the Scotchman Peak Roadless Area and the effects of that recommendation are discussed in that roadless area discussion. The other roadless area discussions remain the same as presented in the Draft EIS. On those roadless areas, the information and results for the Proposed Action (Alt. J) can also be applied to the final Forest Plan (Alt. JF).

Management Area Prescription Assignments

Multiple use management prescriptions were grouped into categories (management emphases or designations) which have similar impacts on the wilderness and roadless resources.
Table C-1 displays these categories and identifies the Management Area Prescriptions.

Table C-2 briefly describes these Management Area Prescriptions and how they can be identified in the Forest Plan Document and map.

Table C-1

KOOTENAI NATIONAL FOREST

MANAGEMENT AREA PRESCRIPTION ASSIGNMENT CATEGORIES
(Management Emphasis or Designation)

Designation:
Wilderness

Mgmt. Area No.	Management Area Prescription
8	Recommended Wilderness

Designation:
Nonwilderness (Roadless)

Mgmt. Area No.	Management Area Prescription
29	Primitive Recreation
2	Semi-primitive Non-motorized Recreation
5	Viewing
24 & 1	Limited Use Areas

Designation:
Nonwilderness (Some Development)

Mgmt. Area No.	Management Area Prescription
10	Big Game Winter Range

Designation:
Nonwilderness (Developed)

Mgmt. Area No.	Management Area Prescription
11	Big Game Winter Range/Timber
12	Big Game Summer Range/Timber
13	Wildlife/Timber (Old Growth Timber Mgmt.)
14	Grizzly/Timber
15	Timber Optimization
16	Timber/Viewing
17	Viewing/Timber
18	Minimum Use due to Regeneration Problems
19	Minimum Use due to Steep or Unstable Slopes

Table C-2

KOOTENAI NATIONAL FOREST

MANAGEMENT AREA IDENTIFICATION

GROUP	MGMT AREA NO.	DEFINITION
RECREATION	29	LARGE AREAS OFFERING ROADLESS RECREATION OPPORTUNITIES IN A PRIMITIVE SETTING
	2	LARGE AND SMALL AREAS OFFERING ROADLESS RECREATION OPPORTUNITIES IN A SEMI-PRIMITIVE SETTING
	3	SMALL NATURAL APPEARING AREAS OFFERING OPPORTUNITIES FOR ROADED RECREATION IN A SEMI-PRIMITIVE SETTING
	5	NATURAL APPEARING AREAS CONTAINING HIGHLY SENSITIVE VIEWSHEDS
	6	SMALL AREAS CONTAINING CAMPGROUNDS, PICNIC AREAS, SKI AREAS, ETC.
WILDERNESS	7	EXISTING CABINET MOUNTAIN WILDERNESS
	8	AREAS BEING RECOMMENDED FOR WILDERNESS
	9	TEN LAKES MONTANA WILDERNESS STUDY AREA
WILDLIFE, TIMBER & VISUAL QUALITY	10	BIG GAME WINTER RANGE LOCATED ON UNSUITABLE TIMBERLAND
	11	BIG GAME WINTER RANGE LOCATED ON SUITABLE TIMBERLAND
	12	BIG GAME SUMMER RANGE LOCATED ON SUITABLE TIMBERLAND
	13	SMALL AREAS PROVIDING OLD GROWTH TIMBER DIVERSITY
	14	GRIZZLY HABITAT ON SUITABLE TIMBERLAND
	15	SUITABLE TIMBERLANDS MANAGED FOR THE HIGHEST POSSIBLE TIMBER YIELDS
	16	SUITABLE TIMBERLANDS IN A MODERATELY SENSITIVE VIEWSHED
	17	SUITABLE TIMBERLANDS IN A HIGHLY SENSITIVE VIEWSHED
	18	SMALL PRODUCTIVE AREAS THAT HAVE IDENTIFIED REGENERATION PROBLEMS
SPECIAL & OTHER	19	SMALL AREAS THAT ARE STEEP AND COSTLY TO ROAD
	20	RANGER STATIONS AND WORK CENTERS NEEDED FOR FOREST ADMINISTRATION
	21	UNIQUE OR SPECIAL AREAS INCLUDING RESEARCH NATURAL AREAS
	23	POWERLINE TRANAMISSON CORRIDORS
	24	UNPRODUCTIVE LANDS WITH LIMITED USE
	27	LANDS UNDERGOING ACTIVE EXCHANGE WITH OTHER LANDOWNERS
	30	WATER
	1	PRODUCTIVE LANDS WITH LIMITED USE

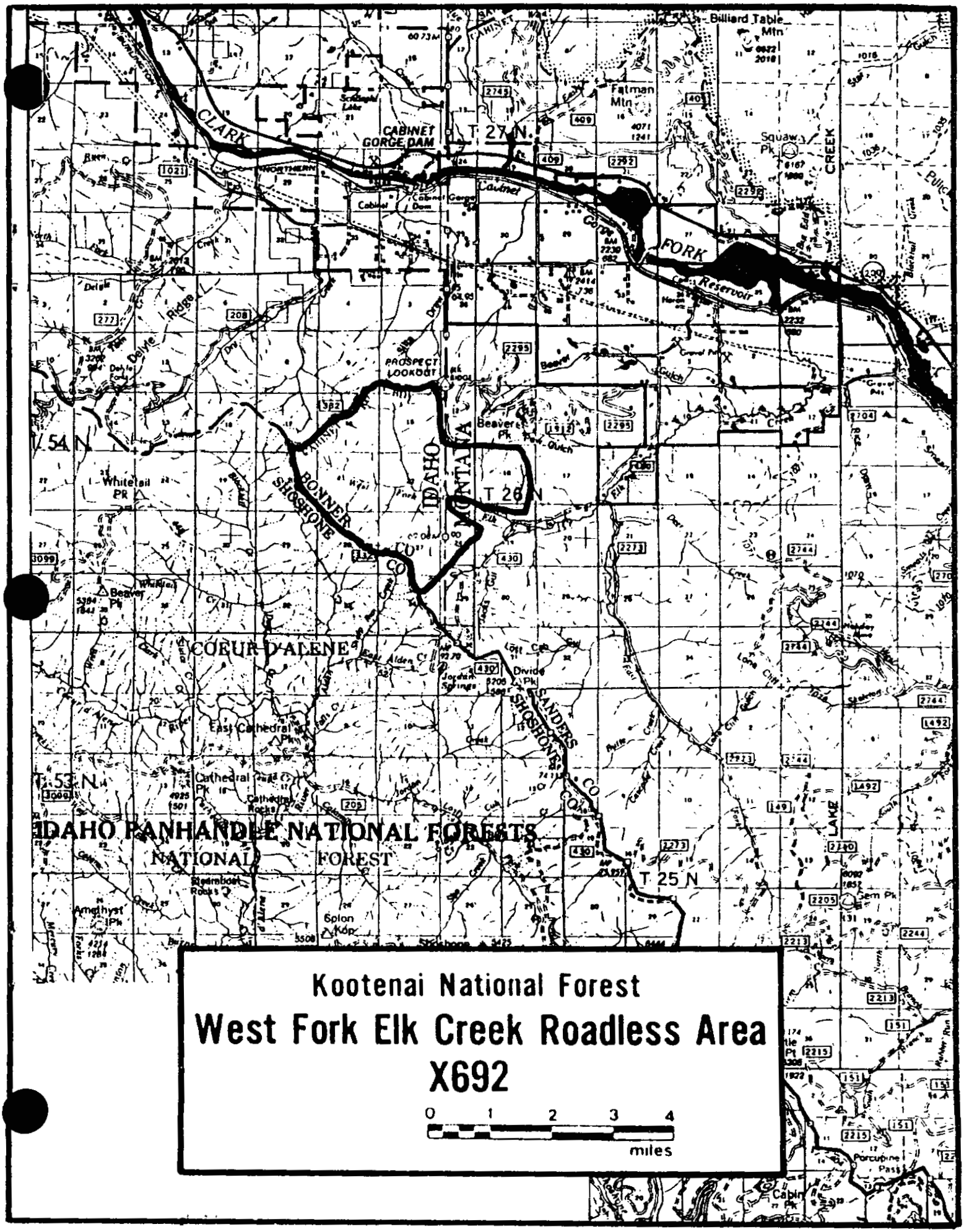
REGIONAL WILDERNESS OPPORTUNITIES and PROXIMITY to ROADLESS LANDS on the KOOTENAI NATIONAL FOREST-in air miles

WILDERNESS	LOCATION	ACRES	DISTANCE
Gospel Hump	Central Idaho	206,000	190
Hells Canyon	Central Idaho	84,000	200
Selway Bitterroot	Central Idaho	1,089,000	150
	Western Montana	251,000	200
Rattlesnake	Western Montana	300,000	120
Scapegoat	Western Montana	240,000	150
Welcome Creek	Western Montana	28,000	150
Anaconda Pintlar	Western Montana	158,000	190
Gates of the Mountains	Western Montana	29,000	220
Cabinet Mountains	Western Montana	94,000	0
Mission Mountains	Western Montana	74,000	90
Great Bear	Western Montana	287,000	120
Bob Marshall	Western Montana	1,009,000	120
Absaroka-Beartooth	South Central Montana	922,000	320
Red Rock Lake	Northeastern Montana	32,000	320
Lee Metcalf	Southwestern Montana	259,000	220

SUMMARY:

Total Wilderness less than 100 miles from Kootenai National Forest roadless areas:	168,000	2 Areas Acres
Total wilderness 100-200 miles from Kootenai National Forest roadless areas:	3,273,000	9 Areas Acres
Total wilderness 200-300 miles from Kootenai National Forest roadless areas:	343,000	2 Areas Acres
Total wilderness 300-400 miles from Kootenai National Forest roadless areas:	954,000	2 Areas Acres

TOTAL AREAS - 15 TOTAL ACRES - 4,378,000



Kootenai National Forest

West Fork Elk Creek Roadless Area

X692

0 1 2 3 4

miles

KOOTENAI NATIONAL FOREST

West Fork Elk Creek - 01X692 State: Montana and Idaho

Gross Acres: 4,800 Net Acres: 4,800

I. Description

The area is located in the southwest corner of the Forest, abutting the divide separating the Kootenai and Idaho Panhandle National Forests. Access is available via Highway 200 and the main Elk Creek Road.

The area is generally surrounded by Forest management activities such as roads and clearcuts.

The represented ecosystem is Cedar Hemlock Pine Forest.

The area is primarily a low-elevation streambottom with steep, rocky upland slopes. The area constitutes the watershed basin for the upper West Fork Elk Creek. A road to Prospect Lookout straddles a ridgeline which rims the area.

The quality elk hunting experience and the views of the Clark Fork Valley are among the area's attractions.

Current use consists primarily of hunting in the fall (1,000 RVD's).

II. Capability

A. Natural Integrity and Appearance

The natural integrity is high with no manmade features to detract from the area's natural appearance.

B. Opportunities for Solitude

Despite the area's smallness and compactness, opportunities for solitude are high in the interior, owing to the steep canyon walls. Atop the ridge, opportunities are less so because of the view of existing roads and clearcuts.

C. Primitive Recreation Opportunities

Recreation opportunities include hunting and some fishing. The steep canyons provide challenging crosscountry travel.

D. Other Features

Special features include the resident elk herd which attracts hunters in the fall.

E. Manageability and Boundaries

This is a good example of a "pocket" wilderness: small and compact with a well defined and easily managed boundary. The boundary is set along a strong ridgeline essentially surrounding the area.

The area was not identified in the RARE II inventory but was identified later during Unit Planning. The nonconforming uses which would conflict with a wilderness classification for the area are the existing oil & gas leases.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential to provide1,400 RVD's of wilderness recreation per year. The current use is estimated to be 1,000 RVD's per year.

2. Wildlife and Fish

The area contains elk summer range which is currently maintaining itself without vegetative manipulation such as prescribed burning.

The West Fork Elk Creek is a cutthroat, brook, and bull trout fishery.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area. The grazing potential is transitory range and is considered negligible.

2. Water

Mean annual precipitation for the area is about 55 inches, varying form 38 to 78 inches depending on elevation. The streams normally peak in mid to late May, but may peak in mid-winter from the occaisonal rain-on-snow events we occasionally experience, at which time the water quality may be degraded.

3. Timber

Approximately 4,400 acres are tentatively suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. This timberland is almost entirely located on slopes steeper than 55%. Road construction will be difficult and costly and logging will require the use of cable or helicopter yarding methods.

4. Minerals

The mineral potential is low and the oil and gas potential is moderate.

5. Cultural Resource

There are no identified historic or prehistoric cultural sites. Based upon surveys in similar areas, the probability of prehistoric sites occurring is considered low.

C. Resource Situation

West Fork Elk Cr. 01X692

Table 1

Category	Unit	
Gross Acres	Acres	4800
Net Acres	Acres	4800
Recreation		
Semiprim. Nonmotor.	RVDs	1000
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	4400
Standing Volume	MMBF	32
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	0
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer)		
Summer Range Total	Acres	1500
Winter Range Total	Acres	1300
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	2
Stream Habitat	Acres	-
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	-
Low	Acres	4800
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	4800
Low	Acres	-
Unknown	Acres	-
Oil & Gas Leases		
Leases	No.	4
Leased Acres	Acres	4800

D. Management Considerations

1. Land Use Authorizations

There are no special uses. Oil & gas leases exist.

2. Fire

The area has had a low occurrence of fires in the last 10 years (no fires). The fuels situation is primarily dense conifers with some downed woody materials.

3. Insect and Disease

The insect and disease situation is stable with no susceptible stands of lodgepole pine and no insect and disease activity occurring.

4. Non-Federal Lands

There are no private lands in the area.

IV. Need

West Fork Elk Cr. 01X692

A. Proximity to Other Wilderness and to Population Centers

The West Fork Elk Creek roadless area is located about 25 air miles from the existing Cabinet Mountains Wilderness. Spokane, Washington (110 miles) and Missoula, Montana (160 miles) are the closest large population centers.

B. Contribution to National Wilderness Preservation System

This area is representative of the Cedar Hemlock Pine Forest Ecosystem which is common in the existing wilderness system.

C. Public Interest

Because this is a newly defined roadless area, there have been no expressions of wilderness preference or nonpreference.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for West Fork Elk Creek Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	1.1	1.1	1.1	0	1.1	2.3	0	0	4.5	1.1	1.1	0	.3	.4	4.8
Nonwilderness (Some Development)															
Big Game Winter Range	.4	.4	.4	0	.4	.4	0	0	0	2.3	2.3	.4	.4	.4	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	3.3	3.3	3.3	4.8	3.3	2.1	0	0	.3	1.4	1.4	4.4	4.1	4.0	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	4.8	4.8	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	.3	0	0	.2	0	0	0	.3	0	0
Decade 5:	3.3	3.3	3.3	4.8	3.3	2.1	0	0	.3	1.4	1.4	4.4	4.1	4.0	0
Roadless - Decade 1:	4.8	4.8	4.8	4.8	4.8	4.5	0	0	4.6	4.8	4.8	4.8	4.5	4.8	4.8
Decade 5:	1.5	1.5	1.5	1.5	1.5	2.7	0	0	4.5	3.4	3.4	0.4	0.3	0.4	4.8
Recommended Wilderness	0	0	0	0	0	0	4.8	4.8	0	0	0	0	0	0	0
Total Acres- W. Fk. Elk Cr.	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8

B. Impacts West Fork Elk Cr. 01X692

1. Designation: Wilderness
Management Emphasis: Wilderness

The West Fork Elk Creek roadless area is designated wilderness in its entirety in both Alternatives G and H. No other alternative recommends wilderness for the area. 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 solitude afforded by the steep canyon walls within the interior of the area would be maintained as would the primitive recreation opportunities. Old-growth timber wildlife habitat would be protected.

There are about 4400 acres of suitable timberland in the area. The opportunity to manage the timber resource would be foregone in Alternatives G and H.

Efforts to improve big-game winter range through burning would not be permitted in wilderness. Likewise, timber harvest to improve summer range would not occur. However, the inability to deliberately increase forage would be offset by the benefits of the security that wilderness affords.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

West Fork Elk Cr. 01X692

2. Designation: Nonwilderness (Roadless)
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every alternative, except Alternatives D, G, H, and L, designate a portion of the area to these emphases. The following chart displays the percent of the area designated to roadless management.

Percent of the Area Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
22	22	22	0	22	47	0	0	93	22	22	0	6	8	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained with these emphases as will the primitive recreation opportunities. Old-growth timber habitat will also be maintained and security for big-game animals will be preserved.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in any of these emphases.

3. Designation: Nonwilderness (Some Development)
Management Emphasis: Big Game Winter Range

All alternatives, except Alternatives D, G, H, I, and O designate a portion of the area to this management emphasis. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

West Fork Elk Cr. 01X692

4. Designation: Nonwilderness (Developed)
Management Emphasis: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Every Alternative except G, H, and O designates at least a portion of the area to one of these emphases. The following chart displays the percent of the area designated to developmental activities.

Percent of Area Designated to Developmental Activities
By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
68	68	68	100	68	43	0	0	6	29	29	91	85	83	0

Only in Alternatives F, I, and M would activities be scheduled to occur in the first decade. (See Table 3 on following page). By the fifth decade, expected road mileage in place would range from 2 to 18 miles in the developmental alternatives.

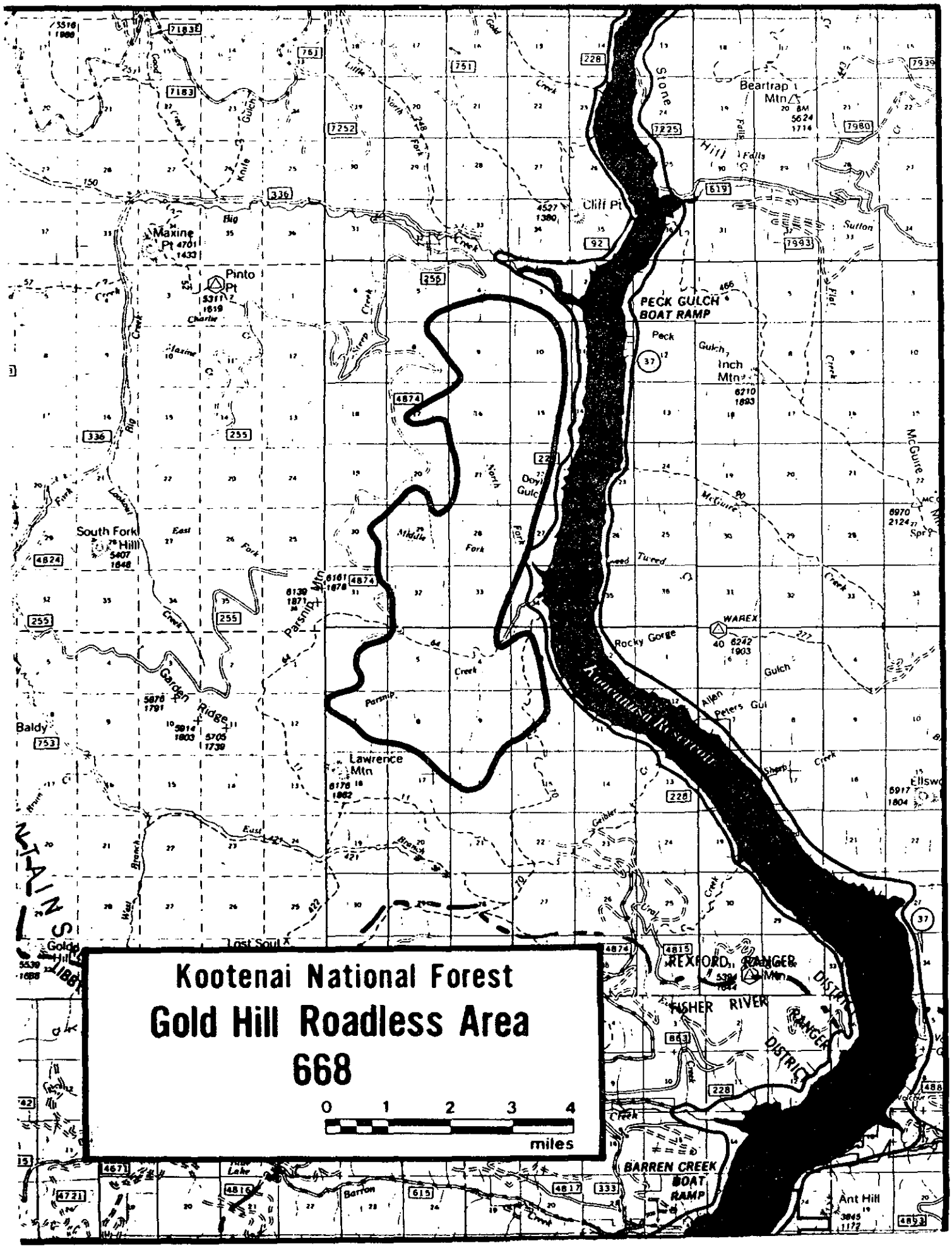
The wilderness resource and roadless character of the area would be impacted by timber cutting units, roads, and other evidence of man's modifications in all Alternatives except G, H, and O. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experience of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big-game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

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 West Fork Elk Creek roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for West Fork Elk Creek Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	0	0	0	0	4.8	4.8	0	0	0	0	0	0	0
Roadless MAcres		1.1	1.1	1.1	0	1.1	2.3	0	0	4.5	1.1	1.1	0	.3	.4	4.8
Recreation																
Prim./Semiprim.MRVDs		4	4	4	0	4	9	14	14	18	2	2	0	1	2	38
Semiprim. Motor.MRVDs		18	18	18	24	18	12	0	0	2	19	19	24	22	22	2
Timber																
Suitable MAcres		3.3	3.3	3.3	4.8	3.3	2.1	0	0	.3	1.4	1.4	4.4	4.1	4.0	0
Volume (MMBF)	1	0	0	0	0	0	.3	0	0	2.2	0	0	0	.3	0	0
	3	12.0	12.0	12.0	17.7	13.0	12.0	0	0	.06	1.7	1.7	12.0	17.0	18.0	0
	5	0	0	0	0	0	7.0	0	0	0	0	0	0	7.0	0	0
Harvest Acres - MAcres	1	0	0	0	0	0	.3	0	0	.2	0	0	0	.3	0	0
	3	2.0	2.0	2.0	3.3	2.0	1.7	0	0	.06	0.3	0.3	1.7	2.4	3.2	0
	5	0	0	0	0	0	.3	0	0	0	0	0	0	.3	0	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	2	0	0	1	0	0	0	2	0	0
Total Road Miles Needed by Fifth Decade - Miles		17	17	17	18	17	13	0	0	2	2	2	18	18	18	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		NOT APPLICABLE IN THIS ROADLESS AREA														
Wildlife - Big Game																
Summer Range MAcres		.3	.3	.3	.7	.3	2.0	0	0	0	.2	.2	1.6	1.0	1.0	0
Winter Range MAcres		.8	.8	.8	.9	.8	.4	0	0	0	2.3	2.3	.4	.7	.8	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Gold Hill Roadless Area
668
0 1 2 3 4
miles
Beartrap Mtn
Cliff Pt
Maxine Pt
Pinto Pt
PECK GULCH BOAT RAMP
Peck Gulch
Inch Mtn
South Fork Hill
Garden Ridge
Parsnip Mtn
Lawrence Mtn
Rocky Gorge
Allen Peters Gul
Baldy
Gold Hill
Lost Soul
REXFORD RANGER DISTRICT
FISHER RIVER RANGER DISTRICT
BARREN CREEK BOAT RAMP
Ant Hill
Stone Hill
Sutton
McGuire
Kootenai Reservoir

KOOTENAI NATIONAL FOREST

Gold Hill - 01668 State: Montana

Gross Acres: 10,700 Net Acres: 10,700

I. Description

The area is located along the west shore of Koocanusa Reservoir and includes the Parsnip, Middle Fork, and North Fork drainages.

It is easily accessible from the Forest Development Road, which runs along the west side of the Reservoir. A trail up Parsnip Creek leads to Parsnip Mountain, which lies outside the roadless area boundary.

The area is comprised of three, gentle to steep-sided, densely-forested, drainages separated by well-defined, tree-covered, finger ridges. These ridges emanate from Parsnip and Lawrence Mountains, both of which lie outside the roadless area.

The roadless area is surrounded by developments, ranging from Koocanusa Reservoir on the east to forest management activities such as roads and clearcuts scattered along the remaining perimeter.

The ecosystems represented are Douglas-fir Forest and Western Spruce Fir Forest.

The area's attraction is primarily the whitetail and mule deer herds that attract hunters in the fall.

Current use includes hunting and hiking and is considered light (400 RVD's).

II. Capability

A. Natural Integrity and Appearance

There are no developments within the area except several miles of trail, making the overall appearance very natural.

B. Opportunities for Solitude

Along the heavily vegetated flat bottoms of Parsnip Creek there are extensive opportunities for solitude. On the more open sideslopes and ridgetops, views and sounds from Koocanusa Reservoir and State Highway 37 would detract from a sense of solitude.

C. Primitive Recreation Opportunities

Primitive recreation experiences available include hiking, hunting (deer and elk), and climbing. There are some substantial rock bluffs which could provide a challenging experience for the person interested in rock climbing.

D. Manageability and Boundaries Gold Hill 01668

The area was identified in the RARE II inventory. At that time, the recommendation was for a nonwilderness classification with most of the area allocated to developmental uses. During the 1983 inventory, the area was divided into two portions, labeled Gold Hill and Gold Hill (West), discussed as a separate roadless area. The adjustments shown below affect only the Gold Hill area.

Gross Acres	Net Acres	
17300	17300	RARE II inventory
-7900	-7900	Timber sales scheduled
+1300	+1300	Additional acres identified that meet requirements
10700	10700	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification for the area are the existing oil & gas leases.

The boundaries of the roadless area are relatively well defined but could be somewhat difficult to manage in their present location. The boundary to the west is generally located on gentle terrain, and in some areas, along poorly defined edges of old logging areas. The topography along the eastern edge is along a paved road and would be more manageable. The area has a relatively long boundary considering is size.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential of providing about 3,200 RVD's of wilderness recreation per year. Current use is estimated to be 400 RVD's per year.

2. Wildlife

Whitetail and mule deer frequent the area, and there are some significant opportunities to manage some of the habitat as mitigation for Koocanusa Reservoir.

Several small tributaries to Koocanusa Reservoir exist as does some reservoir recruitment and/or resident fisheries.

3. Timber

Most of the area (10,000 acres) is tentatively suitable timberland capable of providing more than 20 cubic feet per acre per year of timber growth. The south half of the roadless area is primarily steep land with slopes greater than 55%. Road building will be difficult and costly and logging will require cable or helicopter yarding methods. The north half of the roadless area has gentler slopes (20-40%) which will be more conducive to road building and tractor logging methods.

B. Other Resources Gold Hill 01668

1. Range

There are no grazing allotments and the livestock grazing potential is all transitory.

2. Minerals

The mineral potential is low and the oil and gas potential is unknown.

3. Cultural Resource

There are no known historic or prehistoric cultural sites in the area. Based upon surveys in similar areas, it is determined that the probability of sites occurring is low.

4. Water

Mean annual precipitation varies from 16 to 26 inches, based on elevation, while mean annual runoff varies from 5-12 inches. The quality of this runoff is very high, even during the period in May or July when the streams are high due to snowmelt runoff.

C. Resource Situation Gold Hill 01668

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	10700			
Net Acres	Acres	10700			
Recreation					
Semiprim. Nonmotor.	RVDs	400	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	10000	Existing	No.	0
Standing Volume	MMBF	91			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	-
Situation 1	Acres	0	Low	Acres	10700
Situation 2	Acres	0	Mining Claims	No.	0
Situation 3	Acres	0	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	10700
Summer Range Total	Acres	5400	Low	Acres	-
Winter Range Total	Acres	1900	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	3
Existing Facilities	No.	0	Leased Acres	Acres	10700

D. Management Considerations

1. Land Use Authorizations

There are no special use permits. Oil & gas leases exist.

2. Fire

The area has had moderate fire occurrence (11 fires in the last 20 years). The fuels situation is considered dense conifers with thick downed, woody materials as gound fuels.

3. Insect and Disease

About 50% of the area contains lodgepole pine that is highly susceptible to Mountain Pine Beetle infestation which is occurring presently. It is estimated that by 1990, the majority of these high risk lodgepole stands will be killed.

4. Non-Federal Lands

There are no private lands within the roadless area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is located about 35 miles from Libby, 20 miles from Eureka, and about 30 air miles from the Cabinet Mountains Wilderness. The nearest metropolitan areas are Spokane, Washington (210 miles) and Kalispell, Montana (110 miles).

B. Contribution to National Wilderness Preservation System

This area is representative of Douglas-fir and Western Spruce Fir Forest ecosystems which are common in the existing wilderness system.

C. Public Interest

Of the 2,500 people commenting on the area during the RARE II public comment period, 56% favored a wilderness designation for the area. RARE II recommended non-wilderness. The Montana Wilderness Association's Alternative "W" (1978) recommended that the entire area (now labeled Gold Hill and Gold Hill (West) be placed in a further planning category. In the public comment period during the Unit Planning process (Ziegler, August 1979), some support for maintaining the Parsnip drainage in a roadless condition was expressed, as well as concern that the bulk of the area be allocated to timber management.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Gold Hill Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M ACRES)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless) Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	3.8	3.5	3.3	.9	3.4	4.4	0	0	2.6	3.6	3.6	.5	1.7	1.7	10.0
Nonwilderness (Some Dev.) Big Game Winter Range	.5	.5	.5	.5	.5	.5	0	0	1.0	2.0	2.0	.5	.5	.5	.7
Nonwilderness (Developed) Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	6.4	6.7	6.9	9.3	6.8	5.8	0	0	7.1	5.1	5.1	9.7	8.5	8.5	.2
Wilderness Recommended Wilderness	0	0	0	0	0	0	10.7	10.7	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness Developed - Decade 1:	3.2	3.2	3.2	3.9	3.2	2.3	0	0	1.7	1.5	1.5	2.0	3.2	3.2	0
Decade 5:	6.4	6.7	6.9	9.3	6.8	5.8	0	0	7.1	5.1	5.1	9.7	8.5	8.5	0
Roadless - Decade 1:	7.5	7.5	7.5	6.8	7.5	8.4	0	0	9.0	9.2	9.2	8.7	7.5	7.5	10.7
Decade 5:	4.3	4.0	3.8	1.4	3.9	4.9	0	0	3.6	5.6	5.6	1.0	2.2	2.2	10.7
Recommended Wilderness	0	0	0	0	0	0	10.7	10.7	0	0	0	0	0	0	0
Total Acres- Gold Hill	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7

B. Impacts

Gold Hill 01668

1. Designation: Wilderness
Management Emphasis: Wilderness

The Gold Hill roadless area is recommended for wilderness in its entirety in both Alternatives G and H. No other alternative recommends wilderness for the area. 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 in the Parsnip Creek drainage. Primitive recreation opportunities will be maximized and old-growth timber wildlife habitat will be protected.

There are approximately 10,000 acres of suitable timberland in the Gold Hill area. Opportunities to manage the timber resource would be unavailable in Alternatives G and H. Opportunities to manage for the mountain pine beetle through salvage harvest would also not be available.

Big game habitat management for both summer and winter range, by either burning or timber harvest would not occur in wilderness. Although forage could not be improved by deliberate management activities, wilderness would provide security for big game by limiting access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral entry.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. Designation: Nonwilderness (Roadless)
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every Alternative except G and H designates a portion of the area to these emphases. The following chart displays the percent of the area designated to roadless management by alternative.

Percent of Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
35	32	30	8	31	41	0	0	24	33	33	4	15	15	93

There are few, if any, ground-disturbing management activities specifically associated with roadless management. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained as well as provide for semiprimitive recreaiton opportunities. Old-growth timber habitat will also be maintained and security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social/economic benefits of these emphases is associated primarily with semiprimitive recreation. Because timber opportunities would be unavailable in these emphases, the timber industry would not be supported.

3. Designation: Nonwilderness (Some Development)
Management Emphasis: Big Game Winter Range

All alternatives, except G and H, designate 4% or more of the area (500 acres) to this management emphasis. Alternative I designates 1,000 acres (9%) while Alternatives J and K designate 2,000 acres (18%) to this emphasis. The intent is to manage big game winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

Timber harvest and associated activities, such as road building, have more affect on the physical and biological environment than and of the other forest management activities. The extent of the effects are dependent on management regimes selected.

Each alternative except G, H, and O, designate a portion of the area to these emphases. The following chart displays the percent of the area designated to developmental activities, by alternative.

Percent of Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
59	62	64	86	63	54	0	0	66	47	47	90	79	79	0

Timber harvest activites, including road building, are scheduled to occur in the first decade in all Alternatives except G, H, and O. (See Table 3 which follows this discussion). Road miles built the first decade range from 18 to 23 miles, depending on the alternative. By the fifth decade, 24 to 40 miles would be in place, again depending on the alternative.

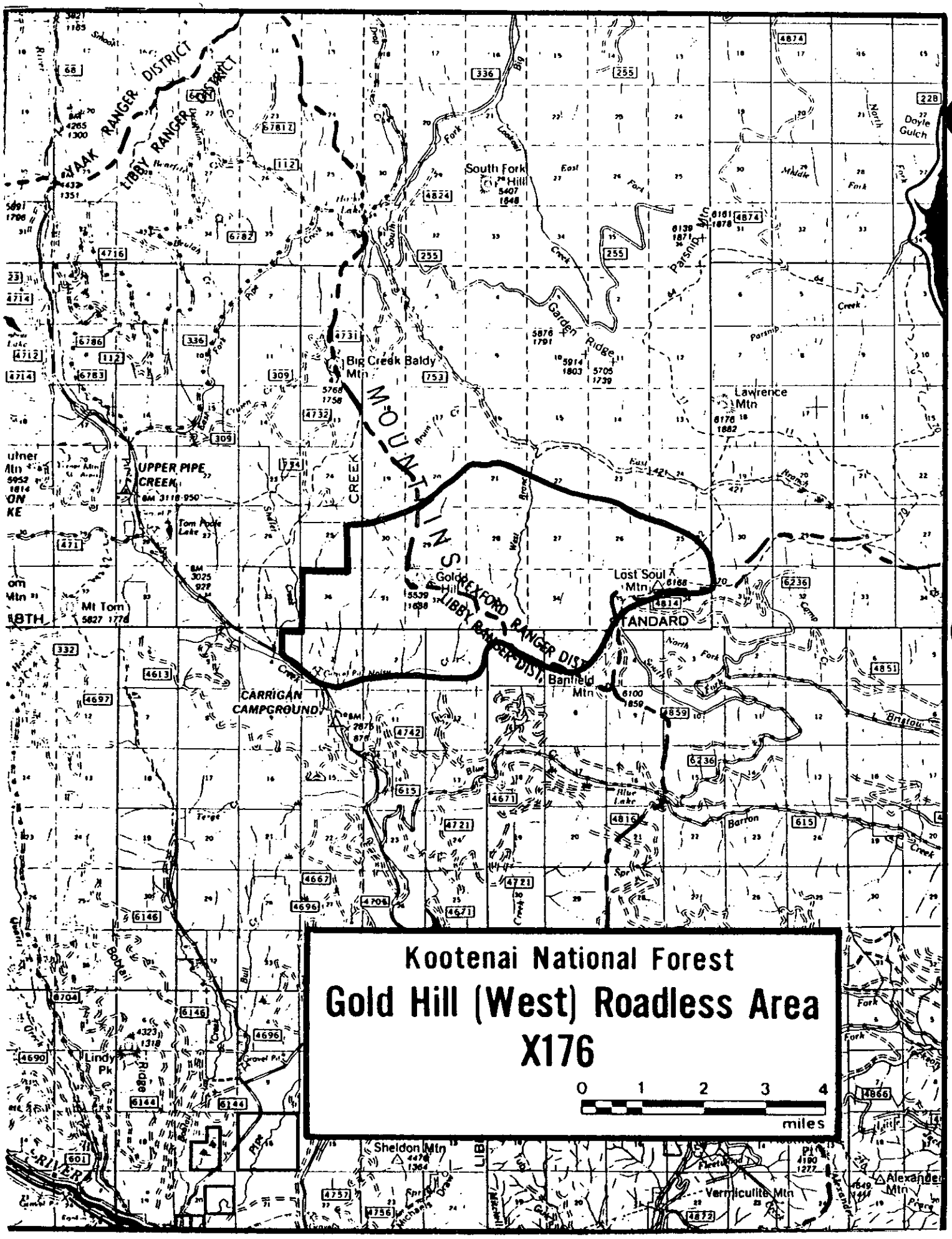
As the area becomes developed, the naturalness of the area will be impacted by timber cutting units, roads, and other evidence of man's modifications. Portions of the area face out into the Koocanusa Reservoir. Activities conducted along these slopes would be highly visible from the Reservoir and from Highway 37. Roading foregoes the opportunity to consider the area for wilderness by the fifth decade and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

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 Forests. Timber from the Gold Hill roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on big game and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Gold Hill Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	10.7	10.7	0	0	0	0	0	0	0
Roadless MAcres		3.8	3.5	3.3	.9	3.4	4.4	0	0	2.6	3.6	3.6	.5	1.7	1.7	10.0
Recreation																
Prim./Semiprim.MRVDs		15	14	13	4	14	18	32	32	4	7	7	2	1	7	38
Semiprim. Motor.MRVDs		33	35	36	48	35	31	0	0	48	51	51	50	44	44	2
Timber																
Suitable MAcres		6.2	7.2	6.9	9.3	7.3	5.8	0	0	7.1	5.1	5.1	9.7	8.5	8.5	0
Volume (MMBF)	1	30.0	30.0	30.0	31.8	30.0	21.0	0	0	15.6	13.9	13.9	17.0	30.0	30.0	0
	3	24.0	17.0	25.0	43.3	7.0	2.9	0	0	9.6	1.1	1.1	38.0	45.0	45.0	0
	5	0	0	5.0	1.6	0	37.0	0	0	0	5.8	5.8	3.0	5.0	5.0	0
Harvest Acres - MAcres	1	3.2	3.2	3.2	3.9	3.2	2.3	0	0	1.7	1.5	1.5	2.0	3.2	3.2	0
	3	1.7	1.4	1.8	4.0	1.0	.2	0	0	1.7	.2	.2	3.3	4.0	4.0	0
	5	0	0	.3	.1	0	2.5	0	0	0	.7	.7	.2	.3	.3	0
Roads																
Roads Constructed First Decade - Miles		18	18	18	23	18	13	0	0	10	8	8	13	18	18	0
Total Road Miles Needed by Fifth Decade - Miles		29	29	31	40	28	24	0	0	16	17	18	40	18	18	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		NOT APPLICABLE IN THIS ROADLESS AREA														
Wildlife - Big Game																
Summer Range MAcres		1.0	1.0	1.2	1.4	1.1	5.6	0	0	0	0	0	1.6	1.8	1.8	0
Winter Range MAcres		.5	.5	.5	.6	.5	.5	0	0	1.0	2.0	2.0	.5	.5	.5	.7
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Gold Hill (West) Roadless Area
X176
0 1 2 3 4
miles
LIBBY RANGER DISTRICT
REXFORD RANGER DISTRICT
MOUNTAINS
South Fork Hill
Garden Ridge
Big Creek Baldy Mtn
Lawrence Mtn
Parsnip Mtn
Doyle Gulch
UPPER PIPE CREEK
Tom Poole Lake
Mt Tom
Gold Hill
Lost Soul Mtn
STANDARD
Banfield Mtn
CARRIGAN CAMPGROUND
Blue Lake
Barton
Lindy Pk
Sheldon Mtn
Vermiculite Mtn
Alexander Mtn

KOOTENAI NATIONAL FOREST

Gold Hill (West) - X1176 State: Montana

Gross Acres: 10,200 Net Acres: 10,200

I. Description

This area is located in the approximate center of the Kootenai Forest. The area extends east from Pipe Creek Road encompassing Gold Hill and Lost Soul Mountains. Access to the area is provided by the Pipe Creek Road to the trailhead on the South Fork of Big Creek.

The area is formed by the West Branch of the South Fork of Big Creek forming a basin on the east half bordered by Gold Hill in the Center and Lost Soul Mountain on the east. Noisy Creek drains the west half. The east half typically has gentle slopes with Lost Soul Mountain the highest point at 6,168 feet elevation. The west half has steeper topography and the entire area is heavily forested.

The roadless area is generally surrounded by forest management activities such as roads and clearcuts.

The represented ecosystem types are Douglas-fir Forest and Western Spruce Forest.

The roadless area contains grizzly bear habitat, though the extent of the grizzly use is unknown. The area also contains moose, deer, black bear, and beaver. Beaver ponds along the West Branch of the South Fork of Big Creek are one of the attractions of the area.

Recreation use in this area is considered light and is primarily hunting in the fall (300 RVD's).

II. Capability

A. Natural Integrity and Appearance

The natural integrity is high with only a primitive hiking trail up the West Branch of the South Fork of Big Creek.

B. Opportunities for Solitude

Opportunities for solitude are high, owing to the dense vegetation throughout most of the area and especially in the Noisy Creek Canyon.

C. Primitive Recreation Opportunities

Recreation opportunities include hiking, hunting, and fishing. Crosscountry travel through dense forest is the most challenging experience offered in the area.

D. Other Features

Water features, beaver dams, and the Noisy Creek Canyon are the area's special features.

E. **Manageability and Boundaries** Gold Hill (West) 01X176

The area was originally identified in the RARE I inventory. At that time, the recommendation was for a non-wilderness classification with most of the area allocated to developmental uses. During the RARE II inventory, Gold Hill (West) was part of the larger Gold Hill roadless area but during the 1983 inventory, the area was divided into two because of developments that had occurred in the interim. The following adjustments reflect only those made to Gold Hill (West); Gold Hill is discussed as a separate area.

Gross Acres	Net Acres	
29400	29400	RARE I inventory
-3000	-3000	Areas affected by timber sales
-1700	-1700	Areas in intermingled ownership which diminishes wilderness potential
-1200	-1200	Areas that are in a configuration which would make an unsuitable wilderness
-1800	-1800	Acres of private land
-6900	-6900	Acres that are now a part of Gold Hill (see section on Gold Hill)
10200	10200	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification for the area are the existing oil & gas leases.

The boundary is not well-defined on the northern portion, corresponding to timber sale activities. The western boundary is formed by private lands while the southern edge conforms to more easily identified topographic features. Some opportunity exists to move the boundaries to more definable and recognizable topographic features.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential to provide about 3,600 RVD's of wilderness recreation per year. Current use is estimated to be 300 RVD's.

2. Wildlife and Fish — Gold Hill (West) 01X176

The area contains grizzly bear, whitetail and mule deer, and moose habitat. Most of the big game habitat is summer range. This area encompasses the West Branch of the South Fork of Big Creek which contains cutthroat and possible brook trout. Noisy Creek and a few small tributaries to Pipe Creek on the south half may support resident trout.

3. Timber

There are about 9,900 acres of suitable timber land capable of producing more than 20 cubic feet per acre per year of timber growth. Approximately 25 percent of this timberland is located on slopes greater than 55 percent. These steep slope areas are primarily located on the western portion of the roadless area (Noisy Creek). In the eastern portion of the roadless area (West Branch of the South Fork of Big Creek) slopes range form 20 to 55 percent. Road building will be less costly and difficult in this portion. Tractor logging will be permissable on slopes less than 40 percent which make up approximately half of the land area in the West Branch portion.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area and the grazing potential is all transitory.

2. Minerals

The mineral potential is low and the oil and gas potential is moderate.

3. Cultural Resources

There is one known historic cultural site identified in the area but no identified prehistoric sites. Based upon surveys done in similar areas, the probability of sites occurring is considered low.

4. Water

Mean annual precipitation for the area is about 32 inches varying from 26 to 40 inches depending on elevation. Only 25 to 40 percent of this amount can be expected to show up as streamflow. Peak runoff is generally in June. Water quality is high in these streams except during the higher spring runoff period.

C. Resource Situation

Gold Hill (West) 01X176

Table 1

Category	Unit	
Gross Acres	Acres	10200
Net Acres	Acres	10200
Recreation		
Semiprim. Nonmotor.	RVDs	300
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	9900
Standing Volume	MMBF	75
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	-
Situation 2	Acres	1700
Situation 3	Acres	-
Wildlife - Big Game (Elk, Deer)		
Summer Range Total	Acres	9700
Winter Range Total	Acres	0
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	-
Stream Habitat	Acres	-
Lakes	No.	-
Lake Habitat	Acres	-
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	-
Low	Acres	10200
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	10200
Low	Acres	-
Unknown	Acres	-
Oil & Gas Leases		
Leases	No.	4
Leased Acres	Acres	10200

D. Management Considerations

1. Land Use Authorizations

There are no special uses in the area. Oil & gas leases exist.

2. Fire

The area has had low fire occurrence in the last 20 years (2 fires). The current fuels situation is dense conifer stands with a heavy acculation of downed woody material.

3. Insect and Disease

Almost the entire area contains lodgepole pine including stands of mature lodgepole pine which are susceptible to mountain pine beetle infestation. Only minor insect activity is occurring at present (1983).

4. Non-Federal Lands

There are no private lands in the defined area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is 20 air miles north of the existing Cabinet Mountains Wilderness. Spokane, Washington (170 miles) and Missoula, Montana (220 miles) are the nearest population centers.

B. 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.

C. Public Interest

Gold Hill (West) was eveluated during RARE I and recommended for non-wilderness. During the public comment period for the Big Creek Planning Unit, no expressions of pro-wilderness for the Gold Hill (West) area were voiced. There have been no recent expressions of support for wilderness.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Gold Hill West Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	3.7	3.7	3.7	0	3.7	5.4	0	0	1.4	0	0	0	3.7	3.7	10.2
Nonwilderness (Some Development)															
Special Interest Areas	0	0	0	0	0	0	0	0	0	1.2	1.2	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	6.5	6.5	6.5	10.2	6.5	4.8	0	0	8.8	9.0	9.0	10.2	6.5	6.5	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	10.2	10.2	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	3.6	3.6	3.6	0	3.6	0	0	0	0	0	0	0	3.6	0	0
Decade 5:	6.5	6.5	6.5	10.2	6.5	4.8	0	0	8.8	9.0	9.0	10.2	6.5	6.5	0
Roadless - Decade 1:	6.6	6.6	6.6	10.2	6.6	10.2	0	0	10.2	9.0	9.0	10.2	6.6	6.6	10.2
Decade 5:	3.7	3.7	3.7	0	3.7	5.4	0	0	1.4	1.2	1.2	0	3.7	3.7	10.2
Recommended Wilderness	0	0	0	0	0	0	10.2	10.2	0	0	0	0	0	0	0
Total Acres- Gold Hill West	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2

B. Impacts Gold Hill (West(01X176

1. **Designation: Wilderness**
Management Emphasis: Wilderness

The Gold Hill (West) roadless area is designated wilderness in its entirety in Alternatives G and H. No other alternative recommends wilderness for the area. 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 opportunities for solitude available within the area. Primitive recreation opportunities will be maintained, especially the hiking and hunting opportunities available along the South Fork of Big Creek. Old-growth timber habitat for wildlife would also be maintained.

There are about 9,900 acres of suitable timberland located within the area. In Alternatives G and H, opportunities to manage the timber resource would be foregone. This includes the harvest of lodgepole infested by the mountain pine beetle.

Grizzly bear habitat (Situation 2) is located in this roadless area. Wilderness management would provide security for the bear by prohibiting roading, thereby reducing increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big game summer range using timber harvest would also be foregone, thus limiting the production of forage. However, wilderness will provide security by limiting access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternatives D, G, H, J, K, and L designated a portion of the area to these management emphases. The following chart displays the percent of the area designated to roadless management.

Percent of Area Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
36	36	36	0	36	52	0	0	13	0	0	0	36	36	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained in these emphases as will the primitive and semi-primitive recreation opportunities. Old-growth timber habitat will be maintained and grizzly habitat will be protected. Security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

Gold Hill (West) 01X176

3. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Each alternative, except Alternatives G, H, and O, designate a portion of the area to these emphases. The following chart displays the percent of the area designated for developmental activities in each alternative.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
63	63	63	100	63	47	0	0	86	88	88	100	63	63	0

Development is scheduled to occur in the first decade in Alternatives A, B, C, E, M, and N. (See Table 3 at the end of this discussion). In the other Alternatives, development will occur either by the third or fifth decade. Miles of road expected to be built to develop the area range from 19 to 57 miles, depending on the alternative.

As development occurs, the naturalness of the area will be impacted by harvest units, roads, and other evidences of man's modifications. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

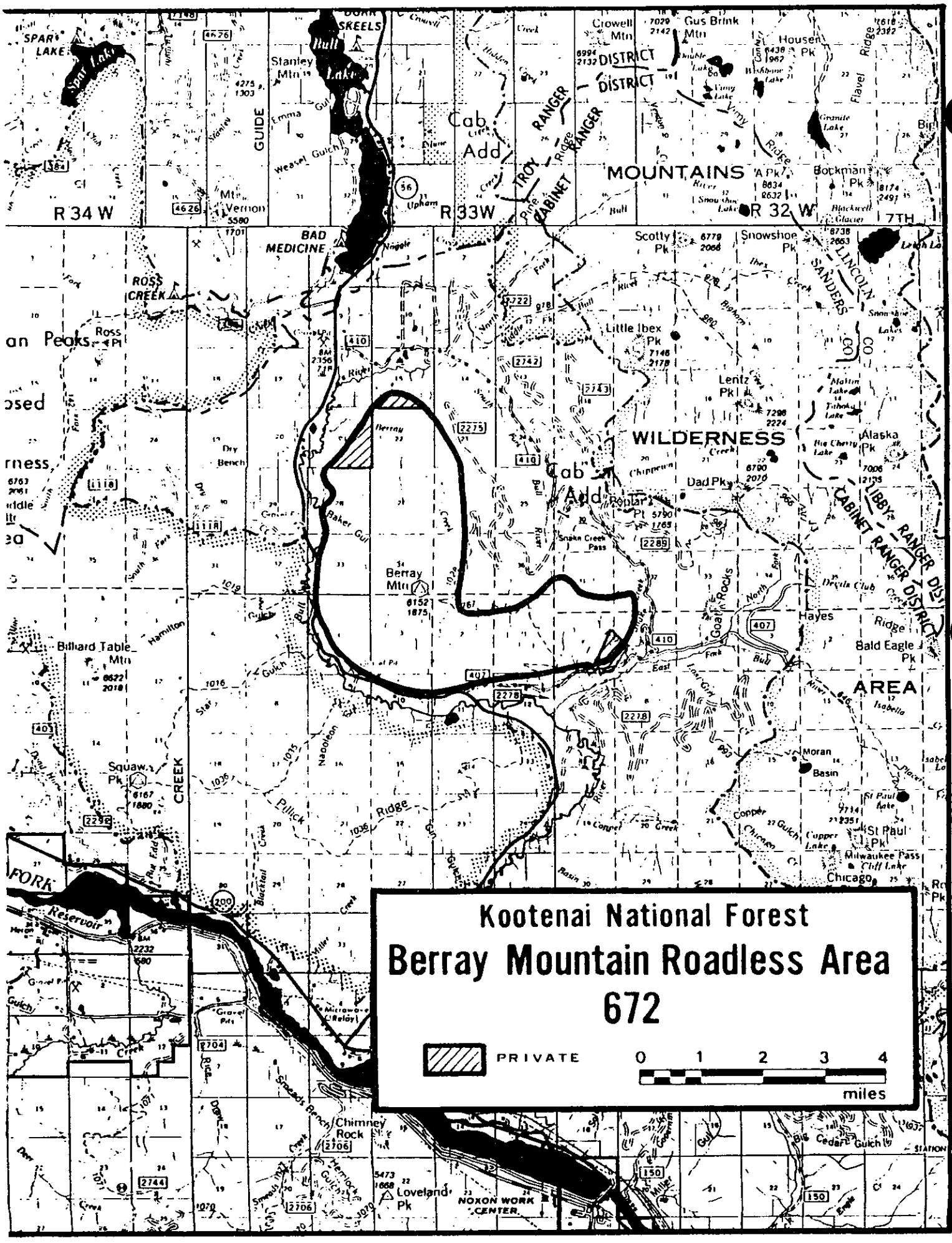
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Gold Hill (West) roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Gold Hill West Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	0	0	0	0	10.2	10.2	0	0	0	0	0	0	0
Roadless MAcres		3.7	3.7	3.7	0	3.7	5.4	0	0	1.4	0	0	0	3.7	3.7	10.2
Recreation																
Prim./Semiprim.MRVDs		15	18	17	8	18	35	31	31	6	0	0	0	21	15	40
Semiprim. Motor.MRVDs		32	26	28	37	27	1	0	0	43	485	485	50	21	32	1
Timber																
Suitable MAcres		6.5	6.5	6.5	9.9	6.5	4.8	0	0	8.8	9.0	9.0	9.9	6.5	6.5	0
Volume (MMBF)	1	4.0	4.0	4.0	0	4.0	0	0	0	0	0	0	0	4.0	4.0	0
	3	0	0	0	0	0	0	0	0	0	0	0	.03	0	0	0
	5	0	0	0	52.9	0	0	0	0	52.9	.03	.03	53.0	0	0	0
Harvest Acres - MAcres	1	3.6	3.6	3.6	0	3.6	0	0	0	0	0	0	0	3.6	3.6	0
	3	0	0	0	0	0	0	0	0	0	0	0	.03	0	0	0
	5	0	0	0	3.6	0	0	0	0	7.3	.03	.03	3.6	0	0	0
Roads																
Roads Constructed First Decade - Miles		19	19	19	0	19	0	0	0	0	0	0	0	19	19	0
Total Road Miles Needed by Fifth Decade - Miles		19	19	19	57	19	19	0	0	50	21	21	44	30	19	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		0	0	0	0	0	1.7	1.7	1.7	1.4	1.2	1.2	0	0	0	1.7
Wildlife - Big Game																
Summer Range MAcres		2.8	1.5	2.0	.2	1.7	.2	0	0	1.2	6.6	6.6	2.8	.6	2.8	0
Winter Range MAcres		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Berray Mountain Roadless Area
672
PRIVATE
0 1 2 3 4
miles
R 34 W
R 33W
R 32 W
7TH
MOUNTAINS
WILDERNESS
AREA
Berray Mtn
Billiard Table Mtn
Squaw Pk
Chimney Rock
Loveland Pk
NOXON WORK CENTER
Bull Lake
Spar Lake
Cab Add
Cab Add
Little Ibex Pk
Lentz Pk
Alaska Pk
Dad Pk
Poplar Pt
Scotty Pk
Snowshoe Pk
Gus Brink Mtn
Crowell Mtn
Housen Pk
Bockman Pk
Stanley Mtn
Mt Vernon
Upham
BAD MEDICINE
ROSS CREEK
Ross Pk
Dry Bench
Baker Gulch
Hayes Ridge
Bald Eagle Pk
Moran Basin
St Paul Pk
Milwaukee Pass
Chicago
Reservoir
Gravel Pits
Microwave Relay
Big Cedar Gulch
STATION
TROY RANGER DISTRICT
CABINET RANGER DISTRICT
LIBBY RANGER DISTRICT
SANDERS CO
LINCOLN CO
GUIDE
Weasel Gulch
Pillick Ridge
Napoleon Gulch
Star Gulch
Hamilton Gulch
Snake Creek Pass
Goat Rocks
Devils Club
Granite Lake
Flavel Ridge
Bighorn
Ibex Creek
Chippewa Creek
Copper Gulch
Chicago Gulch
Sheads Ranch
Herlock Gulch
Miller Gulch
Blacktail Creek
Bull River
Vermilion River
Yaak River
Kootenai River
Fork
Reservoir
Pt 5790
Pt 6152
Pt 6167
Pt 6822
Pt 6994
Pt 7029
Pt 6438
Pt 6634
Pt 6779
Pt 6738
Pt 7146
Pt 7296
Pt 6790
Pt 5473
Pt 2232
Pt 2356
Pt 2722
Pt 2742
Pt 2743
Pt 2275
Pt 2289
Pt 2278
Pt 2296
Pt 2704
Pt 2706
Pt 2744
Pt 2706
Pt 1118
Pt 1118
Pt 1018
Pt 1016
Pt 1015
Pt 1036
Pt 1036
Pt 1037
Pt 1070
Pt 1037
Pt 1637
Pt 410
Pt 407
Pt 200
Pt 150
Pt 56
Pt 364
Pt 4626
Pt 4676
Pt 403
Pt 2289

KOOTENAI NATIONAL FOREST

Berray Mountain - 01672 State: Montana

Gross Acres: 8,600 Net Acres: 8,300

I. Description

Located on the east side of Bull River, this area generally lies between the South and East Forks of the Bull River and is accessible from the Bull Lake Road (State Highway 56).

This roadless area is characterized as a high elevation ridgetop setting, with steep cliffs present on the southern and western end. Berray Mountain (6,150 feet) is the highest point in the area. The northern portion contains forested lands but the remainder is generally sparsely forested. Berray Creek, Baker Gulch, and numerous small tributaries of the Bull River drain this area.

The area is surrounded to the north and east by developments such as roads and timber cutting units. Pellick Ridge (part of the Scotchman Peaks roadless area, #662) lies to the south and west, separated by the Bull Lake Road and Bull River.

The ecosystems represented include Douglas-fir and Cedar Hemlock Pine Forests.

Existing use is primarily hunting in the fall and viewing wildlife from the Bull Lake Road. Berray Mountain is considered perhaps the best place on the Forest to view wintering mountain sheep, elk, and deer.

II. Capability

A. Natural Integrity and Appearance

Natural integrity and appearance is good with the exception of the recently active Berray Mountain Lookout and several miles of existing trail.

B. Opportunities for Solitude

Opportunities for solitude are good in Berray Creek but poor on the south and west facing slopes looking into the Bull River Valley.

C. Primitive Recreation Opportunities

Good opportunities for primitive recreation exist such as hiking, camping, and wildlife observation. Challenging experiences include rock climbing and wildlife photography.

D. Other Features

Special features include the bighorn sheep herd and grizzly habitat.

E. Manageability and Boundaries — Berray Mtn. 01672

Berray Mountain was evaluated in the 1979 RARE II Final EIS and recommended for non-wilderness uses. Since 1979, there have been no changes in the boundary of the area although the acres have been adjusted as shown below.

Gross Acres	Net Acres	
8612	8232	RARE II inventory
8600	8300	1983 roadless inventory

Nonconforming uses include the Berray Mountain Lookout, 300 acres of private land located on the north and east edge of the area and existing oil & gas leases.

The Roadless area is primarily a ridgetop setting with steep slopes on the south and west sides resulting in easily identifiable boundaries. The northern and eastern edges would be more difficult to identify because of their midslope position.

III. Availability

A. Significant Resource Potentials

1. Recreation

It is estimated that the area could provide 2,500 RVD's of wilderness recreation per year. Current use is estimated to be 500 RVD's.

2. Wildlife

The area contains bighorn sheep, whitetail deer, mule deer and elk winter range, and grizzly habitat. Big game habitat is currently managed by the use of both broadcast and under-burning.

3. Timber

The timber productivity of the area is considered poor on the southern half and good on the northern and eastern tips. Approximately 3,700 acres of tentatively suitable land are contained within the roadless area, primarily located on the northern tip. Over 95% of the timberland is located on slopes greater than 55%. Road construction would be difficult and costly. Timber harvesting would require cable or helicopter logging.

B. Other Resources

1. Fish

No major fishery occurs in the area.

2. Range — Berray Mtn. 01672

There are no livestock grazing allotments in the area and the grazing potential is all transitory range.

3. Minerals

The mineral potential is low and the oil and gas potential is moderate.

4. Cultural Resource

One historic cultural site, the Berray Mountain Lookout is known to exist. There have been no prehistoric sites located but surveys done in similar locations on the Forest indicate that the probability of sites occurring is low.

5. Water

Mean annual precipitation for the area varies from 35 to 100 inches depending on elevation. Runoff from the area would vary from 12 to 55 inches, again depending on elevation. While streams in this area can be expected to peak in June, this area also experiences the mid-winter rain-on-snow storms which have caused considerable damage in the past.

C. Resource Situation — Berray Mtn. 01672

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	8600			
Net Acres	Acres	8300			
Recreation					
Semiprim. Nonmotor.	RVDs	500	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	3700	Existing	No.	0
Standing Volume	MMBF	31			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	
Wildlife - T&E			High	Acres	
Grizzly Bear Habitat			Moderate	Acres	
Situation 1	Acres	8300	Low	Acres	8300
Situation 2	Acres	-	Mining Claims	No.	0
Situation 3	Acres	-	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer, Sheep)			High	Acres	-
			Moderate	Acres	8300
Summer Range Total	Acres	1800	Low	Acres	-
Winter Range Total	Acres	4400	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	4
Existing Facilities	No.	0	Leased Acres	Acres	8300

D. Management Considerations

1. Land Use Authorizations

There are no special uses. Oil & gas leases exist.

2. Fire

The fire history is a low occurrence (no fires in the last 10 years) and the fuels situation is conifer stands with thick downed, woody material as ground fuels on the northern portion and sparse fuels on the southern face.

3. Insect and Disease

About 10% of the area contains mature lodgepole pine that is susceptible to Mountain Pine Beetle but there is no insect activity in the area at present (1983).

4. Non-Federal Lands

There are 300 acres of private land located on the northern and eastern edge.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The Berray Mountain roadless area is approximately 105 miles from Spokane, Washington and 3 miles west of the Cabinet Mountains Wilderness which is now getting more than 18,000 annual RVD's. This use is beginning to increase and the trend is projected to continue.

B. 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.

C. Public Interest

During the RARE II public comment period, over 1,300 people commented on the area, most of whom (87%) opposed a wilderness classification for the area. RARE II recommended non-wilderness. During the Unit Planning process, no direct comments were received concerning the wilderness issue nor have there been recent expressions favoring a wilderness in the area.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Barray Mountain Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	.4	.4	.4	.4	.4	1.2	0	0	.6	0	0	0	.4	.4	3.8
Nonwilderness (Some Development)															
Big Game Winter Range	.4	.4	.4	.4	.4	.4	0	0	5.6	5.8	5.8	.4	.4	.4	4.5
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	7.5	7.5	7.5	7.5	7.5	6.7	0	0	2.1	2.5	2.5	7.9	7.5	7.5	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	8.3	8.3	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	0	0	0	.8	0	0	0	0	0	0
Decade 5:	7.5	7.5	7.5	7.5	7.5	6.7	0	0	2.1	2.5	2.5	7.9	7.5	7.5	0
Roadless - Decade 1:	8.3	8.3	8.3	8.3	8.3	8.3	0	0	7.5	8.3	8.3	8.3	8.3	8.3	8.3
Decade 5:	0.4	0.4	0.4	0.4	0.4	1.6	0	0	6.2	5.8	5.8	0.4	0.8	0.8	8.3
Recommended Wilderness	0	0	0	0	0	0	8.3	8.3	0	0	0	0	0	0	0
Total Acres- Barray Mtn.	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3

B. Impacts Berray Mtn. 01672

1. Designation: Wilderness
Management Emphasis: Wilderness

Only Alternatives G and H recommend the entire Berray Mountain roadless area for 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 in the Berray Creek portion. Primitive recreation opportunities would be maximized as well as protection of old-growth timber and associated wildlife habitat.

About 3,700 acres of suitable timberland are in the Berray Mountain roadless area. The opportunity to manage the timber resource would be foregone in Alternatives G and H.

Grizzly bear habitat (situation 1 - critical to the recovery of the species) covers the entire roadless area (see Glossary for definition of habitat situations). Wilderness management would provide security to the bear from roading and related increases in human activity in the area. However, increases in forage through management activities such as burning and timber harvest would not occur.

Past burning efforts to maintain and improve big game (elk, deer, and bighorn sheep) winter range would be discontinued under wilderness management. In the short-term, winter range could decrease although possible increases in the longer term may occur because of openings created by wildfire and/or insect and disease infestations. The habitat on summer range would not be improved or maintained but wilderness management would provide security, i.e., lack of access and human activity in the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semi-primitive recreation activities such as hunting in a roadless setting would continue. Timberland would not be available in alternatives G and H thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

About five percent or 400 acres of the roadless area is managed in roadless emphases in Alternatives A through E, I, M and N. Alternative F designates 1200 acres and Alternative O, 3,800 acres to these emphases. There are few, if any, ground-disturbing management activities specifically associated with unroaded management.

The roadless character within these emphases will be maintained as well as semi-primitive recreation opportunities. Old growth timber habitat will also be maintained and grizzly habitat will be protected. Security for big game animals would be maintained.

Like wilderness, unroaded management 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression. The impacts of the above activities and associated management in this roadless area are judged to be insignificant.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities.

3. **Designation: Nonwilderness(Some Development) Berray Mtn. 01672**
Mangement Emphasis: Big Game Winter Range

This emphasis is located primarily on the west side of the roadless area along the Bull River. The intent is to manage winter range habitat for the benefit of the elk, deer, and big horn sheep that winter in this area. Prescribed burning is the primary management activity and would be applied when the big game would not be disturbed by the activity. Alternatives A through F and L through N designate about four percent, Alternatives I, J, K designate about 70 percent, and Alternative O designates 55 percent of the roadless area to this emphasis.

The impact on the wilderness and roadless character of the emphasis is short-term in nature. The naturalness of the area is altered by the human activity of burning but vegetative growth after burning would make this activity less apparent.

Impacts on the timber and mineral resource values are insignificant in this emphasis in this roadless area.

Social and economic effects would be primarily one of support of those publics valuing and/or hunting the wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

All alternatives except G, H and O designate at last a portion of the area to one of these emphases. The following chart displays the percent of the area designated to developmental activities.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
91	91	91	91	91	81	0	0	92	30	30	96	91	91	0

Timber harvest and associated activities such as road building have more effect on the physical and biological environment than any of the other forest management activities. The extent of the effects are dependent on management prescriptions selected.

Timber would not be harvested in the first decade except in Alternative I. (See Table 3 which follows this discussion). However, by the fifth decade, portions of the area would have been harvested in all Alternatives except G, H, and O.

The wilderness resource and roadless character of the area is maintained for the first ten years, but by the third decade, activities will alter the roadless area. The naturalness of the area will be impacted by harvest units, roads and other evidence of human modifications. The highly visible portions of the area facing into the Bull Lake Valley would not be affected because they are for the most part unsuitable for timber harvest. Roading forgoes the opportunity to consider 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, but can maintain or improve the wildlife habitat. The impact on security can be mitigated in part by closing roads which would keep human disturbances at lower levels. Timber harvest is scheduled so that hiding cover is not completely removed.

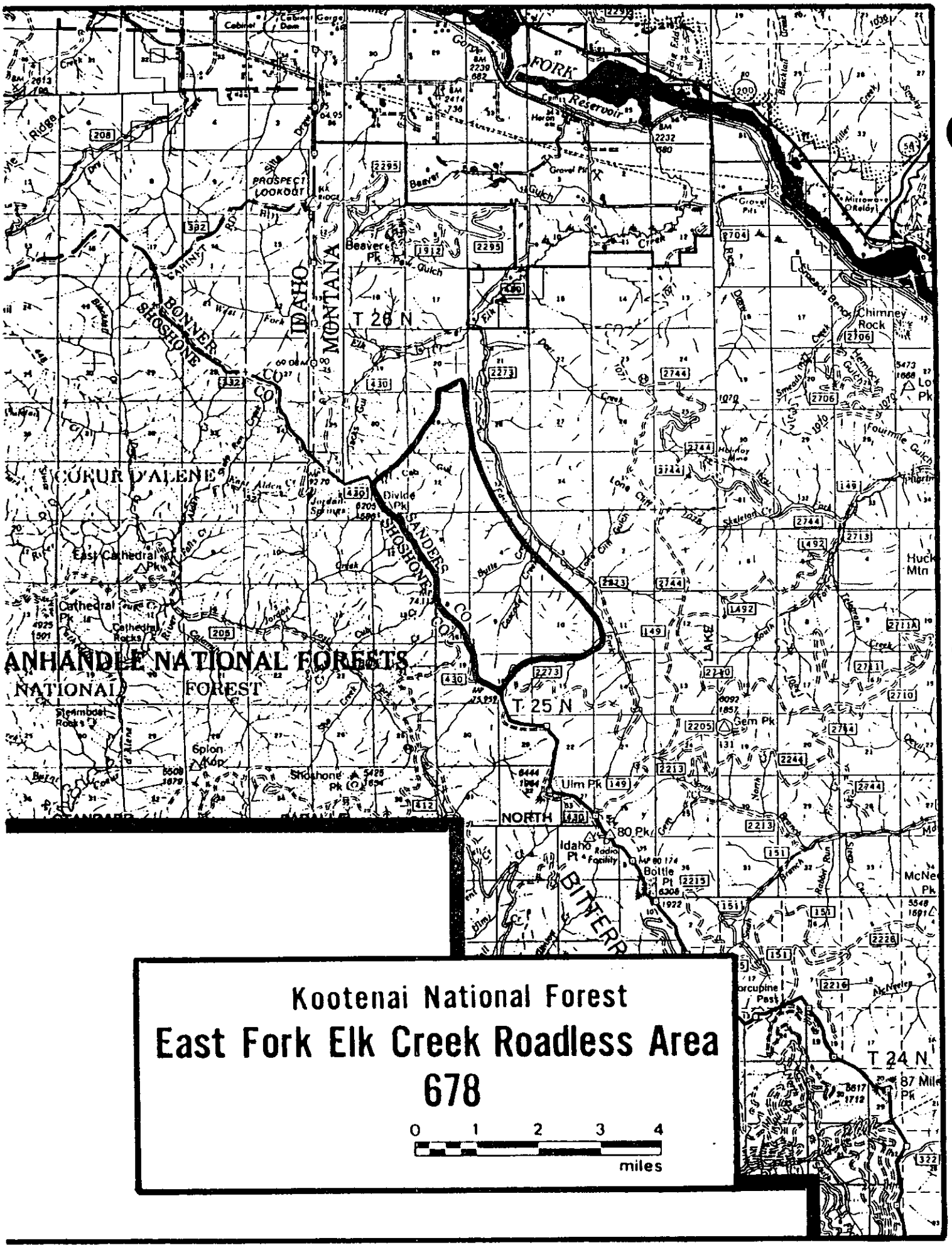
Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce positive benefits by producing more desirable forage for grizzlies through certain timber harvest and site preparation practices such as small clearcuts and broadcast burning instead of tractor piling. Road would be closed in a timely manner to minimize human/bear encounters and displacement.

The harvest of some of the mature lodgepole pine (10% of the area) will provide an opportunity for control of insects and disease because all diseased or susceptible trees are removed and a young, vigorous stand is initiated.

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 Berray Mountain roadless area would contribute to the economic base. 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 it existing character. Those publics desiring wilderness or roadless management for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but should be addressed by the efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Barray Mountain Roadless Area.

OUTPUT CATEGORY	DEC.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	0	0	0	0	8.3	8.3	0	0	0	0	0	0	0
Roadless MAcres		.4	.4	.4	.4	.4	1.2	0	0	.6	0	0	0	.4	.4	3.8
Recreation																
Prim./Semiprim.MRVDs		8	8	8	8	8	9	25	25	1	0	0	0	8	8	15
Semiprim. Motor.MRVDs		29	29	29	29	29	29	0	0	44	37	37	31	29	29	22
Timber																
Suitable MAcres		3.5	3.5	3.5	3.5	3.5	2.7	0	0	2.1	2.5	2.5	3.7	3.7	3.7	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	4.4	0	0	0	0	0	0
	3	8.0	8.0	8.0	15.5	8.0	3.0	0	0	9.2	2.8	3.9	3.0	8.0	8.0	0
	5	7.0	7.0	7.0	4.5	7.0	4.0	0	0	.004	5.8	4.6	6.0	4.0	7.0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	.8	0	0	0	0	0	0
	3	.9	.9	.9	1.8	.9	.1	0	0	.4	.1	.4	.1	.9	.9	0
	5	.3	.3	.3	.2	.3	.2	0	0	.4	.4	.2	.3	.2	.3	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	6	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		12	12	12	14	12	6	0	0	12	8	8	15	12	12	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		.4	.4	.4	.4	.4	1.2	8.3	8.3	.6	0	0	0	.4	.4	3.8
Wildlife - Big Game																
Summer Range MAcres		1.3	1.3	1.3	1.12	1.3	1.3	0	0	1.8	1.2	1.2	1.8	1.2	1.2	0
Winter Range MAcres		4.5	4.5	4.5	5.4	4.5	4.4	0	0	5.6	6.3	6.3	4.4	4.4	4.5	4.4
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
East Fork Elk Creek Roadless Area
678
0 1 2 3 4
miles
T 26 N
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T 24 N
IDAHO
MONTANA
BONNER CO
SHOSHONE CO
SANDERS CO
COEUR D'ALENE
NATIONAL FOREST
PANHANDLE NATIONAL FORESTS
NORTH
BITTERROOT
LAKE
Reservoir
Beaver Pk
Divide Pk
East Cathedral Pk
Cathedral Pk
Cathedral Rocks
Steamboat Rocks
Shoshone Pk
Ulm Pk
80 Pk
Idaho Pt
Bottle Pt
Gem Pk
Chimney Rock
Huck Mtn
McNeil Pk
87 Mile Pk
Porcupine Pass
PROSPECT LOOKOUT
Jordan Springs
Alden Cr
Long Cliff Gulch
Skeleton Cr
Fourmile Gulch
Hemlock Gulch
Smeads Bench
Holiday Mine
Mittowers Relay
Radio Facility

KOOTENAI NATIONAL FOREST

East Fork Elk Creek - 01678 State: Montana

Gross Acres: 5,000 Net Acres: 5,000

I. Description

The area is located on the Idaho-Montana Divide, in the southwestern corner of the Forest. The area encompasses the Lost Cab Gulch, Butte Creek, and Cascade Creek drainages, all flowing northeasterly.

Access to the area is good from the Clark Fork Valley via the East Fork Elk Creek Road. There are no trails in the area.

The area is primarily a ridgetop situation with a very rugged steep rocky east face. Butte and Cascade Creeks, Cab Gulch and several small unnamed tributaries originate within this area. Divide Peak (5,200 feet) is the dominant feature in the area.

The area is generally surrounded by existing or planned Forest developments such as roads or timber harvesting units.

The represented ecosystems are Cedar Hemlock Pine Forest and Western Spruce Fir Forest.

The hunting opportunities are the primary attractions in the area.

Current use is primarily hunting in the fall. Use is considered light (1,000 RVD's) due to steepness of terrain and lack of trails.

II. Capability

A. Natural Integrity and Appearance

The natural integrity and appearance of the area is rated high with no manmade intrusions.

B. Opportunities for Solitude

Opportunities for solitude are also rated high in the deep canyons of Cascade and Butte Creeks. Opportunities are moderate in the remainder of the area because the area looks out onto adjacent lands that have been impacted in the past.

C. Primitive Recreation Opportunities

High quality elk hunting in a primitive setting is the area's primary recreation attraction and the resident elk herd is the area's most special feature. Challenging hiking experiences are provided by the steep canyon walls of Cascade and Butte Creeks.

D. Manageability and Boundaries East Fork Elk Cr. 01678

The area was identified in the RARE II inventory. At that time the area was recommended for non-wilderness and subsequently allocated to both developmental and nondevelopmental uses.

Gross Acres	Net Acres	
6400	6400	RARE II inventory
-1400	-1400	Timber sale activity
5000	5000	1983 roadless inventory

The nonconforming uses in the area are the existing oil & gas leases.

The area has well-defined, easily managed boundaries consisting of existing roads and a ridgeline.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area is estimated to have a potential of providing about 1,600 RVD's of wilderness recreation per year. Some snowmobiling use occurs along the upper end of Cascade Creek, associated with the ridge divide. Current use is about 1,000 RVD's a year.

2. Wildlife

The area contains winter range management opportunities.

3. Timber

There are 3,700 acres of tentatively suitable timberland capable of producing at least 20 cubic feet per acre per year. Over 90% of the total area has slopes greater than 55%. Road construction would be difficult and costly and timber harvest would require a cable or aerial (helicopter) logging system.

B. Other Resources

1. Fisheries

There are no significant fisheries but the area does contain tributaries to East Fork Elk Creek, a cutthroat trout fishery.

2. Range

There are no livestock grazing allotments in the area and the grazing potential is considered all transitory.

3. Minerals

The mineral potential is low. Oil and gas potential is moderate.

4. Cultural Resources East Fork Elk Cr. 01678

There is one historic site and no known prehistoric sites. Based on surveys done in similar areas, the probability of prehistoric sites occurring is considered low.

5. Water

Mean annual precipitation for the entire area is about 50 inches, varying between 40 and 80 inches depending on elevation. Runoff for the area averages about 23 inches per year, showing up as streamflow. Except for short periods during occasional midwinter runoff events, the water quality is usually considered excellent.

C. Resource Situation East Fork of Elk Cr. 01678

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	5000			
Net Acres	Acres	5000			
Recreation					
Semiprim. Nonmotor.	RVDs	1000	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	3700	Existing	No.	0
Standing Volume	MMBF	75			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	-
Situation 1	Acres	-	Low	Acres	5000
Situation 2	Acres	-	Mining Claims	No.	0
Situation 3	Acres	-	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	5000
Summer Range Total	Acres	4700	Low	Acres	-
Winter Range Total	Acres	300	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	4
			Leased Acres	Acres	5000
Existing Facilities	No.	0			

D. Management Considerations

1. Land Use Authorizations

There are no special uses in the area. Oil & gas leases exist.

2. Fire

The area has had low fire occurrence (no fires in the last 10 years). The fuels situation is considered predominately dense conifer with thick accumulations of woody ground fuels with sparse ground fuels on the higher ridgetops.

3. Insect and Disease

There is a limited amount of high risk lodgepole pine but there is no insect and disease activity at present (1983).

4. Non-Federal Lands

No private lands are located within the roadless area boundary.

IV. Need

A. Proximity to Other Wilderness and Population Centers

East Fork of Elk Creek is about 15 air miles from the existing Cabinet Mountains Wilderness. Spokane, Washington (130 miles) and Missoula, Montana (140 miles) are the closest population centers.

B. Contribution to National Wilderness Preservation System

This area is representative of the Cedar Hemlock Pine and Western Spruce Fir Forests ecosystems which are common in the existing wilderness system.

C. Public Interest

During the RARE II pubic review period, over 1,200 people commented on the area, most of whom (84%) were opposed to a wilderness classification for the area. RARE II recommended non-wilderness. There have been no recent expressions of support for wilderness for the East Fork Elk Creek area.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for East Fork Elk Creek Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	1.8	1.6	1.7	1.6	1.8	1.6	0	0	3.2	.7	.7	0	1.8	1.8	4.2
Nonwilderness (Some Development)															
Big Game Winter Range	.8	.8	.8	.8	.8	.8	0	0	.1	1.3	1.3	.8	.8	.8	.8
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	2.3	2.5	2.4	2.5	2.3	2.5	0	0	1.6	2.9	2.9	4.1	2.3	2.3	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	5.0	5.0	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	.6	.5	0	0	.6	0	0	0	0	2.9	1.0	0	0	0
Decade 5:	2.3	2.5	2.4	2.5	2.3	2.5	0	0	1.6	2.9	2.9	4.1	2.3	2.3	0
Roadless - Decade 1:	5.0	4.3	4.4	5.0	5.0	4.3	0	0	5.0	5.0	2.0	3.9	5.0	5.0	5.0
Decade 5:	2.6	2.4	2.5	2.4	2.6	2.4	0	0	3.3	2.0	2.0	.8	.8	.8	5.0
Recommended Wilderness	0	0	0	0	0	0	5.0	5.0	0	0	0	0	0	0	0
Total Acres- E. Fork. Elk	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

B. Impacts East Fork Elk Cr. 01678

1. Designation: Wilderness
Management Emphasis: Wilderness

The East Fork Elk Creek roadless area is recommended for wilderness in its entirety in Alternatives G and H. No other alternative recommends wilderness for the area. 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 primitive characteristics of the area which include the opportunities for solitude in the deep canyons of Cascade and Butte Creeks, and the quality roadless elk hunting experience. Primitive recreation opportunities, such as the hiking opportunities in Cascade and Butte Creeks, will be maximized.

There are 3,700 acres of suitable timberland in the roadless area. The opportunity to manage the timber resource would be foregone in Alternatives G and H.

Opportunities to manage either big game winter range through burning, or big game summer range through timber harvest, would be foregone in this emphasis. However, the inability to improve foreage opportunities would be offset by the security provided the wildlife because of the limit placed on access.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternatives G and H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

East Fork Elk Cr. 01678

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every alternative, except Alternatives G, H, and 1, designate a portion of the area to these emphases. The following chart displays the percent of the area designated to roadless management.

Percent of Area Designated Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
36	32	34	32	36	32	0	0	65	14	14	0	36	36	84

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within these emphases will be maintained as well as semi-primitive recreation opportunities. Old growth timber habitat will also be maintained. Security for be game would be maintained.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

All alternatives, except G and H, designate at least a portion of the area to this emphasis. (See Table 2.) Alternatives J and K designate the most acreage (26% of the area). The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on. Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

East Fork Elk Cr. 01678

4. **Designation:** Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Every alternative, except Alternatives G, H, and O, designates a portion of the area to one or more of these emphases. The following chart displays the percent of the area designated for developmental activities in each alternative.

Percent of the Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
46	50	48	50	46	50	0	0	32	58	58	82	46	46	0

Timber harvest activities are scheduled to occur during the first decade in Alternatives B, C, F, and L. (See Table 3 at the end of this discussion). In all Alternatives except G, H, J, and O, development will occur by the third decade. By the fifth decade, from 3 to 13 miles of road would be in place in developmental alternatives, depending on the alternative.

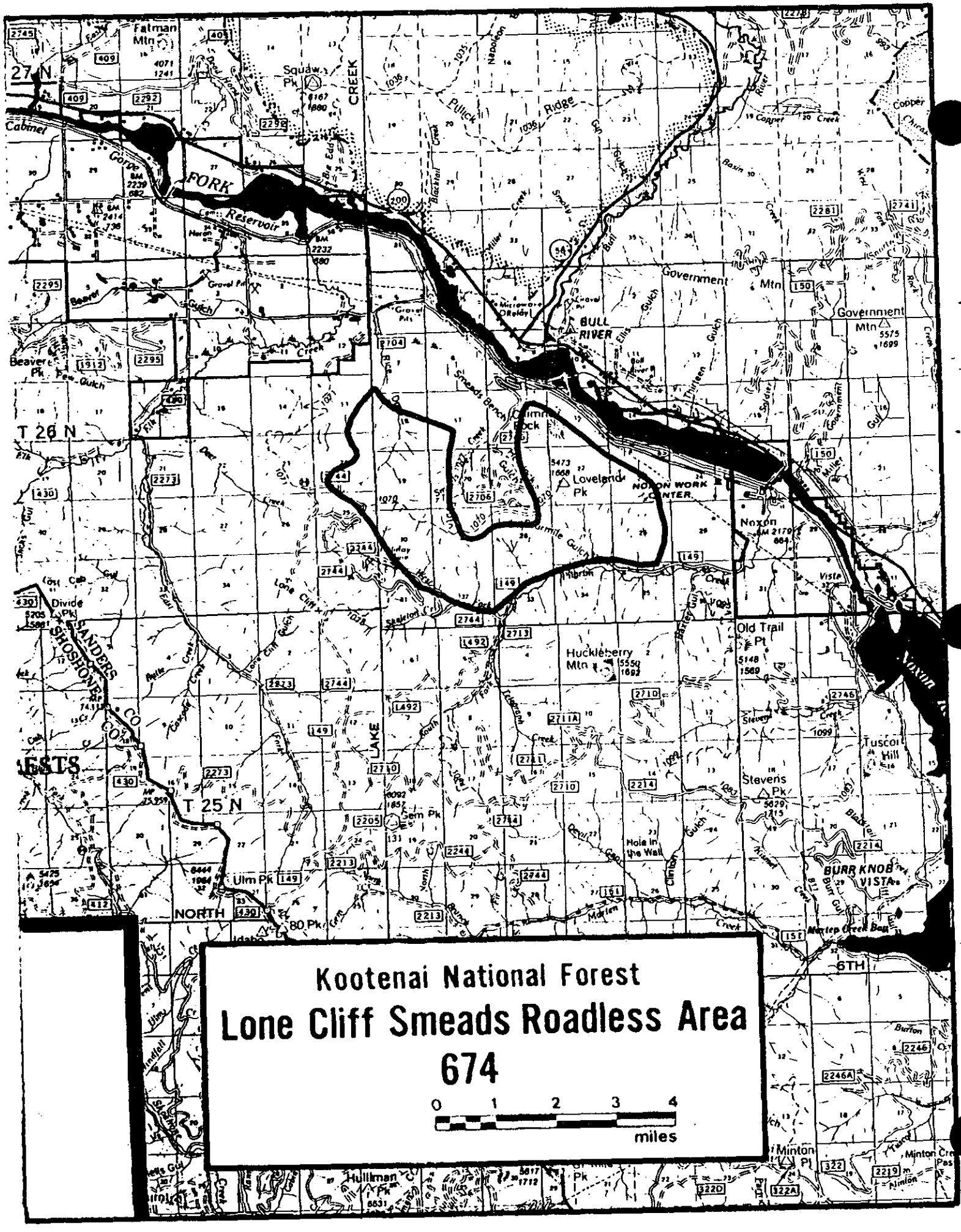
As activities occur, the naturalness of the area is impacted by timber cutting units, roads, and other evidence of man's modifications. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

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 East Fork Elk Creek roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on big game and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for East Fork Elk Creek Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	0	0	0	0	5.0	5.0	0	0	0	0	0	0	0
Roadless MAcres		1.8	1.6	1.7	1.6	1.8	1.6	0	0	3.2	.7	.7	0	1.8	1.8	4.2
Recreation																
Prim./Semiprim.MRVDs		7	7	7	6	7	7	15	15	13	3	3	0	7	7	15
Semiprim. Motor.MRVDs		13	14	14	15	13	14	0	0	9	11	11	23	13	13	4
Timber																
Suitable MAcres		2.0	2.3	2.5	2.3	2.3	2.5	0	0	1.6	2.9	2.9	3.7	2.3	2.3	0
Volume (MMBF)	1	0	12.0	10.0	0	0	12.0	0	0	0	0	0	12.0	0	0	0
	3	12.0	5.0	5.0	11.9	4.0	5.0	0	0	4.1	0	7.8	13.0	12.0	12.0	0
	5	6.0	8.0	8.0	6.4	6.0	15.0	0	0	0	0	0	8.0	6.0	6.0	0
Harvest Acres - MAcres	1	0	.6	.5	0	0	.6	0	0	0	0	0	1.0	0	0	0
	3	.5	.2	.2	.5	.2	.2	0	0	1.0	0	.3	.5	.5	.5	0
	5	.3	.3	.3	.2	.2	.6	0	0	0	0	0	.3	.2	.2	0
Roads																
Roads Constructed First Decade - Miles		0	4	3	0	0	4	0	0	0	0	0	7	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		9	10	10	9	8	10	0	0	7	3	4	13	9	9	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		NOT APPLICABLE IN THIS ROADLESS AREA														
Wildlife - Big Game																
Summer Range MAcres		.6	1.2	1.1	.6	.6	2.0	0	0	0	.8	.8	.9	.5	.6	0
Winter Range MAcres		.8	.8	.8	.8	.8	.8	0	0	.1	1.3	1.3	0	.8	.8	.8
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Lone Cliff Smeads Roadless Area
674
0 1 2 3 4
miles
Fatman Mtn
Squaw Pk
CREEK
FORK
Reservoir
Cabinet
Government Mtn
Government Mtn
BULL RIVER
Beaver Pk
T 26 N
Lovelands Pk
NOXON WORK CENTER
Noxon
Divide Pk
SANDERS
SHOSHONE
CO
FSTS
T 25 N
LAKE
Huckleberry Mtn
Old Trail Pt
Tuscor Hill
Stevens Pk
Sem Pk
Hole in the Wall
Ulm Pk
NORTH
80 Pk
BURR KNOB VISTA
6TH
Minton Pt
Hullman Pk

KOOTENAI NATIONAL FOREST

Lone Cliff Smeads - 01674 State: Montana

Gross Acres: 6,600 Net Acres: 6,600

I. Description

This roadless area is located along the south bank of the Clark Fork River, overlooking the Clark Fork Valley. The area is "U"-shaped in configuration, the east part of the "U" containing Chimney Rock and Loveland Peak and the west part the upper reaches of Rice Draw. The lower portion is bordered by the West Fork Pilgram Creek Road (see map). Access is good via State Highway 200.

The area has primarily steep slopes (½55%) with narrow ridgetops and narrow valley bottoms and contains the upper reaches of Rice Draw and Smeads Creek and several small tributaries to the West Fork Pilgrim Creek including Fourmile Gulch. Loveland Peak (5,470 feet) is the highest point.

The area is surrounded by timber management activities such as roads and clearcuts.

The represented ecosystems include Douglas-fir, Cedar Hemlock Pine, and Western Spruce Fir Forests.

The area's wildlife, especially elk, make the area a popular hunting spot. Current use consists primarily of hunting in the fall and is considered heavy (1,500 RVD's). The view offered of the Clark Fork Valley is another one of the area's attractions.

II. Capability

A. Natural Integrity and Appearance

Natural appearance and integrity are good. Manmade features are lacking except for a few miles of trail to Loveland Peak.

B. Opportunities for Solitude

Opportunities for solitude are marginal because much of the roadless areas faces directly into adjoining areas that have roads and clearcuts.

C. Primitive Recreation Opportunities

Primitive recreation experiences are primarily hunting and hiking.

D. Other Features

Special features include the Loveland Face, a steep slope with distinct snowslide patterns facing into the Clark Fork Valley.

E. Manageability and Boundaries — Lone Cliff Smeads 01674

The Lone Cliff Smeads roadless area was identified in the RARE II inventory. The recommendation made was for non-wilderness with most of the area subsequently allocated to developmental uses.

Gross Acres	Net Acres	
14200	14200	RARE II inventory
-7600	-7600	Areas affected by timber sales
6600	6600	1983 roadless inventory

The nonconforming uses which would conflict with a wilderness classification for the area are the existing oil & gas leases.

The setting is primarily a ridgetop situation that results in a difficult boundary management situation because of the number of access points along the edge.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area's potential to provide wilderness recreation is estimated to be 2,000 RVD's per year.

2. Wildlife

The area contains big game summer and winter range and many habitat management opportunities exist.

B. Other Resources

1. Fisheries

No significant fishery occurs; however, this area has some tributary headwaters to Cabinet Gorge Reservoir and Pilgram Creek (brook, cutthroat, rainbow, and brown trout).

2. Range

There are no livestock grazing allotments in the area and the grazing potential is primarily transitory range.

3. Timber

Approximately 4,100 acres are suitable timberland. The majority of this suitable land is west of Chimney Rock and Loveland Peak, with the most productive land located in Rice Draw, Smeads Creek, and Hemlock Gulch. As mentioned before, side slopes are steep (½55%) and logging systems will be primarily cable.

4. Minerals — Lone Cliff Smeads 01674

The mineral potential is considered moderate in the area immediately adjacent to the Holiday Mine (on the southern edge of the area, outside the boundary) and low in the remainder of the area. The oil and gas potential is moderate.

5. Cultural Resources

There is one historic cultural site (mining complex) in the area but no prehistoric sites have been identified. Based on surveys conducted in similar areas, the probability of prehistoric sites occurring is considered low.

6. Water

Mean annual precipitation varies from 30 to 75 inches and runoff from 14 to 38 inches, depending on elevation. Runoff from melting snow usually causes these streams to peak in late May or June.

C. Resource Situation — Lone Cliff Smeads 01674

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	6600			
Net Acres	Acres	6600			
Recreation					
Semiprim. Nonmotor.	RVDs	1500	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	4100	Existing	No.	0
Standing Volume	MMBF	40			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	600
Situation 1	Acres	-	Low	Acres	6000
Situation 2	Acres	-	Mining Claims	No.	10
Situation 3	Acres	-	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	6600
Summer Range Total	Acres	1800	Low	Acres	-
Winter Range Total	Acres	2300	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	3
			Leased Acres	Acres	6600
Existing Facilities	No.	0			

D. Management Considerations Lone Cliff Smeads 01674

1. Land Use Authorizations

There are no special uses in the area. Oil & gas leases exist.

2. Fire

Fire occurrence is low (no fires in the last 10 years) and the fuels situation is predominately dense conifer stands with thick, downed, woody material as ground fuels.

3. Insect and Disease

No known insect and disease problems are occurring or are anticipated.

4. Non-Federal Lands

There are no private lands in the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

This roadless area is approximately 100 miles from Spokane, Washington and 10 miles from the Cabinet Mountains Wilderness, which are now getting more than 18,000 RVD's per year. This use is beginning to increase rapidly and is projected to increase steadily.

B. Contribution to National Wilderness Preservation System

This area is representative of the Douglas-fir, Cedar Hemlock Pine, and Western Spruce Fir Forests ecosystems and as such, are not uncommon in the existing wilderness preservation system.

C. Public Interest

During the RARE II public review period, over 1,300 people commented on the area, most of whom (86%) were opposed to a wilderness designation for the area. RARE II recommended non-wilderness. During the Unit Planning process (Bull River-Clark Fork) no expressions favoring wilderness for the area were voiced nor has there been recent support for wilderness.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Lone Cliff Smeads Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	.2	.2	.2	.2	.2	1.4	.2	0	0	1.3	1.3	0	.2	.2	4.2
Nonwilderness (Some Dev.)															
Big Game Winter Range	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0	.9	2.6	2.6	2.4	2.4	2.4	2.4
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	3.9	3.9	3.9	3.9	3.9	2.7	3.9	0	5.6	2.6	2.6	4.1	3.9	3.9	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	0	6.6	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	.9	.9	.9	.9	.9	.9	.9	0	.7	.7	.7	.9	.1	.9	0
Decade 5:	3.9	3.9	3.9	3.9	3.9	2.7	3.9	0	5.6	2.6	2.6	4.1	3.9	3.9	0
Roadless - Decade 1:	5.6	5.6	5.6	5.6	5.6	5.6	5.6	0	5.2	5.8	5.8	5.6	6.4	5.6	6.6
Decade 5:	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0	0.9	3.9	3.9	2.4	2.6	2.6	6.6
Recommended Wilderness	0	0	0	0	0	0	0	6.6	0	0	0	0	0	0	0
Total Acres- Lone Cliff Smeads	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6

B. Impacts Lone Cliff Smeads 01674

1. Designation: Wilderness
Management Emphasis: Wilderness

The Lone Cliff Smead roadless area is recommended for wilderness in its entirety only in Alternative H. No other alternative recommends wilderness for the area. 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.

A wilderness classification for the area will preserve the primitive character of the area. The quality roadless hunting experiences available will be protected and old growth timber habitat will be provided.

There are about 4,100 acres of suitable timberland in the area that would be unavailable for harvest in Alternative H. This inability to manage the timber resource would primarily affect wildlife habitat management as the opportunity to improve forage and create openings would be foregone.

Big game summer range (about 1,800 acres) and winter range (2,300 acres) would not be managed under this emphasis, through either burning or timber harvest. However, big game would be benefitted by the security that wilderness would provide.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is generally low (a portion is rated as moderate) and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

Lone Cliff Smeads 01674

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every alternative, except Alternatives H, I, and L, designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to roadless management.

Percent of the Area Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
3	3	3	3	3	21	3	0	0	20	20	0	3	3	63

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained in these emphases. Primitive recreation opportunities will be maximized and old growth timber habitat will be protected. Security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest under these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

All alternatives, except Alternative H, designate a portion of the area to this management emphasis. Alternative I designates 13% of the area (900 acres) while Alternatives J and K each designate 40% of the area (2,600 acres). All other alternatives designate 36% of the area (2,400 acres). This emphasis is located throughout the area. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on. Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation:** Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Every alternative, except Alternatives H and O, designates a portion of the area to these emphases. The following chart displays the percent of the area designated to developmental activities.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
60	60	60	60	60	41	60	0	87	40	40	63	60	60	0

In all alternatives where these emphases occur, development is scheduled to take place sometime during the first decade. (See Table 3 at the end of this discussion). During the first decade, from 1 to 6 miles of road will be in place, depending on the alternative, and by the fifth decade, 8 to 19 miles of road will be in place.

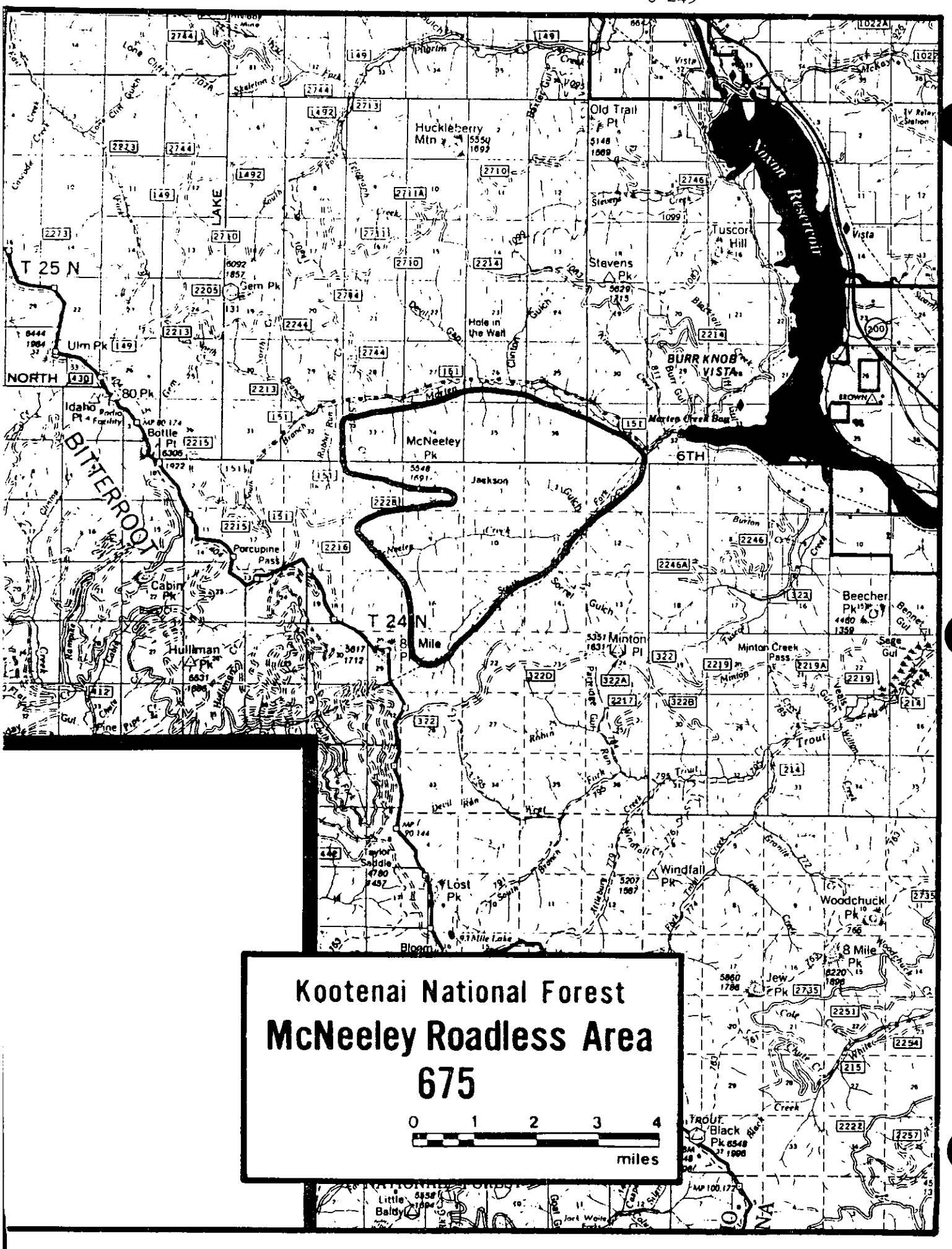
The naturalness of the area will be impacted by timber cutting units and roads. The north facing portion of the area faces into the Clark Fork Valley and is highly visible from Highway 200. Activities conducted here would impact the view. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for solitude and primitive recreation experiences.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

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 Lone Cliff Smeads roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on big game and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Lone Cliff Smeads Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	0	6.6	0	0	0	0	0	0	0
Roadless MAcres		.2	.2	.2	.2	.2	1.4	.2	0	0	1.3	1.3	0	.2	.2	4.2
Recreation																
Prim./Semiprim.MRVDs		2	2	2	2	2	7	2	20	0	1	1	0	2	2	17
Semiprim. Motor.MRVDs		31	31	31	31	31	32	31	0	47	37	37	31	31	31	12
Timber																
Suitable MAcres		3.9	3.9	3.9	3.9	3.9	2.7	3.9	0	2.6	2.6	2.6	4.1	3.9	3.9	0
Volume (MMBF)	1	20.0	20.0	20.0	20.0	20.0	20.0	20.0	0	.4	15.2	15.2	20.0	1.0	20.0	0
	3	16.0	16.0	16.0	16.4	16.0	8.0	7.8	0	8.9	7.6	7.6	16.0	15.0	16.0	0
	5	12.0	12.9	12.0	12.9	12.9	13.0	12.9	0	13.6	12.3	12.3	13.0	11.0	13.0	0
Harvest Acres - MAcres	1	.9	.9	.9	.9	.9	.9	.9	0	.7	.7	.7	.9	.06	.9	0
	3	.9	.9	.9	1.6	.9	.3	.4	0	.6	.3	.3	.9	1.5	1.6	0
	5	.5	.5	.5	.5	.5	.5	.5	0	1.3	.5	.5	.5	.4	.5	0
Roads																
Roads Constructed First Decade - Miles		4	4	4	4	4	3	4	0	6	3	3	5	1	4	0
Total Road Miles Needed by Fifth Decade - Miles		18	18	18	18	18	9	18	0	8	8	8	19	16	18	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		NOT APPLICALBE IN THIS ROADLESS AREA														
Wildlife - Big Game																
Summer Range MAcres		0	.5	0	0	0	2.4	0	0	0	2.3	2.3	1.0	.06	0	0
Winter Range MAcres		2.4	2.4	2.4	2.4	2.4	2.4	2.4	0	1.7	2.6	2.6	2.4	2.4	2.4	2.4
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
McNeeley Roadless Area
675
0 1 2 3 4
miles
T 25 N
T 24 N
NORTH
BITTERROOT
LAKE
Huckleberry Mtn
Old Trail Pt
Tuscor Hill
Stevens Pk
Gem Pk
Hole in the Wall
BURR KNOB VISTA
Ulm Pk
80 Pk
Idaho Pt
Bottle Pt
McNeeley Pk
Jackson
6TH
Porcupine Pass
Cabin Pk
Hullman Pk
8 Mile
Minton Pt
Minton Creek Pass
Beecher Pk
Sage Gul
Trout
Windfall Pk
Lost Pk
Bloom
Woodchuck Pk
8 Mile Pk
Jew Pk
Black Pk
Little Baldy
Vista
Kerr Reservoir

KOOTENAI NATIONAL FOREST

McNeeley - 01675 State: Montana

Gross Acres: 7,700 Net Acres: 7,700

I. Description

The area is located due west of the Noxon Reservoir in the Clark Fork Valley, reached via Marten Creek Road from State Highway 200.

Jackson Gulch, McNeeley Creek and several unnamed tributaries to both the South Branch and South Forks of Marten Creek either originate within or traverse this roadless area.

The south-facing slopes along the South Fork of Marten Creek, McNeeley Creek, and Jackson Gulch are steep and open with very scattered groups of trees. Slopes are also very steep but tree covered into Marten Creek. Slopes are more moderate around the McNeeley Peak ridgeline and Upper McNeeley Creek. Most of the roadless area burned in the 1930's and much of this land has not regenerated to trees. Approximately 75 percent of this unit is suitable for timber production, and about one-third of the unit is important big game winter range.

The area is bordered by timber harvest activities such as roads and clearcuts, particularly in the west, and by a powerline corridor to the south. The Marten Creek Road borders the northern portion.

The area's elk population attracts hunters in the fall as does the quality of the back country hunting experience.

Currents uses, including hunting in the fall, are approximately 1,500 RVD's per year.

II. Capability

A. Natural Integrity and Appearance

The natural integrity of the area is high with no manmade features to detract from the natural appearance

B. Opportunities for Solitude

Opportunities for solitude are moderate due to the visual intrusion of the powerline corridor bordering the southern portion and the Marten Creek Road running along the northern border.

C. Primitive Recreation Opportunities

Primitive recreation opportunities include elk hunting. The elk hunting experience provides the most challenge in the area and is the special attraction for most people.

D. **Manageability and Boundaries** **McNeeley 01675**

The McNeeley roadless area was identified during RARE II. The recommendation at that time was for non-wilderness and the area was subsequently allocated to both developmental and nondevelopmental uses. The difference in the RARE II acres and the 1983 Inventory acres shown below reflect an adjustment made to reconcile the acres with those established in the Forest data base.

Gross Acres	Net Acres	
8800	8800	RARE II inventory
-1100	-1100	Data Base Adjustment
7700	7700	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification for the area are the existing oil & gas leases.

The manageability of the present boundary is generally good except on the western edge where the border does not follow well defined topographic features. The boundry in other areas is satisfactory, following roads and the powerline corridor.

III. **Availability**

A. **Significant Resource Potentials**

1. **Recreation**

It is estimated that a potential of 2,600 RVD's of wilderness recreation could be provided per year. Current use is estimated at 1,500 RVD's per year.

2. **Wildlife**

Opportunities exist on south slopes of the roadless area, particularly in the South Fork of Marten Creek, for elk winter range management (burning).

3. **Timber**

Approximately 5,400 acres are suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. Over 90% of this timberland is located on slopes steeper than 55%. Road building will be difficult and costly and logging will require use of cable or helicopter yarding methods.

B. **Other Resources**

1. **Fisheries**

No significant fisheries occur in this roadless area. However, there are some tributaries that flow into Marten Creek which supports brook, rainbow, and cutthroat trout.

2. **Range** McNeeley 01675

There are no livestock grazing allotments in the area and the grazing potential is all transitory range.

3. **Minerals**

The mineral potential is low and the oil and gas potential is moderate.

4. **Cultural Resources**

There are no known historic or prehistoric cultural sites. Based upon surveys done in similar locations, the probability of prehistoric sites occurring is considered low.

5. **Water**

Mean annual precipitation in the area varies from about 36 to 75 inches, runoff from about 12 to 38 inches, depending on elevation. Normal peak runoff occurs in May or June and is the only time water quality can be degraded.

C. **Resource Situation** McNeeley 01675

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	7700			
Net Acres	Acres	7700			
Recreation					
Semiprim. Nonmotor.	RVDs	1500	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	5400	Existing	No.	0
Standing Volume	MMBF	61			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	-
Situation 1	Acres	-	Low	Acres	7700
Situation 2	Acres	-	Mining Claims	No.	0
Situation 3	Acres	-	Oil & Gas Potential		-
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	7700
Summer Range Total	Acres	4400	Low	Acres	-
Winter Range Total	Acres	3200	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	4
Existing Facilities	No.	0	Leased Acres	Acres	7700

D. Management Considerations McNeeley 01675

1. Land Use Authorizations

There are no special uses. Oil & gas leases exist.

2. Fire

The area has had a low occurrence of fire (no fires in the last 10 years). The fuels situation in the area is healthy conifer stands with sparse undergrowth and thin layers of ground fuels.

3. Insect and Disease

The insect and disease situation is stable, with about 10% of the stands being susceptible mature lodgepole pine but no insect or disease activity presently occurring (1983).

4. Non-Federal Lands

There are no private lands in the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The McNeeley roadless area is about 10 air miles from the Cabinet Mountains Wilderness. Spokane, Washington (110 miles) and Missoula, Montana (160 miles) are the nearest large population centers.

B. Contribution to National Wilderness Preservation System

This area is representative of the Western Spruce Fir Forest ecosystem which is common in the existing wilderness system.

B. Public Interest

During the RARE II public review period, over 1,300 people commented on the area, most of whom (86%) were opposed to a wilderness classification for the area. RARE II recommended non-wilderness. During the Unit Planning process, no direct support for wilderness was expressed nor has there been any recently.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for McNeeley Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	1.6	1.4	1.4	0	1.4	2.1	1.4	0	1.5	0	0	0	0	0	5.4
Nonwilderness (Some Dev.)															
Big Game Winter Range	0	0	0	0	0	0	0	0	1.9	2.5	2.5	0	0	0	2.3
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	6.0	6.3	6.3	7.7	6.3	5.6	6.3	0	5.3	5.2	5.2	7.7	7.7	7.7	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	0	7.7	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	.1	.1	.2	0	.2	0	.2	0	0	0	0	0	.1	.1	0
Decade 5:	6.0	6.3	6.3	7.7	6.3	5.6	6.3	0	5.3	5.2	5.2	7.7	7.7	7.7	0
Roadless - Decade 1:	7.6	7.6	7.5	7.7	7.5	7.7	7.5	0	7.7	7.7	7.7	7.7	7.6	7.6	7.7
Decade 5:	1.6	1.4	1.4	0	1.4	2.1	1.4	0	1.4	2.5	2.5	0	0	0	5.4
Recommended Wilderness	0	0	0	0	0	0	0	7.7	0	0	0	0	0	0	0
Total Acres- McNeeley	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7

B. Impacts

McNeeley 01675

1. Designation: Wilderness
Management Emphasis: Wilderness

The McNeeley roadless area is recommended for wilderness in its entirety in Alternative H. No other Alternative recommends wilderness for the area. 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.

In Alternative H (all wilderness), the primitive character of the area would be maintained. The opportunities for solitude, although considered moderate in quality, would be maintained as would the quality roadless elk hunting experiences offered in the area.

There are about 5,400 acres of suitable timberland in the area, none of which would be harvested in Alternative H. This inability to harvest timber would affect wildlife habitat improvement and salvage of lodgepole pine infested by the mountain pine beetle.

Big game winter range improvement activities, through the use of burning, would not occur in this emphasis. This inability to produce forage would be offset by the benefits of security that wilderness provides by limiting access into the area.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Alternatives A, B, C, E, F, G, I, and O designate portions of the area to these emphases. The following chart displays the percent of the area designated to roadless management.

Percent of Area Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
21	18	18	0	18	28	18	0	20	0	0	0	0	0	70

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within these emphases will be maintained as well as semi-primitive recreation opportunities. Old growth timber habitat will be provided as well as security for big game.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

Alternatives I, J, K, and O designate from 26% to 33% of the area to this emphasis. This emphasis is located along the south slope of the roadless area, primarily in the South Fork of Marten Creek. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation:** Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Every Alternative except H and O designates a portion of the area to one of these emphases. The following chart displays the percent of the area designated to developmental activities by alternative.

Percent of Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
80	82	82	100	82	72	82	0	68	67	67	100	100	100	0

Timber harvest activities are scheduled to occur in the first decade in Alternatives A, B, C, E, G, M, and N. (See Table 3 at the end of this section.) In all Alternatives except H and O, activities will occur by or during the third decade. From 15 to 22 miles of road will be in place, depending on the alternative.

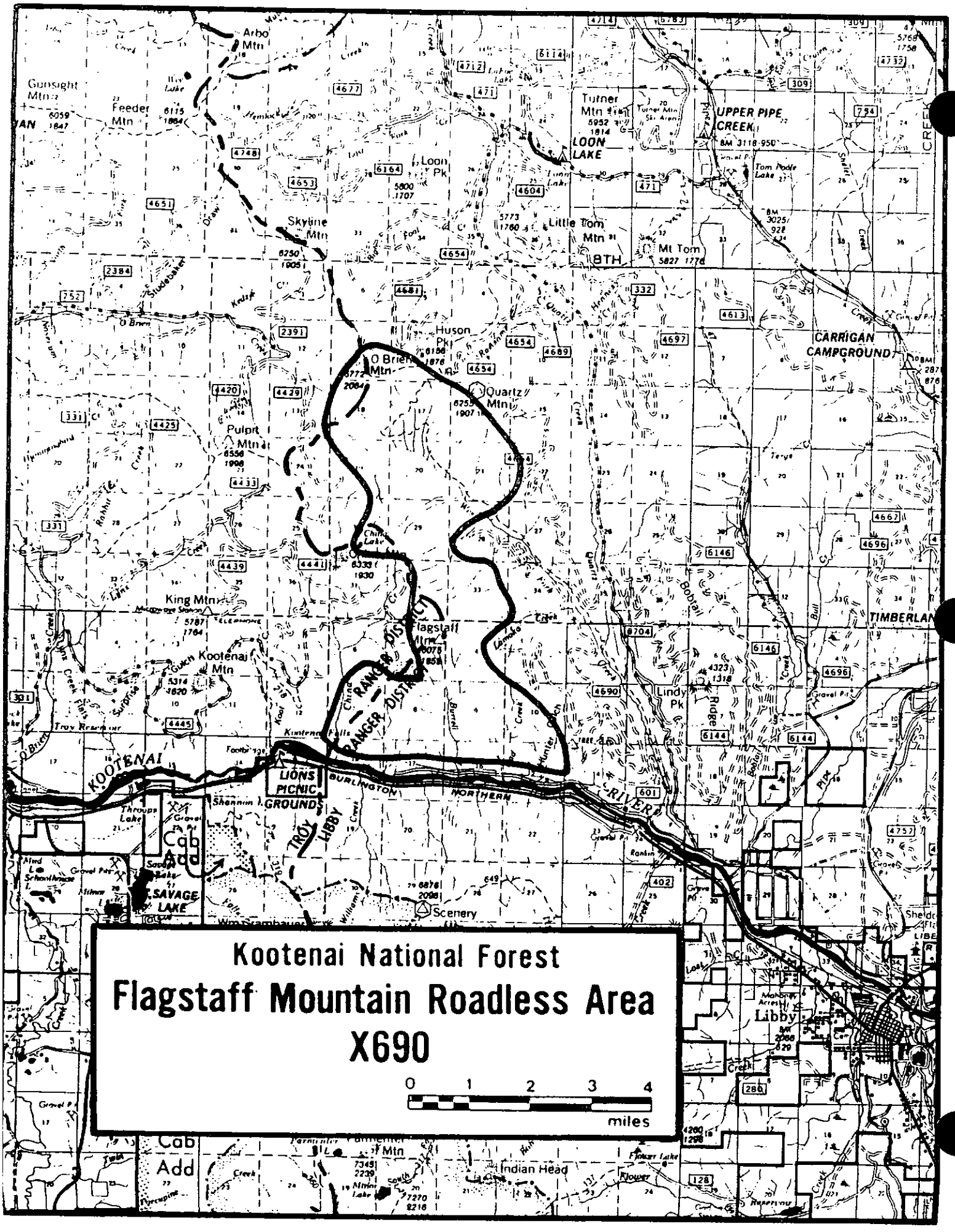
As activities take place, the naturalness of the area will be impacted by timber cutting units, roads, and other evidence of man's modifications. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

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 McNeeley roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on big game and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for McNeeley Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	0	7.7	0	0	0	0	0	0	0
Roadless MAcres		1.6	1.4	1.4	0	1.4	2.1	1.4	0	.5	0	0	0	0	0	5.4
Recreation																
Prim./Semiprim.MRVDs		7	6	6	0	6	9	6	23	2	0	0	0	0	0	22
Semiprim. Motor.MRVDs		27	28	29	35	29	25	29	0	39	26	26	35	35	35	9
Timber																
Suitable MAcres		5.4	5.4	5.4	5.4	5.4	5.4	5.4	0	5.3	5.2	5.2	5.4	5.4	5.4	0
Volume (MMBF)	1	.1	.1	.1	0	.2	0	.2	0	0	0	0	0	.1	.1	0
	3	31.0	28.0	36.0	52.1	28.0	22.0	28.0	0	14.6	11.8	11.8	46.0	46.0	46.0	0
	5	0	0	0	3.6	0	17.0	0	0	1.8	2.0	0	0	0	0	0
Harvest Acres - MAcres	1	.1	.1	.2	0	.2	0	.2	0	0	0	0	0	.1	.1	0
	3	2.6	2.5	2.8	5.0	2.5	1.6	2.5	0	2.1	1.7	1.7	4.3	4.2	4.2	0
	5	0	0	0	.2	0	1.2	0	0	.1	.2	0	0	0	0	0
Roads																
Roads Constructed First Decade - Miles		1	1	1	0	1	0	1	0	0	0	0	0	1	1	0
Total Road Miles Needed by Fifth Decade - Miles		19	19	19	22	19	19	19	0	20	15	15	21	21	21	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		NOT APPLICABLE TO THIS ROADLESS AREA														
Wildlife - Big Game																
Summer Range MAcres		1.9	2.1	2.1	2.2	2.1	4.5	2.1	0	0	2.5	2.5	1.8	2.2	2.1	0
Winter Range MAcres		0	0	0	0	0	0	0	0	1.9	2.5	2.5	0	0	0	2.3
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE TO THIS ROADLESS AREA														


Kootenai National Forest
Flagstaff Mountain Roadless Area
X690
0 1 2 3 4
miles
Arbo Mtn
Gunsight Mtn
Feeder Mtn
Turner Mtn
LOON LAKE
UPPER PIPE CREEK
Loon Pk
Skyline Mtn
Little Tom Mtn
Mt Tom
Huson Pk
O Brien Mtn
Quartz Mtn
CARRIGAN CAMPGROUND
Pulpit Mtn
King Mtn
Flagstaff Mtn
Kootenai Mtn
Lindy Pk
TIMBERLAN
KOOTENAI
LIONS PICNIC GROUNDS
BURLINGTON NORTHERN
RIVER
TROY
LIBBY
Cab Add
SAVAGE LAKE
Scenery
Libby
Indian Head

KOOTENAI NATIONAL FOREST

Flagstaff Mountain - X1690 State: Montana

Gross Acres: 9,500 Net Acres: 9,500

I. Description

The area is located just north of and adjacent to the Kootenai River between Hunter Gulch and China Creek, running north to O'Brien Mountain. Access is provided via the Kootenai River Road, Quartz Creek Road, and roads leading up O'Brien Creek, Lynx Creek, and Kootenai Mountain. A National Recreation Trail traverses the Quartz Creek portion of the roadless area.

The area is primarily a ridgetop setting with some open grassland sidehills in the vicinity of West Fork Quartz Creek. The area is dominated by Flagstaff Mountain (6,100 feet), O'Brien Mountain (6,800 feet), and Quartz Mountain (6,300 feet) lying just outside the boundary. The area contains some timberlands in the upper reaches of West Fork Quartz Creek. The north end of this area includes China Lake and much of the headwaters of the West Fork Quartz Creek. China, Burrell, and Dad Creeks and Hunter Gulch drain to the south directly into the Kootenai River.

The area is generally surrounded by Forest developments such as roads and clearcuts.

The ecosystem types represented are Western Ponderosa Forest and Western Spruce Fir Forest.

The area contains bighorn sheep, primarily on the face overlooking the Kootenai River. Viewing them from Highway 2 in the spring is one of the area's main attractions.

Current use is light and consists primarily of hunting in the fall (500 RVD's).

II. Capability

A. Natural Integrity and Appearance

The natural integrity of the area is fairly high with the remains of the Flagstaff Lookout, and a trail up the West Fork Quartz Creek, being the only manmade features.

B. Opportunities for Solitude

Opportunities for solitude are high in the north and around the West Fork Quartz Creek but low on the south end where the area faces into the Kootenai River. The Quartz Mountain Lookout, just outside the boundary on the north edge, is also visible from points within the roadless area.

C. Primitive Recreation Opportunities

Primitive recreation opportunities include hiking and hunting and bighorn sheep observation and hunting in the Kootenai Canyon.

D. Other Features — Flagstaff Mtn. 01X690

Observing and then approaching bighorn sheep is certainly one of the more challenging aspects of the area, as well as one of the more special features. Other special features include the old growth timber stream bottom in West Fork and the big, open grassy burn in the West Fork Quartz Creek.

E. Manageability and Boundaries

The Flagstaff roadless area was not identified in the RARE II inventory and, thus, no adjustments to the RARE II acres could have been made.

The nonconforming uses that would conflict with a wilderness classification are the existing oil & gas leases.

The area's configuration, size, and the fact that the boundary is located generally on developed rather than topographic lines, makes this a difficult wilderness boundary to manage. Contributing to the difficulty are the many drainages the area borders or encompasses.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential to provide about 3,000 RVD's of wilderness recreation per year. Current use is estimated at 500 RVD's per year.

2. Wildlife and Fish

The area contains bighorn sheep habitat, whitetail and mule deer summer range, and elk habitat. Some opportunities exist for winter range management on the south face next to the Kootenai River.

The upper reach and headwaters of West Fork Quartz Creek, a migratory fish stream for the Kootenai River, is located in this roadless area which contains cutthroat, bull, and brook trout. In addition, this roadless area has several small direct tributaries to the Kootenai that also may provide fish recruitment.

3. Timber

The area contains about 6,500 acres of tentatively suitable timberlands capable of producing greater than 20 cubic feet per acre per year of timber growth. Approximately 90% of this timberland is located on slopes steeper than 55%. Road construction will be difficult and costly and timber harvesting systems will require cable or aerial (helicopter) logging.

B. Other Resources

1. Range

There are no livestock grazing allotments in the area and the grazing potential is mostly transitory.

2. Minerals

The mineral potential is low and the oil and gas potential is moderate.

3. Cultural Resources

There is one historic site and no identified prehistoric sites in the area. The area does border the Kootenai Falls Proposed Archaeological District, containing significant prehistoric sites. Based on surveys done in similar areas, however, the probability of prehistoric sites occurring elsewhere in the area is considered low.

4. Water

Mean annual precipitation varies from 25 to 85 inches, depending on elevation. Runoff is low from the lower south slope positions but becomes high in the upper West Fork because runoff efficiency is over 50%, based on aspect and elevation. Water quality is good except during the seasonal peak flow events.

C. **Resource Situation** **Flagstaff Mtn. 01X690**

Table 1

Category	Unit	
Gross Acres	Acres	9500
Net Acres	Acres	9500
Recreation		
Semiprim. Nonmotor.	RVDs	500
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	6500
Standing Volume	MMBF	63
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	-
Situation 2	Acres	9500
Situation 3	Acres	-
Wildlife - Big Game (Elk, Deer, Sheep)		
Summer Range Total	Acres	5400
Winter Range Total	Acres	4100
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	2
Stream Habitat	Acres	-
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	-
Low	Acres	9500
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	9500
Low	Acres	-
Unknown	Acres	-
Oil & Gas Leases		
Leases	No.	5
Leased Acres	Acres	6200

D. **Management Consideration**

1. **Land Use Authorizations**

There are no special uses. Oil & gas leases exist.

2. **Fire**

The area has had low fire occurrence in the last 20 years (8 fires). The fuels situation is primarily dense conifers with downed woody materials in the northern part of the area and open pine stands with grasses and forbs for ground fuels in the southern part.

3. **Insect and Disease**

About 10% of the area contains high risk lodgepole pine stands but there is no insect or disease activity at the present (1983).

4. **Non-Federal Lands**

There are no private lands in the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The Flagstaff roadless area is just across the Kootenai River (north) from the existing Cabinet Mountains Wilderness (approximately 1 mile). Spokane, Washington (150 miles) and Missoula, Montana (195 miles) are the nearest large population centers.

B. Contribution to National Wilderness Preservation System

This area is representative of the Western Ponderosa and Western Spruce Fir Forest ecosystems which are common in the existing wilderness system.

C. Public Interest

This is a newly identified roadless area since RARE II. There have been no recent expressions of support for wilderness for the area but concerns have been voiced in past planning efforts for protecting the roadlessness of West Fork Quartz Creek.

V. Alternatives and Enviromental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Flagstaff Mountain Roadless Area.

MANAGEMENT EMPHASIS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	ALTERNATIVES (M Acres)														
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	3.0	2.9	2.8	2.7	2.8	3.5	2.8	0	1.2	3.9	3.9	.1	2.7	2.9	6.5
Nonwilderness (Some Dev.) Big Game Winter Range	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0	4.0	3.5	3.5	3.0	3.0	3.0	3.0
Nonwilderness (Developed) Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	3.5	3.6	3.7	3.8	3.7	3.0	3.7	0	4.3	2.0	2.0	6.4	3.8	3.6	0
Wilderness Recommended Wilderness	0	0	0	0	0	0	0	9.5	0	0	0	0	0	0	0
Summary of Management Emphasis															
Nonwilderness Developed - Decade 1:	1.8	1.8	1.8	.1	1.8	0	1.8	0	.3	0	0	0	1.8	1.8	0
Decade 5:	3.5	3.6	3.7	3.8	3.7	3.0	3.7	0	4.3	2.0	2.0	6.4	3.8	3.6	0
Roadless - Decade 1:	7.7	7.7	7.7	9.4	7.7	9.5	7.7	0	9.2	9.5	9.5	9.5	7.7	7.7	0
Decade 5:	6.0	5.9	5.8	5.7	5.8	6.5	5.8	0	5.2	7.5	7.5	3.1	5.7	5.9	9.5
Recommended Wilderness	0	0	0	0	0	0	0	9.5	0	0	0	0	0	0	0
Total Acres- Flaggstaff Mtn.	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5

B. Impacts Flagstaff Mtn. 01X690

1. Designation: Wilderness
Management Emphasis: Wilderness

The Flagstaff roadless area is recommended for wilderness in its entirety in Alternative H. No other alternative recommends wilderness for the area. 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 primitive quality of the area; specifically, the high quality solitude opportunities in the West Fork Quartz Creek drainage, and the primitive recreation opportunities including hunting and observing bighorn sheep. Old growth timber wildlife habitat will be protected and security provided for big game and grizzly bears.

There are about 6,500 acres of suitable timberland in the area that would be foregone in Alternative H. This inability to manage the timber resource affects wildlife habitat management and salvage of dead and dying lodgepole afflicted by the mountain pine beetle.

Grizzly bear habitat (Situation 2 - see glossary) covers virtually the entire roadless area. Wilderness management would provide security for the bear by prohibiting roading thereby reducing increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big game summer and winter range would not occur, either by burning or timber harvest. As with grizzly bears, however, this inability to harvest timber would be offset by the security that would be provided in a wilderness designation.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every alternative except H designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to roadless management, by alternative.

Percent of the Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
32	30	29	28	29	36	29	0	12	41	41	2	28	30	69

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within the area would be preserved in these management emphases, as would the primitive recreation opportunities. Old growth timber habitat will be maintained and grizzly habitat will be protected. Security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

All alternatives, except Alternative H, designate at least 31% of the area (3,000 acres), to this management emphasis. Alternatives I, J, and K designate 42% (4,000 acres), 36% (3,500 acres), and 35% respectively, to this emphasis. This emphasis is located primarily on slopes facing south into the Kootenai River Valley. The intent is to manage winter range habitat for the benefit of big horn sheep. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphasis: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Every Alternative except H and O designates a portion of the area to one of these management emphases. The following chart displays the percent of the area designated to developmental activities, by alternative.

Percent of Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
36	39	40	41	40	33	40	0	46	23	23	67	41	39	0

In all alternatives where these emphases occur, except Alternatives F, J, K, and L, activity will occur during the first decade. (See Table 3 at the end of this section.) In all developmental alternatives (all but H and O), activity will occur in the fifth decade.

As the area becomes developed, the naturalness of the area will be impacted by timber cutting units and roads. Expected road mileage ranges from 10 to 32 miles, depending on the alternative. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for solitude and primitive recreation experiences.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

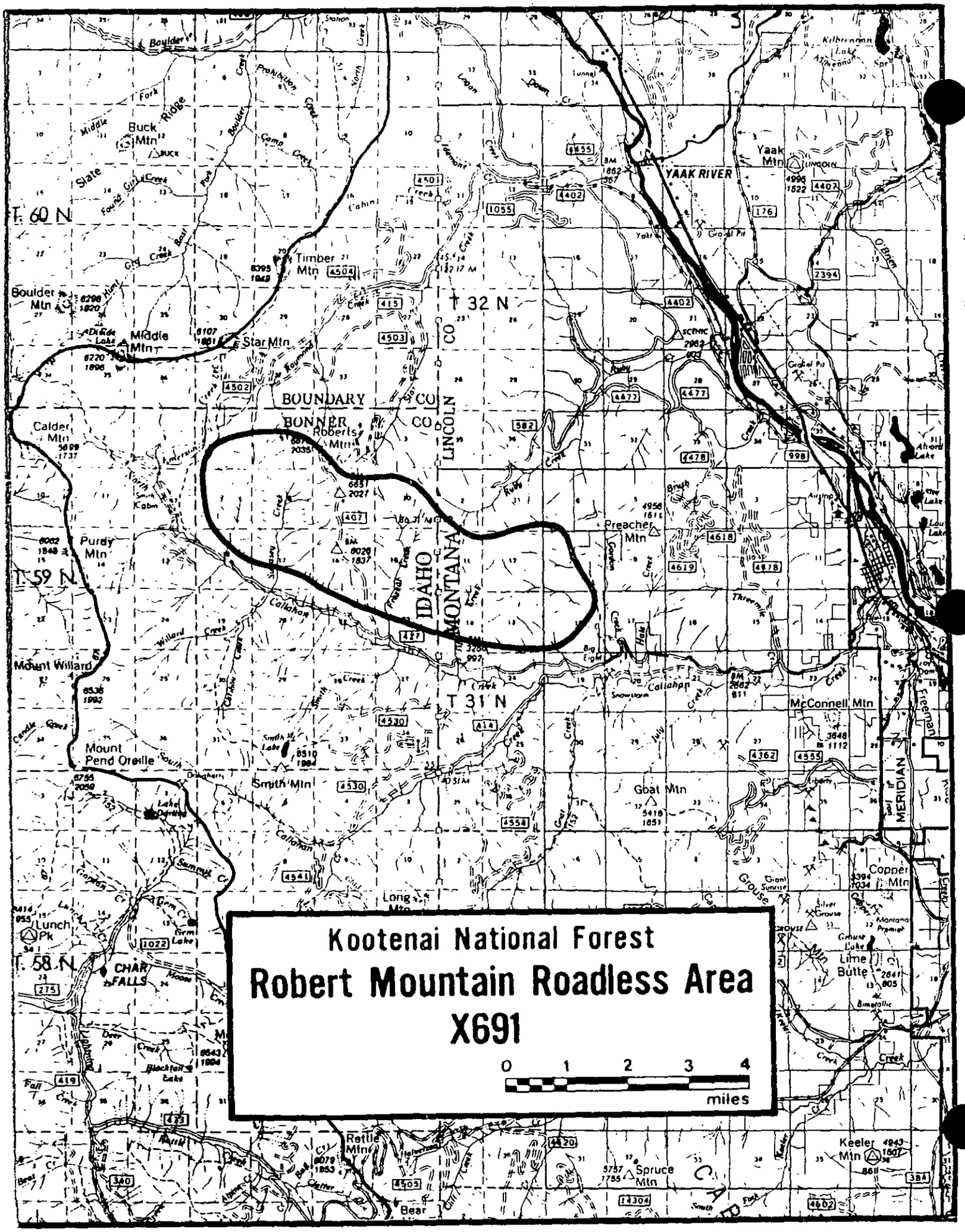
Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long-term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

The harvest of some of the mature lodgepole pine will provide an opportunity for control of insects and disease beause all diseased or susceptible trees are removed and a young, vigorous stand is installed.

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 Flagstaff Mountain roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Flagstaff Mountain Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	0	9.5	0	0	0	0	0	0	0
Roadless MAcres		3.0	2.9	2.8	2.7	2.8	3.5	2.8	0	1.2	3.9	3.9	.05	2.7	2.9	6.5
Recreation																
Prim./Semiprim.MRVDs		14	14	14	14	14	14	14	26	9	16	16	3	13	15	26
Semiprim. Motor.MRVDs		28	28	29	28	28	30	29	0	23	28	28	42	30	27	15
Timber																
Suitable MAcres		3.5	3.6	3.7	3.8	3.7	3.0	3.7	0	4.3	2.0	2.0	6.4	3.8	3.6	0
Volume (MMBF)	1	6.0	6.0	6.0	4.1	6.0	0	5.7	0	.3	0	0	0	6.0	6.0	0
	3	2.0	2.0	2.0	1.8	2.0	0	2.0	0	0	0	0	2.0	2.0	2.0	0
	5	8.0	8.0	8.0	31.8	8.0	5.0	8.0	0	19.2	.01	.01	31.0	8.0	8.0	0
Harvest Acres - MAcres	1	1.8	1.8	1.8	.1	1.8	0	1.8	0	.3	0	0	0	1.8	1.8	0
	3	.07	.07	.07	.07	.07	0	.07	0	0	0	0	.06	.07	.07	0
	5	.4	.4	.4	2.0	.4	.3	.4	0	1.3	.01	1.5	4.4	.4	.4	0
Roads																
Roads Constructed First Decade - Miles		9	9	9	1	9	0	9	0	1	0	0	0	9	9	0
Total Road Miles Needed by Fifth Decade - Miles		13	13	13	13	13	10	13	0	8	12	12	32	13	13	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		2.6	2.5	2.5	2.7	2.4	3.5	2.4	2.5	1.2	3.9	3.9	.05	2.7	2.9	2.5
Wildlife - Big Game																
Summer Range MAcres		1.1	1.1	1.1	1.1	1.1	3.0	1.1	0	0	2.0	2.0	3.8	1.3	.9	0
Winter Range MAcres		3.0	3.0	3.0	3.0	3.0	3.0	3.0	0	4.0	3.5	3.5	3.0	3.0	3.0	3.0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Robert Mountain Roadless Area
X691
0 1 2 3 4
miles
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T 32 N
T 31 N
BOUNDARY CO
BONNER CO
LINCOLN CO
IDAHO
MONTANA
YAAK RIVER
Buck Mtn
Timber Mtn
Boulder Mtn
Middle Mtn
Star Mtn
Calder Mtn
Roberts Mtn
Purdy Mtn
Preacher Mtn
Yaak Mtn
Mount Willard
Mount Pend Oreille
Smith Mtn
Goat Mtn
McConnell Mtn
Copper Mtn
Lime Butte
Lunch Pk
CHAR FALLS
Rattle Mtn
Spruce Mtn
Keeler Mtn
Bear
BOISE MERIDIAN

KOOTENAI NATIONAL FOREST

Roberts Mountain	01X691	State:	Montana	State:	Idaho
Gross Acres:	8,000	Net Acres:	2,700	Net Acres:	5,300

I. Description

The area is located on the west central edge of the Forest (near the Idaho-Montana State Line), immediately north of the Callahan Creek Road. Access is provided via Highway 2 and the Callahan Creek Road. A trail along the divide between Sweasey and Frezkat Creeks leads to Roberts Mountain, which is just outside the roadless boundary. This trail is erroneously shown as a road on the current Kootenai National Forest base map.

The area is primarily a south exposure mountainside settng, generally vegetated throughout. The area is dominated by the divide between Sweasey and Frezkat Creeks, 6,000 to 6,600 feet. Sweasey, Frezkat, and Jill Creeks as well as unnamed tributaries to North Fork Callahan and Gordon Creeks, originate in this area.

The area is surrounded by Forest management activities such as roads and clearcuts.

Wildlife in the area, including grizzly bear, deer, and elk are the primary attractions of the area.

Current recreation uses include hunting in the fall and the total use is considered light (500 RVD's).

II. Capability

A. Natural Integrity and Appearance

The natural integrity is rated high with no manmade features detracting from the natural appearance.

B. Opportunities for Solitude

The vegetative cover provides moderate opportunities for solitude although the size and configuration would serve to limit the opportunities.

C. Primitive Recreation Opportunities

Primitive recreation experiences provided include ridgetop hiking and hunting.

E. Manageability and Boundaries

The Roberts Mountain roadless area was identified in the 1983 roadless inventory.

The nonconforming uses that would conflict with a wilderness designation for the area are the oil & gas leases.

The boundary of the area can be considered relatively good from a management standpoint, with a ridgeline defining the north boundary and a road on the south.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential of providing about 2,700 RVD's of wilderness recreation per year. Current use is estimated to be 500 RVD's.

2. Wildlife and Fish

The area contains grizzly habitat, elk summer range, and excellent whitetail deer habitat. Some management opportunities exist, particularly along the south slopes between Sweasey and Frezkat Creeks.

The area is partial headwaters for Callahan (rainbow, cutthroat, and bull trout), Star (brook, cutthroat, rainbow, and bull trout), and Ruby Creeks (cutthroat and rainbow trout).

3. Timber

There are about 6,900 acres of suitable timberland capable of producing greater than 20 cubic feet per acre per year of timber growth. Over 90% of this timberland is on slopes steeper than 55%. Road construction will be difficult and costly and timber harvesting will require cable or helicopter logging. Some regeneration problem areas are located in the northwest corner.

B. Other Resources

1. Range

There are no livestock grazing allotments in the areaa and the area's potential for grazing is considered all transitory.

2. Minerals

The mineral potential is low and the oil and gas potential is moderate.

3. Cultural Resource

There are no identified historic or prehistoric cultural sites in the area. Based upon surveys done in similar areas, the probability of prehistoric sites occurring is considerd low.

4. **Water** **Roberts Mtn. 01X691**

Mean annual precipitation for the area is about 65 inches, varying between 50 to 105 inches depending on elevation. Except during occasional rain or snow events, the water quality is high.

C. **Resource Situation** **Roberts Mtn. 01X691**

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	8000			
Net Acres	Acres	8000			
Recreation					
Semiprim. Nonmotor.	RVDs	500	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	6900	Existing	No.	0
Standing Volume	MMBF	102			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	-
Situation 1	Acres	3000	Low	Acres	8000
Situation 2	Acres	3000	Mining Claims	No.	0
Situation 3	Acres	-	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	8000
Summer Range Total	Acres	6000	Low	Acres	-
Winter Range Total	Acres	0	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	4
			Leased Acres	Acres	5500
Existing Facilities	No.	0			

D. **Management Considerations**

1. **Land Use Authorizations**

There are no special uses. Oil & gas leases exist.

2. **Fire**

The area has had low fire occurrence in the last 20 years (five fires). The fuels situation is predominately dense conifer with downed woody material.

3. **Insect and Disease**

About 10% of the area contains mature lodgepole pine susceptible to Mountain Pine Beetle infestation but no insect activity has been identified to date (1983).

4. **Non-Federal Lands**

There are no private lands in the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is about 10 air miles from the existing Cabinet Mountains Wilderness. Spokane, Washington (170 miles) and Missoula, Montana (210 miles) are the closest large population centers.

B. 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.

C. Public Interest

This is a newly identified roadless area, since RARE II, so there have been no inputs received concerning the wilderness qualities of Roberts Mountain.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Roberts Mountain Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	1.1	1.1	1.1	1.1	1.1	2.3	1.1	0	1.9	5.5	5.5	1.1	1.1	1.1	8.0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	6.9	6.9	6.9	6.9	6.9	5.7	6.9	0	6.1	2.5	2.5	6.9	6.9	6.9	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	0	8.0	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	.5	.5	.5	.8	.5	.8	.5	0	.1	0	0	.8	.8	.8	0
Decade 5:	6.9	6.9	6.9	6.9	6.9	5.7	6.9	0	6.1	2.5	2.5	6.9	6.9	6.9	0
Roadless - Decade 1:	7.5	7.5	7.5	7.8	7.5	7.2	7.5	0	7.9	8.0	8.0	7.2	7.2	7.2	8.0
Decade 5:	1.1	1.1	1.1	1.1	1.1	2.3	1.1	0	1.9	5.5	5.5	1.1	1.1	1.1	8.0
Recommended Wilderness	0	0	0	0	0	0	0	8.0	0	0	0	0	0	0	0
Total Acres- Roberts Mtn.	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0

B. Impacts Roberts Mtn. 01X691

1. Designation: Wilderness
Management Emphasis: Wilderness

The Roberts Mountain roadless area is recommended for wilderness in its entirety in Alternative H. No other alternative recommends wilderness for the area. 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.

A wilderness classification would preserve the existing primitive character of the area, including the opportunities for solitude that are present and the primitive recreation experiences of ridgetop hiking and hunting.

There are about 6,900 acres of suitable timberland located in the area, the management of which would be foregone in Alternative H, the full wilderness alternative.

Grizzly bear habitat (Situations 1 and 2 - see glossary) covers most of the area. A wilderness classification would prohibit the management of the habitat by burning or timber harvest to increase forage opportunities. However, this inability to directly manage the habitat would be offset by the security provided the grizzly bear by a wilderness designation because of the limited access into the area.

Opportunities to manage the big game summer range habitat, about 6,000 acres, through the use of timber harvesting would also be foregone in wilderness. But, as with grizzly bear, the security offered in wilderness would be beneficial to the elk and deer as access would be limited.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternative H, designates a portion of the area to roadless management. The following chart displays the percent of the area designated to these management emphases, by alternative.

Percent of the Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
13	13	13	13	13	29	13	0	23	68	68	13	13	13	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained in these emphases. Primitive recreation opportunities will be maintained as will old growth timber wildlife habitat. Grizzly habitat will be protected and security for grizzly and big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation:** Nonwilderness (Developed)
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Each alternative, except Alternatives H and O, designates a portion of the area to one of these emphases. The following chart displays the percent of the area designated for developmental activities, by alternative.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
87	87	87	87	87	71	87	0	77	32	32	87	87	87	0

In all alternatives, except Alternatives H, J, K, and O, development will occur in the first decade. (See Table 3 at the end of this section.) Specifically, timber will be harvested and roads will be built. In all Alternatives except H and O, development will occur by the third decade. By the fifth decade, anticipated total road mileage ranges from 12 to 35 miles, depending on the alternative.

As activities occur, the naturalness of the area will be impacted by timber cutting units, and roads, and the sounds of man's activities. Roading forgoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

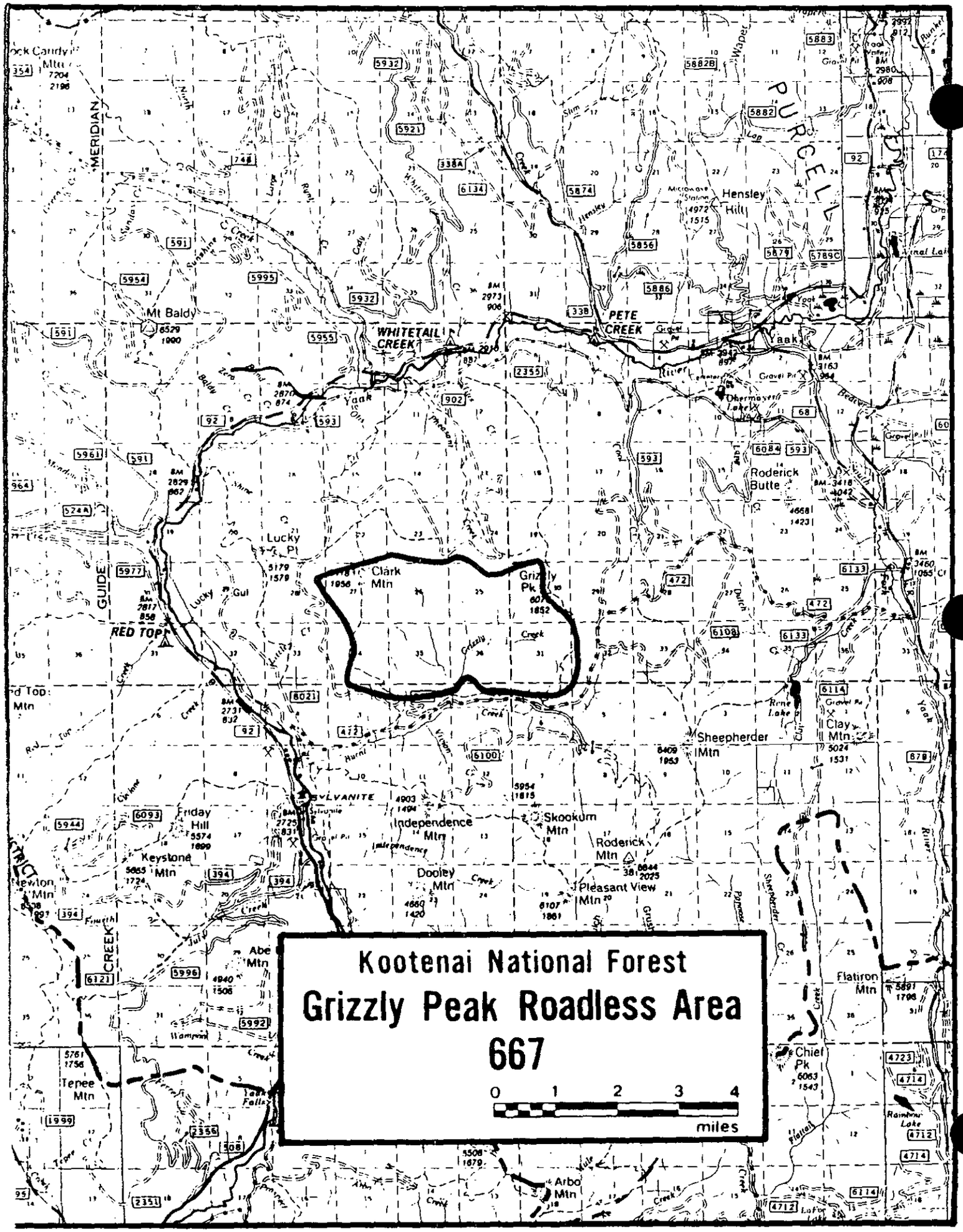
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Roberts Mountain roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Roberts Mountain Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	0	8.0	0	0	0	0	0	0	0
Roadless MAcres		1.1	1.1	1.1	1.1	1.1	2.3	1.1	0	1.9	5.5	5.5	1.1	1.1	1.1	8.0
Recreation																
Prim./Semiprim.MRVDs		7	7	7	5	7	10	5	24	8	24	24	8	8	8	32
Semiprim. Motor.MRVDs		31	31	31	33	31	27	33	0	15	8	8	29	29	29	0
Timber																
Suitable MAcres		6.9	6.9	6.9	6.9	6.9	5.7	6.9	0	6.1	2.5	2.5	6.9	6.9	6.9	0
Volume (MMBF)	1	11.0	11.0	11.0	18.3	11.0	18.0	16.0	0	.4	0	0	18.0	18.0	18.0	0
	3	24.0	24.0	24.0	46.5	24.0	17.0	24.0	0	31.2	6.7	6.7	46.0	43.0	46.0	0
	5	11.0	11.0	11.0	15.2	11.0	12.0	11.0	0	20.1	0	0	12.0	12.0	12.0	0
Harvest Acres - MAcres	1	.5	.5	.5	.8	.5	.8	.8	0	.05	0	0	.8	.8	.8	0
	3	1.6	1.6	1.6	2.7	1.6	.7	1.6	0	2.0	.2	.2	2.6	2.6	2.8	0
	5	.4	.4	.4	.6	.4	.5	.4	0	.8	0	0	.5	.5	.5	0
Roads																
Roads Constructed First Decade - Miles		3	3	3	5	3	5	4	0	1	0	0	5	5	5	0
Total Road Miles Needed by Fifth Decade - Miles		28	28	28	35	28	21	29	0	23	12	12	34	29	29	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		1.1	1.1	1.1	1.1	1.1	2.3	1.1	8.0	1.9	5.5	5.5	1.1	1.1	1.1	8.0
Wildlife - Big Game																
Summer Range MAcres		4.0	4.0	4.1	4.6	4.6	5.5	4.6	0	1.1	1.7	1.7	3.8	3.8	3.7	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE TO THIS ROADLESS AREA														


Kootenai National Forest
Grizzly Peak Roadless Area
667
0 1 2 3 4
miles
Clark Mtn
Grizzly Pk
Lucky Pt
Mt Baldy
WHITETAIL CREEK
PETE CREEK
Hensley Hill
Roderick Butte
RED TOP
Sheepherder Mtn
Clay Mtn
Independence Mtn
Skookum Mtn
Roderick Mtn
Pleasant View Mtn
Dooley Mtn
Keystone Mtn
Friday Hill
Abe Mtn
Tepee Mtn
Arbo Mtn
Flatiron Mtn
Chief Pk
PURCELL
MERIDIAN
GUIDE
CREEK

KOOTENAI NATIONAL FOREST

Grizzly Peak - 01667 State: Montana

Gross Acres: 6,000 Net Acres: 6,000

I. Description

The area is located in the north end of the Forest, northeast of the Sylvanite Ranger Station, immediately north of the Burnt Creek Road (No. 472). The area is readily accessible from the Burnt Creek Road which is reached via the Yaak Road (Forest Highway 92). Trails in the area are limited to one, on the west side, leading up to Clark Mountain.

The area is formed by the Grizzly Creek drainage, fanning up from the Burnt Creek Road, culminating at the main ridge running from Clark Mountain (6400 feet) to Grizzly Peak (6100 feet). These two peaks dominate the roadless area. The area also includes a second order tributary to Burnt Creek and the Yaak River. The roadless area has generally forested stream bottoms but more open ground along the main ridge.

The area is surrounded by timber management activities such as roads with clearcuts on the north side of the main ridge.

The ecosystem represented in the area is Cedar Hemlock Pine Forest.

The area supports grizzly bear and mule deer. The views offered by the Clark Mountain - Grizzly Peak ridge are another attraction.

The area currently receives hunting use especially in the fall (1,000 RVD's). The remoteness and lack of specific recreation features, such as fishing lakes, tend to limit other recreation.

II. Capability

A. Natural Integrity and Appearance

The natural integrity of the roadless area is high, with nothing but a few miles of ridgetop trail affecting the natural appearance.

B. Opportunities for Solitude

Although it is difficult to get more than a mile from an existing road, the opportunities for solitude are relatively good, as there is an almost continuous canopy of trees in the Grizzly Creek valley, and the surrounding roads are lightly used. On the more open Grizzly Peak and Clark Mountain, the solitude would be lower, with the views of the highly developed surrounding land.

C. Primitive Recreation Opportunities

Much of the primitive recreation taking place within the roadless area is hunting deer and elk in the fall. The drainage is known for quality mule deer hunting. There are excellent camping spots along the open grassy ridges of Grizzly Peak and Clark Mountain. Bow or rifle hunting for big game animals provides a challenging experience.

D. **Manageability and Boundaries** **Grizzly Peak 01667**

The area was identified in the RARE II inventory. The recommendation was for non-wilderness classification and the area was subsequently allocated to both developmental and nondevelopmental uses.

Gross Acres	Net Acres	
5900	5900	RARE II inventory
6000	6000	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification for the area are the existing oil & gas leases.

The Grizzly Peak roadless area is essentially one single drainage, in its entirety for the most part, and as such should be manageable from a boundary standpoint. The roadless area is surrounded by roads, but three sides have topographic features strong enough to form a boundary. The fourth side on the south is the Burnt Creek Road, the main access to the area.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential of providing about 1,800 RVD's of roadless recreation per year. Current use is estimated to be 1,000 RVD's per year.

2. Wildlife

The area contains grizzly habitat and deer, elk, and moose winter range. This winter range is managed by the use of prescribed fire to enhance browse forage. The Forest Wildlife Biologist has determined that if the prescribed burning were discontinued, there would not be significant impacts to the maintenance of the wildlife in the roadless area.

3. Timber

There are 5,000 acres of suitable timberland in the Grizzly Peak roadless area capable of producing at least 20 cubic feet per acre per year of timber growth. Approximately 50% of this timberland is on slopes steeper than 55%. Road construction on these slopes will be difficult and costly. Logging will require the use of cable or helicopter yarding methods. The remainder of the timberland is located on slopes that range from 20-55%. Road construction will be less costly on these slopes and logging will utilize a combination of tractor and cable yarding methods.

B. Other Resources

Grizzly Peak 01667

1. Fisheries

Grizzly Creek, a major tributary to Burnt Creek, flows through this area and provides fish habitat for cutthroat, rainbow, and brook trout,

2. Minerals

The mineral potential is low and the oil and gas potential is moderate.

3. Cultural Resources

There is one known historic cultural site in the area, the Clark Mountain Patrol Station. The area has not been extensively surveyed for prehistoric sites and thus no sites have been identified. Based upon surveys in similar locales, the probability of prehistoric sites occurring is considered low.

4. Water

Mean annual precipitation in the area varies from 45 to 70 inches depending on elevation. Runoff would vary from 17 to 35 inches, again, depending on elevation. Water quality is high, interrupted only briefly by high runoff events such as spring snowmelt.

C. Resource Situation

Grizzly Peak 01667

Table 1

Category	Unit	
Gross Acres	Acres	6000
Net Acres	Acres	6000
Recreation		
Semiprim. Nonmotor.	RVDs	1000
Range		
Suitable Acres	Acres	0
AUMs	AUMs	0
Timber		
Tentative Suitable	Acres	5000
Standing Volume	MMBF	51
Corridors		
Existing & Potential	No.	0
Wildlife - T&E		
Grizzly Bear Habitat		
Situation 1	Acres	6000
Situation 2	Acres	0
Situation 3	Acres	0
Wildlife - Big Game (Elk, Deer, Moose)		
Summer Range Total	Acres	3200
Winter Range Total	Acres	2600
Special Uses Existing	No.	0
Existing Facilities	No.	0

Category	Unit	
Significant Fisheries		
Stream Miles	Miles	0
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Minerals		
Hardrock Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	-
Low	Acres	6000
Mining Claims	No.	0
Oil & Gas Potential		
Very High	Acres	-
High	Acres	-
Moderate	Acres	6000
Low	Acres	-
Unknown	Acres	-
Oil & Gas Leases		
Leases	No.	5
Leased Acres	Acres	4500

D. Management Considerations

1. Land Use Authorizations

There are no special uses in the area. Oil & gas leases exist.

2. Fire

The area has had a low fire occurrence history. The fuels situation in the area is a combination of dense conifer stands in the lower elevations and canyon bottoms and by open stands with grasses and forbs on the main ridge.

3. **Insect and Disease**

70-75% of the area contains mature lodgepole pine susceptible to Mountain Pine beetle infestation which has recently started. Within 10 years, it is expected that these mature stands will be killed.

4. **Non-Federal Lands**

There are no private lands in this area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The existing Cabinet Mountains Wilderness is located 30 air miles to the south of the area. The Cabinets receive over 18,000 RVD's annually and this use is steadily increasing.

Grizzly Peak roadless area is about 40 miles by road from Libby, Montana and 150 miles form the Coeur d'Alene, Idaho and Spokane, Washington areas.

B. 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.

C. Public Interest

During the RARE II public review period, over 1,300 people commented on the area. Most (85%) were opposed to a wilderness classification for the area. RARE II recommended non-wilderness. Responses to the Unit Plan in which Grizzly Peak is located (Cool-Burnt, December 1979) were few but did include some support for a primitive-type designation.

The area is currently used primarily for hunting in the Fall.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Grizzly Peak Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M ACRES)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	1.2	1.2	1.2	1.4	1.2	1.0	1.2	0	2.3	3.1	3.1	1.0	1.2	1.2	6.0
Nonwilderness (Some Dev.)															
Big Game Winter Range	0	0	0	0	0	0	0	0	0	.4	.4	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	4.8	4.8	4.8	4.6	4.8	5.0	4.8	0	3.7	2.5	2.5	5.0	4.8	4.8	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	0	6.0	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	.3	0	0	2.7	0	0	0	0	0	0
Decade 5:	4.8	4.8	4.8	4.6	4.6	5.0	4.8	0	3.7	2.5	2.5	5.0	4.8	4.8	0
Roadless - Decade 1:	6.0	6.0	6.0	6.0	6.0	5.7	6.0	0	3.3	6.0	6.0	6.0	6.0	6.0	6.0
Decade 5:	1.2	1.2	1.2	1.4	1.4	1.0	1.2	0	2.3	3.5	3.5	1.0	1.2	1.2	6.0
Recommended Wilderness	0	0	0	0	0	0	0	6.0	0	0	0	0	0	0	0
Total Acres- Grizzly Peak	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0

B. Impacts Grizzly Peak 01667

1. **Designation: Wilderness**
Management Emphasis: Wilderness

The Grizzly Peak roadless area is recommended for wilderness in its entirety in Alternative H. No other alternative recommends wilderness for the area. 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.

A wilderness classification will preserve the primitive character of the area. Specifically, the opportunities present for solitude within the interior of the area and the quality roadless hunting experiences will be maintained. Old growth timber habitat will be protected.

There are about 5,000 acres of suitable timberland in the area that would be foregone in Alternative H (full wilderness classificaiton). This would affect primarily the ability to manage big game and grizzly habitat through timber harvest and the ability to salvage dead and dying lodgepole infested by the mountain pine beetle.

Grizzly bear habitat (Situation 1 - critical to the recovery of the species) covers almost the entire roadless area. Wilderness management would provide security to the bear by prohibiting roading thereby reducing increases in human activity. However, opportunities to increase forage through burning and timber harvest would not occur.

Opportunities to manage big game summer and winter range by burning and timber harvest would be foregone in this emphasis. As with the grizzly bear, however, this lack of opportunity would be offset by the benefits of habitat security that wilderness could afford.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternative H, designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to roadless management, by alternative.

Percent of the Area Designated for Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
20	20	20	23	20	16	20	0	38	51	51	16	20	20	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be preserved in these emphases as will the primitive recreation opportunities present in the area. Old growth timber habitat will be maintained and grizzly bear habitat will be protected. Security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. The timber resource would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

Alternatives J and K designate about 8% of the area (400 acres) to this management emphasis. The intent is to manage winter range habitat for the benefit of moose, elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphasis: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

Every alternative, except Alternatives H and O, designate a portion of the area to one of these management emphases. The following chart displays the percent of the area designated for developmental activities.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
80	80	80	77	80	84	80	0	62	41	41	84	80	80	0

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.

No alternative projects development to occur during the first decade except Alternatives F and I. (See Table 3 at the end of this section.) However, by the third decade, the naturalness of the area will be impacted by timber cutting units and roads as development occurs in all alternatives except H and O. From 14 to 27 miles of road will be needed to develop the area, depending on the alternative. Roading foregoes the opportunity for wilderness consideration in the long-term, and reduces the opportunties for solitude and primitive recreation.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

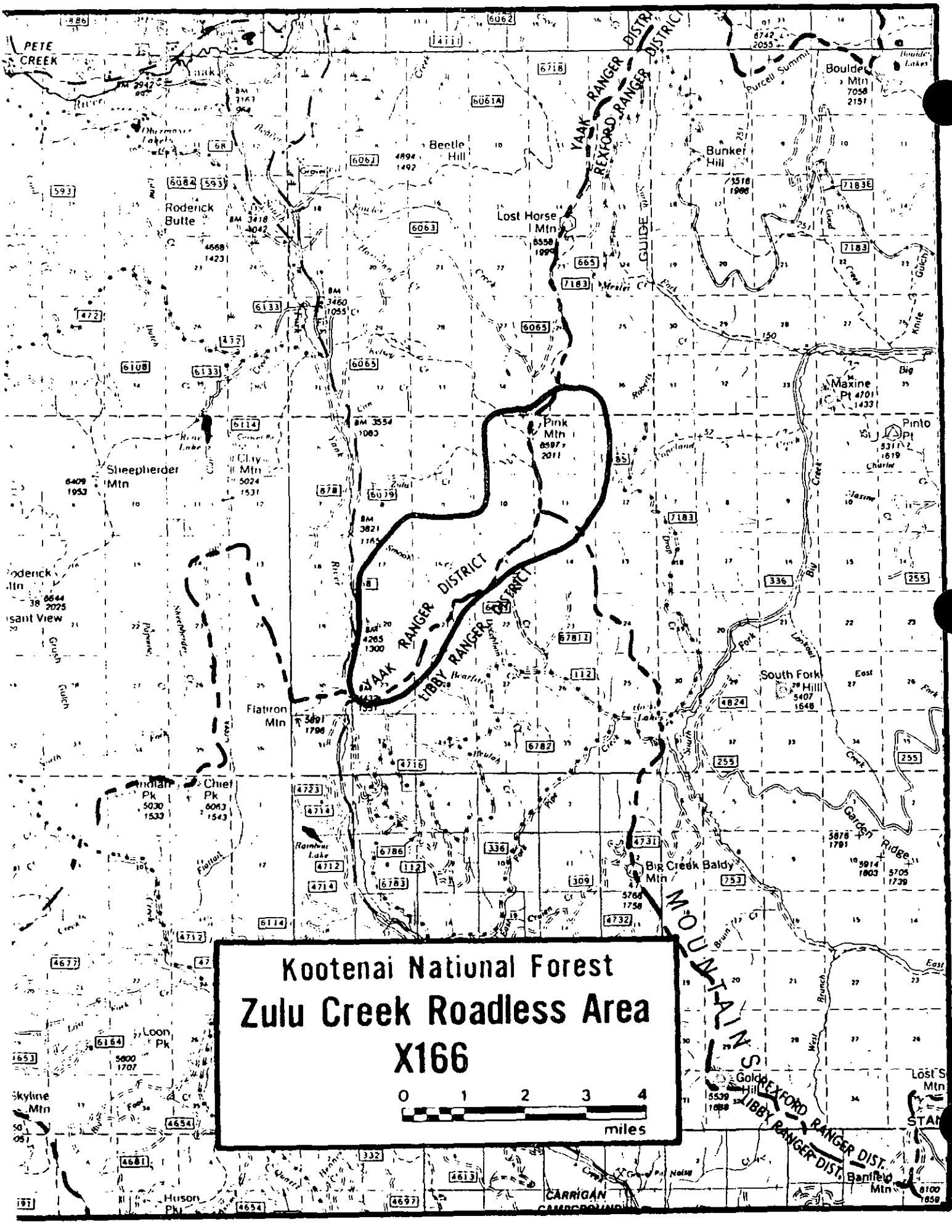
Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

The harvest of some of the mature lodgepole pine will provide an opportunity for control of insects and disease because all diseased or susceptible tress are removed and a young, vigorous stand is initiated.

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 Grizzly Peak roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Grizzly Peak Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	0	6.0	0	0	0	0	0	0	0
Roadless MAcres		1.2	1.2	1.2	1.4	1.2	1.0	1.2	0	2.3	3.1	3.1	1.0	1.2	1.2	6.0
Recreation																
Prim./Semiprim.MRVDs		14	10	10	11	14	14	14	18	9	15	15	10	14	14	24
Semiprim. Motor.MRVDs		9	15	15	14	9	9	9	0	18	10	10	15	9	9	0
Timber																
Suitable MAcres		4.8	4.8	4.8	4.6	4.8	5.0	4.8	0	3.7	2.5	2.5	5.0	4.8	4.8	0
Volume (MMBF)	1	0	0	0	0	0	7.3	0	0	15.1	0	0	0	0	0	0
	3	23.0	23.0	23.0	3.0	23.0	23.0	23.0	0	0	10.7	10.7	3.0	23.0	23.0	0
	5	5.0	5.0	5.0	15.1	5.0	16.0	5.0	0	0	10.6	10.6	4.0	15.0	4.0	0
Harvest Acres - MAcres	1	0	0	0	0	0	.3	0	0	2.7	0	0	0	0	0	0
	3	2.9	2.9	2.9	.1	2.9	3.0	2.9	0	0	1.8	1.8	.1	3.0	2.9	0
	5	.2	.2	.2	.7	.2	.7	.2	0	0	.5	.5	.2	.7	.2	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	3	0	0	15	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		23	23	23	26	23	27	23	0	16	14	14	23	26	23	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		1.2	1.2	1.2	1.4	1.2	1.0	1.2	6.0	2.3	3.1	3.1	1.0	1.2	1.2	6.0
Wildlife - Big Game																
Summer Range MAcres		1.8	3.0	3.0	2.9	1.8	1.8	1.8	0	0	0	0	3.0	1.8	1.8	0
Winter Range MAcres		0	0	0	0	0	0	0	0	3.5	2.1	2.1	0	0	0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


Kootenai National Forest
Zulu Creek Roadless Area
X166
0 1 2 3 4
miles
PETE CREEK
Boulder Mtn
Beetle Hill
Bunker Hill
Roderick Butte
Lost Horse Mtn
Maxine Pt
Pinto Pt
Pink Mtn
Sheepherder Mtn
Clay Mtn
Flatiron Mtn
South Fork Hill
Big Creek Baldy Mtn
Indian Pk
Chief Pk
Loon Pk
Skyline Mtn
Huson Pk
Golden Hill
Banfield Mtn
Garden Ridge
YAAK RANGER DISTRICT
REXFORD RANGER DISTRICT
GUIDE
LIBBY RANGER DISTRICT
MOUNTAINS
CARRIGAN

KOOTENAI NATIONAL FOREST

Zulu Creek - 01X166 State: Montana

Gross Acres: 6,400 Net Acres: 6,400

I. Description

The Zulu Creek roadless area is located between the Pipe Creek Divide and Pink Mountain, running in a southwest to northeast direction. Access is provided via the Pipe Creek Road and a trail system exists on the main ridge.

The area is primarily rolling timberland with a ridgeline running from Pipe Creek Summit (4,400 feet) to Pink Mountain (6,600 feet). The headwaters for Smoot, Zulu, and Copeland Creeks all originate in this roadless area, as do some small unnamed tributaries of the South Fork Yaak River.

The southeastern edge is bordered largely by Forest developments such as roads and cutting unit, while the remaining surroundings are less developed.

The represented ecosystems are Douglas-fir Forest and Western Spruce Fir Forest.

The area's wildlife, including grizzly, and the potholes and wet meadows in the southern half are among the area's attractions.

Current recreation use consists primarily of hunting in the fall and snowmobiling in winter (500 RVD's).

II. Capability

A. Natural Integrity and Appearance

The natural integrity is high with only a few miles of hiking trails around Pink Mountain.

B. Opportunities for Solitude

Opportunities for solitude vary from high to moderate. Opportunities are more available in the densely vegetated streambottoms and less so on the open ridges of Pink Mountain where views of past timber management activities are apparent.

C. Primitive Recreation Opportunities

Primitive recreation opportunities include ridgetop hiking and hunting. Crosscountry travel through dense woods is a challenging experience also offered.

D. Other Features

Among the special features of the area are wet meadows in the lower portion and the open ridges around Pink Mountain.

E. Manageability and Boundaries Zulu Cr. 01X166

The area was identified during the RARE I effort and in the interim, has retained its roadless qualities although the Zulu Creek area was allocated primarily to developmental uses.

Gross Acres	Net Acres	
7800	7800	RARE I inventory
-1400	-1400	Area affected by existing timber sales
6400	6400	1983 inventory

The nonconforming uses that would conflict with a wilderness classification in the area are the existing oil & gas leases.

The present boundary could be improved by placing it on more definite, stronger topographic features. As presently configured, the area is small with an over-abundance of access from several directions.

III. Availability

A. Significant Resource Potentials

1. Recreation

The area has the potential to contribute about 1,800 RVD's of wilderness recreation per year. The snowmobile use now occurring in the area around Pink Mountain would conflict with a wilderness classification. Current use is estimated to be about 500 RVD's per year.

2. Wildlife

Seventy-eight percent of the roadless area is grizzly habitat. Mule deer and moose habitat are also present though management opportunities are limited.

3. Timber

There are 5,600 acress of suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. Approximately 80% of this timberland is located on slopes ranging from 20 to 55%. Road construction will not be difficult and logging can utilize both tractor and cable yarding methods.

B. Other Resources

1. Fisheries

This area does not have any significant fisheries but contains the headwaters for some tributaries to the South Fork of the Yaak River and Big Creek.

2. Range

There are no grazing allotments in the area and the grazing potential is all transitory.

3. **Minerals** Zulu Cr. 01X166

The mineral potential is low and the oil and gas potential is moderate.

4. **Cultural Resources**

There is one known historic cultural site and no prehistoric sites identified in the area. Based upon surveys done in similar areas, the probability of prehistoric sites occurring is considered low.

5. **Water**

Mean annual precipitation for the area averages about 35 inches. Thirty to 40 percent of this precipitation can be expected to show up as streamflow, inlfuencing the streams to peak in late May or June. Water quaity is very high except during these short time period when the streamflow is high.

C. **Resource Situation** Zulu 01X166

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	6400			
Net Acres	Acres	6400			
Recreation					
Semiprim. Nonmotor.	RVDs	500	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	5600	Existing	No.	0
Standing Volume	MMBF	40			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	-
Situation 1	Acres	4700	Low	Acres	6400
Situation 2	Acres	300	Mining Claims	No.	0
Situation 3	Acres	-	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	6400
Summer Range Total	Acres	6400	Low	Acres	-
Winter Range Total	Acres	0	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	4
			Leased Acres	Acres	5000
Existing Facilities	No.	0			

D. Management Considerations Zulu Cr. 01X166

1. Land Use Authorizations

There are no special uses. Oil & gas leases exist.

2. Fire

The area has had low fire occurrence (2 fires in the last 20 years). The fuels situation is dense conifer stands with an accumulation of downed, woody material as ground fuels.

3. Insect and Disease

Ninety percent of the area contains mature lodgepole pine stands susceptible to Mountain Pine Beetle attack. Insect activity is occurring on the north boundary.

4. Non-Federal Lands

There are no private lands in the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is about 20 air miles from the existing Cabinet Mountains Wilderness. Spokane, Washington (180 miles) and Misoula, Montana (240 miles) are the nearest large population centers.

B. 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.

C. Public Interest

Zulu was eveluated during RARE II and the recommendation was for non-wilderness. Public comments received during the Unit Planning process did not address the question of wilderness for the area and there has been no recent support expressed for wilderness.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Zulu Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	3.3	3.3	3.3	2.8	3.3	4.6	3.3	0	.1	.5	.5	.8	4.1	4.1	6.4
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	3.1	3.1	3.1	3.6	3.1	1.8	3.1	0	6.3	5.9	5.9	5.6	2.3	2.3	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	0	6.4	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	.2	.2	.2	0	.2	0	.2	0	0	.2	.2	1.8	.2	.2	0
Decade 5:	3.1	3.1	3.1	3.6	3.1	1.8	3.1	0	6.3	5.9	5.9	5.6	2.3	2.3	0
Roadless - Decade 1:	6.2	6.2	6.2	6.4	6.2	6.4	6.2	0	6.4	6.2	6.2	4.6	6.2	6.2	6.4
Decade 5:	3.3	3.3	3.3	2.8	3.3	4.6	3.3	0	.1	.5	.5	.8	4.1	4.1	6.4
Recommended Wilderness	0	0	0	0	0	0	0	6.4	0	0	0	0	0	0	0
Total Acres- Zulu	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4

B. Impacts Zulu Cr. 01X166

1. **Designation: Wilderness**
Management Emphasis: Wilderness

The Zulu Creek roadless area is recommended for wilderness designation in its entirety in Alternative H. No other alternative recommends wilderness for the area. 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.

A wilderness classification for the area will protect the primitive characteristics present including the opportunities for solitude within the densely vegetated streambottoms and wet meadows, and the quality roadless hunting opportunities.

There are about 5,600 acres of suitable timberland that would be unavailable for management in the full wilderness Alternative H. This would affect the ability to manage big game summer range and to salvage lodgepole pine timber that becomes infested by the mountain pine beetle.

The inability to manage for big game summer range through timber harvest would be offset by the benefits to wildlife resulting from the security provided by wilderness. This security takes the form of limiting access into the area which, if unabated, can be disruptive to wildlife.

About 78% of the area contains grizzly habitat (Situations 1 and 2 - see glossary). Wilderness management would provide security for the bear from roading and the resultant increase in human activity. However, increases in forage through management activities such as timber harvest and burning would not occur.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. semi-primitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semi-primitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Each alternative, except Alternative H, designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to roadless management in each alternative.

Percent of Area Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
51	51	51	43	51	71	51	0	1	7	7	12	64	64	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character within the area will be maintained as will the semi-primitive recreation opportunities. Old growth timber habitat will be maintained and the grizzly habitat will be protected. Security for big game will be provided.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic effects are primarily the benefits of semi-primitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Developed)**
Management Emphases: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Each alternative designates a portion of the area to one of these emphases. The following chart displays the percent of the area designated for developmental activities, by alternative.

Percent of the Area Designated for Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
49	49	49	57	49	29	49	0	99	93	93	88	36	36	0

In all alternatives, except Alternatives D, F, H, I, L and O, development would occur in the first decade, specifically timber harvesting and road building. (See Table 3 at the end of this section.) In all alternatives except H and O, development will occur by the third decade. Road mileage required to develop the area ranges from 5 to 32 miles, depending on the alternative.

As development occurs, the naturalness of the area will be impacted by timber cutting units, roads, and other activities. Roading foregoes the opportunity to consider the area for wilderness in the long-term and reduces the opportunity for primitive recreation and experiences of solitude.

Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

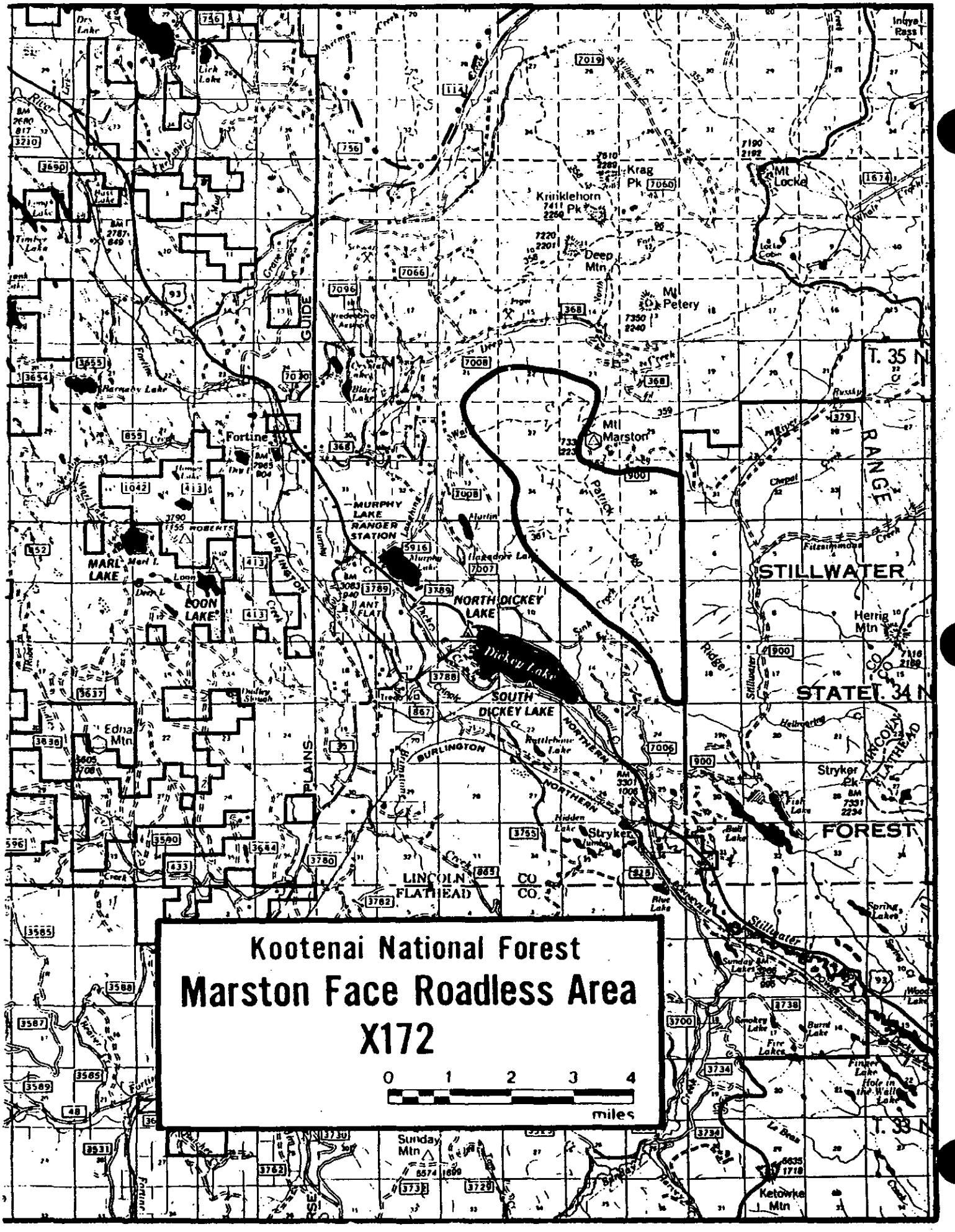
Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

Zulu Cr. 01X166

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 Zulu Creek roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Zulu Roadless Area.

OUTPUT CATEGORY	DECADE	ALTERNATIVES A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Rec. Wilderness MAcres		0	0	0	0	0	0	0	6.4	0	0	0	0	0	0	0
Roadless MAcres		3.3	3.3	3.3	2.8	3.3	4.6	3.3	0	.1	.5	.5	.8	4.1	4.1	6.4
Recreation																
Prim./Semiprim.MRVDs		14	16	15	9	14	21	14	19	10	13	13	0	14	16	23
Semiprim. Motor.MRVDs		11	6	9	16	11	4	11	0	11	11	11	28	11	6	0
Timber																
Suitable MAcres		2.2	2.2	2.2	3.6	2.2	1.8	2.2	0	5.6	5.6	5.6	5.6	2.3	2.3	0
Volume (MMBF)	1	.2	.2	.2	0	.2	0	.2	0	0	.2	.2	0	.2	.2	0
	3	0	0	0	21.2	0	0	0	0	21.2	0	0	21.0	0	0	0
	5	0	0	0	3.5	0	0	0	0	3.5	.02	.02	0	0	0	0
Harvest Acres - MAcres	1	.2	.2	.2	0	.2	0	.2	0	0	.2	.2	0	.2	.2	0
	3	0	0	0	.9	0	0	0	0	.9	0	0	1.1	0	0	0
	5	0	0	0	.2	0	0	0	0	3.5	.02	1.9	0	0	0	0
Roads																
Roads Constructed First Decade - Miles		2	2	2	0	2	0	2	0	0	2	2	12	2	2	0
Total Road Miles Needed by Fifth Decade - Miles		5	5	5	17	5	3	5	0	32	27	27	26	5	5	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		3.3	3.3	3.3	2.8	3.3	4.6	3.3	5.0	.1	.5	.5	.8	4.1	4.1	5.0
Wildlife - Big Game																
Summer Range MAcres		1.9	1.0	1.4	1.0	1.9	.9	1.9	0	0	0	0	3.4	1.9	1.0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE TO THIS ROADLESS AREA														


Kootenai National Forest
Marston Face Roadless Area
X172
0 1 2 3 4
miles
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T. 34 N
T. 33 N
Krag Pk
Krinklehorn Pk
Deep Mtn
Mt Locke
Mt Petery
Mt Marston
Fortine
MURPHY LAKE RANGER STATION
MARL LAKE
LOON LAKE
NORTH DICKEY LAKE
SOUTH DICKEY LAKE
Dickey Lake
Herrig Mtn
Stryker Pk
Stryker
Edna Mtn
Sunday Mtn
Ketowke Mtn
GUIDE
PLAINS
STILLWATER
STATE
FOREST
LINCOLN CO
FLATHEAD CO
BURLINGTON NORTHERN

KOOTENAI NATIONAL FOREST

Marston Face 01X172 State: Montana

Gross Acres: 6,000 Net Acres: 6,000

I. Description

The area is located in the northeastern corner of the Forest, extending along Patrick Ridge northwesterly from the Stillwater State Forest on the east. The area is accessible from Highway 93 and the Deep Creek Road. Trails radiate from Mount Marston (just outside the area boundary) along Patrick Ridge and along Laughing Water Creek.

The area is primarily a long ridge with a steep westerly slope of limited productivity. The rest of the area contains forested lands. Sink Creek, Laughing Water Creek, several small, unnamed tributaries, and the main tributary to Martin Lake all originate within this area. Mount Marston (elevation 7300 feet) dominates the area although it lies outside the area boundary.

Marston Face roadless area is surrounded on three sides by roads and clearcuts.

The represented ecosystems are Douglas-fir Forest and Western Spruce Fir Forest.

Wildlife, including grizzly bear, and views of the Tobacco Valley and Glacier Park are among the area's primary attractions.

Existing use is light (500 RVD's per year) and consists primarily of hunting in the fall.

II. Capability

A. Natural Integrity and Appearance

The natural integrity is high as is the overall natural appearance. There are several miles of hiking trails.

B. Opportunities for Solitude

Opportunities for solitude are generally high, especially in the Laughing Water Creek drainage and less so along Patrick Ridge which looks into the Tobacco Valley.

C. Primitive Recreation Opportunities

Primitive recreation opportunities include hiking, hunting, and wildlife observation, including grizzly bear. Crosscountry travel is the biggest challenge offered and the panoramic views of Glacier Park and the Canadian Rockies are among the area's special features. The Mount Marston Road, just outside the area boundary, is the highest road in the northwest; at 7,300 feet, it is 600 feet higher than Logan Pass on the Going-To-The-Sun Highway in Glacier Park.

D. Manageability and Boundaries Marston Face 01X172

The Marston Face roadless area was inventoried during RARE I. The recommendation made was for non-wilderness and the area was allocated primarily to roadless forms of management. As such, most of the area remained eligilble for inclusion in the 1983 roadless inventory.

Gross Acres	Net Acres	
6400	6400	RARE I inventory
- 400	- 400	Area affected by timber sales
6000	6000	1983 roadless inventory

The nonconforming uses that would conflict with a wilderness classification in the area are the oil & gas leases.

Overall, the manageability of the boundary would prove difficult. Although the west boundary is located at the base of a slope, (a well-defined topographic feature), the remaining boundary is more arbitrary. The north boundary is determined by past developments such as roads and timber harvesting. The east boundary is the Stillwater State Forest.

III. Availability

A. Significant Resource Potentials

1. Recreation

It is estimated that approximately 1,000 RVD's of wilderness recreation could be provided by the area. Current use is estimated to be 500 RVD's per year.

2. Wildlife

The area contains mule deer and elk winter range and excellent grizzly habitat. Some wildlife management opportunities through burning exist on the lower south-facing slopes.

3. Minerals

Mineral potential is low but the oil and gas potential is moderate.

B. Other Resources

1. Fisheries

There are no significant fisheries in the area.

2. Range

There are no livestock grazing allotments in the area and the grazing potential is all transitory.

3. Timber

The roadless area contains 900 acres of suitable timberland capable of producing at least 20 cubic feet per acre per year of timber growth. Over 90% of this timberland is located on slopes in excess of 55%. Road construction will be difficult and costly and logging will require the use of cable and helicopter methods.

4. Water

Mean annual precipitation for the area is about 35 inches, varying from 27 to 50 inches depending on elevation. Aside from occasional high sediment levels during seasonal peak flows, general water quality is excellent.

5. Cultural Resources

There are no known historic or prehistoric cultural sites identified in the area. Based on surveys in similar areas, the probability of prehistoric sites occurring is considered low.

C. Resource Situation Marston Face 01X172

Table 1

Category	Unit		Category	Unit	
Gross Acres	Acres	6000			
Net Acres	Acres	6000			
Recreation					
Semiprim. Nonmotor.	RVDs	500	Significant Fisheries		
			Stream Miles	Miles	0
Range			Stream Habitat	Acres	0
Suitable Acres	Acres	0	Lakes	No.	0
AUMs	AUMs	0	Lake Habitat	Acres	0
Timber			Water Developments		
Tentative Suitable	Acres	900	Existing	No.	0
Standing Volume	MMBF	11			
Corridors			Minerals		
Existing & Potential	No.	0	Hardrock Potential		
			Very High	Acres	-
Wildlife - T&E			High	Acres	-
Grizzly Bear Habitat			Moderate	Acres	-
Situation 1	Acres	5900	Low	Acres	6000
Situation 2	Acres	100	Mining Claims	No.	0
Situation 3	Acres	-	Oil & Gas Potential		
			Very High	Acres	-
Wildlife - Big Game (Elk, Deer)			High	Acres	-
			Moderate	Acres	6000
Summer Range Total	Acres	2300	Low	Acres	-
Winter Range Total	Acres	1400	Unknown	Acres	-
			Oil & Gas Leases		
Special Uses Existing	No.	0	Leases	No.	4
			Leased Acres	Acres	6000
Existing Facilities	No.	0			

D. Management Considerations Marston Face 01X172

1. Land Use Authorizations

There are no special uses. There are oil & gas leases.

2. Insect and Disease

The insect and disease situation is relatively stable with no large stands of mature lodgepole pine or spruce susceptible to insect and disease attack.

3. Fire

The area has had a low amount of fires (2 fires in the last 20 years). The fuels situation consists primarily of dense conifer stands with heavy accumulations of woody ground fuels.

4. Non-Federal Lands

There are no private lands in the area.

IV. Need

A. Proximity to Other Wilderness and to Population Centers

The area is about 25 air miles from Glacier National Park, 50 air miles from the existing Cabinet Mounains Wilderness, and 4 miles from the Ten Lakes Montana Wilderness Study Area. Missoula, Montana (180 miles) and the Flathead Valley area (60 miles) are the closest large population centers.

B. Contribution to National Wilderness Preservation System

This area is representative of the Northern Continental Divide Grizzly Bear Ecosystem which is represented in the existing wilderness system.

C. Public Interest

The area was evaluated in RARE I and recommended for non-wilderness. Responses to the Unit Plan for the area (Dickey-Sunday Unit Plan, 1976) did not reveal strong support for a wilderness designation in the area. Concern was expressed, however, that the area should remain in a primitive state. No recent expressions of support for a wilderness in the area have been made.

V. Alternatives and Environmental Consequences

A. 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.

Table 2. Management Emphasis by Alternative for Marston Face Roadless Area.

MANAGEMENT EMPHASIS	ALTERNATIVES (M Acres)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Nonwilderness (Roadless)															
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas	5.1	5.1	5.1	5.1	5.1	5.7	5.1	0	5.6	3.8	3.8	5.1	5.1	5.1	6.0
Nonwilderness (Some Dev.)															
Big Game Winter Range	0	0	0	0	0	0	0	0	.4	2.1	2.1	0	0	0	0
Nonwilderness (Developed)															
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems	.9	.9	.9	.9	.9	.3	.9	0	0	.1	.1	.9	.9	.9	0
Wilderness															
Recommended Wilderness	0	0	0	0	0	0	0	6.0	0	0	0	0	0	0	0
Summary of Management Emphasis:															
Nonwilderness															
Developed - Decade 1:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decade 5:	0	0	0	.9	0	0	0	0	0	.1	.1	0	0	0	0
Roadless - Decade 1:	6.0	6.0	6.0	6.0	6.0	6.0	6.0	0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Decade 5:	6.0	6.0	6.0	5.1	6.0	6.0	6.0	0	6.0	5.9	5.9	6.0	6.0	6.0	6.0
Recommended Wilderness	0	0	0	0	0	0	0	6.0	0	0	0	0	0	0	0
Total Acres- Marston Face	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0

B. Impacts Marston Face 01X172

1. Designation: Wilderness
Management Emphasis: Wilderness

The Marston Face roadless area is recommended for wilderness in its entirety in Alternative H. No other alternative recommends wilderness for the area. 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.

A wilderness designation will preserve the primitive character of the area, specifically the opportunities for solitude to be found in the Laughing Water Creek drainage and the hiking and roadless hunting experiences afforded in the area.

There are about 900 acres of suitable timberland in the area that would be unavailable for management in Alternative H. In most alternatives, however, this timberland is not scheduled for harvest because of the steep slopes involved. (See Table 3 at the end of this section.) Thus, the effect on the timber resource is not considered significant.

Grizzly bear habitat (Situations 1 and 2 - see glossary) covers the entire roadless area. Wilderness management would provide security for the bear by prohibiting roading, thereby reducing increases in human activity. However, opportunities to increase forage through burning and advantageous timber harvest would not occur.

Opportunities to manage big game winter and summer ranges by burning and timber harvest would also be foregone in wilderness. This would affect about 2,300 acres of summer range and 1,400 acres of winter range. But, as with grizzly bears, this inability to deliberately increase forage through management activities would be offset by the benefits of the security provided by wilderness.

Wilderness will restrict the exploration for, and removal of, mineral resources. Under the Wilderness Act, the land would be withdrawn from mineral entry since no valid mining claims exist. The existing oil and gas leases would be honored, however. This restriction is not considered significant in that the mineral potential is low and the oil and gas potential is moderate. If there is no discovery when a lease expires, then the land will be withdrawn from mineral leasing.

Activities permissable in wilderness, when authorized by the 1964 Wilderness Act or wilderness management plans, can 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 effects would center around the resource values of recreation, wildlife, wilderness, and timber. Semiprimitive recreation activities such as hunting in a roadless setting, would continue. Timberland would not be available in Alternative H, thus not supporting the wood products industry. Those publics valuing wilderness would be supported by this management emphasis.

2. **Designation: Nonwilderness (Roadless)**
Management Emphases: Primitive Recreation, Semiprimitive Nonmotorized Recreation, Viewing, and Limited Use Areas

Every alternative except H designates a portion of the area to these management emphases. The following chart displays the percent of the area designated to roadless management, by alternative.

Percent of the Area Designated to Roadless Management By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
85	85	85	85	85	95	85	0	93	63	63	85	85	85	100

There are few, if any, ground-disturbing management activities specifically associated with roadlessness. Activities are associated primarily with dispersed recreation including hunting and fishing.

The roadless character of the area will be maintained in these emphases. Solitude and primitive recreation opportunities will be maintained and maximized. Old growth timber habitat will be provided and grizzly habitat will be protected. Security for big game will be maintained.

Like wilderness, roadless designations 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 more expensive to accomplish. Such activities can include wildlife and fish habitat improvements, mineral, oil and gas exploration/development, insect and disease control, and wildfire suppression.

The social and economic affects are primarily the benefits of semiprimitive recreation opportunities. Timber would not be available for harvest in these emphases.

3. **Designation: Nonwilderness (Some Development)**
Management Emphasis: Big Game Winter Range

Alternatives I, J, and K designate 7%, 35%, and 35% of the area, respectively, to this emphasis. The intent is to manage winter range habitat for the benefit of elk and deer. Prescribed burning is the primary management activity.

The impact on the wilderness and roadless character caused by this emphasis is short-term in nature. The naturalness of the area would be altered shortly after burning but vegetative recovery would make this activity less apparent later on.

Impacts on the timber and mineral resources would be insignificant in this emphasis.

Social and economic effects would be primarily one of support of those publics valuing wildlife in the area.

4. **Designation: Nonwilderness (Developed)**
Management Emphasis: Big Game Winter Range Timber, Big Game Summer Range Timber, Wildlife Timber, Grizzly Timber, Timber Optimization, Timber Viewing, Viewing Timber, Minimum Use due to Steep Slopes or Regeneration Problems.

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. Each alternative, except Alternatives H, I, and O, designates a portion of the area to one of these emphases. The following chart displays the percent of the area designated to developmental activities.

Percent of the Area Designated to Developmental Activities By Alternative

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
15	15	15	15	15	5	15	0	0	1	1	15	15	15	0

In no alternative are activities scheduled to occur in the first decade (see Table 3). In fact, only in Alternatives D, J, and K are activities scheduled to take place at all. Although the designations are made for developmental activities, specifically timber management for big game and grizzly habitat, there are no plans to harvest timber in the next fifty years. This is because of the steep terrain involved, making the timber less desireable for harvest.

In those Alternatives (D, J, and K) where activities will occur, the naturalness of the area will be impacted by timber cutting units and roads, sometime in the third decade. Roading will remove the opportunity to consider the area for wilderness in the long-term and reduce the opportunity for primitive recreation and experiences of solitude. Expected miles of road range from 6 miles in Alternative D, to 1 mile in Alternatives J and K.

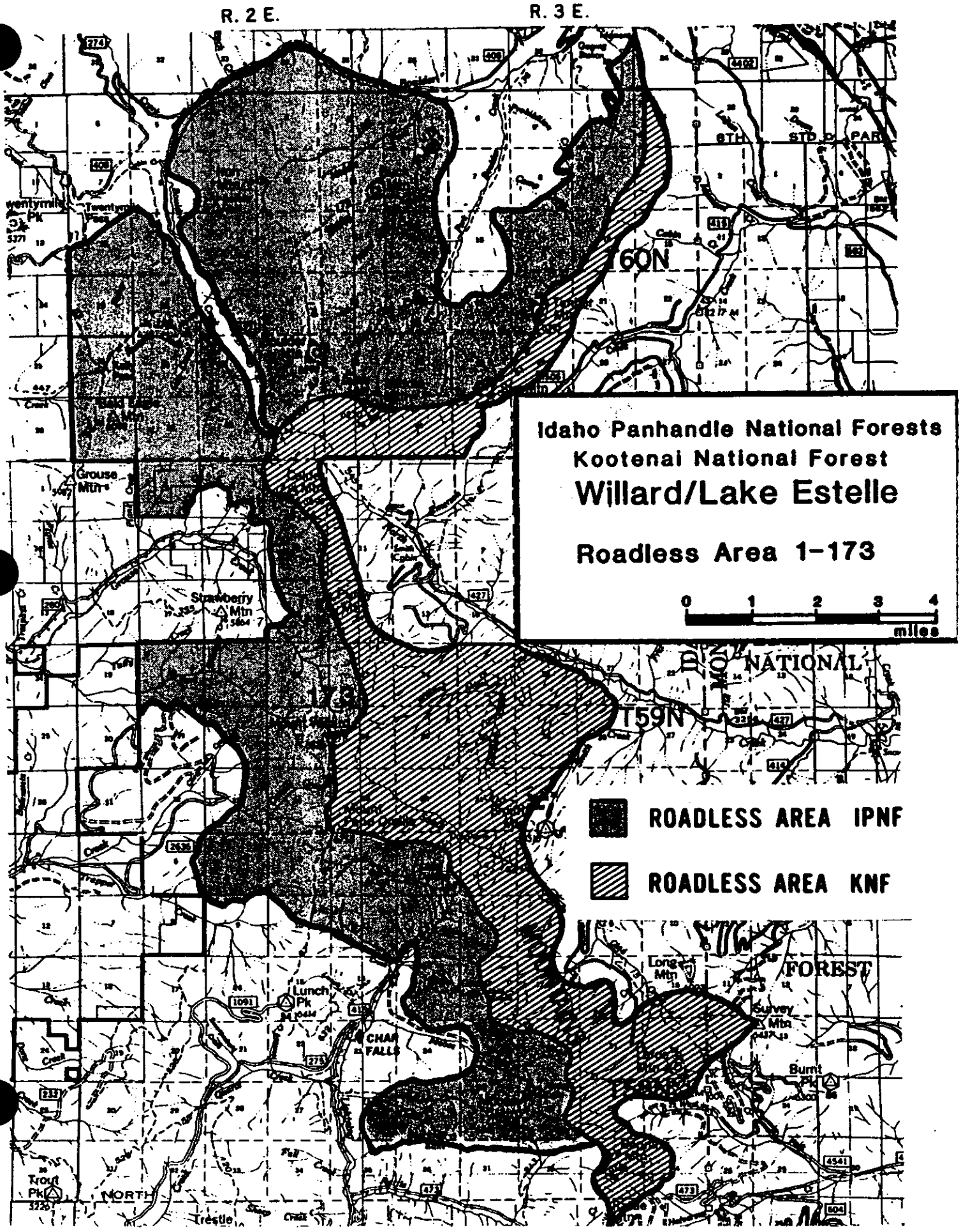
Timber harvest and roads could result in a short-term reduction in big game cover and security. Activities conducted in big game habitat are coordinated with wildlife needs and include the closure of roads upon completion of the activity and insuring that adequate cover is left. Long-term benefits to wildlife include maintaining and improving wildlife forage.

Timber management activities can directly affect the grizzly population in the short-term by logging activities and the long term by road access into a roadless area. Access into the area could displace the bear and increase the opportunity for human/bear encounters. Timber management activities, if well coordinated, can produce benefits by producing more desirable 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 in a timely manner to minimize human/bear encounters and displacement.

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 Marston Face roadless area would contribute to the economic base. 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 mangement for the area would not be supported by these emphases. Concerns about impacts on grizzly bear, big game, and other species could be raised by the activities scheduled in these emphases, but would be addressed by efforts to mitigate the impacts.

Table 3. Decadal Outputs by Alternative for Marston Face Roadless Area.

OUTPUT CATEGORY	DECADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
		ALTERNATIVES														
Rec. Wilderness MAcres		0	0	0	0	0	0	0	6.0	0	0	0	0	0	0	0
Roadless MAcres		5.1	5.1	5.1	5.1	5.1	5.7	5.1	0	5.6	3.8	3.8	5.1	5.1	5.1	6.0
Recreation																
Prim./Semiprim.MRVDs		22	22	22	21	22	23	22	18	23	15	15	22	22	22	24
Semiprim. Motor.MRVDs		1	1	1	4	1	1	1	0	2	11	11	1	1	1	0
Timber																
Suitable MAcres		.9	.9	.9	.9	.9	.3	.9	0	0	.1	.1	.9	.9	.9	0
Volume (MMBF)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	4.3	0	0	0	0	0	.6	.6	0	0	0	0
	5	0	0	0	5.2	0	0	0	0	0	0	0	0	0	0	0
Harvest Acres - MAcres	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	.6	0	0	0	0	0	.09	.09	0	0	0	0
	5	0	0	0	.3	0	0	0	0	0	0	0	0	0	0	0
Roads																
Roads Constructed First Decade - Miles		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Road Miles Needed by Fifth Decade - Miles		0	0	0	6	0	0	0	0	0	1	1	0	0	0	0
Wildlife - T&E																
Grizzly Bear Habitat MAcres (w/o activity)		5.1	5.1	5.1	5.1	5.1	5.7	5.1	6.0	5.6	3.8	3.8	5.1	5.1	5.1	6.0
Wildlife - Big Game																
Summer Range MAcres		.3	.3	.3	.3	.3	.3	.3	0	0	0	0	.3	.3	.3	0
Winter Range MAcres		0	0	0	.6	0	0	0	0	.4	2.2	2.2	0	0	0	0
Minerals & Oil/Gas																
Very High/ High Potential - Accessible MAcres		NOT APPLICABLE IN THIS ROADLESS AREA														


R. 2 E.
R. 3 E.
T60N
T59N
173
Idaho Panhandle National Forests
Kootenai National Forest
Willard/Lake Estelle
Roadless Area 1-173
0 1 2 3 4
miles
ROADLESS AREA IPNF
ROADLESS AREA KNF
Grouse Mtn
Strawberry Mtn
Lunch Pk
Long Mtn
Survey Mtn
Burnt Pk
Trout Pk
NORTH
FOREST
NATIONAL

MT. WILLARD-LAKE ESTELLE (01X173)

I. DESCRIPTION

Size	Gross Acres	Net Acres
Kootenai NF	18,400	18,400
Idaho Panhandle NF	38,646	35,275
Total	57,046	53,675

This area is located 13 miles northeast of Sandpoint, Idaho, and 9 miles southeast of Bonners Ferry, Idaho. The area is along the divide that separates the Kootenai and Idaho Panhandle National Forests. The majority of this roadless area lies in the Bonners Ferry and Sandpoint Ranger Districts of the Idaho Panhandle National Forests. The area runs north-south extending from North Creek in Boundary County to Benning Mountain in Bonner County. Only 300 acres, in the Survey Mountain area, are in Lincoln County, Montana. Access is provided by gravel roads in several drainages, particularly Raymond Creek, North Callahan Creek, Keeler Creek, Grouse Creek, and Boulder Creek, and high elevation access near Lunch Peak.

The roadless area is long and narrow. It follows a ridge which is a watershed divide between the Pend Oreille and Kootenai River watersheds. Average width is 4 miles and length is approximately 14 miles. The highest peak is Mt. Pend Oreille, with an elevation of 6,755 feet. The lowest elevation within this roadless area is approximately 3,500 feet. The landtype was shaped by both continental and alpine glaciation. Six mountain lakes are included within this area. The disintegrating granitic rock and soil types found in this area make this area particularly prone to erosion and stream channel damage. Development along the boundaries has created irregular boundaries.

Most of this area is high alpine forest type with interspersed rocky and grassy openings near the ridgetops. Diversity of vegetative types is most pronounced near the high elevation ridgetops. Forest types include mixed conifer stands common to northern Idaho in the lower elevations and alpine fir, lodgepole pine, and an occasional whitebark pine in the highest elevations.

Trail 67, a popular hiking trail, follows along much of the main ridgetop within this roadless area. Views along the trail include: Lake Pend Oreille, the Cabinet Mountains, the Selkirk Mountains, and the Purcell Trench. Numerous trails also allow easy access into the mountain lakes. Lake Darling, Gem Lake, Moose Lake, Lake Estelle, and Blacktail Lake provide recreational opportunities for camping, fishing, and hiking. The headwaters of numerous small creeks support catchable size trout. Current use is light to moderate and consists of hunting, hiking, and snowmobiling near Benning Mountain.

Wildlife species of most interest to visitors include elk, moose, black bear, whitetail deer, mule deer, and grouse. This roadless area has a significant amount of habitat for the threatened grizzly bear. A rare remnant population of pure strain native rainbow trout exists in the upper drainages of the Kootenai National Forest portion.

II. CAPABILITY Willard-Lake Estelle 01X173

A. Wilderness Characteristics

1. Natural Integrity. Impacts from human activity in this area have been relatively minor. In the past, some hardrock mining exploration occurred, but evidence of these diggings has been reduced substantially by weathering processes. The Dougherty Mine is a well known mine located east of Mt. Pend Oreille and north of Lake Darling. The owner has inquired about road access. Trails that are not maintained quickly become overgrwon with trees and shrubs. The trails to existing lakes are maintained and receive heavy use by backpackers and fishermen. This heavy use has caused some vegetative resource damage around the mountain lakes.

2. Natural Appearance. Since the area is narrow and encompasses a high ridge, people visiting can frequently view human activities and development near the periphery of this roadless area. Roads, timber harvest areas, and activities along Lake Pend Oreille are some of the activities viewed from this area.

3. Solitude. This roadless area possesses high opportunity for solitude because of its large size and diversity of topography. Some areas, such as the ridgetop trail, do offer views of man's activities. It possesses diversity in vegetation because of substantial differences in elevations. With the diversity in elevations, people are not normally concentrated in one area. The divide which is near the Montana-Idaho border attracts people because of its relatively high mountain peaks and vistas. The mountain lakes concentrate people because of the water attraction and fishery values. The periphery of this area can be accessed by numerous roads. The sounds from logging activity and roads near the periphery of the area have the potential of penetrating upwards to one mile inside the roadless area.

4. Primitive Recreation Opportunities. This area offers an opportunity for recreational activities around high mountain lakes. Topography within this roadless area is not unique to northern Idaho. Since this area is quite narrow it offers only limited challenges to the more experienced backpacker. Much of the terrain below the main divide has poor trail access. Hunting, fishing, camping, scenic viewing, hiking, and horseback riding are some of the recreational activities occurring within this roadless area.

5. Other Features. The local population considers it as good bear country. The area contains grizzly bear habitat. There are patches of old-growth timber stands which have escaped the early 1900 forest fires.

The Hunt Girl Research Natural Area is located in the northwest quarter of this area.

The Idaho Panhandle National Forests have not been surveyed for cultural resources but surveys in similar areas on the Kootenai National Forest indicate low probabilities of discovery of cultural sites.

The hiking experience on a trail along a long, unbroken alpine ridge, with views of the Pend Oreille Lake region, is the area's special feature.

B. Wilderness Manageability and Boundaries. This roadless area is a long, narrow unit. Boundaries are not well defined on major terrain or other recognized features. Boundaries generally contour along steep hillsides to avoid roads and logging activities which are on the lower slopes.

This roadless area has considerable variation in width along its long axis. The area becomes narrow at the headwaters of major drainages. Because most of these drainages have road development or private lands up close to the main divide, these intrusions would make it very difficult to establish a logical wilderness boundary. Private lands are also incorporated within this unit boundary. It would be very difficult to purchase or trade for many of these lands because of the number of owners involved. Boundary adjustments to exclude the private lands would only serve to make the area narrower than it already is.

Recreation and other resource uses not requiring surface disturbance can be managed in the Mt. Willard-Lake Estelle area while protecting the wilderness character. Mineral exploration can be controlled with present Federal regulations, although some impacts can be expected.

Future hardrock mineral development is the main uncertainty in addressing manageability because the exisiting laws allow for the exploration and development of hardrock minerals. The owner of the Dougherty Mine has requested road access to his claim.

Willard Lake Estelle 01X173

Table 1

Selected Resource Values

Total Combined Idaho Panhandle and Kootenai Forests

Category	Unit	X01173
Gross Acres	Acres	57046
Net Acres	Acres	53675
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	27087
Standing Volume	MMBF	537
Minerals Potential		
Very High	Acres	0
High	Acres	5760
Moderate	Acres	30155
Low	Acres	17768
Mining Claims	No.	13
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	
Low	Acres	53675
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0

Category	Unit	
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	22631
Situation 2	Acres	10437
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	17400
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	3
Stream Habitat	Acres	1
Lakes	No.	5
Lake Habitat	Acres	50
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	5500
Semiprimitive		
Nonmotorized	RVDs	4800
Motorized	RVDs	0
Roaded Natural	RVDs	0

*Rating also includes uranium, geothermal, and other energy resources.

Willard Lake Estelle 01X173

Idaho Panhandle Portion

Category	Unit	X01173
Gross Acres	Acres	38646
Net Acres	Acres	35275
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	17787
Standing Volume	MMBF	417
Minerals Potential		
Very High	Acres	0
High	Acres	5760
Moderate	Acres	29515
Low	Acres	0
Mining Claims	No.	12
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	
Low	Acres	35275
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0

Category	Unit	X01173
Corridors		
Existing and Potential	No.	0
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	8831
Situation 2	Acres	7237
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.	5
Lake Habitat	Acres	50
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	0
Semiprimitive		
Nonmotorized	RVDs	2800
Motorized	RVDs	0
Roaded Natural	RVDs	0

*Rating also includes uranium, geothermal, and other energy resources.

Willard Lake Estelle 01X173

Kootenai Portion

Category	Unit	X01173
Gross Acres	Acres	18400
Net Acres	Acres	18400
0		
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	9300
Standing Volume	MMBF	120
Minerals Potential		
Very High	Acres	0
High	Acres	0
Moderate	Acres	640
Low	Acres	17768
Mining Claims	No.	1
Oil and Gas Potential*		
Very High	Acres	0
High	Acres	0
Moderate	Acres	0
Low	Acres	18400
Oil and Gas Leases		
Leases	No.	0
Leased Area	Acres	0

Category	Unit	X01173
Corridors		
Existing and Potential	No.	
Wildlife-Threatened and Endangered-Habitat		
Grizzly Bear		
Situation 1	Acres	13800
Situation 2	Acres	3200
Situation 3	Acres	0
Bald Eagle	Acres	0
Mountain Caribou	Acres	0
Gray Wolf	Acres	0
Wildlife-Big Game		
Summer Habitat	Acres	17400
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	2
Stream Habitat	Acres	0
Lakes	No.	0
Lake Habitat	Acres	0
Water Developments		
Existing	No.	0
Recreation		
Primitive	RVDs	5500
Semiprimitive		
Nonmotorized	RVDs	2000
Motorized	RVDs	0
Roaded Natural	RVDs	0

*Rating also includes uranium, geothermal, and other energy resources.

A. Resource Values — Willard Lake Estelle 01X173

1. Recreation. Current recreation use in the area includes hiking, fishing, camping, hunting, and some snowmobiling near Benning Mountain. Trail 67 follows along much of the main ridgetop within this roadless area and is a popular hiking trail. Views from this trail include Lake Pend Oreille, the Cabinet Mountains, the Selkirk Mountains, and the Purcell Trench. Numerous hiking trails also provide easy access into the mountain lake where recreationists enjoy fishing and camping opportunities.

2. Wildlife. Wildlife inhabitants include elk, moose, black bear, whitetail deer, mule deer, and grouse. This roadless area has a significant amount of habitat for the threatened grizzly bear. A rare remnant population of pure strain native rainbow trout exists in the upper drainages of the Kootenai National Forest portion. Much of this area is also good habitat for big game animals.

3. Timber. About 27,000 acres of this area is considered suitable for timber production. Suitable lands are along the lower elevations and in most cases, could be efficiently managed for timber. Portions of these suitable lands support old-growth, higher risk timber stands. Access to these stands can be gained by the extension of existing timber harvest roads in the immediate lower elevations. Road construction on the Kootenai National Forest portion will be difficult and costly. Logging would require cable and helicopter systems.

4. Minerals. All of the area has a medium mineral potential. there are several known mineral occurrences in the area, all of which are associated with the sills. Glacial deposits are fairly extensive in the area, making exploration difficult. There are presently 12 unpatented mining claims. All of the area is under application for oil and gas leases. The potential for oil and gas is low due to lack of information.

5. Range. Sheep grazed this area prior to the 1960s; however, there are no sheep or cattle allotments at this time.

B. Other Management Considerations

1. Fire. Although large fires occurred in the area in the early 1900s, the number of fires occurring annually is low.

IV. NEED

A. Contribution to National Wilderness Preservation System (NWPS). This area would contribute high subalpine ecosystems with several scenic lakes, grizzly bear habitat, and habitat for a rare rainbow trout strain. Wilderness designation would preserve water quality in an area that is naturally susceptible to erosion.

B. Public Interest and Concerns. During the RARE I and Unit Plan process, concern was expressed for maintaining the primitive qualities of the area. Little support was voiced for a wilderness designation. No expressions have been made recently (1982). RARE II allocated the area to non-wilderness.

C. Proximity to Designated Wilderness and to Population Centers

Table 3, Parts A and B, display 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).

V. ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

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 managemem emphasis further defimes the rate of developmemt that is expected to occur im some alternatives as well as the future disposition of the inventoried roadless area.

Table 2. Management Emphasis by Alternative for Willard-Lake Estella Roadless Area, Kootenai and Idaho Panhandle National Forests.

	ALTERNATIVES (M Acres)											
Idaho Panhandle Nat. For.	1	2	3	4	5	6	7	8	9	10	11	12
Kootenai National Forest	D	A,F,L,I,N	H	B	E	C	E	I	O	G,H	J	K
MANAGEMENT EMPHASIS												
Wilderness												
Idaho Panhandle NF:	0	0	53.4	0	0	0	0	0	0	53.4	0	0
Kootenai NF:	0	0	18.5	0	0	0	0	0	0	18.5	0	0
Roadless												
Ib Timber Harvest												
Idaho Panhandle NF:	33.8	16.6	0	17.2	34.1	16.5	34.1	32.5	34.1	0	31.7	31.7
Kootenai NF:	10.0	10.3	0	10.3	10.3	10.3	10.3	16.5	18.5	0	17.1	17.1
Timber/Wildlife												
Idaho Panhandle NF:	10.9	17.4	0	17.8	11.1	17.9	11.1	8.2	11.1	0	10.6	10.6
Kootenai NF:	8.5	8.2	0	8.2	8.2	8.2	8.2	1.9	0	0	1.4	1.4
Wildlife/Visual												
Idaho Panhandle NF:	0	0	0	0	0	0	0	0	0	0	0	0
Kootenai NF:	0	0	0	0	0	0	0	0	0	0	0	0
Special Areas												
Idaho Panhandle NF:	0.7	0.7	0	0.7	0.7	0.7	0.7	0.7	0.7	0	0.7	0.7
Kootenai NF:	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Level												
Idaho Panhandle NF:	8.0	18.7	0	18.3	7.5	18.2	7.5	12.0	7.5	0	10.4	10.4
Kootenai NF:	0	0	0	0	0	0	0	0	0	0	0	0
Total												
Idaho Panhandle NF:	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4
Kootenai NF:	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
Summary of Management Emphasis:												
Roadless												
Developed - Decade 1:												
Idaho Panhandle NF:	8.3	8.8	0	10.8	10.3	11.9	9.5	5.8	9.2	0	6.0	6.0
Kootenai NF:	1.0	1.0	0	1.0	1.0	1.0	1.0	.9	0	0	0	0
Decade 5:												
Idaho Panhandle NF:	19.9	33.4	0	23.4	19.9	23.4	19.9	19.9	19.9	0	19.9	19.9
Kootenai NF:	8.5	8.2	0	8.2	8.2	8.2	8.2	1.9	0	0	1.4	1.4
Roadless - Decade 1:												
Idaho Panhandle NF:	45.1	44.6	0	42.6	43.1	41.5	43.9	47.6	44.2	0	47.4	47.4
Kootenai NF:	17.5	17.5	0	17.5	17.5	17.5	17.5	17.6	18.5	0	18.5	18.5
Decade 5:												
Idaho Panhandle NF:	33.5	20.0	0	30.0	33.5	30.0	33.5	32.0	32.0	0	32.0	32.0
Kootenai NF:	10.0	10.3	0	10.3	10.3	10.3	10.3	16.5	18.5	0	17.1	17.1
Recommended Wilderness												
Idaho Panhandle NF:	0	0	53.4	0	0	0	0	0	0	53.4	0	0
Kootenai NF:	0	0	18.5	0	0	0	0	0	0	18.5	0	0
Total Acres - Idaho Panhandle	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4	53.4
Total Acres - Kootenai	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
Total Acres- Willard-Lake Est.	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9	71.9

B. Impacts

Willard Lake Estelle 01X173

1. Designation: Wilderness

Management Emphasis: Wilderness

Management Prescription: Wilderness

This management emphasis occurs in Alternatives 3 and 10. This designation will preserve and enhance wilderness attributes. Current motorized uses (such as mining and trail maintenance) and other uses or facilities not compatible with wilderness management would be eliminated. Timber harvest on 27,800 acres would be foregone. The goal of this allocation would be to protect and preserve its natural condition.

The long, narrow ridge is generally bordered by developments where human activity, such as roads and timber sales, is evident. Other attributes generally associated with wilderness, such as solitude and semi-primitive recreation opportunities, are preserved.

The non-priced benefits or costs would be:

-- Wilderness values are preserved and enhanced.

-- Wilderness area would be increased.

-- Visual quality would be retained.

-- Water quality and fisheries would remain at their present high level.

-- The Hunt Girl Research Natural Area would remain in its present isolated condition.

-- Threatened and endangered species habitat for grizzly bear would not be disturbed.

-- The remnant population of native rainbow trout would be assured of continued, undisturbed stream habitat.

-- Recreation opportunities would continue to be primitive or semi-primitive.

-- Security for all fish and game animals would be maintained.

-- Diversity would tend toward old growth.

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.

2. Designation: Non-wilderness

Management Emphasis: Roadless Recreation

Management Prescription: Roadless Recreation, Timber Management, Minimum Level

This management emphasis occurs in Alternatives 1, 5, 7, 8, 9, 11, and 12. Approximately 32,000 acres are allocated to roadless recreation, 11,000 acres to timber management, and 10,000 acres to minimum management.

Approximately 16,000 acres of tentatively suitable timberland would not be available.

Minerals, oil, and gas, if discovered, would continue to be available.

The non-priced benefits or costs would be:

-- Wilderness characteristics would be compromised on about 20,000 acres. The reduction in size would adversely impact the remaining area.

-- Visual quality will decline.

-- The Hunt Girl Research Natural Area would be preserved.

-- Primitive and semi-primitive recreation opportunities would be foregone on 20,000 acres.

-- Big game habitat and security would be adversely affected; road closures are essential mitigation to minimize the adverse impact.

-- Water quality and fisheries habitat would decline, but not significantly.

-- Habitat for the rare rainbow trout strain is preserved.

-- Grizzly bear habitat would be managed to support a recovered population. Road closures to mitigate the increased disturbance caused by roads are not 100 percent effective, but monitoring of bear habitat and populations will insure the goal of a recovered population is met.

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 semi-primitive recreation as well as publics viewing the area.

3. Designation: Non-wilderness

Management Emphasis: Minimum Level

Management Prescription: Minimum Level, Timber, Roadless Recreation

This management emphasis occurs in Alternatives 2, 4, and 6. Approximately 17,000 acres are designated for roadless recreation, 18,000 acres for timber, and 18,000 acres for minimum management.

Approximately 10,000 acres of tentatively suitable timberland are not available.

Minerals, oil, and gas, if discovered, remain available.

The Hunt Girl Research Natural Area is maintained.

The non-priced benefits or costs would be:

-- Wilderness values would remain on about 18,000 acres.

-- Visual quality would decline.

-- Semi-primitive recreation opportunities would decline.

-- Habitat for the rare rainbow trout strain would be preserved.

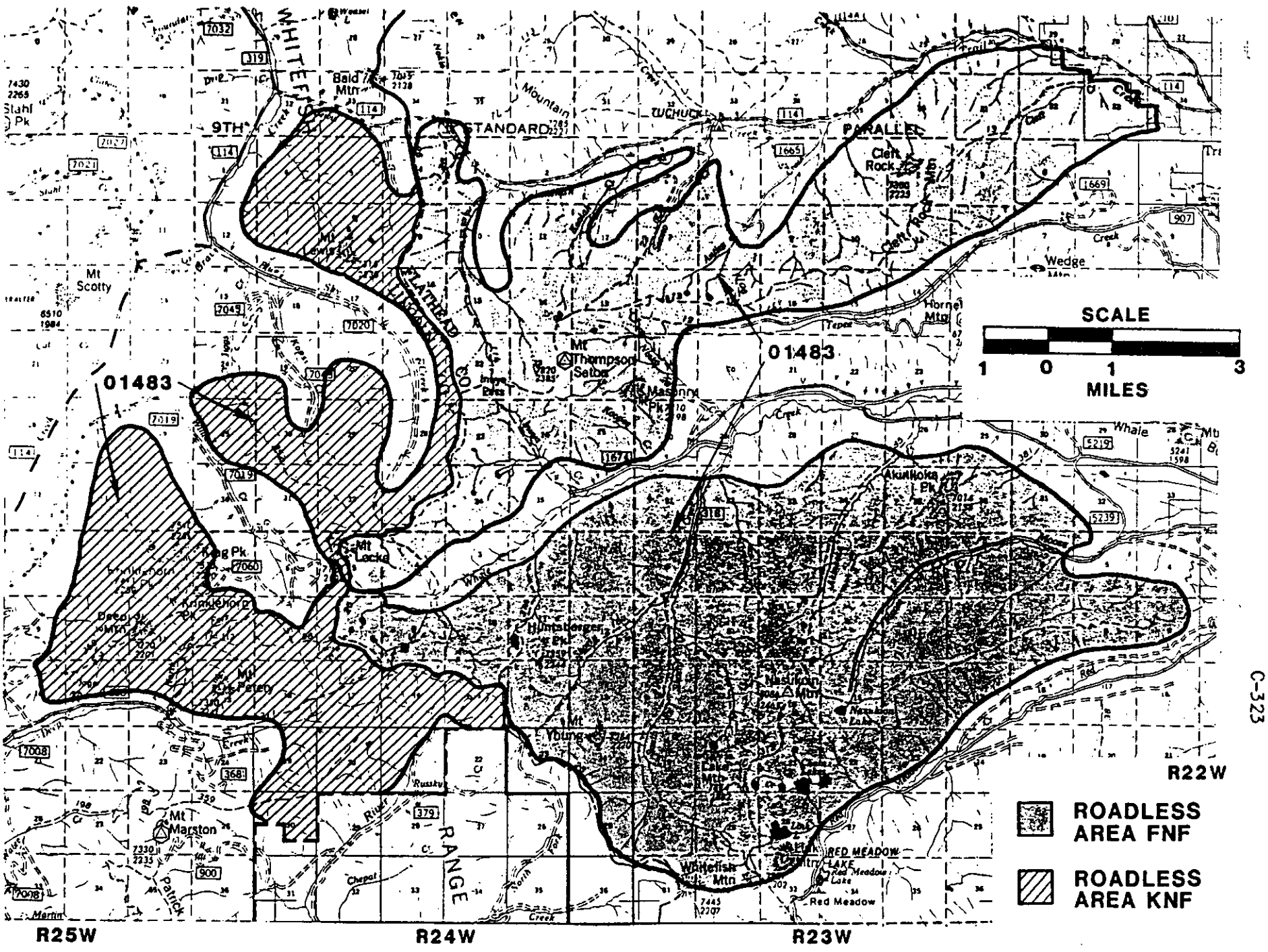
-- Habitat for grizzly bear would be maintained to support a recovered population. The increased roading of this emphasis, as compared to the previous non-wilderness alternative, carries a slightly higher risk of road closure breaching.

-- Security for game animals would be compromised. Road closures are essential mitigation to minimize this impact.

-- Water quality and fisheries would be adversely impacted, but only slightly.

-- Tendency would be toward old growth and even-aged stands less than 100 year of age.

-- Wilderness values would be foregone on about 25,000 acres. This would lower the quality of the remaining potential wilderness.



THOMPSON-SETON ROADLESS AREA

FLATHEAD NATIONAL FOREST AND KOOTENAI NATIONAL FORESTS

MT. THOMPSON SETON 01483

(RARE II NO. 01483, RARE I NOS., 171, 124-125)

Total Gross Acres:	71,750	Total Net Acres:	71,750
Flathead National Forest	52,650	Flathead National Forest	52,650
Kootenai National Forest	19,100	Kootenai National Forest	19,100

I. DESCRIPTION

Thompson-Seton Roadless Area is located in the north end of the Flathead National Forest, 6 miles south of the Canadian border. It is one of seven roadless areas located in what is often referred to as the "North Fork." The North Fork region lies adjacent to Glacier National Park and is bordered by the North Fork of the Flathead River on the east and the Whitefish Mountain Range or Divide on the west.

The Flathead National Forest is the lead Forest for this roadless area evaluation. The Kootenai National Forest portion lies within Lincoln County, and the Flathead National Forest portion is in Flathead County. The Whitefish Divide forms the Flathead - Lincoln County boundary as well as the Flathead - Kootenai National Forest boundaries.

This area is generally bounded on the north by the Trail Creek Road, on the east by roaded timberland, on the south by the Red Meadow and Deep Creek Roads and other roaded Forest land and on the west by the Williams Creek, Graves Creek and Blue Sky Creek Roads. Whale Creek, Blue Sky Creek and Williams Creeks are roaded and form deep incisions into this roadless area. Also, old, low standard roads penetrate into the Shorty Creek and Moose Creek drainages. These roads have been closed to public use for many years; hence, this area is considered by some people to be essentially roadless.

The topographical character of the area consists of rugged mountaineous terrain, with several major peaks over 7,000 feet, forested ridges and steep narrow glaciated canyons. Major peaks include: Cleft Rock, Mount Thompson Seton, Mt. Locke, Mt. Lewis, Krinklehorn Peak, Deep Mountain, Mt. Petery, Huntsberger Peak, Mt. Young, Lake Mountain, Whitefish Mountain, Link Mountain, Akinkoka Peak and Nasukoin Mountain. Nasukoin Mountain at 8,086 feet, is the highest peak in the Whitefish Mountain Range. Valley bottoms range as low as 4,200 feet.

Major drainages include: Shorty Creek, Moose Creek, Akinkoka Creek, Cleft Creek, Inuya Creek, Yakinakak Creek, Ninko Creek and Teepee Creek. Much of the area consists of broad ridges between drainages such as Trail, Whale, Red Meadow, Williams, Deep and Blue Sky Creek.

Much of the northern and eastern portion of the area burned in the 1910, 1917, and 1929 fires. The predominant tree species in the burned-over areas are lodgepole pine and larch. Primary ecosystems present include whitebark pine/subalpine fir on the ridgetops, and subalpine fir/bear grass on the southeast to southwest aspects. Timber types vary from whitebark pine at the upper limits to Engelmann spruce at the lower limits. There is considerable volume of commercial timber in this area.

This area includes some of the finest grizzly bear habitat in the United States. It contains all the necessary grizzly bear habitat components* as well as key population centers. Sightings of the gray wolf, an endangered species, has increased during 1983. It is believed that wolves from Canada are becoming established in this area. Biologists believe the North Fork of the Flathead River drainage is the most likely location in the Rocky Mountains for re-establishing a viable gray wolf population.

Other wildlife species present include mule deer, black bear, whitetailed deer, wolverine, the hoary marmot, golden eagle, and the lynx. There is a possibility of occasional use of this area by mountain caribou ranging down from Canada. Efforts are being made to confirm the existence and extent of caribou use through special surveys and observations by work crews and cooperators.

Whale Creek and the Whale Lake area is an important fishery for bull trout. The number of high mountain lakes within the area makes this roadless unit unique from others on the District. There are approximately 15 lakes, including those known as the Chain Lakes. Several lakes in the Mt. Young area provide a good trout fishery.

Scenic attractiveness of the area is very good due to the variety of landscapes within the area and the adjacent scenes into Glacier Park from the Whitefish range. The area is extremely remote and has limited access, which has resulted in light use by recreationists. Present use consists primarily of fall big-game hunting with lessor amounts of day-use trips by hikers and horseback users. A portion of the Whitefish Divide Trail south of Mt. Young has been designated a National Recreational Trail. This trail would terminate at the Meadow Creek Road on the southern boundary of the area. The land around Red Meadow Lake is noted for its scenic value in the fall when the shrub covered slopes around the lake turn color.

II. CAPABILITY

A. Natural Integrity and Appearance

This Roadless Area, as it stands, has many intrusions around the edges in the form of existing roads and scars left by old logging roads. Also, there are many visible cutting units, especially in the Shorty Creek Area which has been managed as a roadless area for several years under the current Land Management Unit Plan. Some respondents objected to the inclusion of old roads and cutting units in the roadless inventory. These intrusions do impact the natural integrity of the area; however, it is felt that these impacts can be lessened with time and boundary adjustments. After boundary adjustments, the effect of human activity in the area would be minor and natural integrity judged to be high.

Internal impacts consist of the Mt. Thompson Seton Lookout and approximately 26 miles of low standard trail, but these impacts do not appreciably alter the long-term ecological processes. The appearance of this area has been influenced by natural processes with very little impact by man other than the previously mentioned roads and trails. Visitors to the area would feel that the greater portion maintains a natural appearance.

B. Opportunities for Solitude Thompson-Seton 01483

There are many off-site intrusions in the form of timber harvest and roads penetrating the area. However, opportunities for solitude do exist over the greater portion of this area. The distance from perimeter to core varies from less than 1 mile to approximately 7 miles with good vegetative and topographic screening, and the extensive trail system allows a visitor to get away from the off-site intrusions.

C. Primitive Recreation Opportunities

The area has a moderate potential for primitive recreation opportunity. There is evidence of previous logging activities and roads, but this is localized and the majority of the area has not been impacted by man's activities. The diversity of the terrain adds to the visitor's primitive experience. Particularly rugged and challenging terrain is found in the Deep Creek - Mt. Krinklehorn and Mt. Thompson Seton vicinities.

D. Other Features

The area is considered to have good scenic value due to the numerous mountain lakes within the area and the panoramic views into Glacier National Park from the ridges.

E. Manageability and Boundaries

This area generally contains well-defined boundaries set along topographic features or along roads. The boundaries could be adjusted to exclude the old roads and thus improve the wilderness characteristics. Conversely, inclusion of these intrusions would bedesirable from a manageable boundary standpoint if the area should be managed as wilderness.

Approximately 6,490 acres have been added to the Thompson Seton RARE II inventory in the Mt. Young-Nasakoin area. RARE II did not inventory these areas, because they were already allocated in the North Fork Unit Plan when the inventory was conducted. An additional 10,400 acres were added from the Kootenai Forest Deep Creek area for the same reason, and 3,000 more from updated mapping of contiguous roadless area. A downward adjustment of 700 acres was made after recalculating the area using current data base information. After considering public comments expressing concern or opposition to including some old logging roads and cutting units in the Shorty Creek area, it was decided not to adjust the roadless inventory boundary. The reason for this is that most of the area with intrusions had been allocated and managed as a roadless area by the North Fork Unit Plan and therefore, it should receive evaluation for wilderness management.

III. AVAILABILITY

A. Resource Potentials

The discussion that follows refers to resources present within this roadless area other than the previously discussed wilderness resource. The chart on the previous page summarizes the existing resource potential for this roadless area.

Wildlife

This area contains some of the best grizzly bear habitat in the lower 48 states and is considered very important for the recovery of the grizzly bear to a level that would allow this species to be removed from the threatened and endangered list. Recent destruction of many of the pine nut producing whitebark pine trees by the mountain pine beetle and regrowth of timber in the 1910 and 1929 burn areas, are viewed as potentially adverse to future grizzly bear production. Sustained production of essential grizzly habitat components is needed from the area to assure recovery of the grizzly bear from the threatened status.

This area is also considered important for the recovery of the endangered gray wolf.

The headwaters of Blue Sky, Williams, Whale, and Lewis Creek provide habitat for both migratory and resident cutthroat and bull trout and contain spawning habitat. Upper Deep Creek runs through this area and supports cutthroat and brook trout with the lower reaches also having bull and rainbow trout. Also included are the headwaters for Williams and Deep Creek.

Minerals

This area is within the Montana Overthrust Belt. The area is rated as having high oil and gas potential. There is continuous seismic investigation in this area. Hardrock mineral potential is considered to be low.

Timber

Whitebark pine and alpine larch are long-lived species and are major stand components above 6,000 feet in elevation. In 1978 the lodgepole pine and whitebark pine in the Mt. Thompson Seton Roadless Area began experiencing an epidemic infestation of mountain pine beetle. Between 1978 and 1982 this insect had spread throughout the lodgepole pine and whitebark pine stands resulting in moderate mortality throughout this roadless area. The spruce bark beetle is active in the Kootenai National Forest portions of the area. This mortality results in a buildup of ground fuel and greatly increases the risk of large wildfires.

There are approximately 14,000 acres of potentially suitable timberlands included in the Flathead portion of the area. Most of these stands are on steep slopes and timber management costs are generally high. Little of the Kootenai National Forest portion of the area is suitable for commercial timber management.

MT THOMPSON-SETON ROADLESS AREA

Category	Unit	Flathead	Kootenai
Gross Acres	Acres	52,650	19,100
Net Acres	Acres	52,650	19,100
Recreation			
Primitive	RVD's	0	0
Semiprim. Nonmotor	RVD's	788	403
Semiprim. Motor.	RVD's	324	0
Roaded Natural	RVD's	288	0
Range			
Existing Obligated			
Suitable	Acres	0	0
Allotments	No.	0	0
AUM's	AUM's	0	0
Existing Vacant			
Suitable	Acres	0	0
Allotments	No.	0	0
AUM's	AUM's	0	0
Proposed			
Suitable	Acres	0	0
AUM's	AUM's	0	0
Timber			
Tentative Suitable	Acres	14,290	4,700
Standing Volume	MBF	96,028	30,000
Corridors			
Exist. & Potential	No.	1	1
Wildlife - T&E			
Grizzly Bear Habitat			
Situation 1	Acres	52,650	19,100
Situation 2	Acres	0	0
Situation 3	Acres	0	0
Gray Wolf			
Habitat	Acres	52,650	19,100

Category	Unit	Flathead	Kootenai
Wildlife - Big Game			
Summer Habitat	Acres	0	0
Winter Habitat	Acres	0	0
Significant Fisheries			
Stream Miles	Miles	13	0
Stream Habitat	Hab. Ac.	15	0
Lakes	No.	8	0
Lake Habitat	Hab. Ac.	87	0
Water Developments			
Existing	No.	0	0
Minerals			
Hardrock Potential			
Very High	Acres	0	0
High	Acres	0	0
Moderate	Acres	0	0
Low	Acres	52,650	19,100
Mining Claims	No.	0	0
Oil & Gas Potential			
Very High	Acres	0	0
High	Acres	52,650	19,100
Moderate	Acres	0	0
Low	Acres	0	0
Oil & Gas Leases			
Leases No.		15	2
Leased Area	Acres	27,727	2,000

Recreation

Recreation uses include hunting and fishing, with some use from snowmobiling, cross-country skiing, camping, hiking and horseback use along the numerous trails. The relatively small amount of current recreational use the area receives is attributed to the fact that an abundance of high quality wilderness opportunities exist in the Forest zone of influence along with the fact that the Thompson Seton area is not well known in population centers. Current use is primarily from local residents.

Land Use Authorizations

There are no private inholdings or special uses within this area. There is no potential for domestic grazing.

B. Management Considerations

The area as inventoried presents moderate probability for successful wilderness management. Probability of successful management would be increased if the area were merged with the Tuchuck and Mt. Hefty areas to the north, to form a more manageable wilderness unit. Merged or managed separately, moderate risks would be involved in containing the natural forces of fire or insect and disease outbreaks within the areas.

The area offers outstanding grizzly research opportunities.

High costs and low probability of success is anticipated for future grizzly habitat management needs if use of mechanized equipment for prescribed burning or other vegetative treatment is foregone under wilderness management.

IV. NEED

A. Proximity to Designated Wildernesses and to Population Centers.

Refer to Table C-1 for Wilderness proximity data. In addition to the National Forest Wilderness and Roadless areas listed in the table, the Thompson Seton area is located just a few miles west of the 1,000,000 acre Glacier National Park. A large part of Glacier Park is currently being studied for wilderness classification.

Additional roadless and wilderness areas are available in Provincial Parks and Forest lands within 100 miles in Canada.

B. Contribution to the National Wilderness Preservation System.

The vegetative habitat types, plant species, most animal species, and geologic types known to exist in this area are well represented in existing wilderness areas. The area has national significance due to its potential contribution to grizzly bear/gray wolf recovery.

C. Public Interests Thompson-Seton 01483

Past public involvement for the 1979 RARE II study showed that half of those responding supported nonwilderness management. The final RARE II allocation was nonwilderness.

Intensity of public opinion conflict in this area has been increased since the RARE II process due to the continued emergence of national issues such as potential oil and gas resources and grizzly bear habitat.

The September 1983 public involvement on the current roadless inventory on the Thompson Seton area, showed that more than half of those responding favored nonwilderness management. The three "North End" roadless areas, Thompson Seton, Tuchuck, and Mt. Hefty received similar support. The Young-Nasakoin area and the Kootenai Deep Creek areas had lower levels of expressed interest for wilderness than the Thompson Seton portion inventoried in RARE II. The expressed demand for timber harvest in the "North End" roadless areas is second highest among all Flathead roadless areas.

Public input in 1983 has also shown that local environmental groups have strong feelings about the wilderness potential of this area. Their concerns are linked to the protection of the grizzly bear and other wildlife species. They believe the best way to protect the bear would be through wilderness classification of the area. Timber and oil and gas interests have strong feelings that properly controlled industrial activities can be conducted in the area without adverse effects on the bear and if properly planned, long-term benefits to bear habitat productivity could be provided.

V. ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

A. Management Prescription Assignment by Alternative

A breakdown of the land allocations for the Thompson Seton Roadless Area is displayed in Table C-2 of this Appendix for all 16 Draft Forest Plan Alternatives. The roadless area would be managed differently under the various alternatives in order to contribute appropriately to meeting the Forest objectives in each case. The allocations are summarized below by management emphasis.

ALTERNATIVE ALLOCATION BY MANAGEMENT EMPHASIS

Management Emphasis*	Alternatives (Acres) 1/							
	1	2	3	4	5	6	7	8
Wilderness	0	0	0	0	0	0	0	0
Roadless	19,505 (15,100)	49,320 (14,100)	57,160 (17,100)	30,082 (14,100)	66,600 (17,100)	40,320 (2,100)	19,920 (19,100)	26,715 (14,000)
Minimum Level	0	2,834	0	26,280	950	0	0	0
Wildlife	48,245	0	0	0	0	40	30,350	41,154 (5,000)
Timber W/Roads	4,000 (4,000)	18,881 (5,000)	11,719 (2,000)	15,353 (5,000)	4,200 (2,000)	31,390 (17,000)	21,480	2,599 (100)
Timber W/O Roads	0	715	2,871	35	0	0	0	1,282
Total	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)

Summary of Management Emphases

	Decade								
ROADED	1	700	3,920	1,600	600	500	6,620	4,240	2,250
	5	12,461	22,430	14,590	15,353	5,150	31,430	21,480	8,856
ROADLESS	1	71,050	67,838	70,150	71,150	71,250	65,130	67,510	69,500
	5	84,211	49,320	57,160	55,797	66,600	40,320	50,270	62,894
WILDERNESS	1	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0

1/ Includes the Kootenai National Forest acres allocated under a similar alternative as the Flathead National Forest Alternative. Acres in ( ) are Kootenai National Forest portion.

The following chart displays the comparison between Flathead National Forest and Kootenai National Forest alternatives.

Flathead National Forest Alternative(s)	Kootenai National Forest Alternative(s)
1	A
2	A
3	A
4	A
5	A
6	H
7 CD	I
8	A
9	H
10	G
11 PA	J
12	A
13	A
14	G
15	H
16	H

* Mineral resource development is subject to the General Mining Law, Mineral Leasing Laws and related laws and regulations. See Section V, Part B, of this roadless area writeup for further discussion.

ALTERNATIVE ALLOCATION BY MANAGEMENT EMPHASIS

Management Emphasis*	Alternatives (Acres) 1/							
	9	10	11	12	13	14	15	16
Wilderness	71,750 (19,100)	28,000 (5,700)	0	0	0	28,000 (5,700)	71,750 (19,100)	71,750 (19,100)
Roadless	0	38,620 (11,400)	29,715 (17,000)	26,715 (14,000)	26,715 (14,000)	24,777 (13,000)	0	0
Minimum Level	0	930	0	0	0	0	0	0
Wildlife	0	0	36,754 (600)	41,154 (5,000)	41,154 (5,000)	16,374 (300)	0	0
Timber W/Roads	0	4,200 (2,000)	3,999 (1,500)	2,599 (100)	2,599 (100)	2,599 (100)	0	0
Timber W/O Roads	0	0	1,282	1,282	1,282	745	0	0
Total	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)	71,750 (19,100)

Summary of Management Emphases

	Decade								
ROADED	1	0	500	2,000	2,000	2,000	1,140	0	0
	5	0	4,200	8,715	9,514	9,514	5,299	0	0
ROADLESS	1	0	43,250	69,775	69,775	69,775	70,610	0	0
	5	0	39,550	63,035	62,236	62,236	38,451	0	0
WILDERNESS	1	71,750	28,000	0	0	0	28,000	71,750	71,750
	5	71,750	28,000	0	0	0	28,000	71,750	71,750

1/ Includes the Kootenai National Forest acres allocated under a similar alternative as the Flathead National Forest Alternative. Acres in ( ) are Kootenai National Forest portion.

The following chart displays the comparison between Flathead National Forest and Kootenai National Forest alternatives.

Flathead National Forest Alternative(s)	Kootenai National Forest Alternative(s)
1	A
2	A
3	A
4	A
5	A
6	N
7 CD	I
8	A
9	H
10	G
11 PA	J
12	A
13	A
14	G
15	H
16	H

* Mineral resource development is subject to the General Mining Law, Mineral Leasing Laws and related laws and regulations. See Section V, Part B, of this roadless area writeup for further discussion.

B. Impacts

1. Designation: Wilderness
   Management Emphasis: Wilderness

The entire Thompson Seton Roadless Area is allocated to wilderness under Alternatives 9, 15 and 16. Alternatives 10 and 14 recommend for wilderness only the northern portion of the area.

Wilderness allocation will preserve or enhance wilderness attributes. Current uses which may not conform with wilderness management include oil and gas leasing. Of the 71,750 acres, 29,727 acres have been leased. No timber harvest would be permitted, and 18,990 acres available for timber production would be forgone.

Wilderness allocation would offer not only protection for the wilderness attributes of the area but would also provide additional security for grizzly bear.

Highlighting of the area on National maps could result in more recreational pressure. Also, the option for treating vegetation for grizzly habitat component objectives through the use of natural or planned ignitions in a wilderness environment while protecting adjacent nonwilderness resources would be expensive.

Current contracts for oil and gas leases, special uses, or grazing would probably be permitted to run their course with emphasis on contract administration to protect wilderness attributes. Oil and gas exploration and development costs would be increased. Exploration activities in the nonleased portion of the area would be prohibited.

The nonpriced conponents are affected as follows:

- Visual quality would be preserved.
- National Wilderness Preservation System lands will increase.
- Grizzly bear, elk, and other wildlife species would have increased security.
- Diversity would tend towards climax vegetation but could be maintained near current levels if successful fire management programs were implemented.
- Water quality and fisheries quality would be maintained at natural levels.
- Local employment and income would decrease due to a reduced timber base and nonwilderness recreational opportunities.
- Nonpriced spiritual, scientific, and esthetic values would be fully preserved.
- All nonpriced benefits of wilderness such as spiritual values,natural appearance, gene pool and other scientific values would be provided.

The potential economic benefits of wilderness classification for this area are judged to be small due to the abundance of high quality wilderness on the Forest along with the low recreational carrying capacity of the area especially in light of grizzly bear habitat needs.

2. **Designation: Nonwilderness** **Thompson-Seton 01483**
Management Emphasis: Roadless

Alternatives 1 through 8, 10 and 14, allocate from 1 percent of the roadless area in Alternative 7, to 93 percent in Alternative 5 to roadless management. There are no roadless allocations made in alternatives 9, 15 and 16 because the total area is allocated to wilderness. Under Alternatives 11, 12, and 13, a large portion of this roadless area would be managed as part of the Trail Creek Grizzly Bear Management Area (Refer to Chapter II, Page II-25, Alternative 11 Proposed Action, Resource Objectives Flathead National Forest Draft EIS).

The effects of the roadless allocation is to maintain the roadless resource by establishing a management objective of keeping the area roadless. Other resources are managed subject to the primary roadless objective. Wilderness attributes may be affected to different degrees depending on the recreation or wildlife habitat objectives of local areas. Modification of natural systems to accommodate multiple-use objectives is most noticeable when trails, campsites, or other recreation facilities are constructed and maintained.

Vegetation management practices for wildlife habitat or other purposes may involve prescribed burning. Motorized equipment, such as chainsaws, helicopters, motorbikes, and snowmobiles, are often used to facilitate cost efficient management or maintenance activities or as part of the recreation opportunities. Although these activities or uses affect wilderness attributes at the time of implementation, they are short-term effects and the wilderness attributes could be easily reclaimed by eliminating the use and allowing vegetation to regrow.

The nonpriced components are affected as follows:

- Visual quality will be retained.
- Semiprimitive motorized and nonmotorized and primitive recreation opportunities will be maintained.
- Grizzly bear and other wildlife security will be maintained.
- Diversity will be maintained at current or higher levels.
- Water quality and fisheries will be maintained or improved.
- Employment and income from woods products will not be provided.
- Many nonpriced benefits of wilderness such as spiritual values, natural appearance, gene pool and other scientific values 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. The probability of roading and development in this area is remote. 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 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.

3. **Designation: Nonwilderness**
Management Emphasis: Minimum Level

Minimum management is allocated on areas which are not needed to meet objectives of alternatives. Alternatives 2, 4, 5 and 10 allocate from 1 to 37 percent of the area to minimum management.

The effect of this prescription is to "do nothing" except to maintain existing improvements and resources. In Alternative 4 which allocates a large contiguous area to this prescription, no developments would occur due to surface resources. Alternatives 2, 5, and 10 allocate small areas which are not contiguous. The management direction may provide for roads tocross these areas to support management objectives of adjacent management units. The geographic configurations of the allocations in each alternative in relation to adjacent management units determine the effects minimum management may have on wilderness attributes. The small isolated areas allocated to minimum management do not need to be managed in order to achieve the objectives of each alternative. Alternative 4 allocates substantial roadless areas to this prescription to minimize costs and maximize revenues. These areas are the lands between the suitable timberlands and the ridgetop recreation trails.

The nonpriced components are affected as follows:

- Visual quality will be retained.
- Semiprimitive motorized and nonmotorized and primitive recreation opportunities will be available but not by management design.
- Grizzly bear and other wildlife species will have security maintained.
- Diversity would tend toward climax species.
- Water quality and fisheries would not be affected by management activities.
- Minimum contribution to employment and income would result as there will be no commodity outputs and only incidental recreation use.
- Many nonpriced wilderness benefits may be provided by this management prescription since only minimum cost care taking activities, such as fire protection, would affect the land.

4. **Designation: Nonwilderness** **Thompson-Seton 01483**
Management Emphasis: Wildlife

This management emphasis includes those areas allocated to grizzly bear management and riparian/wildlife. Alternatives 2 through 5, 9, 10, 15 and 16 do not allocate any acreage under these management prescriptions. The remaining 8 alternatives allocate from less than 1 percent in Alternative 6 to 67 percent in Alternative 1. Under this management emphasis, commodity outputs or recreational use of the land is subordinate to managing the natural ecosystems for wildlife habitat. Development and manipulation of vegetation may be required to achieve the habitat objectives. If such treatments involve commercial timber stands, timber harvest volume may be a byproduct of achieving or maintaining habitat objectives. The timber harvest is scheduled if the project treatments of local habitats involve enough commercial timber stands that regular periodic harvest volume can be predicted.

These prescriptions affect wilderness attributes differently than those where timber management and economics require development and a relatively high level of human activities. Due to wildlife security and cover requirements, these prescriptions require a high degree of constraint on human activities. The result is some reduction in wilderness attributes compared to wilderness and roadless management amenities, but less than management prescriptions with timber harvest and roading as firm objectives.

The nonpriced components are affected as follows:

- Visual quality will be appropriate to the local area as determined for individual management areas. The most common will provide modification.
- A high level of semiprimitive recreation is provided.
- Grizzly bear and other wildlife species will have a high level of security.
- Diversity and nongame species habitat would be provided.
- Water quality and fisheries habitat will be maintained or improved.
- The prescriptions will provide some support of woods products jobs and a high level of support to recreation industry employment and income due to the role of wildlife in providing a recreation resource base.

Alternative 1 would maximize protection and management for grizzly bear habitat over most of the area. This management would permit activities which would maintain or improve grizzly bear habitat over the long term based on complete habitat component mapping and analysis. No development would occur in the higher elevation alpine ridges and basins thus, the roadless resource would be preserved for approximately 75 percent of the area. Due to the grizzly habitat emphasis, recreational use in areas such as the Chain Lakes area would not be encouraged. Future recreational use will be limited if conflicts with bear management are identified. Development in the suitable timberland area would proceed very slowly under grizzly emphasis.

Projections estimate timber would be harvested very slowly and rotations would be 180 years or more. This management is anticipated to offset a likely decline in future bear habitat productivity due to natural processes of timber regrowth, declining huckleberry production on old burn areas and mountain pine beetle mortality in mature pine nut producing whitebark pine stands. The area at high elevations would continue to appear natural even though vegetative patterns may be considerably influenced by man. Where bear habitat needs require conversion of merchantable timber stands, modification of the land, through conventional roading and logging, is anticipated. Opportunities for solitude would likely remain very good under grizzly management due to the year-long road closures when they are not being used for habitat management purposes and the low level of activities.

Under the Proposed Action (Alternative 11) and also under Alternatives 12 and 13, the Flathead National Forest proposes to manage a portion of the Glacier View District as the Trail Creek Grizzly Bear Management Area. This would include a large portion of the Thompson Seton Roadless Area, and would provide an opportunity for research while providing a high level of security for not only the grizzly bear, but other wildlife species as well.

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.

5. **Designation: Nonwilderness**
Management Emphasis: Timber with Roads

Alternatives 1 through 8 and 10 through 14 allocate from 3 to 44 percent of the total roadless area to roaded timber management. The consequences of these allocations are a loss of wilderness attributes at the time of implementation of timber harvest or support activities requiring roads. The roadless resource and wilderness attributes of natural integrity, natural appearance, opportunity for solitude, and primitive recreation are foregone when these management prescriptions are implemented.

The nonpriced components are affected as follows:

- Visual quality will be modification or maximum modification where man's activities will dominate the landscape.
- Semiprimitive nonmotorized and wilderness recreation attributes would be foregone within 50 years.
- Elk security and big game hunting opportunities would be reduced but mitigated in travel plans depending on local needs.
- Diversity would be optimized and nongame wildlife would be maintained.
- Water quality and fisheries would be adversely affected but mitigated according to local needs.
- Grizzly bear and gray wolf habitat would be suboptimal but mitigated according to local needs.
- Local economic stability would be provided by supporting the highest level of woods products industry jobs.

These prescriptions provide for a wide range of multiple-use benefits both priced and nonpriced. The flow of these benefits in place of roadless and wilderness attributes depends on the specific location and timing of implementation of timber management practices.

Alternative 6 would have the most immediate effects on the roadless resource by accessing the most acres for timber management in Decade 1. Under the preferred alternative the only areas accessed for timber harvest in Decade 1 are east of Nasukoin Mountain in the lower elevations of the Flathead National Forest portion. The Kootenai National Forest's preferred alternative allocated to timber management in Decade 1 approximately 600 acres in the Graves Creek area and another smaller portion in the Deep Creek area.

6. **Designation: Nonwilderness**
Management Emphasis: Timber Without Roads

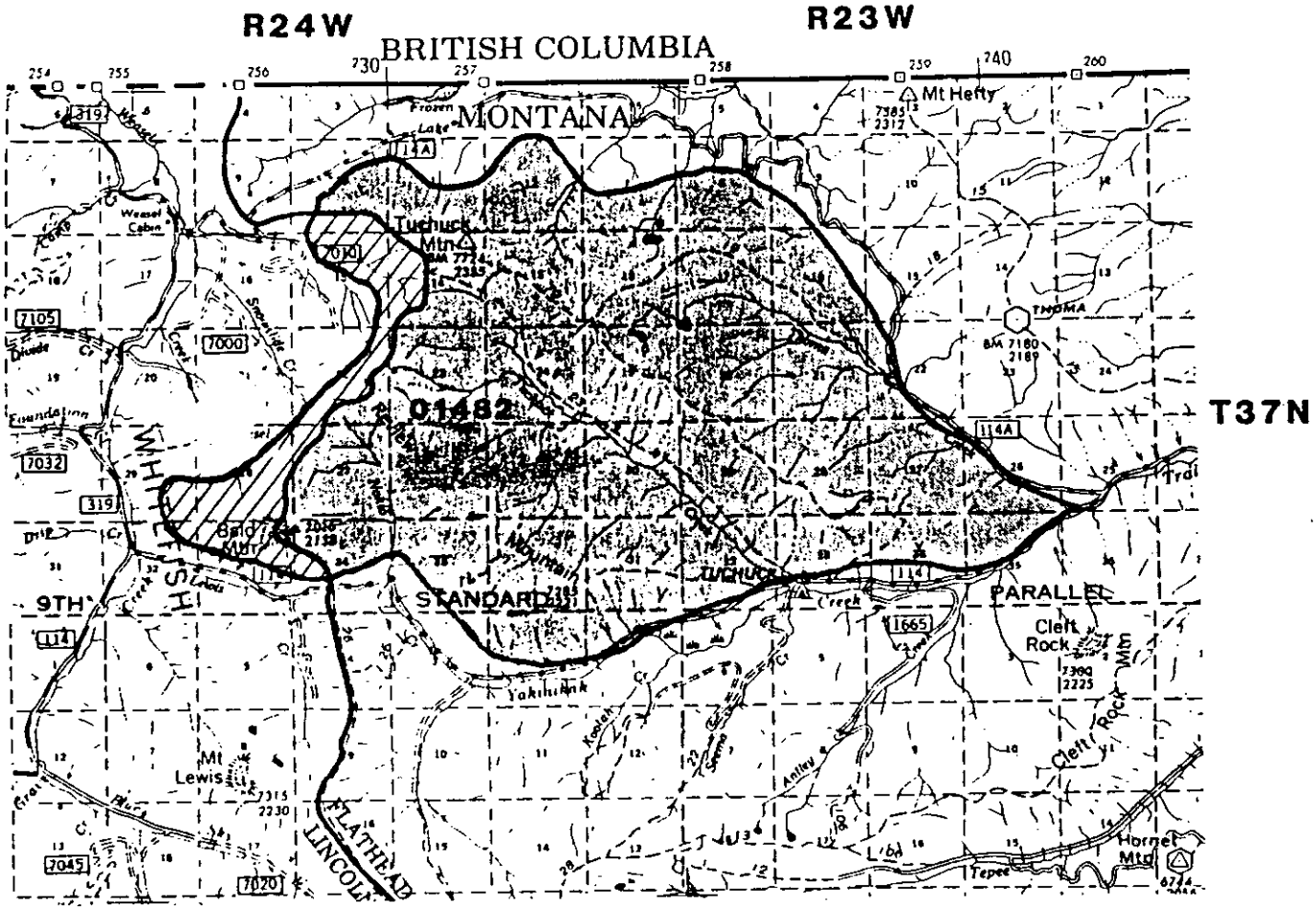
Alternatives 2 through 4, 8, and 11 through 14 allocate from less than 1 percent of the roadless area in Alternative 4 to 4 percent in Alternative 3 towards roadless timber management.

These are areas with commercial timber potential 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. Since the land itself would not be changed, wilderness attributes could be easily reclaimed after implementation by vegetative regrowth. Implementation would proceed slowly for all alternatives allocating these prescriptions. Only a few acres would be affected in Decades 1 and 2. Most allocated areas would have harvesting by Decade 5 when economic efficiency of the prescription are projected to be best. The prescription would not make significant changes in economic or social effects until Decade 4, when implementation is projected to increase. The first decade timber harvest scheduled under this prescription could be relocated to other areas without affected objectives or outputs of the alternative.

The nonpriced components are affected as follows:

- Visual quality objectives appropriate to local areas will be part of project design with modification the most common VQO.
- Semiprimitive nonmotorized recreation would be provided with wilderness attributes retained or recoverable after implementation.
- 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.
- Support of local employment and income would be less than timber roaded due to the lower intensity of timber management.

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 a no-surface occupancy stipulation.



TUCHUCK 01482 ROADLESS AREA

ROADLESS AREA ON FNF

ROADLESS AREA ON KNF

SCALE

1 0 1 3

MILES

FLATHEAD NATIONAL FOREST AND KOOTENAI NATIONAL FOREST

TUCHUCK 01482 (RARE II No. 01482)

Total Gross Acres:	19,820	Total Net Acres:	19,820
Flathead National Forest	17,520	Flathead National Forest	17,520
Kootenai National Forest	2,300	Kootenai National Forest	2,300

I. DESCRIPTION

Tuchuck Roadless Area is located in the north end of the Flathead National Forest, 3 miles south of the Canadian border. It is one of seven roadless areas located in what is often referred to as the "North Fork". The North Fork region lies adjacent to Glacier National Park and is bordered by the North Fork of the Flathead River on the east and the Whitefish Mountain Range or Divide on the west.

The Flathead National Forest is the lead Forest for this Roadless Area Evaluation. The Kootenai National Forest portion lies within Lincoln County, and the Flathead National Forest portion is in Flathead County. The Whitefish Divide forms the Flathead - Lincoln County boundary as well as the Flathead - Kootenai National Forest boundaries.

This area borders timber harvest land on the north. The Thoma - Frozen Lake Road on the east, Trail Creek Road on the south, and the Kootenai National Forest on the west. The site is accessed by the North Fork Road from Columbia Falls and by Graves Creek Road from the west.

The area varies from 4,800 feet to 7,751 feet in elevation. Tuchuck Mountain (7,724 feet) and Review Mountain (7,286 feet) are the two highest peaks. Topography consists of typical steep, narrow alpine glaciated canyons with glacial cirque headwalls, glacial trough walls, high elevation slab rock, and glacial tills.

The site is drained primarily by Tuchuck and Thoma Creeks. There are six small lakes in the northern portion of the area, but only one is known to support a fish population.

This roadless area has some of the most important grizzly bear habitat on the Flathead Forest. During 1983, the gray wolf activity increased significantly south of the Canadian/Montana border. All the necessary habitat components for grizzly bear and gray wolf are represented. Biologists believe the North Fork of the Flathead River drainage is the most likely location in the Rocky Mountains for re-establishing a viable gray wolf population. The area is also used as summer range by a herd of approximately 50 head of elk. Other wildlife species present include mule deer, black bear, whitetail deer, wolverine, the hoary marmot, golden eagle, and the lynx.

Most of the area burned in the 1910, 1917, and 1929 fires. The predominant tree species in the burned over area is lodgepole pine, western larch, Douglas-fir, Engelmann spruce, and subalpine fir. Alpine fir, alpine larch, and whitebark pine exist at elevations over 6,000 feet, but the overall timber productivity of this area is low.

Within the Tuchuck drainage, 1,592 acres has been proposed for designation as a research natural area because of the unique geology and vegetative community.

The area is extremely remote and has limited access which has resulted in light use by recreationists. Use occurs mostly during the big game hunting season with minor amounts of day trips by hikers and horseback users.

II. CAPABILITY

A. Natural Integrity and Appearance

There are very few impacts affecting the natural integrity of this area. Those impacts present include approximately 20 miles of low standard trail. Generally, the appearance of this area has been influenced by natural processes with very little impact by man.

B. Opportunities for Solitude

There are only a few off-site impacts, mostly in the form of timber harvests and roads. Topographic and vegetative screening is generally very good. The Tuchuck area is far from any local geographic centers and there is little chance of meeting other people within the area.

C. Primitive Recreation Opportunities

Because the Tuchuck Roadless Area is relatively small (approximately 5 miles across) the area is considered to have a low potential for primitive recreation; however, topographic and vegetative screening is considered to be very good. Also included in this area are several limestone caves providing exploration opportunities.

D. Other Features

No endangered or threatened plant species have been identified; however, there is supposition that some areas may contain rare plant species.

Special geological features include limestone caves and several sinkholes evident in the Thoma Creek drainage.

The adjacent Trail Creek drainage was used as a major tribal route by the Kootenai Indians in their travels to and from the eastern plains on hunting expeditions.

E. Manageability and Boundaries

There are no necessary boundary changes to be made within the Flathead National Forest portion of this area. The boundary in the Kootenai National Forest is reasonably well-defined, although it lacks strong topographic features. A portion of the boundary is located along a weakly defined edge of development (logged spruce bains) which create boundary management difficulties.

III. AVAILABILITY

A. Resource Potentials

The discussion that follows refers to resources present within this Roadless Area other than the previously discussed wilderness resource. The chart on the previous page summarizes the existing resources of this roadless area.

Wildlife

This area contains some of the best grizzly bear habitat in the lower 48 states and is considered very important for the recovery of the grizzly bear to a level that would allow this species to be removed from the threatened and endangered list. Recent destruction of many of the pine nut producing whitebark pine trees by the mountain pine beetle and regrowth of timber in the 1910 and 1929 burn areas, are viewed as potentially adverse to future grizzly bear production. Sustained production of essential grizzly habitat components is needed from the area to assure recovery of the grizzly bear from the threatened status.

This area is also considered important for the recovery of the endangered gray wolf.

Trail Creek (Yakinikak) and its tributaries below the mouth of Thoma Creek are closed to fishing due to spawning bull trout. Native cutthroat trout inhabit Tuchuck Creek and Upper Trail Creek. The streams within the Kootenai National Forest portion may not support habitat for fish, however, they are the headwaters to Weasel Creek, a cutthroat stream. Water quality and food organisms from these tributaries influence downstream fisheries. Weasel Lake supports cutthroat and bull trout.

Minerals

This area is within the Montana Overthrust Belt. The area is rated as having high oil and gas potential. There is continuous seismic investigation in this area. Hardrock mineral potential is considered to be low.

Timber

Whitebark pine and alpine larch are long-lived species and are major stand components above 6,000 feet in elevation. In 1978 the lodgepole pine and whitebark pine in the Tuchuck roadless area experienced an infestation of mountain pine beetle. Between 1978 and 1982, this insect has spread throughout the overmature lodgepole pine and whitebark pine stands, resulting in moderate mortality throughout this roadless area. Tuchuck is adjacent to Canada, where they have also experienced infestations of mountain pine beetle and spruce bark beetle. Extensive salvage logging of both lodgepole pine and Engelmann spruce is presently occurring on the Canadian side of the border.

There are approximately 5,400 acres of potentially suitable timberlands included in the Flathead portion of the area. Most of these stands are on steep slopes and timber management costs are generally high. There are 2,000 acres of the Kootenai National Forest portion suitable for commercial timber management.

TUCHUCK ROADLESS AREA (01482)

Category	Unit	Flathead	Kootenai
Gross Acres	Acres	17,520	2,300
Net Acres	Acres	17,520	2,300
Recreation			
Primitive	RVD's	260	26
Semiprim. Nonmotor	RVD's	0	0
Semiprim. Motor.	RVD's	90	20
Roaded Natural	RVD's	0	0
Range			
Existing Obligated			
Suitable	Acres	0	0
Allotments	No.	0	0
AUM's	AUM's	0	0
Existing Vacant			
Suitable	Acres	0	0
Allotments	No.	0	0
AUM's	AUM's	0	0
Proposed			
Suitable	Acres	0	0
AUM's	AUM's	0	0
Timber			
Tentative Suitable	Acres	5,442	2,000
Standing Volume	MBF	22,978	8,445
Corridors			
Exist. & Potential	No.	0	0
Wildlife - T&E			
Grizzly Bear Habitat			
Situation 1	Acres	17,520	2,300
Situation 2	Acres	0	0
Situation 3	Acres	0	0
Gray Wolf			
Habitat	Acres	17,520	2,300

Category	Unit	Flathead	Kootenai
Wildlife - Big Game			
Summer Habitat	Acres	0	0
Winter Habitat	Acres	0	0
Significant Fisheries			
Stream Miles	Miles	4	0
Stream Habitat	Hab. Ac.	0.5	0
Lakes	No.	0	0
Lake Habitat	Hab. Ac.	0	0
Water Developments			
Existing	No.	0	0
Minerals			
Hardrock Potential			
Very High	Acres	0	0
High	Acres	0	0
Moderate	Acres	0	0
Low	Acres	17,520	2,300
Mining Claims	No.	0	0
Oil & Gas Potential			
Very High	Acres	0	0
High	Acres	17,520	2,300
Moderate	Acres	0	0
Low	Acres	0	0
Oil & Gas Leases			
Leases No.		0	1
Leased Area	Acres	0	1,000

Recreation

Recreation uses include primarily hunting and fishing, with some use from snowmobiling, cross-country skiing, camping, hiking and horseback use along the trails.

Land Use Authorizations

There are no private inholdings or special uses within the interior of this area. There is no potential for domestic grazing.

B. Management Considerations

The area as inventoried presents moderate probability of success of wilderness management. Probability of successful management would be increased if the area were merged with the Thompson-Seton area to the south and Mt. Hefty area to the northeast, to form a more manageable wilderness unit. Merged or managed separately, moderate risks would be involved in containing natural forces of fire or insect and disease outbreaks within the areas.

The area offers outstanding grizzly bear research opportunities.

High costs and low probability of success is anticipated for future grizzly habitat management needs if use of mechanized equipment for prescribed burning or other vegetative treatment is foregone under wilderness management.

IV. NEED

A. Proximity to designated Wildernesses and to Population Centers

Refer to Table C-1, Parts A and B for proximity data. In addition to the National Forest Wilderness and Roadless areas listed in the table, the Tuchuck area is located just a few miles west of the 1,000,000 acre Glacier National Park. A large part of Glacier Park is currently being studied for Wilderness classification. Additional roadless and wilderness areas are available in Provincial Parks and Forest lands within 100 miles in Canada. The relatively small amount of current recreational use the area receives is attributed to the fact that an abundance of high quality wilderness opportunities exist in the Forest zone of influence along with the fact that the Tuchuck area is not well known in population centers. Current use is primarily from local residents.

B. Contribution to the National Wilderness Preservation System.

There are few vegetative habitat types, plant or animal species, or geologic types known to exist in this area that are not currently represented in existing wilderness areas; however, a portion of this roadless area has been proposed as a Research Natural Area due to its unique topography. The area has national significance due to its potential contribution to grizzly bear/gray wolf recovery.

C. Public Interests

Local environmental groups have strong feelings about the wilderness potential of this area. Their concerns are linked to the protection of the grizzly bear. They believe the best way to protect the bear would be through wilderness classification of the area.

The timber and oil and gas interests also have strong feelings that properly controlled industrial activities can be conducted in the area without adverse effects on the bear and if properly planned, long-term benefits to bear habitat productivity could be provided.

Intensity of public opinion conflict in this area has been increased since the RARE II inventory due to the continued emergence of the national significance of potential oil and gas resources and grizzly bear habitat.

Past public involvement for the 1979 RARE II study showed that a large percentage of those responding supported nonwilderness management. The final RARE II allocation was nonwilderness.

The September 1983, public involvement on the current roadless inventory on the Tuchuck area, showed that more than half of those responding favored nonwilderness management. The three "North End" roadless areas, Thompson-Seton, Tuchuck, and Mt. Hefty received similar supports. The expressed demand for timber harvest in the "North End" roadless areas is second highest among all Flathead roadless areas.

V. ALTERNATIVES AND ENVIRONMENTAL CONSEQUENCES

A. Management Prescription Assignment by Alternative

A breakdown of the land allocations for the Tuchuck Roadless Area is displayed in the following Table of this Appendix for all 16 Draft Forest Plan Alternatives. The roadless area would be managed differently in the various alternatives in order to contribute appropriately to meeting Forest objectives in each case. The allocations are summarized on next page by management emphasis.

ALTERNATIVE ALLOCATION BY MANAGEMENT EMPHASIS

Management Emphasis*	Alternatives (Acres) 1/							
	1	2	3	4	5	6	7	8
Wilderness	0	0	0	0	0	0	0	0
Roadless	0	14,503	17,418 (2,300)	14,860	19,820 (2,300)	10,970 (300)	4,170 (2,300)	0
Minimum Level	1,800 (1,800)	182	0	968	0	0	0	0
Wildlife	17,520	0	0	0	0	0	0	17,520
Timber W/Roads	500 (500)	5,135 (2,300)	2,402	3,992 (2,300)	0	8,850 (2,000)	15,650	2,300 (2,300)
Timber W/O Roads	0	0	0	0	0	0	0	0
Total	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)

Summary of Management Emphases

	Decade								
ROADED	1	0	740	0	0	0	1,040	480	0
	5	2,720	5,317	2,402	4,420	0	8,850	4,481	2,720
ROADLESS	1	19,820	18,540	19,820	19,820	19,820	18,740	19,340	19,820
	5	17,099	13,963	16,878	14,860	19,820	10,970	15,399	17,100
ILDERNESS	1	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0

1/ Includes the Kootenai National Forest acres allocated under a similar alternative as the Flathead National Forest Alternative. Acres in ( ) are Kootenai National Forest portion.

The following chart displays the comparison between Flathead National Forest and Kootenai National Forest alternatives.

Flathead National Forest Alternative(s)	Kootenai National Forest Alternative(s)
1	A
2	A
3	A
4	A
5	A
6	M
7 CD	I
8	A
9	H
10	G
11 PA	J
12	A
13	A
14	G
15	H
16	H

* Mineral resource development is subject to the General Mining Law, Mineral Leasing Laws and related laws and regulations. See Section V, Part B, of this roadless area writeup for further discussion.

ALTERNATIVE ALLOCATION BY MANAGEMENT EMPHASIS

Management Emphasis*	Alternatives (Acres) 1/							
	9	10	11	12	13	14	15	16
Wilderness	19,820 (2,300)	19,820 (2,300)	0	0	0	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)
Roadless	0	0	2,300 (2,300)	0	0	0	0	0
Minimum Level	0	0	0	0	0	0	0	0
Wildlife	0	0	17,520	17,520	17,520	0	0	0
Timber W/Roads	0	0	0	2,300 (2,300)	2,300 (2,300)	0	0	0
Timber W/O Roads	0	0	0	0	0	0	0	0
Total	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)	19,820 (2,300)

Summary of Management Emphases

	Decade								
ROADED	1	0	0	0	0	0	0	0	0
	5	0	0	2,720	2,720	2,720	0	0	0
ROADLESS	1	0	0	19,820	19,820	19,820	0	0	0
	5	0	0	17,100	17,100	17,100	0	0	0
WILDERNESS	1	19,820	19,820	0	0	0	19,820	19,820	19,820
	5	19,820	19,820	0	0	0	19,820	19,820	19,820

1/ Includes the Kootenai National Forest acres allocated under a similar alternative as the Flathead National Forest Alternative. Acres in ( ) are Kootenai National Forest portion.

The following chart displays the comparison between Flathead National Forest and Kootenai National Forest alternatives.

Flathead National Forest Alternative(s)	Kootenai National Forest Alternative(s)
1	A
2	A
3	A
4	A
5	A
6	M
7 CD	I
8	A
9	H
10	G
11 PA	J
12	A
13	A
14	G
15	H
16	H

* Mineral resource development is subject to the General Mining Law, Mineral Leasing Laws and related laws and regulations. See Section V, Part B, of this roadless area writeup for further discussion.

B. Impacts

1. Designation: Wilderness
Management Emphasis: Wilderness

The entire Tuchuck Roadless Area is allocated to wilderness under Alternatives 9, 10, 14, 15 and 16.

Wilderness allocation will 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. No timber harvest would be permitted, and 7,442 acres (total, both Forests) available for timber production would be foregone.

Wilderness allocation would offer not only protection for the wilderness attributes of the area but would also provide additional security for grizzly bear.

Highlighting of the area on National maps could result in more recreational pressure. Also, the option for treating vegetation for grizzly habitat component objectives through the use of natural or planned ignitions in a wilderness environment while protecting adjacent nonwilderness resources would be expensive.

Current contracts for oil and gas leases, special uses, or grazing would probably be permitted to run their course with emphasis on contract administration to protect wilderness attributes. Oil and gas exploration and development costs will be increased. Exploration activities in the nonleased portion of the area would be prohibited.

The nonpriced components are affected as follows:

- Visual quality would be preserved.
- National Wilderness Preservation System lands will increase.
- Grizzly bear, elk, and other wildlife species would have increased security.
- Diversity would tend towards climax vegetation but could be maintained near current levels if successful fire management programs were implemented.
- Water quality and fisheries quality would be maintained at natural levels.
- Local employment and income would decrease due to a reduced timber base and nonwilderness recreational opportunities.
- All nonpriced benefits of wilderness such as spiritual values, gene pool, and other scientific values and natural appearance will be provided.

The potential economic benefits of wilderness classification for this area are judged to be small due to the abundance of high quality wilderness within the Forest along with the low recreational carrying capacity of the area, especially in light of grizzly bear habitat needs.

2. Designation: Nonwilderness Tuchuck 01482
Management Emphasis: Roadless

Alternatives 1 through 8 and 11 through 13 allocate from 12 percent to 100 percent of the area to roadless management. There are no roadless allocations made in alternatives 9, 10, 14, 15 and 16 because the total area is allocated to wilderness. Under Alternatives 11, 12 and 13, all of this roadless area would be managed as part of the Trail Creek Grizzly Bear Management Area (Refer to Chapter II, Page II-25 , Alternative 11 Proposed Action, Resource Objectives).

The effect of the roadless allocation is to maintain the roadless resource by establishing a management objective of keeping the area roadless. Other resources are managed subject to the primary roadless objective. Wilderness attributes may be affected to different degrees depending on the recreation or wildlife habitat objectives of local areas. Modification of natural systems to accomodate multiple-use objectives is most noticeable when trails, campsites, or other recreation facilities are constructed and maintained.

Vegetation management practices for wildlife habitat or other purposes may involve prescribed burning. Motorized equipment, such as chainsaws, helicopters, motorbikes, and snowmobiles, are often used to facilitate cost efficient management or maintenance activities or as part of the recreation opportunities. Although these activities or uses affect wilderness attributes at the time of implementation, they are short-term effects and the wilderness attributes could be easily reclaimed by eliminating the use and allowing vegetation to regrow.

The nonpriced components are affected as follows:

- Visual quality will be retained.
- Semiprimitive motorized and nonmotorized and primitive recreation opportunities will be maintained.
- Grizzly bear and other wildlife security will be maintained.
- Diversity will be maintained at current or higher levels.
- Water quality and fisheries will be maintained or improved.
- Employment and income from wood products will not be provided.
- Many nonpriced benefits of wilderness such as spiritual values, natural appearance, gene pool and other scientific values 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. The probability of roading and development in this area is remote. 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 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 temporarily displacement from normal seasonal ranges may occur.
- Employment and income from the oil and gas resources would be provided.

3. **Designation: Nonwilderness**
Management Emphasis: Minimum Level

Minimum management is allocated on areas which are not needed to meet objectives of alternatives. Alternatives 2 and 4 allocate from 1 to 5 percent of the area to minimum management.

The effect of this prescription is to "do nothing" except to maintain existing improvements and resources. Alternatives 2 and 4 allocate small areas which are not contiguous. The management direction may provide for roads to cross these areas to support management objectives of adjacent management units. The geographic configurations of the allocations in each alternative in relation to adjacent management units determine the effects minimum management may have on wilderness attributes. The small isolated areas allocated to minimum management are not needed to be managed in order to achieve the objectives of each alternative.

The nonpriced benefits are affected as follows:

- Visual quality will be retained.
- Semiprimitive motorized and nonmotorized and primitive recreation opportunities will be available but not by management design.
- Grizzly bear and other wildlife species will have security maintained.
- Diversity would tend toward climax species.
- Water quality and fisheries would not be affected by management activities.
- Minimum contribution to employment and income would result as there will be no comodity outputs and only incidental recreation use.
- Many nonpriced wilderness benefits may still be provided by this management prescription since only minimum cost care taking activities, such as fire protection, would affect the land.

4. Designation: Nonwilderness Tuchuck 01482
Management Emphasis: Wildlife

This management emphasis includes those areas allocated to grizzly bear management and riparian wildlife. Alternatives 2 through 7, 9, 10, 14, 15 and 16 do not allocate any acreage under these management prescriptions. The remaining 5 alternatives allocate all of the Flathead National Forest portion to wildlife management. Under this management emphasis, commodity outputs or recreational use of the land is subordinate to managing the natural ecosystems for wildlife habitat. Development and manipulation of vegetation may be required to achieve the habitat objectives. If such treatments involve commercial timber stands, timber harvest volume may be a byproduct of achieving or maintaining habitat objectives. The timber harvest is scheduled if the project treatments of local habitats involve enough commercial timber stands that regular periodic harvest volume can be predicted.

These prescriptions affect wilderness attributes differently than those where timber management and economics require development and a relatively high level of human activities. Due to wildlife security and cover requirements, these prescriptions require a high degree of constraints on human activities result in some reductions in wilderness attributes, compared to wilderness and roadless management amenities than management prescriptions with timber harvest and roading as firm objectives.

The nonpriced benefits are affected as follows:

- Visual quality will be appropriate to the local area as determined for individual management areas. The most common will provide modification.
- A high level of semiprimitive recreation is provided.
- Grizzly bear and other wildlife species will have a high level of security.
- Diversity and nongame species habitat would be provided.
- Water quality and fisheries habitat will be maintained or improved.
- The prescriptions will provide some support of woods products jobs and a high level of support to recreation industry employment and income due to the role of wildlife in providing a recreation resource base.

Alternatives that allocate 100 percent of the roadless area to wildlife management would maximize protection and mangement for grizzly bear habitat over the entire area. This management would permit activities which would maintain or improve grizzly bear habitat over the long term based on complete habitat component mapping and analysis. No development would occur in the higher elevation alpine ridges and basins, thus the roadless resource would be preserved for approximately 75 percent of the area. Due to the grizzly habitat emphasis, recreational use would not be encouraged. Future recreational use will be limited if conflicts with bear management are identified. Development in the suitable timberland area would proceed very slowly under grizzly emphasis. Projections estimate timber would be harvested very slowly and rotations would be 180 years or more. This management is anticipated to offset a likely decline in future bear habitat productivity due to natural processes of timber regrowth, declining huckleberry production on old burn areas, and mountain pine beetle mortality in mature pine nut producing whitebark pine stands.

The appearance of the area at high elevations would continue to appear natural even though vegetative patterns may be considerably influenced by man. Where bear habitat needs require conversion of merchantable timber stands, modification of the land through conventional roading and logging is anticipated. Opportunities for solitude would likely remain very good under grizzly management due to the year-long road closures, when the roads are not being used for habitat management purposes, and the low level of activity within the area.

Under the Proposed Action (Alternative 11) and also under Alternatives 12 and 13, the Flathead National Forest proposes to manage a portion of the Glacier View District as the Trail Creek Grizzly Bear Management Area. This would include all of the Tuchuck Roadless Area, and would provide an opportunity for research while providing a high level of security for the grizzly bear.

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.

5. **Designation: Nonwilderness**
Management Emphasis: Timber with Roads

Alternatives 2 through 4, 6, and 7 allocate from 12 to 79 percent of the total roadless area to roaded timber management. The consequences of these allocations is a loss of wilderness attributes at the time of implementation of timber harvest or support activities requiring roads. The roadless resource and wilderness attributes of natural integrity, natural appearance, opportunity for solitude, and primitive recreation are foregone when these management prescriptions are implemented.

The nonpriced benefits affected are as follows:

- Visual quality will be modification or maximum modification where man's activities will dominate the landscape.
- Semiprimitive nonmotorized and wilderness recration attributes would be foregone within 50 years.
- Elk security and big game hunting opportunities would be reduced but mitigated in travel plans depending on local needs.
- Diversity would be optomized and nongame wildlife would be maintained.
- Water quality and fisheries would be adversely affected but mitigated according to local needs.
- Grizzly bear and gray wold habitat would be suboptimal but mitigated according to local needs.
- Local economic stability would be provided by supporting the highest level of woods products industry jobs.

These prescriptions provide for a wilde range of multiple-use benefits both priced and nonpriced. The flow of these benefits in place of roadless and wilderness attributes depends on the specific location and timing of implementation of timber management practices.

Alternatives 6 and 7 would have the most immediate effects on the roadless resource by accessing the most acres for timber management in Decade 1.

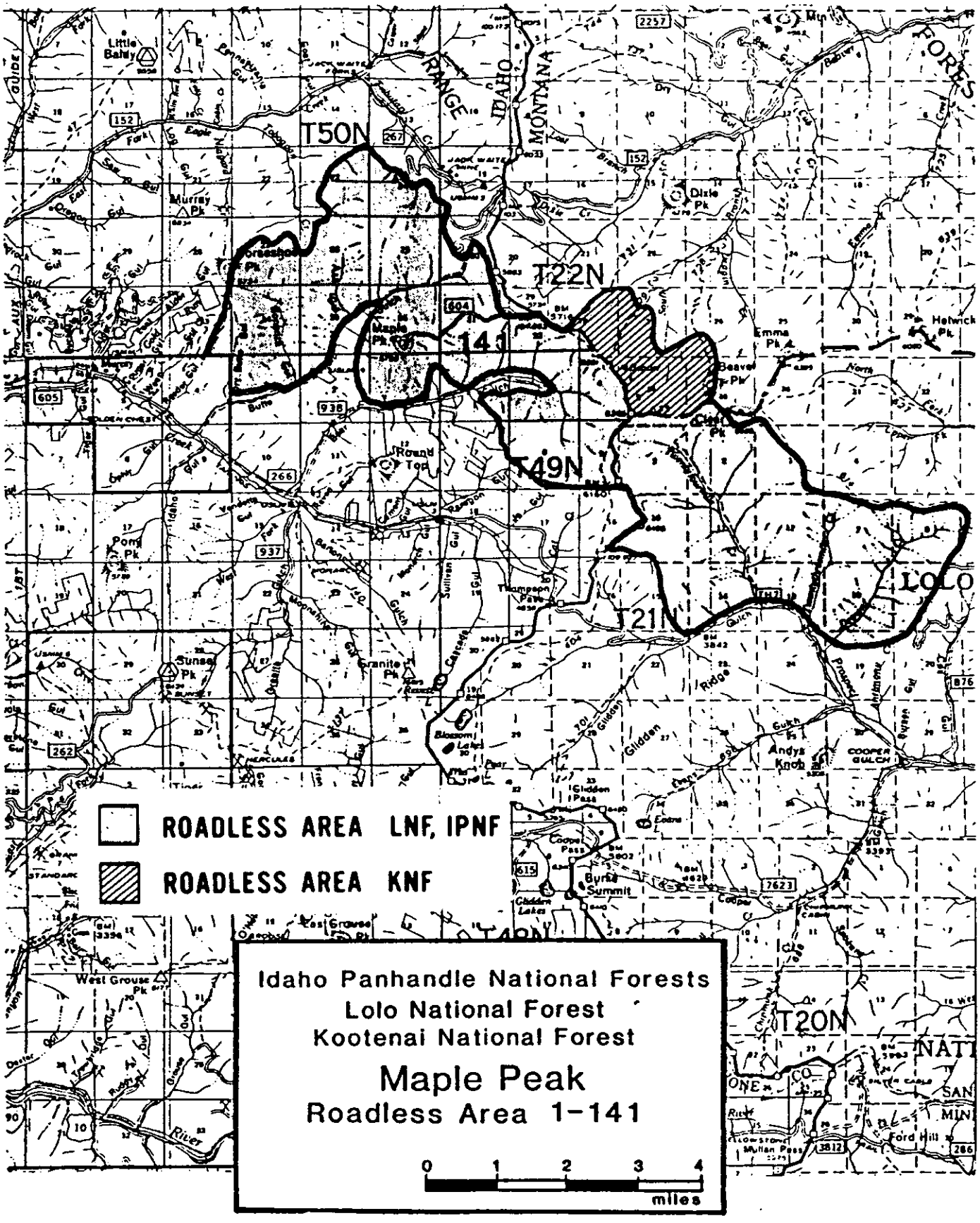
Shared Roadless Areas With Other Forest Lead

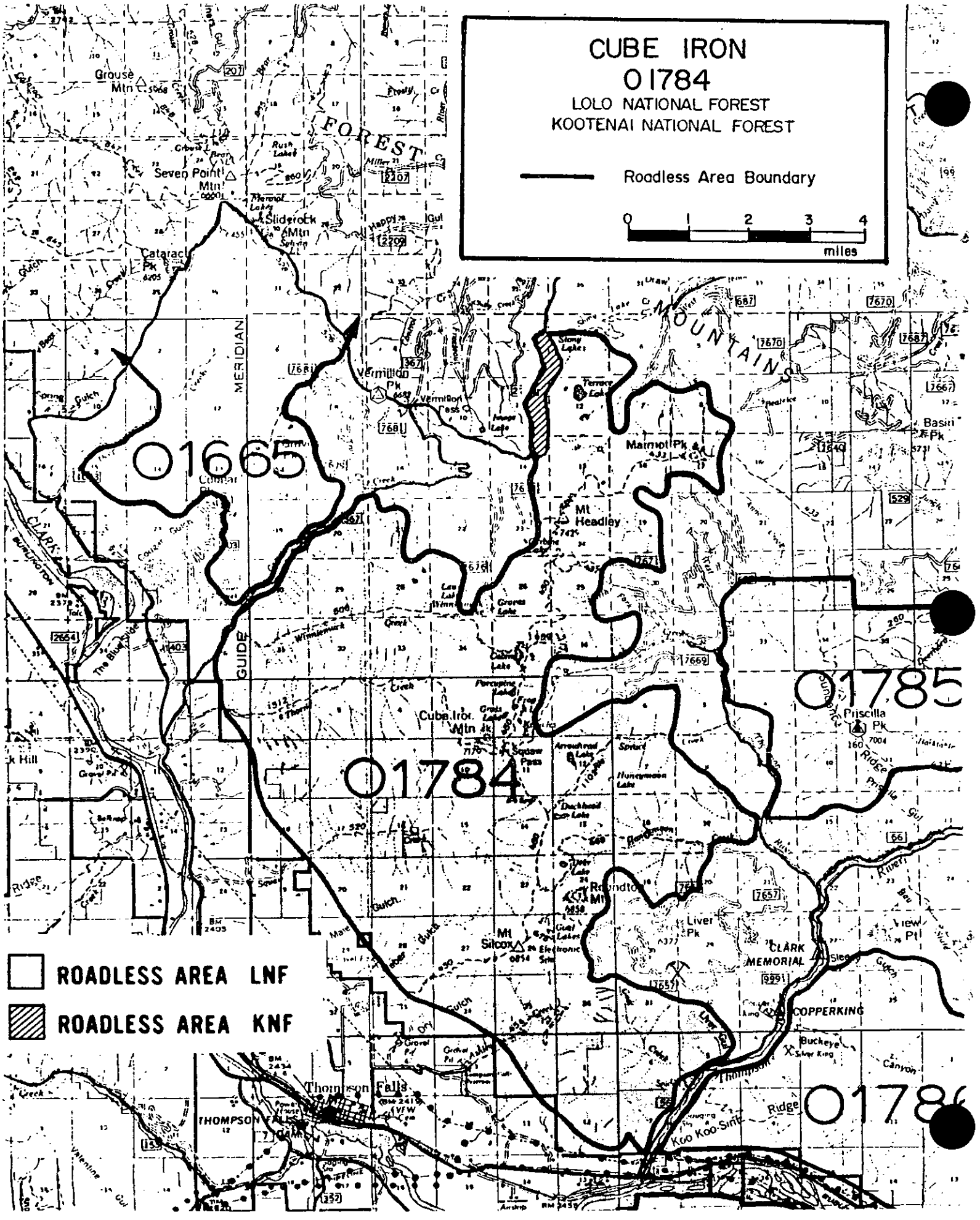
Three roadless areas on which other Forests have the lead responsibility, are not included in this appendix. They are Maple Peak, #01141 - 17,000 acres total (Idaho Panhandle), Cube-Iron, #01784 - 38,000 acres total (Lolo), and LeBeau, #01507 - 6200 acres total (Flathead). The Kootenai's share of these areas is small and the designations proposed by the alternatives are not considered to significantly effect the resource. Detailed descriptions of the areas and the proposed action can be found in the Draft Environmental Impact Statements for the Flathead National Forest (LeBeau), the Lolo National Forest (Cube-Iron), and the Idaho Panhandle National Forest (Maple Peak). These documents can be obtained by requesting a copy from the Kootenai National Forest or the respective forest. The designations for the areas on the Kootenai are:

Maple Peak (1,400 acres) - designated to roadless management in all alternatives except H where the designation is proposed wilderness. Vicinity map is displayed on page C-353.

Cube-Iron (1,200 acres) - designated to roadless management in all alternatives except H where the designation is proposed wilderness. Vicinity map is displayed on page C-354.

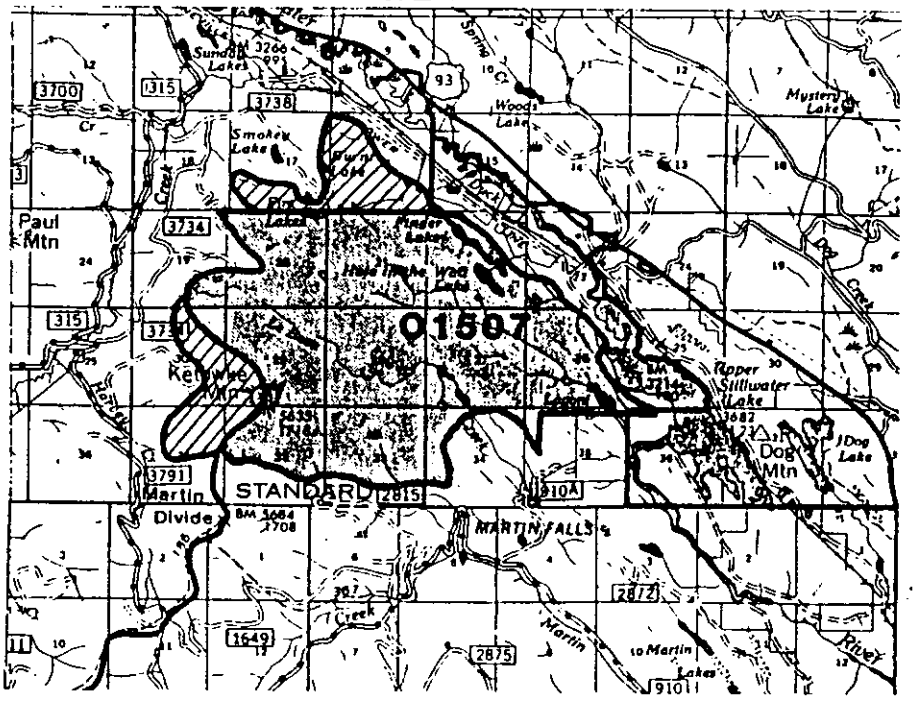
LeBeau (700 acres) - designated for developmental activities in all alternatives except H where the designation is proposed wilderness, and Alternatives I, J, and K where the designation is nonmotorized recreation. Vicinity map is displayed on page C-355.


ROADLESS AREA LNF, IPNF
ROADLESS AREA KNF
Idaho Panhandle National Forests
Lolo National Forest
Kootenai National Forest
Maple Peak
Roadless Area 1-141
0 1 2 3 4
miles
T50N
T22N
T49N
T21N
T20N
141
IDAHO
MONTANA
LOLO
Little Baldy
Murray Pk
Dixie Pk
Maple Pk
Emma Pk
Hetwick Pk
Round Top
Pony Pk
Sunset Pk
Granite Pk
Thompson Pass
Blossom Lake
Glidden Pass
Cooper Pass
Burke Summit
Andys Knob
West Grouse Pk
Ford Hill


CUBE IRON
01784
LOLO NATIONAL FOREST
KOOTENAI NATIONAL FOREST
Roadless Area Boundary
0 1 2 3 4
miles
01665
01784
01785
01786
ROADLESS AREA LNF
ROADLESS AREA KNF
Grouse Mtn
Seven Point Mtn
Sliderock Mtn
Cataract Pk
Vermilion Pk
Marmot Pk
Mt Headley
Cube Iron Mtn
Priscilla Pk
Mt Silcox
Liver Pk
CLARK MEMORIAL
COPPERKING
Buckeye
Thompson Falls
THOMPSON FALLS
Koo Koo Sint Ridge
Basin Pk
MOUNTAINS
GUIDE
MERIDIAN
CLARK
FOREST

R24W

T33N



LEBEAU 01507

ROADLESS AREA

ROADLESS AREA FNF

ROADLESS AREA KNF

SCALE

1 0 1 3

MILES

Kootenai National Forest Plan

Final Environmental Impact Statement

Appendix E – Public Comments and Forest Service Response-Volume 1

United States
Department
of Agriculture

Forest Service

Kootenai
National Forest

FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KOOTENAI NATIONAL FOREST PLAN

APPENDIX E

PUBLIC COMMENTS

ON THE

KOOTENAI NATIONAL FOREST PROPOSED PLAN

AND

DRAFT ENVIRONMENTAL IMPACT STATEMENT

AND THE

FOREST SERVICE RESPONSE

VOLUME ONE

APPENDIX E

PUBLIC COMMENTS AND FOREST SERVICE RESPONSES

I. Introduction

This Appendix presents the comments received on the Draft EIS and displays the Forest Service response to the various Federal and State Agencies, Elected Officials, Business and Industry members, Organizational groups, and Individuals. The material is presented in the order mentioned and the Table of Contents is arranged alphabetically and indicates the page number of each letter for ease of reference. The "Individuals" group is subdivided into three sections. The first section lists the individual letters that provided information that was generally specific and in-depth to the Kootenai National Forest land base or the Proposed Forest Plan and/or Draft EIS. The second and third sections are grouped because of their close similarity and in the interest of reducing bulk and expense.

Each letter displayed outlines the individual points noted with a number. Beside each page is the Forest Service response indicated by the corresponding number. The Forest Service responses can usually be categorized as one of the following:

(1) Responses needed to correct technical errors or inconsistencies, or to clarify points of misunderstanding identified by the public. These types of comments usually resulted in a change in the wording of the final documents.

(2) Responses needed to indicate what additional analysis was done, or why some requested analysis was not done. The additional analysis is presented in the final documents or are identified as Forest Planning Records available upon request.

(3) Responses needed to indicate what specific changes were made in the Forest Plan land designations, management direction, or intensity, or why the requested changes were not made. These types of comments resulted in changes to the Forest Plan Map or the wording in the Forest Plan document.

For a complete summary of what the overall Public Response was and how the Kootenai National Forest responded to the changes requested by the public, see Chapter VI, Consultation With Others, in the Final EIS.

PUBLIC LETTERS LISTED BY AGENCIES, ELECTED OFFICIALS, BUSINESSES, ORGANIZATIONS, AND INDIVIDUALS

FEDERAL AGENCIES

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
ENVIRONMENTAL PROTECTION AGCY.	49	1	E-1
U.S. DEPT OF ENERGY	298		E-3
U.S. FISH AND WILDLIFE SERVICE	1		E-5
USDA, SOIL CONSERVATION SERV.	53		E-9
USDI, OFFICE OF THE SECRETARY	31		E-11

STATE AGENCIES

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
COOPERATIVE EXTENSON SERVICE	192	1	E-15
MONTANA HISTORICAL SOCIETY	5		E-17
MONTANA STATE DEPT OF HIGHWAYS	50		E-19

ELECTED OFFICIALS

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
MONTANA OFF. OF THE GOVERNOR	305	1	E-21
PETERSON, MARY LOU (MT REPR.)	22		E-53
SWIFT, BERNIE (MT REPR.)	142		E-54

BUSINESS AND INDUSTRY

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
AMOCO PRODUCTION COMPANY	234	1	E-57
CENEX	220		E-59
CHAMPION INTERNATIONAL, INC.	59		E-61
CHAMPION INT. (JOHN MCBRIDE)	11 & 197		E-63
CONOCO	3		E-66
EMETT TRUCKING & LOGGING CO.	153		E-68
LOUISIANA PACIFIC CORPORATION	72 & 218		E-69
MARATHON OIL COMPANY	139		E-77
OWENS & HURST LUMBER COMPANY	105		E-79
PLUM CREEK TIMBER COMPANY	304		E-80
STOLTZE LAND & LUMBER COMPANY	193		E-91
STOLTZE LAND & LBR.(MCCUBBINS)	194		E-94
TEXACO USA	45		E-98
U.S. BORAX	40		E-99
WILLIAMS, JR., CLAYTON W.	19		E-102

ORGANIZATIONS

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
CABINET BACKCOUNTRY HORSEMEN	48 & 313	1	E-104
COALITION FOR CANYON PRESER.	127		E-109
DEFENDERS OF WILDLIFE	223		E-111
GALLATIN WILDLIFE ASSOC.	310		E-117
GREAT BEAR FOUNDATION	281		E-118
INLAND FOREST RESOURCES CNCL.	138		E-123
MONTANA LOGGING ASSOCIATION	69		E-130
MONTANA WILDERNESS ASSOC.	237 & 301		E-132
MONTANA WOMEN IN TIMBER	39 & 224		E-216
NATIONAL AUDUBON SOCIETY	302		E-217
NATIONAL WILDLIFE FEDERATION	268		E-218
NATURE CONSERVANCY	73		E-235
NORTH FORK PRESERVATION ASSOC	271		E-247
NW ENRGY.EMPLY.& DVLMT.(NEED)	195		E-250
PROTECT THE YAAK COMMITTEE	312	2	E-253
ROCKY MTN. OIL & GAS ASSOC.	55		E-284
TROUT UNLIMITED	147		E-286
WESTERN FOREST INDUST. ASSOC.	62		E-288
WESTERN ENVIRON. TRADE ASSOC.	264		E-292
WILDLIFE CLUB, FLTHD.VLY.C.C.	140		E-297
WILDLIFE MGMT. INSTITUTE	30		E-298

INDIVUDUALS LETTERS

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
ALDRICH, DONALD	20	2	E-300
ANDERSON, MAURY	158		E-302
BAIRD, DENNIS	270		E-303
BARCOMB, JOE	278		E-304
BEASLEY, KEN	265		E-305
BOSWELL, MR. & MRS. TYLER	161		E-307
BUSTAMENTE, ROBERT G.	65		E-308
CHALGREN, BILL	6		E-310
CHVILICEK, SARAH	7 & 236		E-311
CLARK, CHARLES	159		E-314
CONKLIN, GLEN H.	219		E-323
DALIMATA, MARY C.	206		E-335
DAVIES, JILL	56		E-336
DAYTON, JIM	155		E-338
ENGLAND, TERI	141		E-339
ENNENBACH, JIM & SUSAN	86 & 108		E-342
ENSIGN, DIANE	267		E-347
ERICKSON, OLGA	196		E-350
EVANS, JUDY	144		E-351
FERRELL, DOUGLAS	46		E-352
GREEN, DAN	12		E-357
GREGAS, NORMAN	38		E-358
HADDEN, DAVID G.	71		E-359
HARGROVE, MRS. JAY	10		E-364
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United States
Environmental Protection
Agency

Region 8, Montana Office
Federal Building
301 S. Park, Drawer 10096
Helena, Montana 59626

49

EPA

REF: 8MO

OCT 15 1985

Mr. James R. Rathbun
Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

Dear Mr. Rathbun:

The U.S. Environmental Protection Agency (EPA) has completed its review of your Agency's draft environmental impact statement (DEIS) and Kootenai National Forest Land and Resource Management Plan. EPA has conducted this review under authority of Section 309 of the Clean Air Act. The Agency appreciates the opportunity to review your documents.

EPA is concerned about potential adverse water quality impacts resulting from implementation of your proposed alternative. Construction of approximately 5,000 miles of roads and harvesting timber have the real potential, unless carefully undertaken, to severely degrade Kootenai area streams and fisheries. 1 The Agency is also concerned with your proposed alternative because EPA believes that there is insufficient funding to complete a monitoring plan to evaluate the results of implementing your proposed alternative. 2 Specific comments are attached.

Your DEIS is rated EO-2 (environmental objections - insufficient information). The Agency believes that the potential for adverse water impacts is a significant environmental concern. Substantial changes to the preferred alternative may be required to adequately protect the environment. There is insufficient water quality information to fully evaluate the possible adverse environmental impacts. 3 EPA will be happy to meet with you to discuss these comments. Mr. Steve Potts of my staff will call your office to arrange such a meeting in the near future.

If you have questions or concerns, please call me at 449-5432 or Mr. Potts at 449-5486 in Helena.

Sincerely yours,

John F. Wardell

John F. Wardell, Director
Montana Office

Attachment

Response to Letter #49 - EPA, first page

E-1

1. The miles of road required to harvest timber has been reduced in the first decade and in total. Direction to use "Best Management Practices" (BMP's) and the guidance in the forthcoming "Soil and Water Conservation Practices Handbook - FSH2509.22" is included in the Plan. In addition the Monitoring and Evaluation Plan has been modified to better address the water quality issue. The statement "any activity that is found not to be in compliance with the Soil and Water Conservation Practices or State standards will be brought into compliance, modified or stopped" has been added to the Standards section of the Plan.

2. The funding will be commensurate with the job to be done. The Monitoring Plan in the Draft EIS only indicated the additional funding estimated to be needed to do the required monitoring.

   The requirements for Monitoring and Evaluation are found in Chapter IV of the final Forest Plan. Funding by individual Monitoring and Evaluation element is not included in the final Plan, but the expected budget for Monitoring activities is part of all activities on the Forest and, as such, will be funded as part of those activities.

3. A meeting has been held with the EPA to discuss their concerns in more depth. Additional water quality information has been added. Also see #1 above.

Specific Comments On
Kootenai National Forest Plan/EIS

1) The proposed alternative (AH.J) calls for increasing timber harvest by 32 mmbf/year during the first decade (over that experienced in the prior ten years). Road construction is proposed to increase from the present 233 miles/year to 244 miles/year during the first decade. In fact, total road mileage will more than double, up to a total of 10,692 miles. Though the Plan includes the reference to maintaining or exceeding water quality standards and implementing best management practices (BMPs) to prevent or reduce erosion, it also states that the total catchable trout population will decline four percent and migratory fish population will decline nine percent due to the additional road building. (pp II-32 of DEIS.) 4

It is not clear how the fish population decline estimates have been calculated. Sedimentation that degrades spawning habitat will contribute to fish population declines. EPA does not concur with your conclusion that this resource loss is acceptable.

On pp IV-65 of the DEIS it is stated that "watershed analyses will be a part of all analyses for road construction and timber harvest to assure the channel stability and sediment levels in streams are within acceptable levels." "Acceptable levels" of sedimentation should not cause between four percent and nine percent fish losses forest wide (presumably this will involve severe spawning habitat loss in certain locations). The watershed analysis and site specific application of BMPs should either prevent the severe sedimentation, or the activity proposed in the watershed should be changed/stopped. 4 a

The Forest Plan states (pp II-6), that "Habitat for catchable populations of fish will be maintained in all streams and lakes where they presently exist." If habitat will be maintained, why are fish population declines predicted? 4 b

2) Water quality monitoring is not receiving adequate emphasis in the Plan and DEIS. Table IV-1, the Monitoring and Evaluation Plan, allows only $700 annually for proposed riparian habitat condition monitoring. This proposed monitoring includes stream surveys and sediment monitoring. 5

This level of monitoring is inadequate. How can impacts on water quality be evaluated, and habitat be maintained with this level of monitoring?

3) We have concerns with some of your criteria for initiating further action as described in Table IV-I - Monitoring and Evaluation Plan.

No corrective action would apparently be taken until 20 percent of the fish habitat or fish numbers were lost. The reporting of such losses would only be required every two years. 6

No corrective action would also be required until water yields and sediment production increase by 20 percent (municipal watersheds are more restrictive).

As a minimum, these evaluations should be made, and reported annually.

Response to letter #49 - EPA, Pg. 49a

4. The procedure for estimating fish yields is outlined in Appendix B of the DEIS (page B-32). Sedimentation is taken into account. Since the model used to estimate the number of fish is very rough and difficult to verify we have focussed our efforts on maintaining water quality in the actual application of the Plan on-the-ground (see #1 above).

4a. We have addressed this concern in terms of water quality (see #1 above).

4b. Habitat can be maintained at less than current levels thus maintaining catchable populations. It was not the intent of the Proposed Action to retain all habitat.

5. See response to #1 and #2 above.

6. Corrective Action criteria has been changed.

298

Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

November 8, 1985

In reply refer to: SJ

Mr. James R. Rathbun
Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

Bonneville Power Administration's Office of Engineering and Construction has reviewed the Draft Environmental Impact Statement (EIS) for the Kootenai National Forest Land and Resource Management Plan. Your planning personnel should be commended for the manner in which they have addressed long-range energy transmission corridors. They have mapped corridor windows and have provided an analysis of the effects of each alternate forest management plan on the windows. From a corridor planning standpoint, we support the Forest's proposed Alternative J.

We would like to submit the following specific comments on the Plan and EIS:

Forest Plan

1. We encourage the Forest to establish a management area specifically addressing utility and transportation corridors and corridor windows. 1

2. Management direction should be given on the establishment of remote radio stations and hydromet sites.

3. Management direction should be given on renewable energy resources found on the Forest such as hydro, small hydro, geothermal, biomass, and wind. 2

Maps

1. Forest Plan Alternative and management area maps should show existing transmission corridors and corridor windows as specific management areas. 3

Draft EIS

1. The analysis of the effects of alternate plans on corridor windows will be useful to the decisionmaker, but it would be even more helpful if this and other important decision issues could be presented in summary form as a decisionmaking aid. 4

1. Management Area 23 is specific to transportation corridors. Remote radio stations and hydromet sites are considered speculative at this time.

2. These resources were not identified as important issues needing resolution during this round of planning. We will be responsive to needs as they are raised.

3. Appendix 15 in the Final Forest Plan contains the criteria for identifying corridor exclusion areas, avoidance areas, and windows. There is also a map of the corridor windows. The existing corridors will be managed according to the Memorandum of Understanding that is currently in effect. A Powerline Transmission Corridor (Mgmt. Area 23) is in existence in the Forest Plan and is located on the south end of the Cabinet Mountain Wilderness.

4. Corridor Windows come from the Utility Transportation Study for Montana. They do not vary by alternative.

2

2. We suggest that the EIS address the effect of different alternatives on renewable energy resources and communication facilities. 5

Sincerely,

Anthony R. Morrell
Environmental Manager

Response to Letter #298 - U.S. Dept. of Energy, Bonneville Power Administration

5. Renewable energy resources and communications facilities were not identified as issues or concerns during the initial scoping or public review of the previous Draft EIS.

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Endangered Species, Field Office
Federal Bldg., U.S. Courthouse
301 South Park
P.O. Box 10023
Helena, Montana 59626

IN REPLY REFER TO:
6-1-85-F-010
M.19 Kootenai Forest Plan

June 26, 1985

Mr. Tom Coston
Regional Forester
U.S. Forest Service
Region 1
Federal Building
P.O. Box 7669
Missoula, MT 59807

Dear Mr. Coston:

This is the Fish and Wildlife Service's (FWS) biological opinion prepared in response to your April 22, 1985 request for formal consultation on the proposed Kootenai Forest Plan on the threatened grizzly bear (Ursus arctos horribilis). Consultation was originally requested on December 21, 1982 and on March 21, 1983 the FWS issued a biological opinion that concluded that the proposed Plan would likely jeopardize the grizzly bear. The opinion further stated that consultation should remain open untr. the Forest Service identified an alternative which would preclude jeopardy.

The FWS has examined the revised proposed Plan in accordance with the Section 7 Interagency Cooperation Regulations (50 CFR 402,43 FR 870) and the Endangered Species Act, as amended. This biological opinion refers only to the potential effects of the Plan on threatened and endangered species and not the overall environmental acceptability of the proposed Plan.

Project Description

The proposed Kootenai National Forest Plan sets forth Forest-wide goals and objectives, management area prescriptions, standards and guidelines, and monitoring and evaluation requirements to establish direction for management of the Kootenai National Forest.

No response needed on this page.

Biological Opinion

It is the FWS biological opinion that implementation of the revised proposed Kootenai National Forest Plan is not likely to jeopardize the continued existence of the grizzly bear. We concur with the conclusion of the biological evaluation prepared for the Forest Plan that the Plan should not adversely affect the bald eagle, peregrine falcon, and gray wolf. 1

Basis of Opinion

In the 1983 jeopardy opinion, we indicated that the primary factor creating the jeopardy situation was that the extent of occupied grizzly habitat covered with a grizzly prescription or supportive allocation was not adequate to offset the impacts of non-supportive allocations. As a result, the potential for population growth to recovery levels was being suppressed.

To assure the viability of the Cabinet-Yaak grizzly population and habitat, Forest activities must be at a level and conducted in a manner to assure that (1) bears are not adversely impacted directly, indirectly, or cumulatively; (2) important habitat components are not adversely modified or destroyed; and (3) that sufficient space is left undisturbed from detrimental human activities to meet the biological requirements of grizzly bears. These objectives can be met in the Forest planning process by (1) allocating sufficient space to accommodate grizzly recovery in which grizzly management is the primary use or grizzly bear supportive allocations are made, and (2) prescribing in areas of occupied grizzly habitat that have non-supportive allocations, sufficient grizzly bear prescriptions to assure that the activities are made compatible with the biological requirements of the bear. We believe that the Kootenai National Forest, through the revised Forest Plan, has adequately addressed the above concerns and have developed the appropriate processes to assure that the land allocations are compatible with recovery objectives. Briefly these include:

1) Placing additional constraints on Foreplan to assure that timber harvest outputs are not at a level that will preclude grizzly recovery. Using the procedure outlined in the biological evaluation, Foreplan was limited to selecting 8.3 percent of the commercial timber acres in grizzly habitat in any decade. This process extended the rotation age a small amount to allow for the scheduling of timber sales in time and space and to meet displacement needs of the grizzly.

Response to Letter #1 - U.S. Fish & Wildlife Service, Pg. 1a

1. No response needed.

2) Stratifying grizzly habitat into management situations 1, 2, and 3. Stratification of occupied habitat into management situations 1, 2, and 3 and implementation of their attendant management guidelines provides a process to assure that multiple use activities are conducted in a manner compatible with grizzly management. Review of the stratification, however, indicates that there is a flaw in the Yaak portion of the Cabinet-Yaak Ecosystem. The "donut holes" of unoccupied habitat in the Yaak (MS 5 areas) violate the management philosophy that accompanies the stratification of grizzly habitat into MS 1, 2 and 3.

   Due to the large home ranges of grizzlies and their extensive movements, areas within occupied habitat that have no management direction for bears (MS 5) could easily result in mortality sumps and/or negate the beneficial effects of positive management in the adjacent MS 1 and 2 areas. Most grizzly bear biologists and researchers recognize that grizzlies can not be recovered by managing "islands" of habitat. Those areas that concern us most are the four MS 5 areas south of Whitetail Creek Campground and the "finger projections" of MS 5 north of the West Fork Yaak River. We recommend that these areas be restratified before issuance of the final Plan. 2

   We believe that if the occupied habitat is managed in accordance with the direction for MS 1, 2, and 3 and that human/bear conflicts are minimized so as to prevent human-induced mortalities, the grizzly population will have the opportunity to respond by expressing the parameters identified for recovery in the Grizzly Bear Recovery Plan. It should be recognized, however, that the present population may be suppressed to the point that augmentation may be required to facilitate recovery. 3

3) Assuring that land use allocations in MS 1 and 2 are either compatible or supportive of grizzly recovery. Under the revised Kootenai Plan, all acres of grizzly habitat are now contained in supportive or compatible prescriptions.

4) Adding additional detail and specificity to the Forest grizzly bear guidelines. Strengthening the guidelines helps assure that bears will not be adversely impacted directly, indirectly, or cumulatively and that important habitat components will not be adversely modified or destroyed.

We agree with the discussion presented in the biological evaluation regarding numbers of grizzlies that can potentially be supported. Habitat management and preventing mortalities is the key aspect to achieving recovery. Augmentation may, how- 3

Response to Letter #1 - U.S. Fish & Wildlife Service, Pg. 1b

2. The areas of concern have been re-designated to management prescriptions that are supportive of the grizzly bear. See the final Forest Plan map.

3. We agree.

ever, play an important role in recovering the grizzly in the Cabinet-Yaak Ecosystem. Grizzly habitat management goals will eventually be established for each bear management unit now being identified through revision of the Kootenai cumulative effects analysis (CEA) model and will be expressed as a percent habitat effectiveness needed to recover the grizzly. The CEA model will help identify levels of activities and open road densities that are compatible with the bear management objectives. 4

This completes the FWS biological opinion on the proposed Kootenai Forest Plan. We commend the Kootenai staff for the excellent work performed in the revision of the Plan to resolve the 1983 jeopardy opinion. If the proposed Plan should change significantly resulting in impacts not considered in this biological opinion, consultation should be reinitiated. Your cooperation and interest in meeting our joint responsibility under the Endangered Species Act is appreciated.

Sincerely,

Wayne G. Brewster

Wayne G. Brewster
Field Supervisor
Endangered Species

cc: Director, FWS, Washington, D.C. (OES)
Regional Director, FWS, FA/SE, Denver, CO
Grizzly Bear Recovery Coordinator
Field Supervisor, ES, FWS, Billings, MT
Forest Supervisor, Kootenai National Forest

Response to Letter #1 - U.S. Fish & Wildlife Service, Pg. 1c

4. We agree.

53

United States Department of Agriculture

Soil Conservation Service

Federal Building-Room 443
10 East Babcock
Bozeman, MT 59715

October 11, 1985

James F. Rathbun
Forest Supervisor
Kootenai National Forest
R.R. 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

We have reviewed the Kootenai National Forest Plan, Draft Environmental Impact Statement and Proposed Kootenai National Forest Plan.

We feel you have given adequate consideration to the environmental concerns.

We could not find any reference to the existence of snow survey sites and and electronic SNOTEL (snow survey telemetry) sites on the Kootenai National Forest in the draft Plan. 1

We are concerned with status of our snow courses and SNOTEL sites located on National Forest land and authorized under our Memorandum of Understanding. There are 22 sites, six of which are radio equiped SNOTEL or joint SCS-USCE sites. We are particularly concerned about protection from logging, roadbuilding or other uses which would alter our correlations with streamflows. Access is also a concern, should road closures or access restrictions be imposed for other purposes. 1

This has already happened at two sites that we had authorization for access with motor vehicles.

Each of these sites are authorized on a separate Supplemental Agreement to our overall Memorandum of Understanding and a copy should be on file in your office.

We would like to see the plan make reference to these locations and indicate the management action necessary to protect and preserve their integrity as data collection sites. 2

In Appendix C, for the Ten Lakes roadless area, the reference indicates there are no special uses in this area. We think our Stahl Peak SNOTEL site may be within the Ten Lakes roadless area. In the Cabinet East Face Area, on page C63, the report indicates there is an SCS snow course near Indian Head Mountain. We are not aware of any of our equipment at this location. 3

The Soil Conservation Service is an agency of the Department of Agriculture

Response to Letter #53 - USDA, Soil Conservation Service, first page.

1. No specific mention of Snow Survey sites were made because it was not considered to be an issue which is similar to the remainder of the existing Special Uses on the Forest. The 22 existing snow survey sites (including one on private land) could possibly increase or decrease during the life of the Forest Plan depending on future technological changes or needs of the SCS. A Table has been added to the Forest Plan Appendix to insure coordination needs with the SCS.

1a. All existing land use authorizations will be allowed to continue under the final Forest Plan unless they are in conflict with the management direction for the particular area. If a conflict occurs, then a transition period will be agreed to in order to relocate any nonconforming use. Some uses may become more restrictive; such as motorized access to a particular site no longer being authorized in order to conform to the management direction for a newly designated roadless or recommended wilderness area.

2. Data collection sites will be protected to preserve the integrity of their intended use.

3. Our error! There is a SNOTEL site on the eastern edge of the Ten Lakes recommended wilderness (head of Stahl Creek). In the Cabinet Face East roadless area, there is a snowcourse in the head of Poorman Creek, not on Indian Head Mountain as implied.

Also, we would like to be advised of any activity that could affect either our present access or land use changes in the vicinity of these snow courses or SNOTEL sites. 4

We appreciate the opportunity to comment on this plan.

Sincerely,

for Glen H. Loomis
State Conservationist

Response to Letter #53 - USDA, Soil Conservation Service, Pg. 53a

4. The request has been forwarded to the Districts.

United States Department of the Interior

OFFICE OF THE SECRETARY
OFFICE OF ENVIRONMENTAL PROJECT REVIEW
Denver Federal Center, Building 67, Room 488
P.O. Box 25007
Denver, Colorado 80225-0007

IN REPLY REFER TO

ER 85/1102

October 3, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
Route 3 Box 700
Libby, MT 59923

Dear Mr. Rathbun:

The Department of the Interior has reviewed the Draft Environmental Statement and Proposed Forest Plan for the Kootenai National Forest, Montana, and offers the following comments.

Fish and Wildlife Resources

We recognize and appreciate incorporation of the suggestions contained in our comments of April 1, 1983. Specifically, the Forest Service has included management guidelines for riparian habitat (page III-2 to III-8 of the Plan), cavity habitat (Appendix 16 of the Plan), and old-growth habitat (Appendix 17 of the Plan). 1

We believe it is vital to consider the effects of off-forest, land-use practices and trends when setting on-Forest management strategies. The Forest should be commended for considering off-Forest conditions when developing watershed objectives (page II-20 of the Plan). We would like to suggest that the Kootenai National Forest consider adopting the strategy proposed by the Lolo National Forest to facilitate achieving watershed protection on lands with intermingled ownership. The elements of this strategy are:

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. 2

b. Buffering. 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 would be used only as an interim action during watershed reparation. If reasonable solutions cannot be achieved within 3 years, approaches (c) and (d) would be used.

c. Land Acquisition. This would 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.

Response to Letter #31 - U.S.D.I., Office of the Secretary, first page

1. No response needed.

2. We agree and have added a similar strategy in the soil and water standards of the Final Plan.

d. Legal Action. The Forest would 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

In the discussion about soil and water (e.g., pages II-20 of the Plan), we did not notice any reference to the statutory responsibility that the Forest Service has under Section 404 of the Clean Water Act. Wording should be added acknowledging the requirement to obtain necessary permits prior to undertaking projects that may necessitate the placement of fill below ordinary high water or in wetlands. We would also like to see acid rain referenced as having a potential to adversely influence water quality and fisheries. 3

Riparian habitat is acknowledged throughout as having unique qualities that are important to many activities and resources on the Forest. It seems that more Forest activities are concentrated in this zone (per unit of area) than in any other. Often the interactions between human activity, grazing, and wildlife use in this area are profound. Riparian habitat is being severely degraded on some private lands. We were pleased to see that riparian areas are being treated as a unique management area. The management goals and standards listed for the riparian ecosystem (pages III-2 through III-8 of the Plan) are well organized, straightforward, and easy to read. The management direction and intent seem to be in keeping with Executive Order 11990 (Protection of Wetlands) and Forest Policy (2527.03) as written under Forest Service Manual Title 2500 - Watershed Management. However, no consolidated statement of intent with respect to the Executive Order was found. 4 4 a

The discussion in Appendix 17 notes that 8-10% old growth condition is considered to be a minimum level, and goes on to state that "it is premature to make extensive designations of old growth until a clear picture of the existing status and distribution can determined." We recommend that the discussion of Forest Standards on page II-18 (5th paragraph) be revised to make clear that at least 8% old growth condition will be maintained, and recognize that higher percentages would be maintained in certain areas. 5

We agree that feedback information gained as a result of monitoring activities will be essential in order to evaluate the implementation of the Plan. Upon examination of the Monitoring and Evaluation Plan (Table IV-1, p. IV-4 through IV-12 of the Plan), we noticed that several items to be monitored will incur "no additional cost." This information provides the reader with no insight into the scope of work required to perform the monitoring. For the monitoring to be effective, it will have to be adequately funded. Therefore, we recommend that the actual cost associated with monitoring each element be included in Table IV-1 of the Plan. We noticed that, because of the high variability levels sometimes used in the monitoring plan, a substantial decrease in riparian habitat, wetlands, fisheries, and water quality could occur over the life of the Plan without any further evaluations being initiated. We do not think this is in keeping with either the intent of Executive Order 11990 or Forest Policy. We strongly recommend that the levels of variability which would initiate further action be dramatically reduced, so that further losses can be detected and hopefully avoided. With respect to monitoring item C-11 (Riparian habitat and condition), we do not think that age classes of riparian trees is an appropriate single indicator of overall riparian conditions. 6

3. We acknowledge the requirement, but our Plan does not restate all existing statutory requirements. The Forest will continue to cooperate in studies to determine the impacts of acid rain on the Forest water quality and fisheries, but the Forest does not control the activities that will impact acid rain.

4. Riparian areas are addressed as a unique zone, but they are not treated as separate management areas.

4a. The Forest Service Manual is the basic standard that underlies all Forest Service activities and does not warrant summarizing in the Forest Plan. The Forest attempts to discourage development in floodplains, and wetlands which are identified at the project level.

5. The old-growth timber standards have been revised and clarified in the final Forest Plan. The percentage of old-growth being retained was increased from 8 percent to 10 percent in the Final Plan and these stands were removed from the regulated timber base.

6. The requirements for Monitoring and Evaluation are found in Chapter IV of the final Forest Plan. Funding by individual Monitoring and Evaluation element is not included in the Final Plan, but the expected budget for Monitoring and Evaluation activities is part of the total budget. Monitoring is an integrated part of all activities on the Forest and, as such, will be funded as part of those activities. The riparian condition portion of the Monitoring and Evaluation Plan has been modified to better address your concerns.

Threatened and Endangered Species

The Forest Service has completed Section 7 consultations with the U.S. Fish and Wildlife Service (FWS) Endangered Species Field Office in Helena. A biological opinion issued by FWS on June 26, 1985 stated that implementation of the revised proposed Kootenai National Forest Plan is not likely to jeopardize the continued existence of the grizzly bear. The opinion also concurred that the Plan should not adversely affect the bald eagle, peregrine falcon, and grey wolf. Consultation results should be included in the final EIS. 7

Mineral Resources.

The Draft Environmental Impact Statement and Forest Plan for the Kootenai National Forest is reasonable and realistic with respect to minerals. The colored maps are very helpful and are easy to read. The alternatives explore all options possible, with the proposed alternative reasonable and acceptable with respect to the available options and limiting criteria.

However, we do have a few suggestions for improvement. On page II-85, the first sentence should be moved to follow "Category D." Then, for further clarification, the next sentence should be rewritten as, "Acreages for all of the operability categories are compared with the geologic potential rating in the main table (table II-24)."

On page III-69, figure III-10, the Minerals Potential Map is blurred and vague to unreadable as are most of the maps in section III. With the importance of these maps, we urge that they be of the quality of the colored alternatives maps.

The tables on II-168 to II-171 should be discussed in the text. Specifically, a discussion on the practical effect of the forest restrictions on mining and exploration should be discussed in chapter IV to explain how the various alternatives will affect future exploration and mining. Also, each alternative in chapter II should include a brief summary sentence stating the acreage of moderate to very high mineral potential that is in category D (readily operable or available). 8

Some discussion of the Bureau of Land Management's (BLM) involvement in the oil and gas permitting process would be appropriate. This would be valuable to the public in facilitating their understanding of how surface resources (threatened and endangered species, cultural resources, reclamation) are protected at the actual operation stage by both the BLM and U.S. Forest Service.

Water Resources

The documents should address the subject of potable water for recreational sites and for staff, indicating types of sources and whether periodic monitoring is to be provided. Sanitation facilities, sewage disposal, solid-waste disposal, and landfills on the Forest should be addressed within the evaluation of the management plan for land and resources. 9

Response to Letter #31 - U.S.D.I., Office of the Secretary, Pg. 31b

7. The Consultation Results are included (See Letter #1 - U.S. Fish & Wildlife Service).

8. The suggestions for editing and map presentation are all appreciated. The practical effects on the Forest restrictions on mining have been added in Chapter IV.

9. Information on potable water for recreational sites, and listings of sanitation facilities are on file in the Forest Headquarters in Libby.

National Natural Landmarks

Several proposed National Natural Landmark (NNL) areas are included in (or found nearby) the National Forest. They are:

Flathead County - LeBeau Creek Glacial Pavement proposed NNL

Lincoln County - Eureka Drumlin Field proposed NNL

Lincoln County - Kootenai Falls proposed NNL 10

Lincoln County - Rainy Creek Stock proposed NNL

Further planning for the Kootenai National Forest should take into account these proposed designations and avoid impacts that could adversely affect the outstanding ecological and geological features of these areas. Information on the NNL program and specific information on the above-named proposed NNL's may be obtained from Ms. Carole Madison, Rocky Mountain Regional Office, National Park Service, P.O. Box 25287, 655 Parfet Street, Denver, Colorado 80225, telephone (303)236-8699 or (FTS)776-8699.

Sincerely

Robert F. Stewart

Robert F. Stewart
Regional Environmental Officer

Response to Letter #31 - U.S.D.I., Office of the Secretary, Pg. 31c

10. The information for the Proposed National Natural Landmark has been obtained from the Denver Office listed.
    (a) The LeBeau Creek Glacial Pavement Area is located on the Flathead National Forest, adjacent to the Kootenai.
    (b) The Eureka Drumlin Field is located in Tobacco Valley on private land.
    (c) Kootenai Falls is located partially on Kootenai National Forest Land and is designated as a Special Interest Area (See Mgmt Area 21 in the Forest Plan).
    (d) Rainy Creek Stock is located on private land (W.R. Grace Vermiculite Mine).

Cooperative Extension Service

MONTANA STATE UNIVERSITY, U.S. DEPARTMENT OF AGRICULTURE, AND MONTANA COUNTIES COOPERATING

REPLY TO:
LINCOLN COUNTY
418 MINERAL AVE.
LIBBY, MONTANA 59923
TEL. 293-7781 EXT. 211

October 31, 1985

Kootenai National Forest
Rt. 3, Box 700
Libby, Montana 59923

Dear Sirs:

The proposed Kootenai National Forest Plan is a document which directs policy and programs on the Kootenai National Forest in the future. In this regard it appears to be a major oversight to lightly address the insidious invasion of exotic noxious weeds into the forest. Because of the potential impact to almost all forest uses, noxious weeds should be the major item under the general heading of forest pests and, not just lightly mentioned under range. 1

Exotic noxious weeds by definition are not just "a plant out of place," as the general definition of weeds go. These plants have evolved to be competitive under extremely harsh conditions of competition and numerous enemies. When taken out of their natural environment and introduced into areas without their natural predators, populations are allowed to propagate unchecked. This single factor isolates these plants from the common definition used in range management of an "invader" species.

For purposes of discussion the plants which potentially affect the Kootenai National Forest include: Spotted Knapweed (Centaurea maculosa L.), Diffuse Knapweed (Centaurea diffusa L.), Russian Knapweed (Centaurea repens L.), Dalmation Toadflax (Linaria dalmatica L.), Dyers Woad (Isatis tinctoria L.), Yellow Starthistle (Centaurea solstitialis L.), St. Johnswort (Hypericum perforatum), and Leafy Spurge (Euphorbia esula). Other species of plants could be included at a later date.

The plant with the most immediate potential threat to the Kootenai National Forest is Spotted Knapweed (Centaurea maculosa L.). A study conducted by Montana State University using the edaphic and climatic characteristics necessary for supporting the growth of Spotted Knapweed indicate that the only lands of the Kootenai National Forest incapable of supporting growth are the extreme alpine areas and the subirrigated peat meadows. Once an invasion is started, Spotted Knapweed reduces indigenous plant species 40-80% or greater. One of the goals of the forest plan is to maintain diverse age classes of vegetation. If Spotted Knapweed were allowed to establish itself on even 50% of the Kootenai National Forest, at the readily obtainable 50% level, this and other goals could not be realized.

Response to Letter #192 - Cooperative Extension Service, first page

1. The issue of noxious weeds on the Kootenai National Forest is indeed an important one. It has been addressed in the final Forest Plan under Forestwide Management Direction (#23).

Response to Letter #132 - Cooperative Extension Service, Pg. 192a

1.(cont.) SEE #1 ABOVE

October 31, 1985
pg.2

Potential impacts of noxious weeds on recreation, wildlife, timber management and range demand that they be given a major consideration in any long term planning process. 1

While the research has not been funded to quantify the impacts, preliminary research and observations indicate Spotted Knapweed competition with tree seedlings can have a detrimental affect on reproduction and land management.

Options which need exploration for the Kootenai National Forest include such things as prevention, cultural and chemical control methods, biological control agents, funding of research, public awareness programs, vegetative management to make habitat unsuitable, and restricting soil disturbances. These options allow numerous opportunities to keep all noxious weeds at an acceptable infestation level if they are conscientiously applied.

Because of the land ownership patterns of Western Montana control measures must be implemented area wide. Not by any single entity. Cooperation is essential and provided for in both state and federal law. 1

Thank you for the opportunity to comment on the proposed Kootenai National Forest plan. I trust these comments will not be taken lightly but instead, noxious weed management be incorporated into the basic management plans on all National Forest lands.

Sincerely,

Robert E. Wilson
Lincoln County Extension Agent

enc: Literature cited

REW:mew

MONTANA HISTORICAL SOCIETY
HISTORIC PRESERVATION OFFICE
225 NORTH ROBERTS STREET • (406) 444-4584 • HELENA, MONTANA 59620

July 19, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
RR 3, Box 700
Libby , MT 59923

RE: Review of the Kootenai National Forest Plan and Draft Environmental Impact Statement

Dear Mr. Ruthbun:

Thank you for providing this office with the documents cited above for our review and comments. In many ways, we believe the Plan and DEIS do not accurately reflect the nature or level of cultural resource management on the forest. The actual activities currently conducted and planned in consideration of this non-renewable resource often exceed the resource management level presented in these documents. For example, we understand that the Forest is developing a systematic survey strategy and cultural resource overview and management plan to provide more effective management of this resource. However, there is no mention of these efforts in the Forest planning document. We believe the Forest should take credit for its accomplishments achieved thus far in developing a coherent and effective program for managing its historic and archaeological resources. 1

In other ways, we are discouraged by the Plan's failure to present cultural resources at the same level of consideration as other resources within the context of the multiple use concept. The Plan fails to present cultural resource management goals or objectives. The commitment to integrate, consult, inventory and evaluate provides no real direction to their management. 2 This problem is compounded by the lack of identified research needs and the restriction of standards to identification and evaluation of listing on the National Register (II-21). The Plan also lacks an accomplishment schedule, projected outputs, program monitoring and evaluation mechanisms, 3 or program costs. The Plan, therefore, does not communicate commitment to the management of the cultural resources of the Forest; a position we do not believe to be entirely accurate.

We recommend that these issues be addressed in the final Plan, or in a supplemental cultural resource management plan, to provide the reader with sufficient data to accurately assess the Forest's intentions and commitment 4 to this resource. We also recommend that cultural resource planning data

Response to Letter #5 - Montana Historical Society, First Page.

1. We have added an Appendix to the final Forest Plan to clarify the management of these resources.

2. See Goal #21 on page II-2 in the final Forest Plan. Also see the Objective on page II-5 and the Standards on pages II-25 and II-26.

3. See #1 above.

Rathbun
Page 2
July 19, 1985

be incorporated in Table II-1 (Projected Outputs and Activities by Time Period), Table II-3 (Additional Data Requirements and Accomplishments Schedule), and Table IV-4 (Monitoring and Evaluation plan). Finally, we recommend that standards for inventory, evaluation and treatment for cultural resources be presented in Chapter II and that these be applied to all management areas, not just riparian areas. 4

Please call if you have any questions regarding these matters or want a clarification of any issue presented here.

Sincerely,

Alan L. Stanfill,
Deputy SHPO/Agency Review

File: Comp/Kootenai NF/Management Plan 1985

Response to letter #5 - Montana Historical Society, Pg. 5a.

4. See #1 above.

DEPARTMENT OF HIGHWAYS

TED SCHWINDEN GOVERNOR

2701 PROSPECT

STATE OF MONTANA

HELENA, MONTANA 59620

October 15, 1985

RE: Kootenai National Forest
Proposed Forest Plan

James F. Rathbun
Forest Supervisor
Kootenai National Forest
RR 3, Box 700
Libby, Montana 59923

Dear Mr. Rathbun:

Thank you for the opportunity to review the above captioned Forest Plan.

In light of the proven mineral reserves of the Kootenai Forest and the proposed timber harvest increase, there will probably be increased use of local state and county maintained roadways due to projects originating within the Kootenai Forest. Any future impacts to the transportation system can be minimized through coordinated planning with concerned state and county agencies. The Kootenai Forest Plan should clearly outline your interagency planning criteria. 1

The Forest Plan should also present a clear explanation of how Forest Highway Project money will be programmed. For example, do you anticipate the construction of new accesses onto local state and county maintained roadways, or will new construction solely access new areas of timber harvesting and mining? 2

The State Highway Department has recently adopted the Rural Primary System Level of Development Plan (LODP). The plan explicitly abandons the intent of developing all routes to full design standards but assigns each route a category which will constrain development to a level of essential rather than desirable standards. Also approved as an integral part of the LODP is a policy for securing access rights when major improvement projects are undertaken on primary system routes assigned to either Full Standard or 3R Standard Categories. The Right-of-Way Bureau of the MDOH will make specific access recommendations on a project by project basis. Any MDOH plans for access limitation will be coordinated and compatible with land use plans of local planning agencies. The LODP applies to the following routes that have right-of-way adjacent to Kootenai National Forest Lands. 3

Response to Letter #50 - Montana State Dept of Highways, first page

1. A Regional road management plan does exist that covers interaction between other Forests, State, Federal Highways, and Counties.

2. See #1 above.

3. See #1 above.

James Rathbun
October 15, 1985
Page 2

Primary Rt.	Hwy. Designation	LODP Category
FAP 1	U.S. Hwy 2	3R Standards
FAP 5	U.S. Hwy 93	3R Standards
FAP 33	State Hwy. 37	Existing Level Maintained
FAP 56	State Hwy. 56	3R Standards

3

In order to facilitate future planning, a copy of the LODP is enclosed. If you need any additional information, please contact this office.

Sincerely,

Don Cromer

Don Cromer, Supervisor
Special Studies Section

DC:SS:jm:2oo

cc: Buck Harris

Response to Letter #50 - Montana State Dept of Highways, Pg. 50a

No response needed on this page.

State of Montana
Office of the Governor
Helena, Montana 59620

TED SCHWINDEN
GOVERNOR

November 12, 1985

Mr. James Rathbun
Supervisor
Kootenai National Forest
Rural Route 3
Box 700
Libby, Montana 59923

Dear Mr. Rathbun:

The State of Montana appreciates this opportunity to review and comment on the Draft Kootenai National Forest Plan (Plan) and Environmental Impact Statement (DEIS). Your agency's cooperation and presentation of the Plan to Montana's Interagency Planning Task Force are also appreciated. The attached comments reflect the task force review and concerns regarding the Plan.

We commend the Kootenai National Forest (KNF) for producing a Plan and DEIS that are well organized and easy-to-read. We especially appreciate the improvements that have been incorporated into the Plan and DEIS since the 1982 drafts. We are concerned, however, with the lack of information in the Plan the reader needs in order to clearly understand the reason for the KNF's proposed level of timber harvest. Without this information and other related information on future timber demand for the Kootenai National Forest, it is difficult to comment on the appropriateness of the proposed levels of timber harvest. 1

We look forward to your consideration and response to the attached comments in the Final Plan and EIS.

Sincerely,

TED SCHWINDEN
Governor

Attachment

Response to Letter #305 - Montana State Office of the Governor, first page

1. See response #13.

STATE OF MONTANA COMMENTS
ON THE
1985 DRAFT KOOTENAI NATIONAL FOREST PLAN
AND ENVIRONMENTAL IMPACT STATEMENT

Overview

The Kootenai National Forest (KNF) is to be commended for producing a well written and organized Forest Plan (Plan) and draft Environmental Impact Statement (DEIS). The arrangement and presentation of information and the general accuracy make them highly readable documents. In addition, the descriptions of the analyses used in developing alternatives are both helpful and clearly written.

We support the Plan's proposed coordination with adjacent landowners and cumulative effects analysis in areas of checkerboard ownership. 2

Regarding water quality and watershed protection, however, the Plan and DEIS continue to follow the deficient pattern of inadequate monitoring, data collection and modeling efforts we have seen in other Region I current forest planning efforts. As a result, little information is available in the documents to support water quality/quantity evaluations. 3

The following additional concerns were identified:

o The Plan contains very little information to assist the reviewer in clearly understanding the reasons for the KNF's proposed timber harvest levels. 4

o Information on future demand for KNF forest products and the proposed availability of timber from non-KNF lands is lacking in the Plan.

o The DEIS and Plan significantly underestimates non-timber benefits by the assignment of unrealistically low recreation visitor day values. 5

o The budget required to implement the Plan represents a 22 percent increase in funding. Given the current federal deficit situation, the KNF should further address the consequences of a possible budget shortfall on the Plan's implementation. 6

o Recreation use projections for the KNF are based on the estimated population growth of Lincoln county--a question- 7

Response to Letter #305 - Montana State Office of the Governor, Pg. 305a

2. No response needed.

3. Additional information has been added regarding water quality. Refer to the monitoring plan in the Final Forest Plan.

4. See Response #13.

5. Non-timber benefits used in the Kootenai Plan are from the 1980 RPA program analysis as discussed in the DEIS Appendix B. The actual value one assigns to the non-timber benefits is not critical because the Final Forest Plan provides opportunities for most types of recreation in excess of anticipated use levels (see Response #7, below). Any increase in opportunity would be without value because it is not likely to be used. In the case of elk hunting, the 1985 RPA program, which reconsidered the value of all benefits, uses the same $21.00 per big game hunter RVD as the 1980 RPA (in 1978 dollars). If the Forest were to maximize elk habitat, the timber program would involve about 164 MMBF per year (regulated) in the first decade and provide habitat for an elk herd estimated at 9,900 animals. The final plan provides for about 8,000 animals and a regulated timber program of 202 MMBF per year. The value of elk hunting would have to rise a great deal to offset the cost in terms of social impact of the lower timber program.

6. The final Forest Plan incorporates a more modest budget. Budget shortfalls will result in lower outputs and benefits. An item is included in the Monitoring and Evaluation Plan to deal with the situation of an insufficient budget.

7. We have tested the validity of our assumptions by developing a projection using the approach suggested here. Resident recreation trends were based upon Statewide adult population and non-resident trends were based upon visitor projections. The process paralleled that used in the 1983 Statewide Comprehensive Outdoor Recreation Plan (SCORP). The new projections ranged from 2% (Decade 2) to 4% (Decade 5) above those used in the DEIS. We have not changed our projections because (1) the new approach generates an insignificant change considering the accuracy of such projections and (2) the assumption of a 3% increase in non-resident recreation use each year may be reasonable for the Flathead Basin where it was developed, but it is probably optimistic for the Kootenai National Forest. Details on the comparison are contained in the planning records ("Recreation Use Projections", Haugen, June 24, 1986).

able basis for projecting increases in recreation. Recreation projections should be based on both Montana population trends and on non-resident visitor projections. 7

o While the Plan predicts that there will be 13 percent more recreational hunters and anglers using the KNF in the next decade, it proposed a decrease in the number of catchable trout. 8

o Although the extensive roading proposed on the KNF has the potential to greatly contribute to the spread of knapweed and other noxious weeds, the Plan makes no commitments to a weed control. 9

o The Plan fails to identify those watersheds that are expected to exceed water yield guidelines; nor is any attempt made to identify stream reaches that provide critical spawning habitat. 10 10 a

o While the DEIS and Plan provide appraisals of the impacts of timber harvest and road construction on fisheries and water quality, the magnitude of the impacts is generally underestimated not stated. 11

o Although the KNF contains two of the largest river systems in Montana, high water quality is not identified as a critical item in determining Net Public Benefit, despite its value to the state and benefits to users on and off the KNF. 12

These and other concerns are addressed in more detail in the following discussion.

Response to Letter #305 - Montana State Office of the Governor, Pg. 305b

8. Recreational hunting and fishing are expected to increase on the Forest in the future due to indications from past and present use trends. Also the new kokanee fishery in Lake Koocanusa is becoming increasingly popular. This increase will occur despite predicted decreases in trout numbers as a result of projected timber harvesting. Basically, the fishery supply on the Forest still exceeds the demands and can support additional fishing pressure in selected areas.

9. The issue of noxious weeds on the Kootenai National Forest is indeed an important one. It has been addressed in the final Forest Plan as a Forestwide Goal (#23).

10. No drainages under Forest Service control are expected to exceed the watershed guidelines in upcoming projects. The DEIS displayed those watersheds that are at or have been over their thresholds.

10a. The Plan purposely omitted the identification of important spawning streams as this "advertisement" could easily increase fishing pressure in these areas which could be detrimental to these fisheries.

11. Our professional opinion, coupled with the data available to us, supports the position that the percentage decrease in fish numbers from the timber cut and associated roads in the preferred alternative is not underestimated in the Draft EIS. However, the Monitoring and Evaluation Plan will help us ground-truth our estimates. If these estimates indeed prove to be too conservative, the Forest has the direction to adjust the management of other activities accordingly.

12. The water quality on the Kootenai is an inherent quality that was protected under the "Minimum Management Requirements" for Soil and Water Protection (See Appendix B). The calculated opportunity cost of this protection was estimated at $566,000,000. This could not be identified as a Net Public Benefit, because the requirement to protect the soil and water resources implies that the public benefit is equal to the cost. In addition, this level of resource protection is included in all alternatives so any attempt to count it as a benefit would not add any differentiating information to aid in the selection of the preferred alternative.

1. Timber

The timber harvest on the KNF in the next decade is scheduled to increase 19 percent over the average sales volume for the last 10 years, and 36 percent over what has been cut in the last decade (DEIS; II-33). Northwestern Montana has a high historic dependence on the wood products industry for its economic health. We recognize and support the need to maintain a viable and competative wood products industry in the KNF's zone of influence. We are concerned, however, that the Plan contains very little information to assist the reviewer in clearly understanding the reasons for the KNF's proposed level of timber offerings.

Information on future demand for KNF forest products and the projected availability of timber from non-KNF lands is lacking in the Plan. Additionally, the KNF appears to have made its proposed sale determinations based only on the KNF's historical record without an analysis of the sustained capability from non-KNF lands. Lacking these analyses, it is difficult to form conclusions on the propriety of the proposed sale levels. We recommend that the KNF include an analysis of the timber supply situation in the final EIS and Plan. 13

There are currently 900 million board feet (mmbf) under contract on the KNF that have not been harvested. Industry is seeking a "buy out" from the KNF of 240 to 270 mmbf in 1985. These factors indicate a possible short run surplus of available timber on the KNF, and should be addressed in the final EIS and Plan.

Despite the shut down of the Louisiana Pacific Mill at Trout Creek, mill capacity in the KNF area has increased in recent years to the current level of about 260 mmbf. The proposed timber harvest level appears to address this expanded mill capacity. Because of the uncertainty of the future timber supply from private lands in the KNF zone of influence, however, we recommend that the KNF maintain adequate flexibility in its planned harvest levels. 14

Timber management goals are very good. However, according to the DEIS, more timber can be harvested under Alternative H, which allocates all existing roadless areas to Wilderness. Alternative H also provides a higher present net value and a larger elk population than the preferred alternative. Fish populations are only slightly lower under Alternative H, presumably because of additional road construction in roaded areas. This indicates that development of roadless areas may not be economical and may adversely affect wildlife habitat. KNF planners might consider easing scenic restrictions in roaded areas to reduce roadless area development. 15

Response to Letter #305 - Montana State Office of the Governor, Pg. 305c

13. We have examined the total supply of timber from all ownerships in our five-county secondary impact area (Lincoln, Flathead and Sanders Counties in Montana and Boundary and Bonner Counties in Idaho). The analysis is documented in the planning records ("Development of Response to Public Comments - Timber Supply Situation", Haugen, July 24, 1986) and summarized in Appendix B of the EIS. We concluded that maximizing timber production during the 10 year life of the plan under a long term non-declining harvest schedule and in accordance with all the other factors spelled out in the Forest Plan would best serve community stability for the long run. The projected harvest levels in the Forest Plan are not based upon historic harvest levels. Rather they are based primarily upon the productive capability of the land subject to land designations and environmental constraints that maximize the net public benefit from the Forest.

14. The existing timber under-contract is now approximately 600 mmbf (after "buy-back") or three years plus in harvest which is considered normal and desireable from the industry perspective. Because of the uncertainty of the private timber supply, the Kootenai will maintain the flexibility to provide increases above the historic timber harvest levels. The Forest Plan also includes limitations on the maximum volume under contract in order to avoid another "buy-back" situation.

15. The easing of visual quality or scenic constraints results in an increase in timber harvest levels and an increase in water quality impacts which affects the fisheries. In addition, the easing of the visual quality constraints does not help resolve the visual quality issue.

Forest managers should consider prescribed burning for insect and disease management where appropriate. Integrated pest management (IPM) is an excellent strategy for insect, disease and weed management and should be implemented on the KNF where feasible. 16

Planners and managers should consider shorter rotation ages, especially for susceptible stands of lodgepole pine. Shorter rotations are often more economical and may reduce the need for road construction in the future. 17

The DEIS (III-19) states that 2,000 mmbf of high risk lodgepole "represents a significant potential for timber volume loss" to mortality caused by the mountain pine beetle. The discussion of insect epidemics predicts that most of this high risk lodgepole will die in the next decade. In light of this expected loss of timber volume, the ability of the remaining timber base to support increasing levels of timber harvest in the next 50 years needs to be discussed further in the DEIS and Plan. 18

2. Economics

The DEIS and Plan are more realistic than the 1982 DEIS and Plan in assessing the impacts of timber harvest and road construction on other resources. However, the DEIS still significantly underestimates non-timber benefits by the assignment of unrealistically low recreation visitor day values, such as $21.00 for a day of elk hunting and $3.00 for a day of most other types of recreation (Plan; Appendix B-47). The KNF should work with the Montana Department of Fish, Wildlife and Parks to develop more appropriate non-timber values. 19

Information should be added in the discussion of thinning on page IV-47 of the DEIS, describing the type of economic or investment analysis that the KNF has used to reach thinning decisions. Similarly, in the section describing the "Development of Timber Harvest Intensities" (DEIS; B-27, a description of the investment analysis procedure used should be added.

Pages B-37 and B-46 of the DEIS state that lumber price projections were based on Adams and Haynes figures from 1980. These projections call for a substantial real price increase over time. More recent information suggests that much lower figures are more realistic. We recommend that the KNF test the sensitivity of their timber prescriptions to real price increases by running alternative scenarios, including a zero increase in real lumber prices. 20

The budget required to implement the Plan represents a 22 percent increase in funding--an additional $3.7 million in 1978 dollars. Based on the decision flow diagram shown on page IV-5 21

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16. We agree.

17. Lodgepole Pine has the shortest rotation age on the Kootenai Forest. Short rotation ages increase the timber harvest and associated road building in the short-term.

18. All of the estimated lodgepole pine timber volume losses have been discounted in the lodgepole pine yield tables and an estimate has been made as to how much of this discounted loss can be harvested (See Chapter III, Insects and Disease). Most of the timber volume projections displayed in the EIS are volumes which do not include the discounted "lost" volume. See the Forest Plan Appendix 11 for the projected timber sale volumes for the next ten years. The Kootenai National Forest has the productive capability to provide high levels of regulated timber harvest currently and in the future while still providing for many other resource uses. All of the unregulated "captured" volumes that are harvested are dependent on the state of the lumber market demand. See the Forest Planning Records for more technical detail on volume-per-acre calculations and growth modeling (prognosis).

19. See Response #5, above.

20. Actual practice has shown that commercial thinning is hard to accomplish for economic reasons even though it can increase growth and long term potential harvest levels. The Final Plan is based upon limited commercial thinning. With the timber price data used in the DEIS, pre-commercial thinning generally produced enough increase in future value to justify its cost. When a broader base is used for initial timber prices and the most recent price projections of Adams and Haynes are used, pre-commercial thinning can not generally pay for itself on a site by site basis. The PNV of managing the Forest can be increased by continuing the pre-commercial thinning program because the increase in future yields allows larger harvests early in the time horizon under the non-declining yield assumption (the allowable cut effect). We will evaluate the efficiency of pre-commercial thinning on a project basis. If pre-commercial thinning can no longer be supported, the next Forest Plan will reflect its elimination. The effects of applying a new set of economic data, including new timber base prices and price projections and updated road costs, are described in the planning records ("The Effects of Updated Economics on the Suitable Timber Land Base and A comparison of the Final Forest Plan to Suitabilities When PNV is Maximized", Haugen, June 10, 1986).

21. See response #6 above.

of the Plan, the KNF may have to revise the Plan if funding increases do not occur. Given the current federal deficit situation, the KNF should further address the consequences of a possible budget shortfall on the Plan's implementation. 21

3. Wilderness/Roadless

We appreciate the KNF's response to the increasing demand for primitive and semiprimitive recreation through its proposed wilderness and roadless area management prescriptions. We support roadless management for the Trout Creek, Cataract Creek and Northwest Peaks Scenic Area, and the remaining areas proposed for roadless management by the KNF. 22

We urge the KNF to reconsider the Governor's 1984 wilderness recommendations (Appendix A) for other areas as follows:

Area	Acres
Scotchman Peaks	46,115
Tuchuck	2,300

23

Development activities planned for portions of the Governor's 1984 Chippewa Creek and Scotchman Peaks recommendations should be postponed pending Congressional action.

4. Recreation

Reports indicate that the importance of recreation to the local economy near the KNF has been increasing. According to the Spokesman Review, during summer 1985, the KNF had to provide temporary campgrounds because existing campgrounds could not meet demand. While the KNF overview addressed roadless recreation, it did not provide a recommendation on campgrounds. Nor does the Plan vary recreation opportunities by alternative. The KNF should reevaluate this assumption that recreation opportunities are adequate through the fifth decade of the Plan (Plan; V-3). We support expanding available campgrounds in the area if reevaluation demonstrates a need during peak use. Reports indicate shortages of places to stay in the area, including motels and hotels. An increase in KNF camping possibilities could benefit the local tourism industry. 24

Recreation use projections for the KNF are based on the estimated population growth of Lincoln County--a questionable basis for projecting increases in recreation. Increasing numbers of non-residents are expected to visit Montana to participate in outdoor recreation, particularly since similar opportunities in other states are diminishing. Recreation projections should be based on both Montana population trends and on non-resident 25

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22. No response needed.

23. The Governor's recommendation has been reconsidered. See the final Forest Plan map. No developmental activities are planned within the Governor's recommendations on Scotchman Peak and Chippewa Creek.

24. Total recreation capacity on the Forest is probably adequate, but specific shortages may occur which will require a re-emphasis to meet any changed demand in certain areas such as has been recently occurring along Koocanusa Reservoir.

25. See Response #7, above.

visitor projections. 25

The wilderness use projections for the previous draft Plan (1982) were derived using a 1980 base of 42,100 RVD's. For the revised Plan, a 1984 base of 18,000 RVD's was used. The 57 percent decrease in base figures over a 4 year period is difficult to understand. If it resulted from an error in the original calculation, the entire process of documenting visitor use and projecting future demands is questionable. This should be clarified. 26

The management objectives for backcountry areas should be clarified and separate areas of motorized and non-motorized semi-primitive recreation should be clearly designated. No motor vehicles, except snowmobiles, should be allowed in a management area with roadless recreation emphasis (MA 2). Snowmobile use in these areas is appropriate if it does not conflict with other types of recreation or with wildlife management objectives. Existing roads or trails with established motorized use should be reassigned to a management area with more emphasis on semi-primitive motorized recreation (MA 3). 27

The DEIS (II-95) states that "nonmotorized, or roadless recreation, is increasingly important because of the perception that opportunities for this form of recreation are diminishing." The proposed construction of 4,690 miles of road and the conversion of 136,000 roadless acres to other uses is clear evidence of the loss of roadless recreation opportunities on the KNF.

The Plan predicts that there will be 13 percent more recreational hunters and anglers using the KNF in the next decade (Plan; II-15). Given this trend, it is puzzling that a decrease in the number of catchable trout should be proposed. 28

The KNF should be congratulated on its goal to improve fishermen access to lakes. (DEIS; IV-89), the Plan's discussion on wilderness (Management Area 7 III-28), however, states that lake stocking will be cancelled if sites adjacent to the lake become overused. Admittedly, the presence of trout attracts (camping) fishermen to the lake, but a reduction of fishing is an inappropriate method of controlling the problem. It would be more reasonable to control camping. 29

5. Roads

The Plan provides a total road system of 10,692 miles, a 78 percent increase over existing mileage. Excluding wilderness areas, this will result in a total road density of 3.6 miles per section and 1.6 miles of open road per section. In addition, road closures do not totally compensate for losses in habitat security, especially for elk. They provide much easier access 30

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26. The 1980 base figures for wilderness recreation used in the prior DEIS were incorrectly calculated. The figures shown in the new DEIS are considered to be more correct.

27. Motorized vehicle use is allowed to continue in certain semi-primitive recreation areas where that pattern has been an historic use. If conflicts occur, the historic use can be discontinued. Areas are assigned to semi-primitive motorized use where that is determined to be the desired end result. The final Forest Plan designates more roadless recreation than the Current Direction and is considered to be adequate to meet expected demand. As projected, approximately 23% of the Kootenai Forest will still be roadless after 50 years, compared to the 26% maximum available today (518,000 acres versus 583,000 acres respectively).

28. The projection of catchable trout numbers is very difficult and accuracy can not be readily verified. To prevent significant loss of trout fisheries we have added a management goal and clarified the Monitoring and Evaluation Plan to insure that State water quality standards will not be violated. The majority of the expected increase in fishing demand will occur in lakes and reservoirs which will not be significantly affected by timber harvesting and roadbuilding.

29. See the Wilderness Action Plan for the final management direction.

30. We agree. The Kootenai intends to manage roads in areas critical for wildlife. Note that the Final Plan calls for less road building.

for walking and motor biking. Aggressive road management will be necessary to maintain wildlife habitat security. The KNF should commit to implementing the Montana Fish and Game Commission's Road Management Policy and the Interagency Elk-Logging Guidelines. However, if high quality hunting and existing hunter opportunity are to be maintained, a significant portion of important elk security areas should remain unroaded. 30 30 a 30 b

6. Wildlife

Elk habitat potential in the KNF is projected to increase 40 percent by the fifth decade. A potential increase of this magnitude is questionable in light of the proposed logging on important summer ranges and with the relatively insignificant burning and habitat improvement program planned. This needs to be clarified. 31

The Plan states that about 2,400 acres have been burned annually to benefit wildlife on the 2.2 million acre forest. This very small portion of the forest will result in little wildlife habitat improvement. We support an expanded program for the use of fire on the KNF to improve wildlife habitat. While a fire management plan is in effect for the Cabinet Wilderness, planned ignition fires will probably also be necessary in the wilderness to improve wildlife habitat.

We question whether $200/year will be adequate to assess changes in elk numbers by pellet group transects. In light of proposed increases in timber harvest and road densities, this monitoring program should be substantially expanded. 32

a. Grizzly Bear

The rationale for establishing a grizzly bear habitat and timber production prescription (MA 14) is unclear, especially since only 3.8 acres per year are scheduled for threatened and endangered species habitat improvement, while 1,633 acres per year will be harvested. Annual timber production from this management area will be 15.4 mmbf in the first decade and 41.9 mmbf in the second decade. This amount of timber harvest will not enhance grizzly bear recovery. Occupied grizzly bear habitat could be included under big game winter range areas or big game summer and fall habitat (MAs 11 and 12, respectively) if timber harvest is anticipated. 33

Habitat improvement for grizzly bears through clearcutting is discussed often. If harvest and site preparation after harvest are done correctly, habitat containing bear foods can be improved, as several studies have shown. However, on the basis of the literature, the value of 34

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30a. The Interagency Elk-Logging Guidelines are used regularly on the Forest. Road management guidelines are provided in the Forest Plan.

30b. Approximately 523,000 acres are destined to remain unroaded which is 23% of the entire forest. Over half of the forest (52%) will have some form of road management (1,170,000 acres).

31. The elk population was projected to increase 40% by the third decade, not the fifth decade as stated (See DEIS, pg. II-76). This increase is expected to occur as a result of vegetative manipulation by logging and slash disposal by burning; along with an increased emphasis on road management to insure the necessary security. The 2,400 acres per year shown for wildlife burning was for habitats outside of commercial forest lands. Currently, approximately 10,650 acres a year are burned which benefits both timber and wildlife which includes the 2,400 acres mentioned.

At this time, burning to improve wildlife habitat in the Cabinet Mountain Wilderness is not planned. Fire is only planned to perpetuate the wilderness vegetation that would be expected if fire had not been excluded over the last 75 years.

32. The $200 figure was the projected increase in the on-going cost to do this work. The total estimated costs are available for review at the Forest Headquarters in Libby, Montana.

33. The rationale for the MA 14 area is to provide for the recovery of the grizzly bear while providing for other multiple-use benefits, including timber. All activities need to provide for the bear's recovery which include scheduling of projects and limiting their scale, if necessary.

We respectfully disagree, as does the U.S. Fish & Wildlife Service, whether the amount of timber harvest projected will be possible without harming the recovery of the bear. The assumption is: if the standards and guidelines are followed in MA 14 then no harm should occur to the grizzly bear.

There is occupied habitat also in MA's 11 & 12

34. Bears do avoid clearcuts in certain situations, particularly recent clearcuts where forage has not developed and clearcuts with road access where disturbance may preclude bear use. Properly treated clearcuts (i.e. burned) on sites with potential for producing quality bear foods, and where security is provided through road closures, should receive more use than untreated, closed, timber stands.

clearcuts to grizzly bears is overstated. Little documentation exists that shows direct grizzly use of clearcuts. Blanchard (1980) and Zager et al. (1980), observed avoidance of clearcuts by bears and use of timber burns or natural shrubfields. In the Cabinets there appears to be limited use of clearcuts, but only during the fall. 34

The situation map regarding management situations does not classify several major areas in the Yaak. Considering the status of the Cabinet-Yaak grizzly population, additional consideration should be given to protecting and improving habitat. All central habitat including the unclassified areas in the Yaak should be management situation (MS) 1. The value of migration corridors is stated as being important, but only mapped as MS 2. All corridors should be MS 1. A second corridor linking the Cabinets and Yaak is possible at the confluence of the Yaak and Kootenai Rivers. 34 a

b. Management Area Direction

The following comments on specific management area direction were developed by the Montana Department of Fish, Wildlife and Parks.

1). To be consistent with stated goals, all roads in MA-2 should be closed yearlong to motorized travel. The road in upper Bear Creek, which is now opened in July and August, should be closed because of high grizzly use in the area. Also, there should be a snowmobile closure on the East Fork of Rock Creek to protect mountain goat winter range. 35

2). Portions of the Cabinet Wilderness Area plan are vague, using words such as "generally," "most," "sometimes," "maybe." This interpretational latitude allows management direction to be changed by individual Rangers. For example, "Most permanent outfitter facilities will not be allowed." This leaves the possibility of "some" facilities to occur. 36

3). The mountain goat winter range in Rock Creek should be given an MA-10 designation. The south side of Little Hoodoo and Big Hoodoo are moose winter range and should also be designated MA-10. Winter ranges should be adequately monitored so that livestock grazing does not conflict with winter wildlife use. 37 37a

4). The guidelines for unplanned fires in MA-10 are too restrictive. If winter ranges in the KNF are to be maintained and improved, considerably more attention needs to be given to the use of fire in these areas. 38

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34a. We have reanalyzed the grizzly habitat situations in the Yaak area in concert with the U.S. Fish and Wildlife Service. Land designations have been appropriately changed (see the Management Area map).

The potential second corridor will be reevaluated during the life of the plan. Land designations within the potential corridor have been made compatible with grizzly recovery goals.

35. We have provided for some historical use to continue in MA-2 areas to resolve the Recreation Issue. If a conflict arises with grizzly bear recovery goals, the historical use can be disallowed. The exceptions where these historical uses are intended are displayed in the final Forest Plan document.

Snowmobile use has been allowed historically, after 12/1, in the East Fork of Rock Creek. Conflict between snowmobile and the mountain goat use of the winter range has never been documented. If a conflict should become evident the snowmobile use can be reevaluated.

36. That is correct.

37. The goat management activities permissable under MA 10 are also permissable under MA 2.

Our experience has not shown the south side of Little Hoodoo Mountain to be prime winter range for moose.

37a. We agree that winter ranges need to be adequately monitored.

38. We disagree on the use of UNPLANNED fires in winter ranges. These areas are generally located on southern exposures at lower elevations. These conditions usually result in a good chance for large fires. We agree on the increased use of PLANNED fires to maintain and improve the winter ranges on the Kootenai.

5). The use of all terrain vehicles (ATV's) or motorcycles off roads in MA-12 should not be allowed during summer. 39

6). In MA-13 (old growth), the standard which allows for maximum modification of the visual quality objections (VQO) conflicts with the goal "to provide special habitat." Maximum modification appears to allow for the removal of the special habitat. 40

7). Many of the MA-15 areas are important for summering big game. The statement "most species of wildlife occur, but this MA is not critical to their existence" is incorrect and misleading. Many of the most productive timber lands are also the most essential and productive wildlife lands.

Examples of important wildlife areas are upper Wolf Creek, Dry Forks, Kelsey Creek, Brush Creek, Threemile Creek, Canyon Creek - Hornet Ridge complex, upper Backus Creek, Redemption Ridge, Upper Richard Creek, Cody Creek, and Alder Creek. All of these areas are intermingled with private ownerships, much of which has been heavily grazed. This area of the KNF is probably the most important wildlife area north of the Clark Fork River. It also provides more hunting recreation than most areas on the KNF. The condition of adjacent private lands should require more conservative management on the KNF lands in this area. 41

8). Portions of Wolf Creek, Redemption Ridge and Cody Creek are known travel corridors and summering areas for white-tailed deer. In addition, elk use these areas in traveling to and from winter ranges in Butler, Alder and Cody drainages. The KNF guideline of three miles of open road per section in these areas is too generous and will result in significant impacts.

9). The Montana Fish and Game Commission's Road Management Policy and the Interagency Elk-Logging Guidelines should be adhered to in all management areas.

7. Fisheries

The DEIS (III-65, IV-14) contains an excellent discussion of impact of timber harvest and road construction on fisheries, but predicts that catchable fish will decline only five percent in the next 40 years. This small decline needs further explanation, since road miles (a significant impact factor for fisheries) will increase over 75 percent in that period. 42

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39. We agree, and language in the Recreation Standards is present to reduce any conflicts with wildlife.

40. Maximum modification is our management direction for other activities which affect MA 13. We have removed MA 13 from the regulated base.

41. We agree that MA 15 contains significant wildlife values and are committed to multiple use management within this management area. This intent is clearly shown in the MA 15 goals and standards. The statement "is not critical to their existence" has been changed in the final Plan to more accurately reflect the intent of the MA 15 prescription.

42. The models used to determine effects to fish involve sediment from roads as a major factor, although other influences such as increase of anchor ice and loss of pool-making debris, both from timber harvest, also have detrimental effects.

The sensitivity of the watershed where road construction occurs influences the effects this activity has on fisheries. These influences include the recovery rate of the stream involved, initial threshold level of sediment, soil types, and sensitivity of the stream to sedimentation. Although the miles of roads will increase and add to the road inventory, many will be closed following harvest and allowed to recover as much as possible. Also the majority of the sediment from road construction occurs during the first few years following initial disturbance. The stream, however, will continue flushing fines long after the fines initially entered.

The differences in declines between resident and migratory fish is based on the assumption that although both groups are equally affected by sediment, resident trout are more prone to anchor ice problems than migrants (taking into account, unlike rainbow, young bull and cutthroat trout will remain in the tributaries for a year or two before moving downsream). One of the limiting factors on the Forest for resident young and adult fish is pool habitat. Therefore, it is assumed that instream projects, such as pools and cover, will mostly benefit resident fish on a year-round basis, offsetting somewhat the losses that may be caused by road sediment.

The difference in declines between resident and migratory fish reported in the DEIS is erroneous, since both populations are essentially identical in the critical first two years of life. 42

The DEIS (IV-66) lists habitat improvement projects commonly used by the KNF for fisheries. However, the limiting factor to trout populations from forest activities will be the impact of increased sediment yields on egg incubation and fry recruitment. Habitat improvement in high gradient streams is relatively untested; moreover, it does not address problems caused by increased sedimentation. The KNF should stress protection of existing habitat rather than planning to mitigate preventable habitat damage with expensive and unproven methods. 43

8. Range/Weeds

Although the DEIS briefly mentions that the KNF is cooperating with the Cooperative Extension Service in controlling knapweed, no commitments to weed control are made in the Plan. Spotted knapweed is a serious resource problem in northwest Montana. The extensive roading proposed on the Kootenai has the potential to greatly contribute to the spread of knapweed and other noxious weeds. The Plan should present a weed management strategy, preferably an Integrated Pest Management (IPM) approach, and commit to cooperative efforts with county weed boards, conservation districts and adjacent land-owners as well as the Cooperative Extension Service. 44

Big game should not necessarily have priority over livestock for forage resources. This should be handled on a case-by-case basis after considering the grazing history. 45

9. Water Quality

a. Forest Plan

The projected decrease in water quality, as indicated by a permanent reduction in numbers of catchable trout, is a concern. If adverse impacts to water quality and fisheries can't be mitigated, the proposed 4,687 mile increase in the road system should be reevaluated. Because the KNF is Montana's most productive timber producer, the forest should attempt to achieve harvest targets on the most productive, least erosive sites. Road construction in steep marginal sites should not occur if water quality and fisheries cannot be maintained. 46

Under the proposed Plan, water yields would increase by 6 percent as compared to 5 percent under current direction. 47

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43. The final Forest Plan projects less road construction which should provide for a lesser effect on the fish habitat and fishery. See the response to #42.

44. See the response to #9 above.

45. We agree. Winter range monitoring intent is displayed in the Monitoring and Evaluation Plan.

46. Road construction needs have been reduced primarily due to removing old-growth timber habitats from the timber base. The net effect is a reduction in anticipated sediment and effect on water quality and fisheries. See Response #28 above.

47. The 1982 DEIS was in error. As more of the Forest is put under management the water yield will increase slightly. However, the calculated increases all fall within acceptable limits.

This differs from the 1982 KNF Plan which predicted that water yields would triple. This large difference should be clarified in the final Plan. 47

Mean allowable peak flow increases range from 12 to 18 percent depending on the channel stability rating (Plan; A18-4). Although more stable channels can withstand higher flows, higher flows still cause impact. The monitoring plan (Plan; IV-9) will not initiate further action unless stream stability rating increases 20 points. In many cases, a 20 point increase is sufficient to drop a stream into the next lowest stability category. Streams in excellent condition should be maintained in that status. 48

The Plan fails to identify those watersheds that are expected to exceed water yield guidelines; nor is any attempt made to identify stream reaches that provide critical spawning habitat. This information should be included in the Plan. The KNF needs to calibrate its water yield and sediment models to increase the level of confidence in predictions. 49 49 a

The following are additional page specific comments:

1). Chapter II, pg II-14, Timber, Pg II-7, Minerals, pg II-9, Roads and Trails:

A statement ensuring that best management practices will be applied during Plan implementation should be included in these sections in support of water quality goals (state water quality standards) being met, as agreed by the Region One Office. 50

2). Chapter II, pg II-7, Soil and Water:

The KNF is commended for their recognition of Flower Creek and O'Brien Creek as public water supply watersheds for Libby and Troy respectively. Special watershed management considerations are required in these watersheds to protect water quality. 51

3). Chapter II, pg II-14, 4. Additional Data Requirements and Accomplishment Schedule, Table II-3:

Item #8 should be expanded to include a wider streamflow (water yield) and water chemistry data base in support of monitoring and evaluation of forest activities. 54

4). Chapter IV, pg IV-8, Table IV-1, Monitoring and Evaluation Plan, Monitoring Items F-1 and F-2:

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48. Water yield guidelines are used to evaluate project impacts and are based on the Channel Condition Survey. Channel changes are subtle and hard to detect. A lesser change would be hard to detect or attributable to the subjectivity of the inventory procedure.

49. No watersheds are expected to exceed water yield guidelines, if the hydrologic guides are used appropriately. The watersheds that are now at, or above, desired water-yield-increase levels are listed in the DEIS, pg. III-73. (see Response #10)

49a. See Response 10a, above.

50. The Forestwide goal of "Meeting or exceeding State Water Quality Goals" meets this request. The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards are met.

51. No response required.

Numbers 52 & 53 were skipped inadvertantly.

54. The monitoring plan has been modified to include the critical components of water quality.

The need for increased monitoring for accurate evaluation of the impacts of forest activities as described in the goals of the Plan should be expanded. Water Quality goals should not be limited to sediment control and water yield. Water chemistry and aquatic life should also be included in the long-term monitoring/evaluation program. 54

5). Appendix 18, Guidelines for Calculating Water Yield Increases:

The explanation and rational for calculating increased water yield as a result of canopy removal (timber harvest) and hydrologic recommendations for timber harvest are appreciated. 55

b. Draft EIS

While the DEIS and Plan provide appraisals of the impacts of timber harvest and road construction on fisheries and water quality, the magnitude of the impacts is generally not stated or underestimated. In the Plan, roads will increase 78 percent (or 4,690 miles) compared to 1984 levels (DEIS; II 153), and roads cause 80-90 percent of erosion and sedimentation problems (DEIS; IV-14). Increased sediment yields are one of the major potential impacts of increased road building. Despite the increase in road miles and the 1982 DEIS prediction for a 50 percent increase in sediment, the current DEIS does not estimate sediment yields and characterizes sediment yield increases as "medium" (DEIS, IV-55). As a result, there is not enough information for reviewers to determine if the proposed plan adequately protects water quality and fishery habitat. It would seem prudent for the KNF to limit activities for which inadequate data exists to predict impacts. 57

Appendix B contains a position statement of the Montana Department of Health and Environmental Sciences (MDHES) regarding potential sediment yields not addressed in the KNF Plan and DEIS. The position is similar to earlier department statements regarding projection of sediment yields on other national forests in Montana.

In previous discussion with the MDHES Water Quality Bureau, the Region One Office agreed to incorporate several items into the Plan and DEIS for the purpose of resolving the state's water quality concerns related to sediment yield. These items are outlined in Appendix C and should be included in their entirety in the final EIS and Plan.

Although the KNF contains two of the largest river systems in Montana (Clark Fork of the Columbia and Kootenai 58

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55. No response needed.

Number 56 was skipped inadvertantly.

57. The projection of sediment volumes reaching streams is very difficult and accuracy can not be readily verified thus a relative scale was used for comparative purposes. To insure that sediment will not cause significant impacts, we have added a management goal and clarified the Monitoring and Evaluation Plan to insure that State water quality standards will not be violated.

58. Water Quality protection is considered a critical item and has been addressed as a Minimum Management Requirement (See Appendix B for a complete description). Because Minimum Management Requirements apply to all alternatives, no superior advantage is gained when a determination of Net Public Benefit is made. The value of Water Quality Protection was calculated to be $566,000,000 in terms of its opportunity cost as a minimum and could be added to each alternative, if desired.

River), high quality water is not identified as a critical item in determining Net Public Benefit (DEIS; S-14) despite its value to the state and benefits to users on and off the KNF. This should be corrected. 58

Very few measures to mitigate impacts from road construction have been mentioned in the Plan or DEIS. Mitigative measures should be incorporated into the Plan by referencing the use of Best Management Practices (BMPs). 58 a

c. Monitoring

The proposed monitoring budget of $12,900 appears too low considering that this funding will be expected to pay for watershed surveys, fisheries surveys, channel stability inventories, core samples, temperatures and log recruitment samples and streamflow and crest recording gauges. The standards proposed to initiate action on water and sediment yields are such that substantive damage could occur before corrective action is taken. If the proposed management goals are to be realized, a more comprehensive and detailed monitoring program should be developed before the Plan is implemented. 59 59 a

10. Riparian Areas

Riparian areas are some of the most important areas in the KNF for fish, wildlife and water quality. The zone definition in the Plan (III-2) is good, but the Plan states that constraints on activities along ephemeral streams will not be as stringent. Ephemeral streams are very efficient sediment conductors during spring run-off and should be given the same protection as perennial streams. The constraints on timber harvest in riparian zones are too general to assure that these areas will be protected. Further, there is no mention of available mitigation measures such as winter logging. We consider dozer scarification incompatible with riparian management because of soil compaction and stream sedimentation. The Plan also specifies that water quality will be monitored during ground disturbing activities but does not specify the parameters or duration of monitoring. The development standards for this critical management element needs to be detailed further. 60 60 a 60 b 60 c

11. Other

The section on air quality (DEIS; IV-104) should reference the State Airshed Group and the Montana Cooperative Smoke Management Plan, as they represent best available control technology. 61

The Plan should describe how coordination with the Montana

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58a. Mitigative measures are mentioned in the plan as "Best Management Practices" (BMP's) or as reference to the "Soil and Water Conservation Practices Handbook - FSH 2509.22". The handbook, which has not yet been issued in its final form, will become the reference for mitigative measures to be used.

59. The proposed budget for monitoring was displayed as the additional budget. The requirements for Monitoring and Evaluation are found in Chapter IV of the final Forest Plan. Funding by individual Monitoring and Evaluation element is not included in the final Plan, but the expected budget for Monitoring activities is part of the total budget. Monitoring is an integral part of all activities on the Forest and, as such, will be funded as part of those activities. The variability levels have been re-analyzed.

59a. See the new Monitoring Plan in the final Forest Plan document.

60. Our management intent is to protect ephemeral streams and their zone of influence. The ephemeral stream will be protected during the time it is wet. Activities may occur in these areas when they are dry, but measures must still be taken to mitigate the impacts. We have also added standards addressing winter logging and clarified the standard on dozer scarification.

60a. See the response to #60, above.

60b. See the response to #60 above.

60c. See the new Monitoring Plan in the final Forest Plan document.

61. The Kootenai National Forest coordinates the execution of all prescribed burning activity with the Montana State Airshed Group to assure compliance with applicable provisions of the Montana Smoke Management Plan.

Department of State Lands will be ensured regarding fire suppression tactics on KNF management areas protected by the State. 61

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No response needed on this page.

APPENDIX A

SCOTCHMAN PEAKS ROADLESS AREA - 1,662

Forest: Kootenai & Idaho Panhandle - Montana

1983 Roadless Area Net Acres:	Kootenai	52,100
	Idaho Panhandle (Montana)	12,417
		64,417
Recommended Wilderness Acres:	Kootenai	33,698
	Idaho Panhandle (Montana)	12,417
	TOTAL	46,115

I. WILDERNESS ATTRIBUTES:

The Scotchman Peaks roadless area is loctaed on the Idaho Panhandle and Kootenai National Forest on the Idaho-Montana border. It is in the western section of the Cabinet Mountains north of the Clark Fork River and lies between Lightning Creek on the west and Bull River on the east. Access to the area is by Highway #200 and #56 leading to several trails including Pillick Ridge and Star Gulch trails on the south and Ross Point and Little Spar Lake trails on the north.

The area is characterized by rugged alpine scenery left by glaciers on the upper elevations. Major scenic attractions include Sawtooth, Billiard Table Mountain in Montana and Scotchman Peaks in Idaho. In Ross Creek glacial cirques grade into the u-shaped valley of the south fork of Ross Creek. Stands of large old growth hemlock, cedar and white pine are found along the drainage to the scenic Ross Creek cedar grove below outside of the proposed wilderness area.

The area supports a small population of grizzly bear, a threatened species. Populations of elk, deer, big horn sheep and mountain goats also inhabit the area.

The only lake of significance in the area is Little Spar Lake. This receives heavy recreational use primarily for the fishery resource.

The wilderness potential for Scotchman Peak is high. Lack of access, the rugged terrain and dense vegetation provides a challenge for visitors looking for a true wilderness experience in a relatively small area.

II. RESOURCE VALUES:

Ross and Blue Creeks contain stands of large old growth cedar, white pine and hemlock. Most of the area recommended for wilderness does not have an economically suitable timber resource due to the rocky steep terrain. Road construction would be extremely difficult and logging would be limited to cable and helicopter logging systems.

Mineral potential is high for economic recovery of copper and silver deposits in the Ross Point and Star Gulch areas. Oil and gas potential is unknown.

There are no grazing allotments in the area and grazing potential is all transitory.

Response to Letter #305 - Montana State Office of the Governor, Pg. 305o

No response needed on this page.

E-36

III. BOUNDARY RATIONALE:

Mineral conflicts were mitigated by boundary adjustments in the Ross Peak area. Potential minerals in the Star Gulch area is also considered high, however boundary adjustments in the Star Gulch area were minimal. Exceptions for mineral exploration should be made in the Star Gulch are if the area were classifed as wilderness.

Boundary adjustments for the timber resources were made on the eastern boundaries and the lower Blue Creek area for timber considered economically suitable by the Kootenai National Forest.

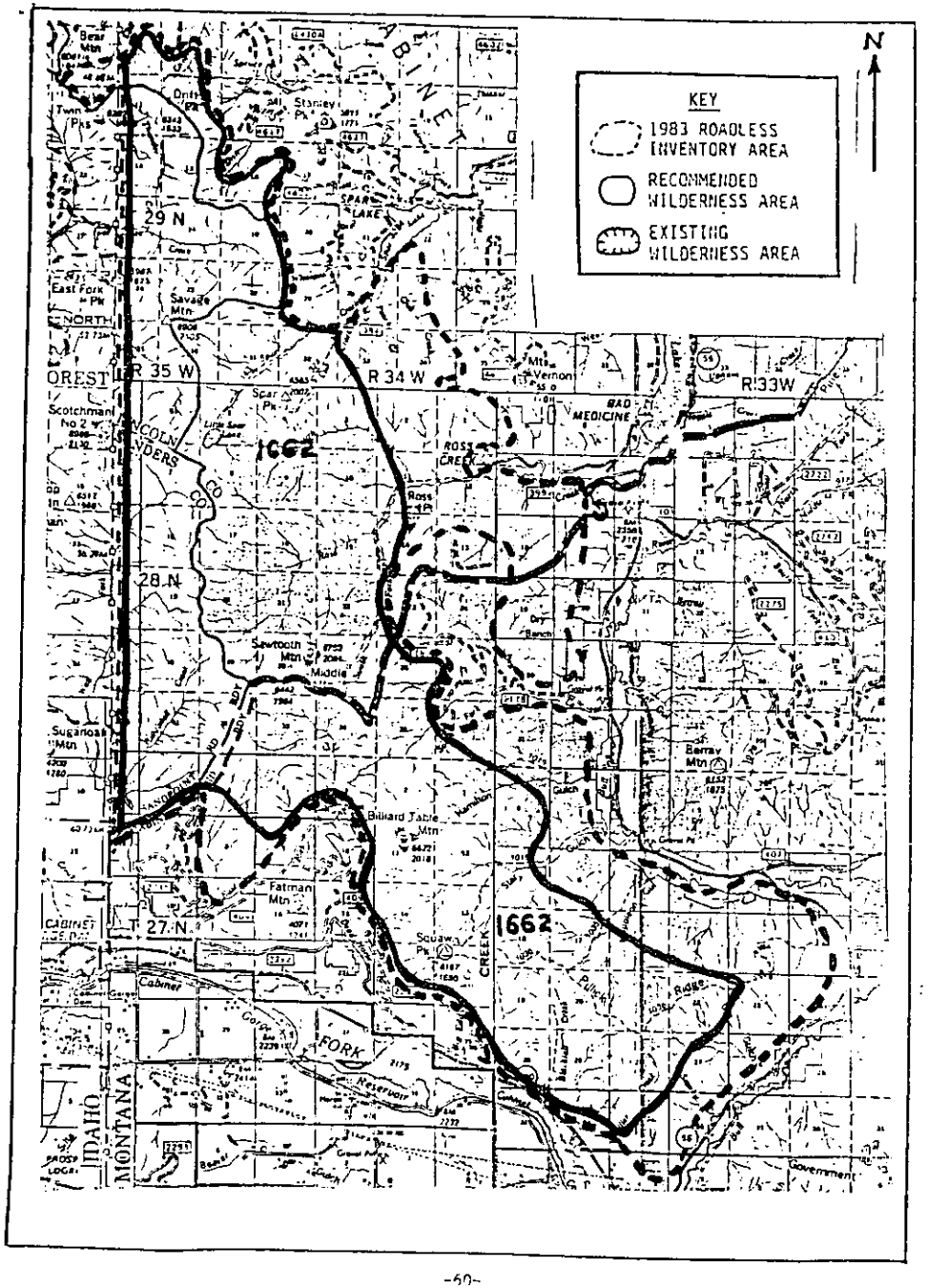
Some snowmobile use is recognized in the Drift Peak area in the northern portion of the roadless area in Montana. This use would be precluded if the area were designated as wilderness.

62

Response to Letter #305 - Montana State Office of the Governor. Pg. 305p

62. The boundary recommendations were accepted with some adjustments. Exceptions for mineral prospecting are Congressional prerogatives.

E-37



Response to Letter #305 - Montana State Office of the Governor, Pg. 305q

No response needed on this page.

CABINET FACE WEST ROADLESS AREA - 1,670
Forest: Kootenai
1983 Roadless Area Net Acres: 9,600
Recommended Wilderness Acres: 6,886

I. WILDERNESS ATTRIBUTES:

This area is in two parcels starting on the west side of the Cabinet Wilderness area at Swanson Creek on the north and extending south to the Noggle Creek drainage. The Madge Creek access road separates the two parcels.

The area is steep and rugged and is primarily a side hill situation.

The drainages and sideslopes are forested with ponderosa pine and Douglas-fir.

The area would provide more solitude to the existing wilderness by increasing its size.

II. RESOURCE VALUES:

The area is predominantly grizzly bear habitat. Mountain goats winter in the Camp Creek area and mountain sheep in the Ibex Peak area. Populations of elk, deer and black bear area also found in the area.

The timber resource potential is considered fair to poor due to the steep rocky slopes and difficulty of logging.

Mineral potential is considered low and oil and gas potential is unknown.

There are no grazing allotments and the grazing potential is all transitory.

III. BOUNDARY RATIONALE:

The area as proposed has excluded the roadless State and private lands. Existing section lines can be marked to provide manageable boundary.

There are no significant resource potential that would be affected by a wilderness classification. 63

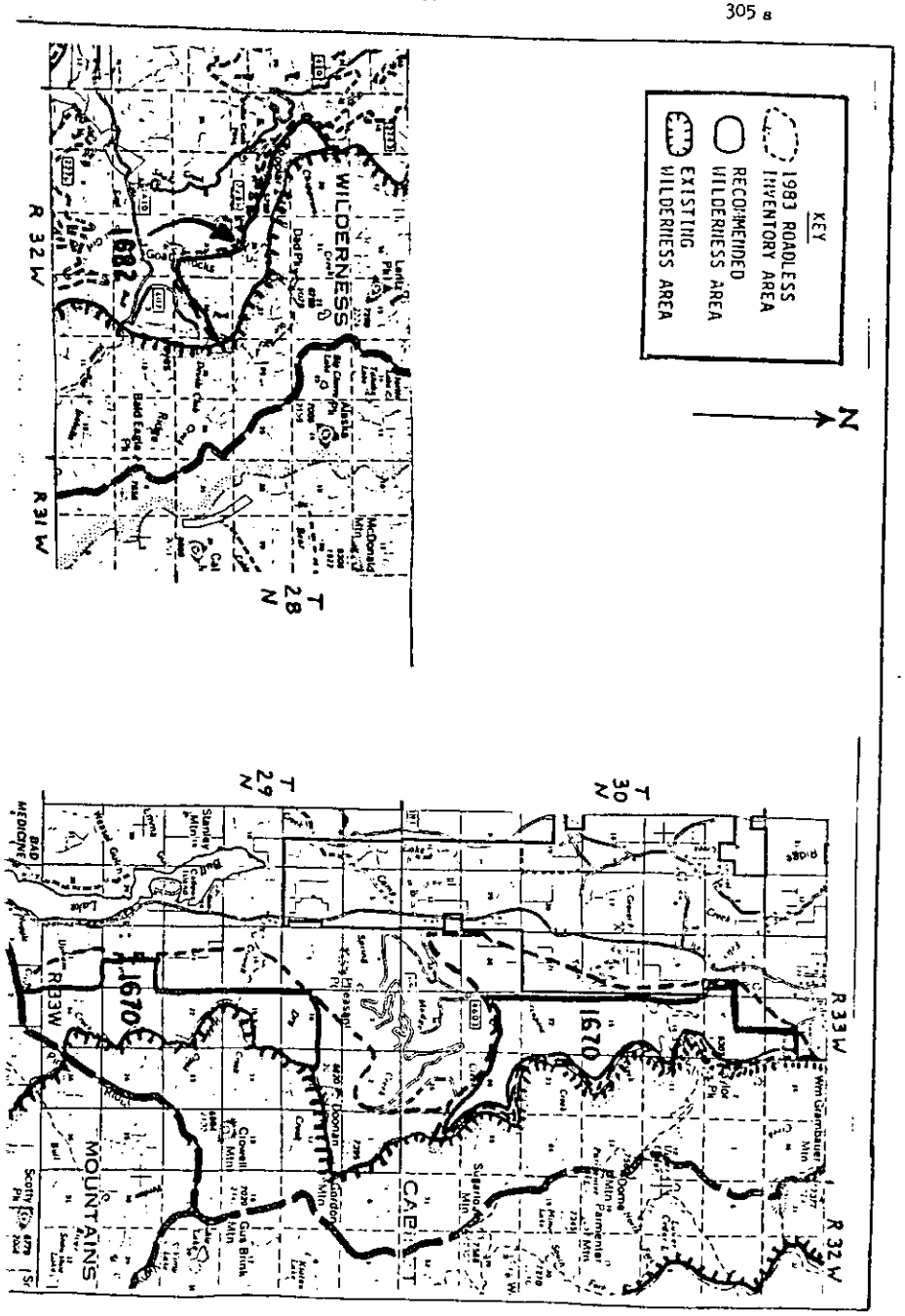
Response to Letter #305 - Montana State Office of the Governor, Pg.305r

63. We agree.

Response to Letter #305 - Montana State Office of the Governor, Pg. 305s

No reponse is needed on this page.

305 s



CABINET FACE EAST ROADLESS AREA - 1,671
Forest: Kootenai
1983 Roadless Net Acres: 50,500
Recommended Wilderness Area: 17,357

I. WILDERNESS ATTRIBUTES:

The area recommended for wilderness is located on the eastern edge of the Cabinet Wilderness and north of Leigh Creek. It also includes roadless areas 681 A & B on the 1978 Rare II inventory on the extreme north end adjacent to the Lions picnic ground. The area is accessible by roads and trails off U.S. Highway #2 westerly from Libby. The proposed addition is approximately 15 miles long and varies from 1 to 3 miles wide.

Topography is rugged steep walled canyons. Topography ranges from 3,600 feet to 7,000 feet in elevation. The lower elevations are timbered in the stream bottoms and sparsely vegetated in the higher elevation. Slopes are steep, 55% and above. The lower elevations are managed for timber and wildlife on the eastern edge.

Douglas-fir and spruce timber types are the cover type represented.

Attractions include numerous hiking trails, wildlife and scenery. A wide variety of wildlife including grizzly bear inhabit the area.

Addition of this area would provide greater depth and opportunities for solitude to the existing Cabinet Wilderness.

II. RESOURCE VALUES:

Timber potential for the proposed addition is low. Mineral potential for the area is low.

Oil and gas potential is unknown.

There are no grazing allotments in the area. Grazing potential is low and is transitory in nature.

III. BOUNDARY RATIONALE:

The significant timber resource areas have been excluded from the recommended wilderness areas. Timber harvest within the recommended areas is not considered economically feasible due to steep rocky slopes, difficulty of road construction and logging.

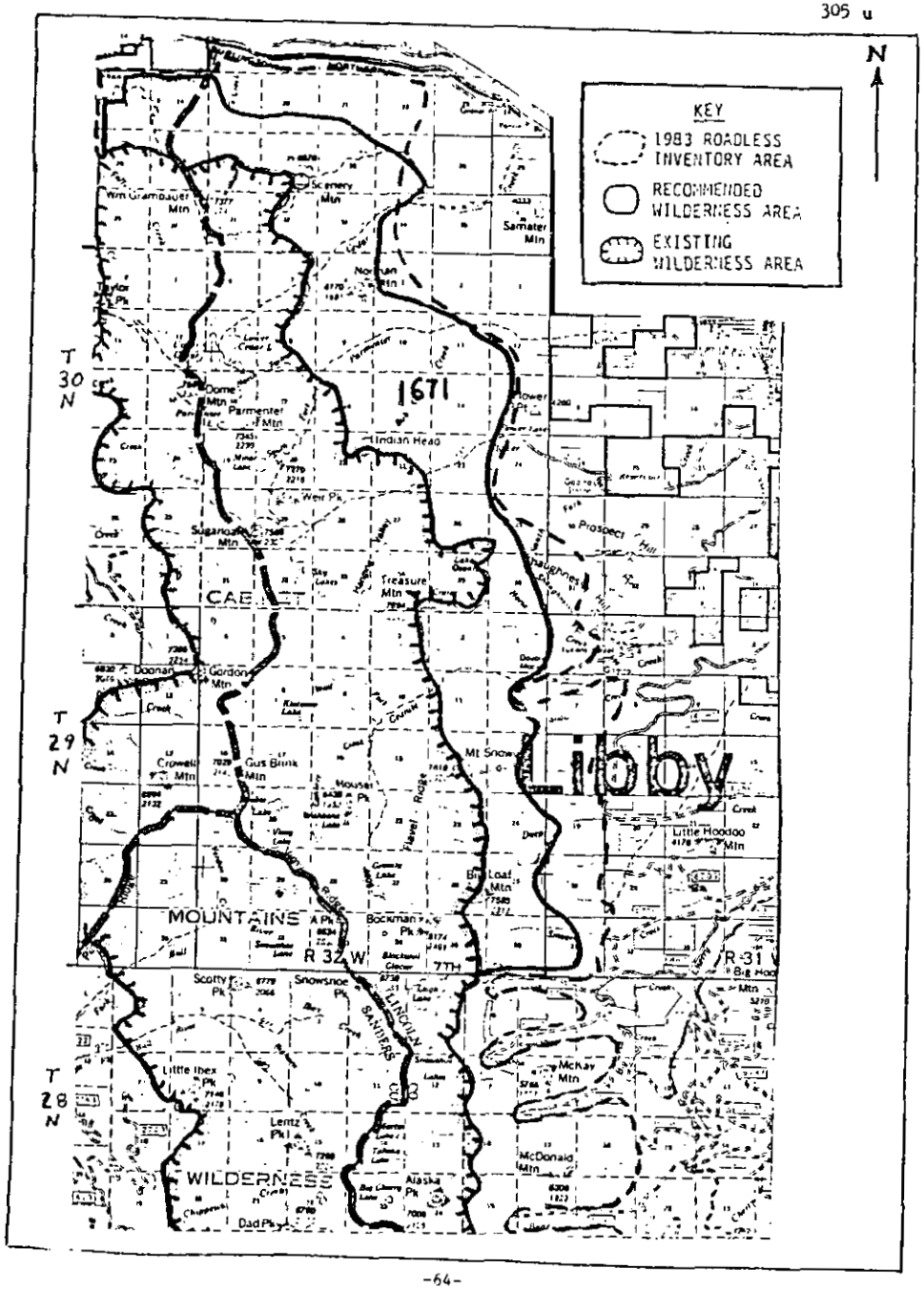
Areas with mineral potential or potential claims south of Leigh Creek have been excluded from the recommended wilderness addition.

Special uses including a Soil Conservation Service snow course and an electronic site is located on Indian Head Mountain. Exceptions to the wilderness recommendation will need to be included to continue these existing uses. 64

Modification of the proposed boundary have excluded private lands and mitigated most conflicts. The boundary selected follows distinct topographic features and should be easy to manage.

Response to Letter #305 - Montana State Office of the Governor, Pg. 305t

64. We agree. A point of clarification is needed: the Soil Conservation Service snow course is located in Poorman Creek which is outside of the recommended wilderness boundary.



Response to Letter #305 - Montana State Office of the Governor, Pg. 305u

No response is needed on this page.

McKAY CREEK ROADLESS AREA - 1,676
Forest: Kootenai
1983 Roadless Net Acres: 14,100
Recommended Wilderness Area: 6,081

I. WILDERNESS ATTRIBUTES:

The area is located adjacent to the southwestern corner of the Cabinet Mountain Wilderness area south of Wanless Lake. The area can be accessed by trail from the McKay Creek and Swamp Creek roads off of State Highway #200.

The portion of the roadless area proposed for wilderness includes the headwaters of Swamp Creek and McKay Creek. Topography is steep and rocky including stream bottom and ridge top. Forest cover types include ponderosa pine, Douglas-fir, cedar, hemlock and evergreen spruce.

The area contains suitable grizzly bear and mule deer habitats. The Swamp Creek and McKay Creek trails provide access to the Cabinet Mountain Wilderness.

The area's natural integrity and appearance are high with trails being the only man-made features. Opportunities for solitude are many and of a high quality especially in the Swamp Creek area. Primitive recreation opportunities include hunting, fishing and hiking. McKay Creek if classified as wilderness would enhance the existing Cabinet Wilderness by providing more depth and solitude.

II. RESOURCE VALUES:

The area contains suitable grizzly bear and mule deer habitat.

Timber suitability in the proposed wilderness addition is poor due to the difficulty and high cost of road construction. Logging would be limited to cable and helicopter systems.

Mineral potential for economic recoverable copper and silver deposits are high to the north of the proposed area in the Eagle Peak area. Exploration by U.S. Borax indicates a high mineral potential. The oil and gas potential for the area is unknown.

There are no grazing allotments in the area and grazing potential is considered all transitory.

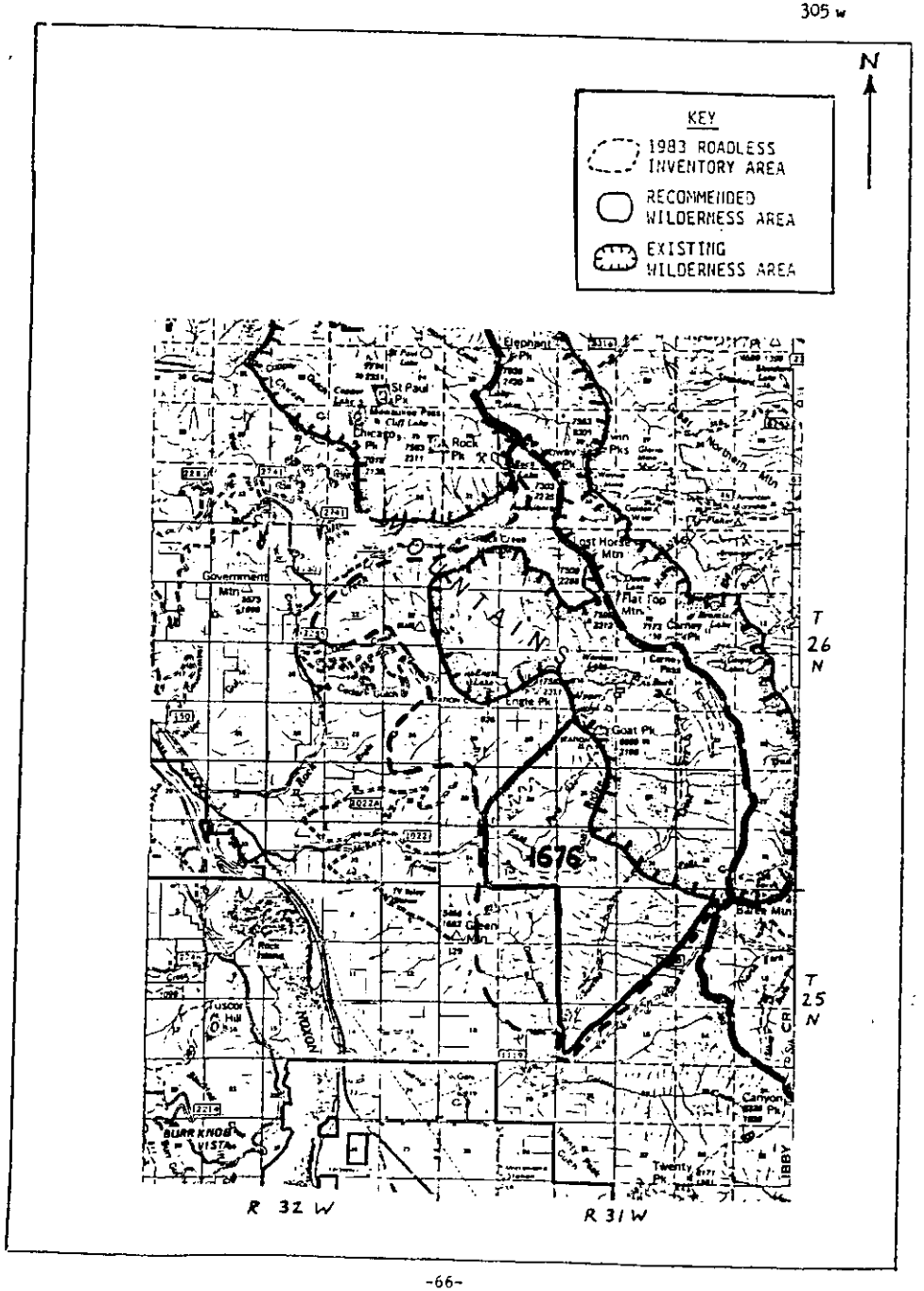
III. BOUNDARY RATIONALE

Boundary adjustments to the roadless area as recommended in this wilderness proposal mitigates the conflicts with mineral development and timber production. A parcel of private land in McKay Creek is currently under exchange negotiations with the U.S.F.S.

McKay Creek if classified as wilderness would enhance the depth and solitude of the existing Cabinet Wilderness. The boundary as proposed is easily identified by natural features and would not present a problem as proposed. 65

Response to Letter #305 - Montana State Office of the Governor, Pg. 305v

65. We agree but have expanded our proposal to include a larger portion of McKay Creek. Exceptions for mineral exploration are a Congressional prerogative.



Response to Letter #305 - Montana State Office of the Governor, Pg. 305w

No response is needed on this page.

CHIPPEWA CREEK ROADLESS AREA - 1,682
Forest: Kootenai
1983 Roadless Net Acres: 2,100
Recommended Wilderness Area: 2,100

I. WILDERNESS ATTRIBUTES:

This area is located on the west side adjacent to the existing Cabinet Wilderness area west of Dad Peak. Access to the area is provided from the Bull Lake road - State Highway #56 and the south fork and east fork of the Bull River road. Trail access through the area is from the east fork of the Bull River road.

The area is on a high steep rocky ridge top located on the west edge of the Cabinet Wilderness. The area is bordered to the west by roads and existing timber harvest units. The timber is primarily Douglas-fir cover type.

The area contains big horn sheep, goats and mule deer. The overall integrity and appearance is high. Opportunities for solitude is moderate because the area overlooks the developed Bull River Valley. The area would enhance the Cabinet Wilderness by providing more depth and solitude to the existing Cabinet Wilderness.

II. SIGNIFICANT RESOURCE VALUES:

The area contains big horn sheep, goats and mule deer. The area is considered suitable grizzly bear habitat.

Timber suitability is considered low due to the steep rocky slopes. Road construction would be very costly and logging would be limited to cable and helicopter systems.

There are no grazing allotments in the area and grazing potential would be transitory.

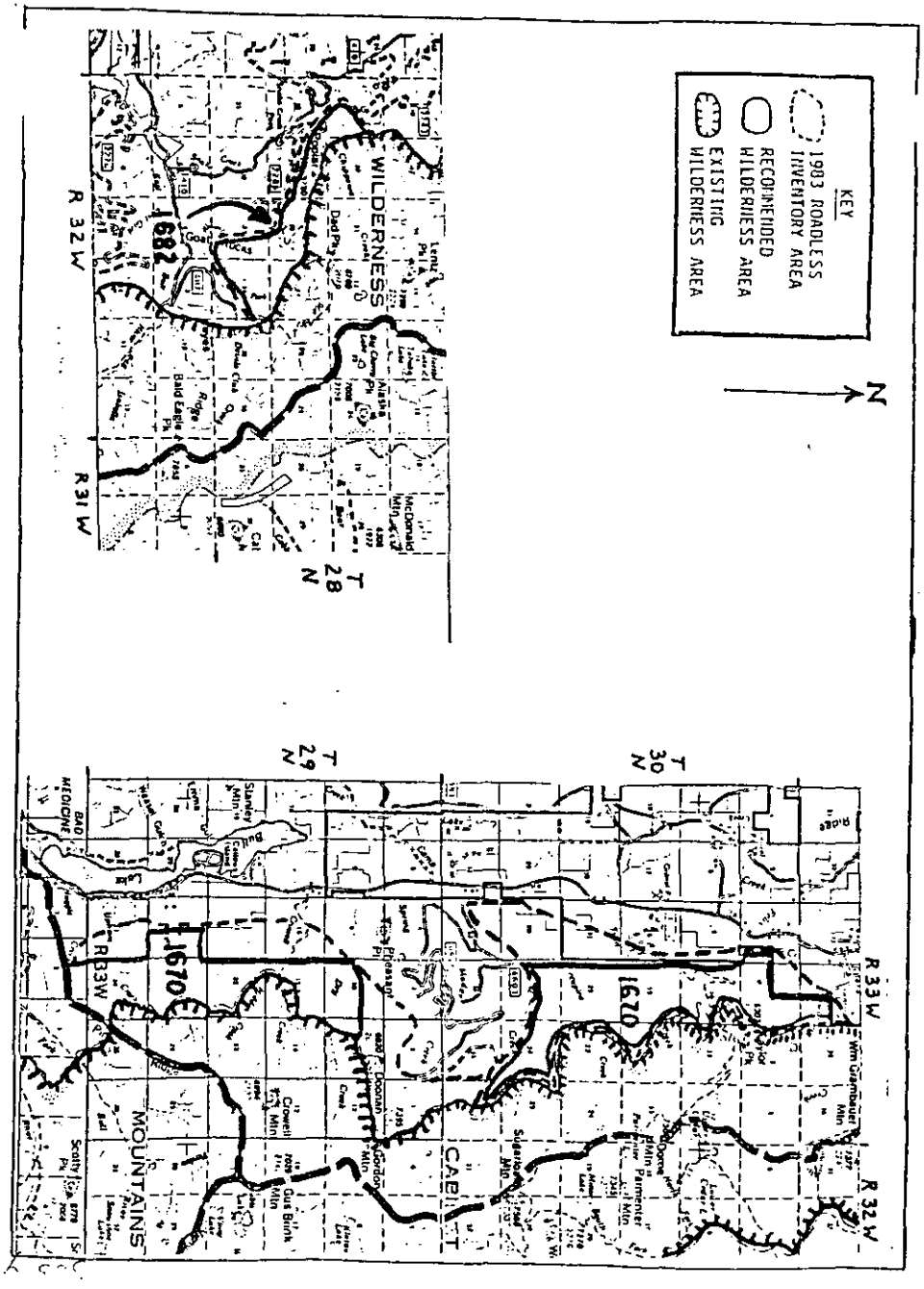
Mineral potential is low and oil and gas potential is unknown.

III. BOUNDARY RATIONALE:

Manageability of the area boundary would be somewhat difficult as it does not follow well defined boundaries. Except for a marginal timber resource, conflicts would be minimal if this area were added to the wilderness system. 66

Response to Letter #305 - Montana State Office of the Governor, Pg. 305x

66. We essentially agree with the rationale but recommend a different boundary because some of the area includes cutover timberland that was mistakenly included in the latest Roadless Inventory.



Response to Letter #305 - Montana State Office of the Governor, Pg. 305y

No response needed on this page.

APPENDIX B

POSITION STATEMENT OF THE MONTANA DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES REGARDING POTENTIAL SEDIMENT YIELDS NOT ADDRESSED IN THE KOOTENAI NATIONAL FOREST PLAN AND DRAFT ENVIRONMENTAL IMPACT STATEMENT

Sediment increases are likely to occur as a result of implementation of the Kootenai National Forest Plan. Increases in sediment yield due to forest activities in some watersheds may be in violation of the Montana Water Quality Act, Sections 75-5-303 and 75-5-605 MCA, and the Montana Water Quality Standards, Section 16.20.633, and Subsections 1 d-e and 2. Decisions on the acceptability of increased sediment yield can be made only on a stream-by-stream basis. Such decisions must take into account the stream's water quality classification, the relative value of the stream's fishery, the predicted loss of life from the stream, and site-specific best management practices to be used in the watershed. Information concerning the cumulative effects of forest activities on water quality and fish in individual forest streams should be made available for public inspection. Land, soil, and water conservation practices that do not give adequate protection to water quality, fisheries, and watershed values shall not be considered "reasonable" in the context of Section 75-5-306 MCA, Subsection 2, and Section 16.20.603 ARM, Subsection 11. 67 68

Response to Letter #305 - Montana State Office of the Governor, Pg. 305z

67. The Final Plan directs that State Water Quality Standards will not be violated. The Monitoring and Evaluation Plan has been modified to address this potential problem area. Provisions to postpone, alter or stop activities which may cause the standards to be violated have been added. The "Soil and Water Conservation Practices Handbook - FSH 2509.22" will become the guide to "Best Management Practices" when it is issued.

68. We agree.

APPENDIX C

Water Quality Considerations in DEIS

Following is an outline of how sediment production and water quality considerations should be addressed in DEIS's. These standards are designed to accomplish two objectives: (1) to ensure that State water quality standards will be met if the Forest Plans are implemented in accordance with the direction contained in them, and (2) to improve the visibility of these documents of our intention to meet State water quality standards.

The approach outlined for the DEIS departs from the traditional one of displaying sediment production in terms of Forest-wide totals per year. Forest-wide sediment production is not a useful measure for evaluating the relative desirability of alternatives; the approach being adopted should be of more value in the decision-making process and be more understandable to the public. 69

DEIS

Chapter II - Alternatives

Comparison of Alternatives

In the Watershed subsection, display and discuss the sediment production potential, in terms of the activities that generate sediment, in a manner similar to the following example:

Response to Letter #305 - Montana State Office of the Governor, Pg. 305aa

69. We agree that the suggested approach could be more understandable to the public. See Response #57 above.

Sediment production can be generated both by increased water yields and ground disturbances.

The principal activity resulting in increased water yields from Kootenai National Forest lands is timber harvest. Other activities that contribute to increased water yield are the clearing associated with road construction, mineral exploration and development, grazing, and slash disposal and site preparation following timber harvest.

Ground disturbance increases the risk of increased sediment yields. Ground-disturbing activities include road construction, mineral exploration and development, timber harvest and the associated slash disposal and site preparation and grazing -- especially in riparian zones. The actual risk of increased sediment yield will vary depending on the amount of soil disturbance, the type of treatment, soil material, and various other physical and biological factors. As roads stabilize and disturbed sites revegetate, sediment production decreases.

Table _____ displays the amounts of sediment producing activities for the alternatives as indicators of their sediment production potential. Using road construction and timber harvest levels as the principal indicators, the alternatives are ranked as to their relative

Response to Letter #305 - Montana State Office of the Governor, Pg. 305 bb

No response needed on this page.

risk of affecting water related beneficial uses, based on siginificant differences in sediment production potential. The alternative(s) ranked 1 has (have) the least risk of affecting such uses.

Table _____
SEDIMENT PRODUCTION POTENTIAL OF ALTERNATIVES - Level of Sediment Producing Activities (Average Annual, _____*)

Sediment Producing Activities	Alternatives
Road Construction - ** Miles	
Timber Harvest - M Acres	
Mineral Explor/Develop. - *** M Acres	
Grazing - M AUM's	

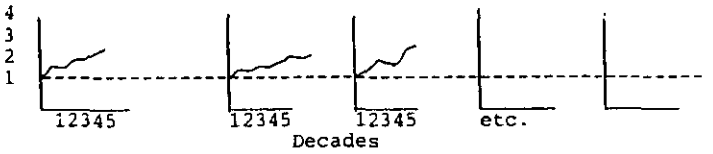
Ranking

* Forests should use the time period that will best portray the sediment production situation and associated problems.

** If total miles of road construction does not accurately demonstrate the sedimentation risk of the alternatives, this situation should be explained in the narrative. An example of where the risk is not accurately demonstrated by total road miles would be when one alternative has the least road miles but the roads will be built in higher hazard land types than the other alternatives. Another example would be an alternative with relatively fewer road miles but with the road construction concentrated within a shorter time span than the other alternatives, resulting in a higher risk of impacting water related beneficial uses. The timing of road construction (and other activities with timing implications between alternatives) could be shown in the above table, under the total road mileage number, as follows:

Response to Letter #305 - Montana State Office of the Governor, Pg. 305cc

No response is needed on this page.



*** This display item may only be appropriate for Forests with an active mineral exploration or development program. Other Forests with mineral development potential should discuss the possiblity that mineral activity could occur, and state the circumstances that could trigger the activity (demand/price for various minerals, etc.).

Management practices will be used in all alternatives to carry out these activities to assure that they will accomplish Forest Plan goals, one of which is to meet and/or exceed State water quality standards. These practices are referred to as best management practices. (Discuss the sediment production potential rankings of the alternatives, and the reasons for the differences between alternatives. Include in this discussion an explanation of factors other than total level of activity that affects the rankings.) Due to their higher sediment production potentials, it would be more costly to meet Forest water quality goals for Alternatives ____, ____, and ____, and there would be a greater risk that water quality might be impacted in spite of application of best management practices.

The effects of sediment production on water related beneficial uses will be evaluated during project development to ensure meeting Forest water quality goals. Projects that

Response to Letter #305 - Montana State Office of the Governor, Pg. 305dd

No response is needed on this page.

will not meet State water quality standards will be redesigned, rescheduled, or dropped.

Chapter IV - Environmental Consequences

Each alternative subsection, MILES OF NEW ROAD CONSTRUCTION is addressed the same, water quality will be affected. This section should include more information.

Under each management activity that has a significant effect on soil, water, or water related beneficial uses such as fish habitat, municipal water, recreation, irrigation, and industrial water, describe such effects. Management activities normally affecting soil, water, or fish habitat potential include timer harvest, road building, slash disposal, site preparation, grazing, and mineral exploration and development. Display with tables and graphs, as appropriate, and/or briefly describe the magnitude of the effects, comparing the relative differences among alternatives. Where an effect cannot be expressed in quantifiable terms, the potential of the alternatives to produce the effect can be related to the level of activity or activities responsible for the occurrance of the effect. Discuss the feasibility and effectiveness of mitigating the effects on water related beneficial uses, such as with capital investments for fish habitat or watershed improvement.

Response to Letter #305 - Montana State Office of the Governor, Pg. 305ee

No response is needed on this page.

United States Department of Agriculture | Forest Service | Kootenai NF Fortine RD | P.O. Box 116 Fortine, MT 59918

22

Reply to: 1920 LAND AND RESOURCE MANAGEMENT PLANNING Date: 9/24/85

Subject: RESPONSE ON FOREST PLAN

To: FOREST SUPERVISOR
ATTN: JIM SHADLE

I received a call today from Mary Lou Peterson in response to our letter and mailer we sent out on the Forest Plan.

Generally, she was quite complimentary about the Plan and felt a lot of effort and thought had gone into preparing the document.

Two items she specifically commented on were:

1) Felt the Forest Service should help to encourage economic growth wherever possible. 1

2) Felt the State was attempting to remove the grizzly bear from the endangered species list and wanted us to pursue the same as rapidly as possible. However, did not have any specifics and how to accomplish. 2

Thanked us for involving her.

WILLIAM BOETTCHER
District Ranger

Response to Letter #22 - Mary Lou Peterson, State Representative

1. We agree.

2. We agree that the grizzly bear should be recovered and removed from the T & E list as soon as possible.

The Big Sky Country 142

MONTANA HOUSE OF REPRESENTATIVES

REPRESENTATIVE BERNIE SWIFT
HOUSE DISTRICT 64
HELENA ADDRESS
CAPITOL STATION
HELENA, MONTANA 59620
HOME ADDRESS
5E 206 ROSE LANE
HAMILTON, MONTANA 59840

COMMITTEES:
APPROPRIATIONS

Hamilton, Mont.
October 27, 1985

Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

Kootenai Forest Supervisor:

Following are my comments on your Kootenai Forest Plan.

First of all, I hope that you will discontinue using the "Roadless" classification for setting aside or looking up/planning land areas and thereby avoiding adherence to the Multiple Use Sustained Yield Act. Further, it is an admission that you have not fulfilled your objective of Forest Planning that calls for wild land allocation decisions to say this decision after 15 years, you are 1

Response to Letter #142 - Bernie Swift, State Representative, first page

1. Wilderness and recreation are listed as some of the Multiple-Uses to be managed on the National Forests.

   Final allocations are being made in the final Forest Plan.

B. Swift Pg 2 - 10/07/85

142 a

still failing to clarify the RARE II question raised by the 9th District Court and are practicing single use or dominant use management by non-recognition of mineral, resource development and proposal to donate upwards of 520,000 acres of land to recreation only!

1

In effect, what I believe your plan should reflect is the full array of resource utilization, so long as the productive capability of the land is maintained. There is no need to "lockup" land unless it is absolutely impractical or infeasible to utilize it for multiple purposes.

2

In view of the above, I believe Alternative N best approaches what I believe the National Forest Management

3

E-55

Response to Letter #142 - Bernie Swift, State Representative, Pg. 142a

2. Congress has established a National Wilderness Preservation System with direction for its possible expansion and management.

3. No response needed.

Response to Letter #142 - Bernie Swift, State Representative, Pg. 142b

4. No response needed.

O'Swift Pg 3-10/27/85

Act of 1976 calls for and recommend it be adopted. This would assure continuance of a stable logging industry for the benefit of the local community, state and nation. It would also provide for all recreation pursuits of fishing, hunting, camping etc. As I understand the planning process, all alternatives considered can be implemented without undue impacts accruing to resources.

3

In summary, I don't believe we can afford to place anymore land in roadless or Wilderness classifications, with its associated loss and waste. All areas should be managed under the multiple use principle. (Wisely managing and utilizing our renewable resources) to benefit all the people.

4

Sincerely,

Bernie Swift

Amoco Production Company
Denver Region
1670 Broadway
P.O. Box 800
Denver, Colorado 80201
303-830-4040

Roberta Andersen
Public Lands Coordinator

October 30, 1985

Mr. Paul Leimbach
Forest Planner
Kootenai National Forest
Route 3, Box 700
Libby, MT 59923

Dear Mr. Leimbach:

Amoco Production Company is a subsidiary of Amoco Corporation. Its Denver Region is responsible for finding and producing oil and gas in the Western United States. We have a continuing interest in federal land use planning, and appreciate the opportunity to comment on the Draft Land and Resource Management Plan for the Kootenai National Forest

We appreciate the fact that the Forest planners and management have taken a positive view of energy exploration and production, even in Grizzly Bear Situation 1 areas. We believe it is more advantageous to consider lease stipulations and operating standards on a case-by-case basis rather than proposing blanket restrictions or prohibitions. There is a substantial area within which compromises can be reached which allow oil and gas exploration and development while protecting sensitive and valuable surface resources. Conflict resolution, or risk management, is the most important aspect of multiple use management, and our company and our industry are willing to cooperate in an effort to achieve this goal. 1 2

It is important for members of industry and the public to know what constraints will be placed on energy exploration activities by Management Area. The inclusion of this information in the Management Area discussions provides further basis for conflict resolution as well as allowing companies to know the management goals for particular areas prior to filing for a lease, a seismic permit, or an application for permit to drill. It is entirely possible that an operator could suggest some alternative management which will provide sufficient protection and efficient exploration.

Amoco cannot support the preferred Alternative J because it proposes additional Wilderness for Montana. There are already 3 million acres of Wilderness in Montana, and we believe that is sufficient, especially considered in the context of the 90 million acres of Wilderness nationwide. We believe Alternatives F and L are more reasonable. They feature maximum opportunities 3

Response to Letter #234 - Amoco Production Company, first page.

1. No response needed.
2. We agree.
3. We respectively disagree. Alternatives F and L do provide more opportunity to resolve the Oil & Gas Issue but they do little to resolve the Wilderness Issue.

Mr. Paul Leimbach
October 30, 1985
Page 2

for energy exploration, which is good for Montana and the nation. These alternatives would provide the Forest with increased revenue resulting from increased development of various commodities while also providing adequate protection of sensitive resource values. 3

Once again, we appreciate the opportunity to comment, and we look forward to receiving the final documents.

Sincerely yours,

B. L. ANDERSEN
Public Land Coordinator

rob

Response to Letter #234 - Amoco Production Company, page 234a.

No response needed on this page.

CENEX • Post Office Box 21479 • 1601 Lewis Ave. • Billings, Montana 59104 • (406) 245-4747

October 31, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
R.R. 3, Box 700
Libby, Montana 59923

RE: Draft Environmental Impact Statement and Proposed Forest Plan

Dear Mr. Rathbun:

CENEX is an independent oil and gas exploration and production company with substantial leasehold in the Kootenai National Forest. We have received the Forest's Proposed Plan and the Draft Environmental Impact Statement and wish to take this opportunity to submit our comments pertinent to these documents.

One of our concerns about the plan is the designation of additional wilderness areas and the classification of roadless areas without an apparent consideration of the hydrocarbon potential of those specific areas. We note that the forest is rated as moderate in oil and gas potential. This suggests that the decisions to designate wilderness were made without a site-specific analysis of the hydrocarbon potential. The same applies to those decisions to classify areas as roadless which will preclude any wildcat exploration in such areas.

By using a blanket oil and gas rating of moderate for the entire forest, the planner avoids having to make a trade-off analysis of conflicting resources when one of those resources is oil and gas. The hydrocarbon potential becomes a constant in the equation and thus, has no effect upon the decision to designate a specific area as wilderness or roadless. 1

We recognize the difficulty the planner may have in obtaining information about the geology of the forest. Detailed exploration activities have not been widespread in the forest and often the information which has been obtained remains proprietary. But we believe there is information available to the forest planner which would require something other than a blanket oil and gas rating of the forest and may affect some wilderness and roadless decisions. In this regard, CENEX is

Response to letter #220 - Cenex, first page.

1. The surface land designations are made using the latest known information about oil and gas resources that are available to us. Requests have been made to obtain any more recent available information but no responses have been received to date. The surface land designations have been made with the intention of preserving as many options for oil and gas exploration as possible while still trying to resolve the other issues adequately.

Mr. James F. Rathbun, Forest Supervisor
Kootenai National Forest
October 31, 1985 - Page Two

willing to make available to the forest planners our geologists to discuss site-specific hydrocarbon potential within the constraints of the proprietary nature of certain geological information which we possess.

We otherwise generally support the approach taken in the proposed plan as it applies to oil and gas activities. We note that one of the forestwide objectives as stated in the proposed plan is the encouragement of oil and gas exploration development in the forest while protecting other resources and uses. The plan sets forth a standard of expediting oil and gas lease applicaitons using standard stipulations. We appreciate this recognition of oil and gas exploration and development as legitimate use of the forest. 1

We also appreciate the flexibility afforded by the plan as opposed to the inclusion of blanket restrictions on oil and gas activities. Thus, as defined, a no surface occupancy stipulation will allow occupancy if, upon site-specific review, it is determined that less stringent measures will adequately protect other resources. We fully support this limitation on no surface occupancy stipulations. 2

We appreciate this opportunity to comment on the proposed plan. Again, we remain available to provide whatever assistance we can to the forest planner on the question of hydrocarbon potential in certain areas of the forest.

Sincerely,

Exploration & Production

Corinne Courtney

Corinne Courtney
Regulatory Compliance Attorney

CC:vw

Response to letter #220 - Cenex, pg. 220a

2. No response needed.

P.O. Box V-X
Libby, Montana 59923-1284
406 293-4141

Champion
Champion International Corporation

October 23, 1985

Kootenai National Forest
Rt. #3, Box 700
Libby, Mt. 59923

Re: Forest Plan

Gentlemen:

Thank you for allowing us to comment on the proposed forest plans.

Champion's sole purpose to exist as a business entity is to make a profit on its investments in the forest products industry. The only way that NEW wealth is created is by converting natural resources into something useful for man and Champion is part of that process. In doing so we provide for the livelihood of many family units in Northwest Montana.

The way the Forest Service manages their timber resources is a vital link in Champion's process. We would be amiss to back any alternative except the one that will provide the highest possible timber yield at the lowest possible cost, while still providing management protection and enhancement to all other resources. Therefore, we ask you to adopt alternative "M". 1

We would like for you to address the issue of cost efficient timber management in regards to withdrawing some timber objectives from this alternative. Several studies have shown that other timberland managers have obtained the same results that the United States Forest Service has in management, at lower costs for the same activities. We do not feel that it is reasonable to withdraw timberland from the productive base just because of some agency imposed inefficiencies. 2

We definately feel it is to the advantage of the public good to depart from the even flow concept when necessary. The current yield and value losses attributed to the Mountain Pine Beatle infestation in our pines is unacceptable. It definately is not an attribute to good forest management. 3

Response to Letter #59 - Champion International, first page

1. We agree that Alt. M would be more beneficial to the timber industry but it does not resolve the other issues, particularly new road construction, as well as Alt. J.

2. Cost efficient timber management is currently receiving a lot of emphasis, but just improving this issue will not always resolve the other issues. We are mandated to multiple-use management and because of that, dollar returns may not always be maximized on every acre.

   The proposed regulated base results in an allowable sell that is higher than the current level of harvest, and the programmed sell can be adjusted upward to include unregulated volume. It appears that this will allow sufficient sell volume to satisfy market demand which appears to be the major concern.

3. We agree. Departure from non-declining even-flow can be a benefit especially when insect losses appear imminent. A Departure on the final Forest Plan was analysed. The results indicated a higher amount of timber could be harvested in the first decade but this would require a proportional increase in road construction and annual budget. This increased timber harvest did not result in an increase in the amount of lodgepole pine harvested. (See Appendix B).

59

Hopefully, you will take these comments into consideration when finalizing your plan. We urge you to remember how important that your timber resources are to this company and to all the families that depend upon them in this area. 4

Sincerely yours,

Russ Hudson

Russ Hudson
Libby Area Operations Manager

nlc

Response to Letter #59 - Champion International, pg. 59a

4. We agree on the importance of the timber industry to the local community.

P.O. Box V-X
Libby, Montana 59923-1284
406 293-4141

197

Champion
Champion International Corporation

October 31, 1985

Mr. James Rathbun
Supervisor, Kootenai National Forest
P.O. Box AS
Libby, Mt. 59923

Dear Jim,

We are pleased to once again have input into the Forest Planning System. As Forest Plans go, this is an excellent one in many ways. It has many strengths and is well laid out. As usual, we are more interested in ways of improving it than in emphasizing its good points.

This has to start out with a comment on the general planning system. All of the Forest Plans seem to be done in a vacuum. 1
The Kootenai pays no attention to the Flathead, the Lolo, or the Panhandle. It seems that Regions should coordinate and suggest goals, but this is not apparent. The result is that no one attempts to live up to any potentials other than externally imposed mandates (grizzly habitat for example). 2
Timber is getting the short end of this. Regional RPA goals will not be met, not that they can't, but rather you don't try.

To be specific, the Kootenai Plan jogs along intending to produce pretty much what it has felt comfortable with in the past. You know by your own conservative figures that you can double the volume available and still legally meet all other constraints. I feel the Kootenai should have the ability to sell 300 million board feet annually. It is not necessary 3
that this be sold, but the opportunity to do so must exist.
After all, the adjoining Forests are planning reduced cuts and your market area will include these. If the demand is present, 4
you should be able to fill it.

It would be easy to dismiss Wilderness by just saying "no more" but this is not right. Scotchman has some ground that has wilderness quality. I feel your proposed boundaries are absurd in that they are not topographic. You need a defensible, definable, findable boundary. The core of Scotchman has wilderness quality, your ideas on Pellick Ridge are mostly correct, 5
but the boundary is a problem. I Have submitted maps in the past that correct this. Examine your wastebasket for my ideas on this.

Response to Letter #197 - Champion International (John McBride), First page

1. Forest Plans are co-ordinated with adjacent forests.

2. Potentials are assessed during the Benchmark Analysis and the effects of achieving the potentials are evaluated. Alternatives are designed to resolve the issues which usually relate to the potentials (timber, wilderness, visual quality, etc.). The Benchmark Analysis on the Kootenai clearly shows that there is "no free lunch." Tradeoffs are required to achieve any one particular resource potential.

3. Providing 300 million board feet per year would require a significant increase in budget and road construction.

4. The Final Plan will provide for an increase in timber harvest over the last 10 years.

5. Scotchman Peak has been re-evaluated for its wilderness boundaries and a new recommendation has been proposed. The new boundaries can be examined on 2.64 inches/mile topographic quads in the Supervisors Headquarters in Libby.

Champion International Corporation

Mr. James Rathbun
October 31, 1985

The Cabinet additions on the west side are no big deal. I don't like them, but presume I could live with them.

The Trout Creek area may deserve to be roadless, but it should NOT be Wilderness. I agree with you there. 6

I do not agree at all with your proposals on the East Face of the Cabinets. The valleys that lead into the Cabinets are highly productive timberlands. The developed areas in the southern part show this pattern distinctly, but these were spruce areas. They were developed in the 1950's in reaction to the spruce beetle epidemic. The northern drainages you would propose to lock up are a more mesic type of timber but of high volume and excellent timber. The unproductive ridges between drainages will not be developed as in the southern Cabinets and can thus do duty as roadless primitive recreation lands. Do not place the east face in Wilderness. 7

It is appreciated that there is a modest disclaimer on the accuracy of the sediment and fish model. I know it is the best you have but it is still subject to a lot of possible variation. I wish this disclaimer was stressed a little more. The very basis for hydrology is so variable that averages may be worthless. Is 1985 a wet year or a dry year? Sort of depends on when you look, not on an average or a month total. 8

The old growth portion of the plan gives me some bad feelings. So you need eight percent (8%) old growth. Why eight percent? Does this include the additional timber and area needed for replacement of the eight percent (8%) as it changes in time? I do not feel the percentage necessity is fully explained nor are the additional requirements explained. The acres and numbers appear excessive. 9

All in all, it is a pretty good plan. Could be better, hope it will be. I appreciate the chance for input.

Sincerely,

John K. McBride
Kootenai District Land Manager

nlc

Response to Letter #197 - Champion International (John McBride), pg.197a

6. No response needed.

7. We feel that the amount of timberland included in the wilderness recommendation is not significant (10,450 acres) and the cost of accessing the land is high.

8. No response needed.

9. The literature recommends a minimum of between 8% and 10%. The 8% does not include the replacement if timber harvest is anticipated. Note that the final Forest Plan contains 10% which is still in the minimum category.

11

John McBride-comments offered during open house on 7/22/85.

1. The timber volume issued for sale appears to be highly inadequate.

2. On a timber base acres of 1,788,000 acres, timber harvest amounts to a palty 114 bd ft/acre. This does not appear to be forest management.

3. Even the maximum 277 mmbf amounts to an insignificant 154 bd ft/acres/year. He would question if this meets RPA goals for the region or the nation. The most productive forest in Montana should be able to do betterthan that. 1

4. In-appropriate to combine management acres 8 and 9. 2

5. Geo graphic boundaries of proposed wilderness are hard to define on the ground. Located with a minimum of practicability. 3

6. Not enough demand for the wilderness additions on the East Cabinets. 4

7. Visual contraints are inappropriately applied in many cases. 5

Recorded by Jim Shadle (typed by G. Powell)

John McBride
Box 1218
Libby Mt. 59923

Response to Letter #11 - Champion International (John McBride)

1. The timber base acreage was 1,386,000 in the Proposed Plan, not 1,788,000 as stated. Our best information does not support figures higher than 277 mmbf/yr in the first decade.

2. We respectfully disagree. The Standards and Guidelines are the same, so the effects should be similar. No bias was intended.

3. The boundaries may be hard to locate on-the-ground but they seem to resolve the issues more adequately.

4. We respectfully disagree.

5. A re-analysis indicates that some changes were appropriate and have been made.

conoco

3

E. Fred Birdsall
Public Lands Coordinator

Conoco Inc.
555 17th Street
Denver CO 80202
(303) 291-6123

July 9, 1985

Mr. James Rathburn
Forest Supervisor
Kootenai National Forest
RR #3 Box 700
Libby, Montana 59923

Re: Kootenai National Forest Draft EIS/LRMP

Dear Mr. Rathburn:

My point of view in commenting on the draft Kootenai Plan is strictly from an oil and gas orientation. Throughout earlier discussions with you we have stressed the point of keeping lands from statutory withdrawal (i.e. wilderness designation) when the geologic potential for commercial petroleum was either high or unknown. The Preferred Alternative recognizes this and to that extent I must applaud the statistical results of your effort. 1

We may, however, be out of the frying pan but into the fire in practical application of this solution. If the in-lieu-of designation is a roadless prescription of such restrictive severity as to preclude access and therewith continued non-assessment of the mineral potential, we're really not much better off. The plan's troublesome bias in this regard is clear in the Kootenai policy, "... to accommodate the exploration for oil and gas in a manner consistent with the intent of each management area as long as the other resource values of the land are not permanently or irreparably compromised." While there is some wiggle room in the definition of "permanently or irreparably compromised" the policy gives no acknowledgement to the fact that in some cases the production of oil and gas may be the highest and best use of certain areas. 2

To my great regret you have largely withdrawn the area which I believe to have the most promising potential; namely, the Ten Lakes. 3 Moreover, you have not recognized the considerable potential for coexistence of oil and gas activities with sensitive environments nor the reclamation potential. 4 Several stunning examples of reclamation come to mind of reclaimed wellsites in environment similar to the Kootenai - four old wellsites in Glacier Park, two wellsites in Wyoming's Gros Ventre Wilderness (quite overlooked because one natural reclamation was so perfect), Getty's Fall Creek wellsite in the Tetons. You quite understate the coexistence and reclamation potentials.

Response to Letter #3 - Conoco, first page

1. No response needed.

2. No acknowledgement is given because of the lack of information.

3. No response needed.

4. We respectfully disagree. We have attempted to provide as much access as possible while still resolving other issues, such as, wilderness, roadless recreation, etc.,.

3 a

Mr. James Rathburn
Kootenai National Forest
July 9, 1985
Page 2

It is perhaps understandable that the plan does not have an oil and gas focus since so little is known yet of the subsurface. It becomes, therefore, essential, from a petroleum point of view, to maintain (1) an open mind for petroleum possibilities and (2) management flexibility. If the plan flexibility under the Preferred Alternative can be accompanied by the open mind, I find this alternative acceptable. I certainly urge you to hold the line on reducing the flexibility by further statutory withdrawal. 5

Very truly yours,

Fred Birdsall/bt

EFB:bt

cc: Alice Frell, RMOGA

Response to Letter #3 - Conoco, pg. 3a.

5. No response needed.

E-67

153

Forest Plan,

In response to your letter on the "Kootenai Forest Plan", our comment is "No More Wilderness!!!" 1

Thank you,

Emett Trucking & Logging
1028 Utah Ave.
Libby, MT. 59923

Response to Letter #153 - Emett Trucking & Logging

1. No response needed.

Response to Letter #72 - Louisiana Pacific Corporation, First Page

1. *No response needed.*

1a. No response needed.

2. No response needed.

Louisiana-Pacific Corporation

P.O. Box 249
Sandpoint, Idaho 83864
208/263-3145

October 22, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
Libby, Montana 59923

Dear Mr. Rathbun:

I have reviewed the draft Kootenai Forest Plan, and I would like to offer the following comments on it. Louisiana-Pacific is currently purchasing timber from the Kootenai Forest and it is being delivered to any one of four sawmills and a waferwood plant in northern Idaho. My concerns are how the Plan will affect the timber supply for each of these plants. I understand the complexities of forming a plan and the fact that it is a near impossible task to satisfy the concerns of all the users of the Forest. My comments are meant to be constructive and will hopefully aid you in formulating a plan that will come as close as possible to satisfying the various concerns. 1

My greatest concern is maintaining an adequate timber supply to meet the needs of the lumber industry. I feel this would be possible without sacrificing roadless recreation, wildlife, or water quality. I am not so concerned with the second through the fifth decade because the Plan will go through review processes before we get to that point. If your projections hold true, there should be little problem meeting the demand for timber at that time. However, for the first decade, the projected timber harvest is not adequate. 1 a

Louisiana-Pacific is almost totally dependent on federal timber for the plants in north Idaho. As with most companies, we speculated too much in the late '70's and early '80's and consequently we have a lot of expensive timber under contract. Our plans are to deplete this expensive timber over the next few years by mixing it with feasibly priced timber that we are currently acquiring on today's market. This has forced us to depend heavily on the open log market which is composed of a high percentage of private timber. The results of most companies being in this position is that the private lands, including industrial fee lands, are being overcut and cannot support their harvest indefinitely. As time goes on, this will 2

create much more demand for federal timber than we have seen in the past. This situation will be compounded if the proposed reduced cuts materialize on the Panhandle and Flathead Forests. The companies dependent on the timber supply from those Forests will be forced to depend more on the Kootenai's supply. 2

From this and the fact that the demand considered in the draft Plan is based on an economically depressed period, it is apparent that the projected harvest will not satisfy the timber industry's needs. It is evident that this trend is taking place today by the fact that we have permanently closed our Trout Creek and Columbia Falls sawmills. Other companies are facing the same situation and I believe that the trend will continue. 3

To make matters worse, the projected supply is based on the proposed Regional utilization standards of 4.6" top DIB and 7" DBH on live saw-logs, and net scale of gross scale would change from 33 1/3% to 25%. With current market conditions, these standards are not feasible and represent an unrealistic additional merchantable volume. 4

The long term sustained yield is 455 MMBF. With the preferred alternative, 78% of the suitable timberlands will be managed for an annual cut of 217 MMBF for the first decade. I believe that this amount can be increased without sacrificing other concerns. 5

The first area that should be considered is the lodgepole pine harvest for the first decade. It is mentioned that 2000 MMBF of lodgepole pine will be affected by the mountain pine beetle, and that only 50% of this is harvestable. In order to salvage that amount, 109 MMBF would have to be harvested each year. I believe that this level of harvest should be increased in order to salvage the wood before it deteriorates. But even if the level of 109 MMBF were maintained, it is 34 MMBF greater than the 75 MMBF level scheduled in the preferred alternative. As I mentioned before, I believe there is going to be increased demand for this timber and there will not be a problem selling it as long as there is not excessive deterioration. 6

Of the total roadless area outside the existing and recommended wilderness areas, 50% or 202,000 acres will remain in a roadless condition. I realize that many of these areas are politically sensitive, but a great deal of the area is not and should be considered for timber production. 7
The semi-primitive motorized recreation does not need roadless areas set aside. These needs can be met through road closures. Another consideration 8
is that the recreational needs will decrease if the timber industry dependent jobs decrease. 9

Old growth retention for wildlife habitat together with replacement stands total 255,000 acres in the preferred alternative. I feel the tradeoff for timber production could be minimized by locating these areas in conjunction with other needs. They could be located, as much as possible, in roadless, riparian and visually sensitive areas. The economics of timber production should also be considered, with the old growth stands being located in the least feasible timber production sites. 10

Response to Letter #72 - Louisiana Pacific Corporation, Pg. 72a

3. No response needed.

4. No response needed.

5. No response needed.

6. The emphasis is already on the selling and harvest of lodgepole pine. We are working with industry and can adjust the level of lodgepole sell as the market allows. The Proposed Plan estimated 75 mmbf of green lodgepole pine PLUS 20 mmbf of dead lodgepole pine for a total of 95 mmbf. This was 87% of the 109 mmbf that was estimated that needed harvesting each year. Unfortunately, the harvest level of lodgepole pine has lagged behind the sell level. (See Table below) It does no good to sell lodgepole pine if all that happens is the volume under contract increases. The encouraging item is that the harvest level for lodgepole pine is increasing as you suggest. (See Table below).

KNF LODGEPOLE PINE (LPP), SOLD AND HARVESTED (mmbf) by Fiscal Year (FY)

FY	Total Sold	LPP Sold	% LPP Sold	LPP Harvested
79	206	36	17	46
80	176	48	26	34
81	264	93	35	50
82	221	91	41	50
83	245	97	39	72
84	212	98	46	72
85	224	97	43	67

7. The productive forest land outside of recommended wilderness that is being managed in a roadless condition is 86,800 acres or 43% of the 202,000 acres mentioned. Alternatives L, M, N and A confirmed that the costs and tradeoffs were high to manage these lands for timber.

8. We agree that semi-primitive motorized recreation needs can be satisfied in areas with permanent road closures.

9. We agree that recreation will probably decrease if timber industry jobs decrease.

10. Old-growth timber has been combined with as many other compatible long-term management needs as possible . This has been the criteria applied on the Kootenai. We agree that old-growth timber should be retained on the more difficult-to- manage sites where feasible.

The tradeoffs of timber for wildlife management could be minimized through effective road closures, which we support. Security appears to be the main constraint in increasing populations to a desired level for elk or any of the T & E species. As recent studies have proven, management for timber production and wildlife are compatible. The road densities are not so critical, if the access is controlled. 11

I do agree with your plans to use even-aged management 99% of the time. Economically, it will have the greatest returns because of logging efficiency and the rate at which sites are put back in production. It also benefits other management concerns because it requires less entries. However, uneven-aged management is a necessary method which should be considered for increasing the harvest in visually sensitive areas. This would help improve the age class distribution and would come closer to meeting the RPA goals of reaching 90% of the potential annual growth rate by the end of the fifth decade. 12

In total, there appears to be several management areas which should be looked at more closely as far as timber production potential. Louisiana-Pacific feels justified in requesting the harvest level for the first decade be increased to 251 MMBF/year. This would enable the Forest Service to accelerate the harvest of the lodgepole pine to the 109 MMBF/year which is necessary to salvage it in a timely manner. This should be possible without sacrificing any other management concerns. 13

Again, hopefully these comments will aid you in developing a feasible final plan. Let me know if you have any questions.

Sincerely,

James R. Dickison

James R. Dickison
Senior Resource Manager

xc: Tom Adair

Response to Letter # 72 - Louisiana Pacific Corporation, pg. 72b

11. We agree. The amount of road closures are the highest of all the alternatives in the EIS.

12. Uneven-aged management ia available and can be used anytime it is the preferable, efficient way to meet the Forest objectives and the Management Area objectives.

13. A harvest level of 251 mmbf is not consistent with the existing backlog of timber under contract and anticipated budgets. It also does not respond well to the other issues as displayed in the Net Public Benefit discussion. The Forest Plan achieves 93% of your recommededation.

218

Louisiana-Pacific Corporation

P O Box 249
Sandpoint, Idaho 83864
208/263-3145

October 25, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
Libby, Montana 59923

Dear Mr. Rathbun:

I have reviewed the Proposed Kootenai Forest Plan. I would like to offer some comments as to how it will affect the Louisiana-Pacific mills that I am associated with. I am the Resource Manager for the Moyie Springs and Priest River/Sandpoint locations. My primary responsibility is supplying these sawmills with sawlogs.

The Kootenai Forest is the most productive Forest in Montana for growing timber. It also appears to have great mineral potential. Therefore, I would expect a lot of emphasis to be put on these categories. 1 The Forest is not located adjacent to any metropolitan areas as are many other Forests; so I would expect less emphasis on recreation demand as compared to other Forests. 2

Therefore, I don't understand why Alternative J was chosen as the preferred alternative. It ranks as one of the lowest in terms of timber output and maximizing present net value. It doesn't meet the RPA goals for timber. Alternative J exceeds the RPA goals for wilderness and grizzly. 3

Response to Letter #218 - Louisiana Pacific Corporation, First Page

1. We agree.

2. The Kootenai is experiencing increases in recreation use from surrounding areas such as Spokane.

3. The RPA goals for timber (Alt. D) require a large budget that is not considered feasible. We are not aware of any RPA goals for wilderness or grizzly for the Kootenai.

The proposed Alternative J has 314,580 acres where timber is designated the primary use. This is 14% of the total Forest acreage, or 18% of the land tentatively suitable for timber production. This is a reduction from the current situation. The timber allocation on the adjacent Panhandle Forest's Proposed Plan is 38% of the total acreage. The Kootenai planners evidently either put less emphasis on the importance of timber or feel they are meeting the timber demands with their Proposed Plan.

Our sawmill at Moyie Springs gets the majority of its sawlogs from the Bonners Ferry and Yaak Districts and to a lesser extent, the Troy District.

The Bonners Ferry District is proposing an annual cut of 28 MMBF from the current 36 MMBF; a reduction of 8 MMBF annually. 4

The Yaak District's sell volume has averaged 58 MMBF annually for the last 5 year period. They plan on selling approximately 52 MMBF annually in the next 10 year period; a reduction of 6 MMBF per year.

The Troy District's average annual sale volume for the last 5 year period is 24 MMBF. They plan on selling 20 MMBF per year in the next decade; a reduction of 4 MMBF.

This is a reduction of 18 MMBF available each year on the districts that are economically tributary to our sawmill at Moyie Springs. This is a 180 MMBF reduction over the next 10 year period.

Fifty-eight percent of the land in Boundary County and 86% of Lincoln County is managed by the Forest Service. The remaining land is primarily private land and only a portion of the private land is timbered. The private land has been cut over for the most part in recent years and contains little merchantable sawlog inventory. 5

Response to Letter #218 - Louisiana Pacific Corporation, pg. 218a

4. The intent of the Proposed Plan was to resolve all the issues, including timber, but not at the expense of the other resources.

   The historical timber harvest level on the Kootenai Forest is approximately 13% below the historical sell level (173 mmbf/yr versus 198 mmbf/yr respectively). This indicates that a sell level that is 25 mmbf/yr lower is adequate to supply the local timber industry unless a definite increase in demand materializes.

5. We agree.

These lands will not produce the volume of sawlogs in the next decade that they have produced in the last decade. 5

Therefore, community stability will depend largely upon the Forest Service selling an adequate volume to sustain the local mills.

We need to do what we can to increase the allowable cut on the Kootenai to maintain existing mill capacity and associated jobs. These artificial timber shortages will temporarily tend to force local mill owners to pay higher stumpage rates in an attempt to keep their mills operating. However, some mills won't be able to compete with other regions of the country and Canada due to high material costs and will cease operations. Companies won't invest money to make or 6
keep these mills efficient due to a questionable timber supply and thus lack of return on investment. The operation we closed at Trout Creek, Montana is an example of this. After some mills cease operations, there will be less competition for available timber, and in the long term, less stumpage receipts to the government due to a lack of competition.

There appears to be a combination of constraints that are limiting the allowable cut on the Kootenai Forest. These are; watershed constraints, 40 acre clearcut limit, old growth contraints, grizzly bears and the allocations for big game and primitive roadless recreation.

The worthiness of the watershed model to determine if a drainage should be deferred is questionable. Past experiences have shown it 7
to be unreliable. My recommendation is not to defer watersheds, unless there is more substantial evidence there will be a significant reduction in water quality. This is particularly true in areas that are being attacked by the mountain pine beetle. We need to salvage this material while it has a value. We should also take a harder look
at the existing sources of sediment production and try to reduce the 8
impact of existing sources. We could possibly do more to improve

Response to Letter #218 - Louisiana Pacific Corporation, pg. 218b

6. Current timber sales under contract total approximately 610 mmbf. This is equivalent to 3.5 years of harvest at the historic level of 173 mmbf/yr. Receipts to the government (and returns to the states) are more dependant on the total level of harvest rather than the price per thousand board feet.

7. We agree. See the Guidelines For Calculating Water-Yield Increases in the Forest Plan Appendix which will be used to determine on-the-ground situations for timber harvesting.

8. We agree.

drainage on existing roads and use more road closures in the spring to reduce sediment production. 8

Timber is the main contributor to the economy on the Kootenai Forest. I would like to see more emphasis put on timber. There are more acres devoted to Management Area 12 (433,970 acres), where the goal is to enhance non-winter big game habitat, then there is in the timber production category. I don't believe there is justification to set aside such a large acreage for big game. Especially when you look at how rapidly big game numbers have increased in recent years. I realize timber will come from this acreage, but it won't be as much as it could be. Rotation will also most likely take longer since you plan on natural regeneration most of the time in Category #12. 9 10

I am opposed to the Cabinet wilderness addition. This could be classified as Management Area 29 roadless recreation and serve the same purpose. I support multiple use of the Pellick Ridge and Trout Creek areas that are classified as Management Area 29. 11

Timber harvest should be allowed in Management Area 10 (Big Game Winter Range) where economically feasible and practical. 12

Your old growth category exceeds RPA goals and should be reduced to the RPA goals. 13

It is ironic that grizzly are hunted on part of the Kootenai Forest yet we have logging restriction on other areas of the Kootenai to protect it. 14

Would it be possible to log Category #18 where regeneration is difficult and use it for big game forage and reduce the acreage set aside for wildlife in other categories? 15

The woods industry is not suffering from a lack of demand for its products. Wood products demand was higher in 1984 than any year 16

9. The management of Big Game, especially elk, was one of the Forest Plan issues. A significant amount of MA 12 (173,000 acres or 36%) is located within identified grizzly habitat. This MA provides for the recovery of the grizzly bear as well as providing big-game and timber benefits.

10. The rotation age for MA 12 was not lengthened and is comparable to other timber-producing prescriptions.

11. If the Cabinet wilderness addition is classified as Management Area 29 that would not be helping to resolve the wilderness issue.

12. *Timber harvest is allowed in Management Area 10 where economically* feasible and practical. In most cases this will not be the case, otherwise the land would have been designated as Management Area 11.

13. We are not aware of any RPA goals for old-growth timber.

14. Hunting is managed by the State of Montana.

15. The majority of MA 18 is within summer range where forage is not limiting. Acreage is not "set aside" for wildlife. Wildlife is integrated with other resources such as timber and recreation to provide multiple benefits.

16. We agree.

previously. We need an adequate timber supply to be able to compete and maintain mill capacity. 16

The Plan shows the allowable cut going from 202 MMBF per year in the first decade to 277 MMBF per year in the fifth decade. I would rather see a more even flow such as 250 MMBF per year. This would be beneficial for several reasons. It would allow you to salvage more mountain pine beetle infested lodgepole in the first decade, while it has value, and get this land back into production. This increased cut in the first decade would help offset the reductions on the Panhandle and Flathead Forests. This would also be beneficial to our sawmill at Moyie Springs since it is designed for this type of material. 17

In closing, I think we should remember the Kootenai is the most productive Forest in Montana and we should build on those strengths.

I appreciate this opportunity to voice my concerns on the Proposed Kootenai Forest Plan.

Sincerely yours,

Robert Blanford

Robert Blanford
Resource Manager

xc: Tom Adair
Jim Dickison

Response to Letter #218 - Louisiana Pacific Corporation, pg. 218d

17. The Forest Plan displayed a total sell level of 233 mmbf yr. average, not 202 mmbf as you stated (See Appendix 11). The 233 mmbf/yr. would achieve 93% of your suggested harvest level and a 33% increase over the actual average harvest level of the last 10 years (170 mmbf).

Marathon Oil Company

Casper Division
Production United States

P.O. Box 120
Casper, Wyoming 82602
Telephone 307/235-2511

139

October 28, 1985

Mr. Paul Leimbach
Forest Planner
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

Dear Mr. Leimbach:

Re: Comments on the Draft Forest Plan,
Kootenai National Forest, Montana.

The proposed forest direction, in regard to energy exploration aimed at balancing resources, is a very commendable step. By allowing a case-by-case analysis of necessary stipulations and mitigating measures, operators and explorationists can be more "creative" in design plans and implementation of projects. Instituting operating standards is, in itself, an incentive to come up with better ideas for resource protection. There are numerous examples of exploration and production facilities which protect sensitive wildlife and environments. 1

The inclusion of stipulations and management guidelines, to be placed on oil and gas activities, is helpful in resolving conflicts of user groups. It allows industry to make plans and decisions on a longer range basis and the public is aware of what to expect for a specific Management Area.

The portions of the plan which are objectionable deal with discrepancy in figures and the amount of wilderness afforded in Alternative J. The figures used are not consistent in regard to wilderness acreage and the lands proposed for withdrawal. There are 206,320 acres proposed for withdrawal, but under the preferred alternative, 215,000 acres are withdrawn from oil and gas leasing. The figures and areas, considered for withdrawal, should be clarified. 2

Response to Letter #139 - Marathon Oil Company, First Page

1. No response needed.

2. The difference in the two sets of numbers is the result of scattered parcels of land in the Forest Plan that have already been withdrawn but are included within Management Areas that allow oil and gas leasing.

Mr. Paul Leimbach
October 28, 1985
Page 2

139 a

Alternative J adds to the already vast amount of wilderness acreage already on public lands in western Montana. By affording multiple use management constraints, public lands can, and are, more productive. If management measures are adhered to, they will not necessarily lose the wild characteristics. 3

Thank you for the opportunity to make these comments on the Draft Forest Plan.

Sincerely,

Bradley G. Penn

Bradley G. Penn
Land/Environmental Coordinator

BGP:mg

cc: W. H. Legg
D. R. Spearing
J. D. Polisini
J. H. Youngflesh
R. D. Whitman
E. E. Reed
K. V. Bonati
E. D. Sayre

85-M-119

Response to Letter #139 - Marathon Oil Company, Pg. 139a

3. No response needed.

Owens and Hurst Lumber Company, Inc.
P O Box 883
Eureka, Montana 59917

October 28, 1985

Forest Plan
Kootenai National Forest
Rt. 3 Box 700
Libby, Montana 59923

Attention: James F. Rathbun

Dear Jim,

We at Owens and Hurst Lumber Company, Inc. have invested heavily at our plantsite in Eureka, Montana, to be able to utilize as much of the raw log as possible. Five and one half years ago this facility was idle, now we have 115 full time jobs. Please consider this because <u>any</u> decrease in the allowable cut will hurt our operation and the employment picture in Lincoln County. 1

Wood, wildlife and wilderness are compatible but lets keep wood at the top of the list.

Sincerely,

James L Hurst - President
Owens and Hurst Lumber Company, Inc.

JLH/slf

1. No response needed.

PlumCreek Timber Company, Inc.
Flathead Unit
2050 Highway 2 West P.O. Box 1957
Kalispell MT 59901
406/755-1498

October 31, 1985

Mr. James Rathbun
Forest Supervisor
KOOTENAI NATIONAL FOREST
P.O. Box 700
Libby, MT 59923

Dear Mr. Rathbun:

This letter contains the response of Plum Creek Timber Company, Inc. (PCTC) to the Kootenai National Forest proposed Forest Plan and draft Environmental Impact Statement Supplements. The comments reflect our March 15, 1983 letter (attached) regarding the Draft Plan and EIS. Our orginal comments remain valid and currently apply to the supplements. We request that the Final Plan address our concerns.

Landownership is a major topic which we have consistently requested the Forest to thoroughly analyze. The Forest, however, has not addressed the issue adequately, nor justified why it has given the topic such a cursory review. The checkered pattern of PCTC's ownership within the Forest is directly affected by Federal Management planning.

In the DEIS, the Forest Service stated that exchange decisions would be based on providing improved grizzly habitat or roadless recreation. We think there should be other considerations used in consolidation decisions. Public and private management can be enhanced and costs reduced by consolidating our respective ownerships. The proposed National BLM - USFS land interchange demonstrates these values. 1

The Forest can best serve public interest and better comply with National directives by analyzing and displaying the costs and benefits of land consolidation. Specific exchange benefits which the Forest should identify include; (a) lower management costs due to improved administrative efficiency, (b) enhanced productivity resulting from improved access and transportation systems, and (c) greater options for intensive management on public and private lands such as improved recreation, wildlife and resource management. 2

Response to Letter #304 - Plum Cr. Timber Company, First Page E-80

1. We agree. See Chapter IV-89 in the DEIS. Also see Appendix 9 (Landownership and Land Adjustments) in the back of the final Forest Plan Document where other reasons are stated for considering landownership adjustments. Providing improved opportunities for grizzly recovery and roadless/wilderness protection will be some of the major reasons for pursuing land exchanges; but not the only reasons.

2. We agree. The criteria in land adjustment planning and the evaluation of each respective land adjustment proposal takes into consideration lower management costs due to improved administrative efficiency. Items that are considered include:

   a.) the reduction of property corners and boundary lines to be established and maintained;
   $250 per each property corner established.
   $4,900 per each mile of boundary line located and posted.
   $18 per mile per year for boundary line maintenance.
   $7 per year per property corner for maintenance.

   b.) the elimination of Rights-of-Way needs (acquisition);
   $2,700 per each case.

   c.) elimination of special use permits (issuance and administration);
   $450 per case.

   d.) the prevention of occupancy trespass and the need for the resolution of encroachments; $400 per case, minimum.

   However, Forest Plan alternatives are limited to the existing land-ownership pattern. Any other analysis would require detailed information about oyher ownerships which we don't have. The results would be speculative.

TO: James Rathbun
PAGE 2
October 31, 1985

The Forest should clearly state that exchange would occur on a value-per-value basis, thereby having minimum impact on the area's economy. Another item, particularly, is the 5,000 acre maximum per exchange. Is this a magic number and how was it derived? We can see the potential, especially in the land ownership adjustment area F, that could be more cost effective for both parties to put together a lot larger package. 3

Access to private lands is an issue the Forest has not thoroughly addressed. The Forest neglected to respond to several concerns we have expressed. We would like the Forest to comment on our earlier concerns.

Again, we would like you to go over our concerns expressed in the attached letter, as we feel that they were generally disregarded when you completed the Draft Forest Plans. It is essential that the Kootenai Staff correct the proposed Forest Plan so that it complies with all applicable laws and regulations. This includes justifying it's recommendations and responding to the concerns of private landowners. 4

We hope our information and questions will be valuable to you as you complete the Final Plan. We urge you to contact us if you have any questions or comments.

Sincerely,

G.C. Corbett
Manager

GCC:lf

Attachment

Response to Letter #304 - Plum Cr. Timber Company, pg.304a

3. Good point! This was stated in the DEIS in Chapter II-87 and Chapter IV-88.

   The 5,000 acre figure (per exchange) has been deleted from the Forest Plan general guidance section.

4. The final Forest Plan does not preclude private rights, including access rights. No laws or regulations have been changed as a result of the Kootenai Forest Planning process.

BNTimberlands

Rocky Mountain District

March 15, 1983

I.F.R.C.

MAR 16 1983

☑ HGM
☑ LFB
WWT
☐ JN
☐ PS

Mr. William Morden
Forest Supervisor
Kootenai National Forest
P. O. Box AS
Libby, MT 59923

Dear Mr. Morden:

Enclosed are BN Timberlands' comments regarding the proposed Kootenai Forest Plan and Draft Environmental Impact Statement. Reference is also made to the six previous letters we have submitted on the planning process. We evaluated the following issues as they relate to the intermingled landownership situation:

I. Land Adjustment, Alternatives, and Economics
II. Facilities
III. Wildlife
IV. Water and Soil
V. Fire and Visual
VI. Management Areas

We commend the Forest for addressing some of the private landowners' concerns within the draft. We especially recognize your efforts to prepare and display a land adjustment map, although we do ask you to expand on it. We also request that the Forest more adequately analyze the economics of landownership, present a broader range of land adjustment alternatives, and give greater consideration to the Plan's impact on private landowners. 1

We hope you give serious consideration to our recommendations in developing the final Plan.

Sincerely,

Donald M. Nettleton
Assistant Vice President
Timberlands

JAB/mc
Enclosure

cc: Tom Coston
IFRC
WETA

Response to Letter #304 - Plum Cr. Timber Company, pg 304b

1. The resource information we had on private land was not sufficient to do a detailed analysis of "Benchmarks", such as acquiring all private lands, disposing of all public lands, etc. The Landownership Adjustment Plan, presented in Appendix 9, was determined to be flexible enough to resolve most of the known private land problems and was adaptable to all 15 alternatives presented in the DEIS.

BNTI'S RESPONSE TO THE DRAFT KOOTENAI PLAN & EIS

I. LAND ADJUSTMENT, ALTERNATIVES, AND ECONOMICS

Land adjustment should be used fully to enhance management efficiency and improve land management opportunities. We believe the Forest Plan will better comply with national direction if it analyzes a full range of landownership alternatives including consolidation. The public will then be able to recognize the opportunities of land exchange and have a choice in selecting an alternative which maximizes net public benefits. The Forest should:

1) list specific land exchange benefits (see our letter of 3/25/82),

2) display a range of land adjustment alternatives within scattered and checkerboard areas,

3) determine what impacts its proposal will have on affected private landowners, and

4) compare the costs of scattered ownership with the benefits of a consolidated land pattern.

Our request is consistent with the attached administrative requirements and national legislation with which the Kootenai is directed to comply.

Kootenai Forest representatives have told us that the land exchange program will be "held back" until the Federal Asset Management Program is complete. We reiterate our position that the Program not preclude legislative direction to address adjacent and intermingled landowners' objectives in the Plan. A thorough land adjustment analysis should help expedite the Program's inventory process. 1

We believe our request is consistent with the recent 9th District Court California RARE II ruling that the Forest Service must provide a more thorough analysis of its land-use decisions. We believe the following excerpts from the case support our concern for an adequate evaluation of land adjustment:

1) "...costs and benefits of land designations need not be in a form of a formal cost-benefit analysis, but it is to reflect that the Forest Service has compared each area for the potential benefits of management against the potential adverse environmental consequences."

2) "The Forest Service may not rely upon forecasting difficulties or the task's magnitude to excuse the absence of a reasonably thorough site-specific analysis." (We believe this applies to displaying a broad range of areas for disposal and acquisition.)

3) "The EIS does not explain what the trade-offs were or why they were considered acceptable or realistic."

4) "An impact statement should provide the public with information on the EIS of a proposed project as well as encourage public participation in the development of that information. It also should give the public enough information to be able to participate intelligently in the EIS process."

Response to Letter #304 - Plum Cr. Timber Company, pg. 304c

1. See the response on the previous page.

The Kootenai is required by regulations to stratify the Forest into categories of land with similar costs and returns. We ask that you estimate the portion of the Kootenai characterized by checkerboard and other intermingled major ownership. It is then possible to determine the costs attributed to scattered ownership such as cost share dealings, right-of-way negotiations, and all other cooperative management programs. Other costs should also be estimated, for example:

-increased road construction and maintenance costs,
-increased haul and travel costs,
-duplication of water quality and wildlife monitoring 2
-fire management planning
-land use planning
-land adjustment planning

In addition to determining direct costs, we ask that you evaluate the opportunity costs, or trade-offs, associated with dispersed ownership. This cost analysis should be included under the Economics section of the DEIS, pages II-3, II-4-14, II-57-60, and II-67.

Comments specific to the DEIS and Plan regarding the lands issue follow:

(DEIS Pages 3,9) Current Direction and Comparison of Net Public Benefits. Land adjustment should be examined when comparing priced and non-priced net public benefits. A consolidated landownership pattern will help the Forest better meet the stated benefits, in addition to improving management efficiency.

(DEIS Page 14) Landownership. Under section F, first sentence, the word "available" should be stricken. As stated, this sentence incorrectly implies that all parties are in full agreement with the areas the Forest Service has identified as desirable to acquire. Decisions to exchange land should also be based on whether it is administratively and economically efficient.

(DEIS Pages 22,II-83,III-10) Lands. All of the alternatives are constrained by having only one land adjustment proposal. None of the alternatives show a range of ownership from the current situation to one of total consolidation. The statement that alternative #7 is more compatible with adjacent landowners is not necessarily correct in that cooperative programs have been costly and inefficient. This is a result of different operating schedules, costs, and other administrative conflicts. 2a.

(DEIS Page 32) Landownership Adjustment. A specific time frame should be set to accomplish the adjustment goals.

(DEIS Page I-2) Forest Planning. As stated, the Forest Plan will supersede all other plans and all management will be in conformance with the Plan. This statement shows the importance of developing the most flexible land exchange proposal which allows maximum management efficiency.

(DEIS Page II-84) Figure II-17b. The Forest should show costs and values for both land acquisition and land disposal in order to meaningfully display land exchange. As displayed, the Forest seems to imply that land acquisition will cost the public more than the compensating values. Our statement also applies to page VI-9 of the Plan.

Response to Letter #304 - Plum Cr. Timber Company, pg. 304d

2. An analysis of this nature is done on each firm land exchange project proposal. The Kootenai looks at the costs and benefits regarding administrative costs of intermingled ownership.

2a. We feel that these requests have been substantially completed. The acreage targets have been changed. The time frame for completion of the entire exchange proposal is estimated at 30 years, optimistically, depending on the willingness of the private landowners and operating budgets. Showing current landowners desires is not considered to be meaningful because of the changing nature of private landowners goals and economic interests.

(DEIS Page IV-56) Lands. The areas where major private landowners desire to exchange but the Forest Service does not should be displayed to the public. Also, the specific reasons why the government disagrees to exchange in these areas should be explained. These comments also apply to page IV-14 of the Plan.

In addition to the reasons listed for acquiring and disposing land, consolidating lands will enhance the government's management program by simplifying the ownership pattern and jurisdiction while increasing the government's efficiency in land management and administration. These benefits should be added to the list.

(DEIS Page IV-58) Lands. We ask that you expand on consolidating lands within the Upper Fisher-Vermillion area. The present adjustment proposal for this area is piecemeal. Blocking up these areas is more consistent with the land adjustment goals to improve resource objectives. See our letter of 3/25/82. 2

(DEIS Page IV-65) Adverse Effects. The Forest should comment on the potential impacts if landownership is not consolidated. Mitigation measures to avoid these impacts should also be displayed.

(Plan Page II-5) Lands. Please clarify the statement that landownership adjustments are allowed when they meet the intent of the management area prescription. Where management on public lands is not consistent with adjacent private land management, conflicts will potentially occur. In this case, will adjustments be accelerated to make activities consistent within management areas?

(Plan Page II-8) Figure II-1. How can the Forest carry out a 44,000- to 52,000-acre exchange program by proposing to adjust only 640 acres per decade for five decades?

(Plan Page B-1) Appendix B. Landowners' desire for exchange should be included in the key and in the section-by-section listings. This information is presently available to the Forest.

II. FACILITIES

Management Area (MA) 2, Semi-primitive Non-motorized Recreation, may cause access problems for BNTI in Section 25, T30N, R29W, and Section 29, T30N, R28W, because of the restrictions placed on new road construction. Where private landowners need access through non-resource designated areas, the Forest Service should specify its intent to coordinate with the landowner. In all cost share dealings, where the landowner desires access, the Forest needs to emphasize timely action to reduce management delays. This also applies to management prior to consummating an exchange in the area. 3

(DEIS Pages IV-50-56,Sec. F) The Forest should address the effects of roads on private landowners. Access to private lands is essential to private land management and is interrelated to Forest Service activities. For example, an improved transportation system can help increase economic productivity and intensification in the private sector. 4

(Plan, Page II-6,Sec. 3) The Forest implies that a "roadless area" can 5

Response to Letter #304 - Plum Cr. Timber Company, pg. 304e

3. The right of reasonable access to private land is provided for.

4. See the DEIS page IV-92.

have roads as long as use is regulated. Is this true? What is the degree of regulation? If it is closure, we assume the Forest does not need full public rights for vehicles, but rather rights only for commercial hauling. Please clarify. 5

III. WILDLIFE

(DEIS Page III-6) Approximately 1.2 million acres of summer range exist on the Forest, yet it is judged to be "limiting" to the elk population. Cover and security are said to be the limiting factors but the reason is not given. Has there been too much cutting in the summer range? Too many open roads? 6

All alternatives are supposed to increase elk over present levels—how? Will road closures alone provide this increase? How will summer range allocated to big game differ from timber allocations? The EIS only partially addressed this question.

(DEIS Page III-7) Threatened and Endangered Species. Theoretical research data show that a minimum viable population of bears is 30. However, the last published material on the Cabinets estimated a population of 12-15 grizzlies. How did these "discussions with USFWS and MDFWP people" come up with 30 bears? Since the Kootenai National Forest grizzlies are in two distinct populations, i.e., Cabinets and Whitefish Range, how many are estimated for each population? The two populations probably will not have contact with each other since they are on opposite sides of the Forest. How will a minimum viable population of 30 bears be maintained in the Cabinets, and what pressure will be placed on private landowners if the Forest can't manage for 30 bears? 7

The Forest Service should more fully coordinate management of grizzly bears with the Montana Fish and Game Commission. For example, the Forest Service should support our request that the Commission delete the Trail Creek drainage from black bear hunting in Hunting District 103 until a more viable grizzly bear population is established. This is a good opportunity for the Forest to promote the grizzly bear population.

(Plan Page II-3) Wildlife and Fish. The Forest needs to explain what they mean when referring to cooperation with private landowners to provide more diverse habitat. Public land management with different objectives is not always compatible or desirable by the private landowner. 8

(DEIS Page II-47) Old Growth. There are generalities regarding the amount of old growth to be retained, i.e., approximately 117,000 acres, or 8% of the total forest. However, MA 13 (old growth) only has 5,180 acres specifically stated as old growth. How does the Forest propose to obtain the rest, and what percentages will come out of each of the other MA's? Many of the prescriptions say that "up to 10% of the area may be managed as old growth." Could all of these "10%" options be used to come up with a total old-growth acreage in excess of the Plan? How will old growth be assigned to different habitate types on the Forest? 9

IV. WATER AND SOIL

Water Yield Analysis Procedure. This document leaves the impression that relationships between timber removal, channel condition, and increases in peak 10

5. Existing old mining roads can remain in roadless areas and used for recreational purposes if a history of use has been the pattern. Commercial use of existing roads is not foreseen unless a mineral development warranted it.

6. The DEIS recognizes the importance of both summer and winter ranges. However, because summer ranges are so widely distributed across the forest, and timber harvest and associated road development are the most significant factors potentially affecting elk habitat on the Forest, an emphasis was placed on summer range management. Food is normally not limiting on summer range due to an abundance of green forage during the summer growing season. However, research has repeatedly shown that elk habitat effectiveness on summer ranges is reduced by human activities through loss of security.

   Road closures alone will not provide the projected increases in elk habitat potential. These increases result from providing a balance of forage (timber harvest and direct habitat improvment) with cover and security (road management and roadless habitat).

   The big game summer range designation (MA 12) provides an emphasis on maintaining quality habitat for big game species. Timber harvest can occur in this MA to the extent it is compatible with this goal. The timber management designation (MA 15), on the other hand places primary emphasis on optimum timber production. MA 15 will provide wildlife habitat sufficient to maintain adequate wildlife populations, but habitat quality for big game will generally be lower in MA 15 than in MA 12. Also see Chapter III, in the DEIS.

7. Theoretical research (i.e. population and genetics modeling) indicates a minimum viable grizzly bear population is 30-70 bears. A habitat assessment for the Cabinet-Yaak ecosystem, including Montana, Idaho, and Canada, indicates this area could potentially support a viable population, even though the present population is below this level.

   The Forest Service has no legal means or desire to "place pressure" on private landowners to manage their lands for grizzly bears.

8. This comment refers to the first proposed plan in 1982. It is no longer relevant due to changes in the 1985 proposed plan.

9. Old-growth timber has been specifically designated within Management Areas 11, 12, 14, 15, 16, 17 below the 5,500 foot elevation, generally. The goal was to disperse the old-growth designations to provide diversity, which includes a diversity of habitat types. Approximately 5% of the old-growth designation were M.A.13's, and the remaining old-growth was included within the non-timber base areas. See Chapter III of the DEIS for a more complete description of the old-growth timber situation on the forest.

and average annual flows are well established, but they definitely are not. While it is generally accepted that timber removal increases average annual flows, there is no evidence that major peak floods are increased by normal forest management activities. In addition, the literature has generally concluded that significant channel alterations are dependent on major peak floods. This makes an attempt to predict channel damage based solely on the extent of timber removal highly questionable.

The report is not specific on what procedures will be followed if the model indicates a watershed is being "over-cut." The report should recognize the numerous weaknesses of the procedure and explain that decisions to defer management activities will not be made without extensive field evaluations.

Sediment Yield Determination Procedure. The Kootenai sediment yield procedure is based on a technique developed by a team of USFS specialists from Regions One and Four. This procedure is based on data from the Idaho batholith, which is among the most erosive areas in the northern Rockies. In addition, the research efforts cited in the R1-R4 document analyzed extreme treatments which are not easily related to normal forest management operations. Although the procedure has been modified to reflect local conditions, the changes are based primarily on "professional judgment," as little or no actual data are available to verify the conclusions reached.

Weaknesses and limitations on use of the procedure should be documented in the report. The importance of field verifications of any suspected problems cannot be overemphasized.

(Plan Page II-4) Soil, Air, and Water #2. Problems with the relationships between vegetation removal and flow regimes have already been discussed. This statement implies that management will be deferred if the model indicates that arbitrary peak flow levels have been exceeded. First, there is no indication in the literature that the major peak flows responsible for significant channel damage are related to timber removal. Second, no decision should be made based only on the model results. Field verification must be made prior to any modification of management plans. This statement should be dropped or rewritten.

In reference to water monitoring, numerous references are made to monitoring water quality in the Plan. For example, it is stated that water quality will be monitored following any activity on MA 18, 18i, and 19. These areas include a total of 113,800 acres. Does this mean that water monitoring will be required for every management activity? We doubt this is cost efficient or even necessary, especially for 18 and 18i.

The table (page IV-8) summarizing water monitoring does not give any details on costs, equipment, or monitoring intensity. However, it leaves the impression that there will be a great deal of monitoring, such that the cost values given appear to be low. Please clarify and address the importance of cost/benefit relationships.

In summary of the water and soil issues, please respond to the following comments:

1. The water and sediment yield models are subject to numerous limitations due to the complexity of the system, limited data, and acceptance of questionable environmental relationships.

Response to Letter #304 - Plum Cr. Timber Company, pg 304g

10. A draft of a paper on water yield increases in the the Horse Creek Administrative Research Study (Nez Perce National Forest, Idaho) stated that the majority of the streamflow increases occur during the two (2) months of highest streamflow during spring snowmelt runoff. The largest increase was 89% in the average April yield.

11. These models are the best that are available at this time. References for the models can be obtained at the Forest Supervisors Headquarters in Libby, Montana.

12. Monitoring may consist of a visual site inventory to insure that no erosion is occurring or that regeneration is established.

13. See the new Monitoring Plan in the final Forest Plan. We don't feel that a cost-benefit analysis would provide any additional useful information. The monitoring needs to be done or it doesn't need to be done.

14. See #11 above.

2. The Plan indicates that extensive water quality monitoring will be used in the future. We do not question the need for some monitoring, but believe it is important to consider the costs involved and limit monitoring to a reasonable level. 15

3. Soils should play a much stronger role in the Plan. The only issues mentioned were erosion and compaction. Other issues should include displacement, fertility, stability, etc. In addition, soil suitability should be a major consideration in land-use decisions. 16

4. As with other issues, our concern with treatment of water and sediment data relates to the impacts on private lands due to restrictive management on adjacent public lands. Where landownership is a concern to the Forest, land adjustment must be presented as a means to mitigate potential conflicts. In all cases where public management is impeded by water or soil constraints, the Plan should assure that access to and management of private land is not unreasonably hindered. 17

V. FIRE, VISUAL

The Forest needs to carefully assess all public management activities which may affect the private landowner. For example, on pages 12 and II-37 of the DEIS and page II-6 of the Plan, the Forest should display in what areas the "let-burn policy" applies and determine the impacts of this policy on adjacent landowners. 18
The Plan also needs to give support to the coordinated state airshed approach to managing smoke emissions. 19

Where visual resource management designations potentially impact adjacent lands, land exchange should be identified as the means to mitigate these impacts. It is probable that public pressure will become greater on private land managers to alter intensive forest practices, i.e., restrict cutting practices, as public land management becomes less intensive. 20

The visual quality analysis on page IV-12 of the DEIS compares different land allocations for achieving visual criteria and objectives. The Forest could have used a similar approach to analyze the landownership situation. Landownership criteria and goals can be established and various alternatives developed to compare Forest Service and private landowners' land adjustment desires. 21

We question why the cost of monitoring the visual plan is so much higher than monitoring other programs. This should be clarified on page IV-10 of the Plan. 22

VI. MANAGEMENT AREAS

The Forest should evaluate how it can achieve its goals without unduly restricting access to private lands or negatively affecting private land management. Below are specific comments to the Management Areas which we ask the Forest to respond to in regard to recognizing the needs of private landowners.

MA 2, Semi-primitive, Non-motorized Recreation. In areas where this MA may impact the private landowner, the Forest should include language to assure that 23

15. We agree.

16. Soil stability and productivity were important influences in the land use designations in all the alternatives, including the final Forest Plan.

17. The right of reasonable access to private land is provided for.

18. This issue has been dealt with in the 7/85 DEIS. See Chapter III, Current Resource Situation, Protection, pg. III-18.

19. The Kootenai National Forest coordinates the execution of all prescribed burning activity with the Montana State Airshed Group to assure compliance with the applicable provisions of the Montana Smoke Management Plan.

20. We agree that land exchange could be used as a tool to lessen a potential public pressure that could result on an adjacent piece of private land.

21. The alternative comparison of various land allocations for visual quality analysis involve National Forest lands. Alternatives to land ownership would have to involve other lands which the Forest Service has no information.

22. See the new monitoring plan.

it will seek to mitigate any conflicts. The Forest goals to prohibit new road building within this MA implies possible conflicts with adjacent landowners. We especially question how the Forest will effectively manage its lands adjacent to intensively managed private lands. These areas include: Sections 6, 12, 13, 18, 20, 24, and 30, T25N, R30W; Sections 7 and 18, T25N, R29W, Sections 4, 9, 10, 15, 22, and 23, T28N, R28W (a transportation plan map for Cow-Sneel Creeks shows roads planned in this area); Sections 8, 16, and 18, T31N, R26W; and Sections 19, 30, 31, and 32, T30N, R28W. 23

MA 5,16,17, Viewing. The Plan needs to state explicitly that it does not intend to exclude resource users from using roads within MA 5. As stated, recreationists seem to be given exclusive preference. How does the Forest propose to manage the scattered view areas adjacent to private ownership such as in: Sections 2, 5, 10, 12, 26, and 36, T26N, R30W; Section 6, T25N, R30W (the BPA powerline crosses this section); Section 28, T25N, R30W; Sections 10, 12, 17, 20, and 32, T26N, R29W; Sections 2, 10, 12, 32, and 36, T25N, R29W; Section 6, T25N, R28W; Sections 2, 10, 12, 14, and 24, T27N, R27W; and Sections 6, 18, and 34, T27N, R26W. We also question the view designation of areas such as the last six sections which are off any well-traveled road. 24

MA 8,10,11,12,13,14,15,18,19, Wilderness, Big Game, Grizzly Bear, Wildlife, Timber, Special Use. The Plan should state its intent to fully coordinate with adjacent private landowners where these designations potentially create management conflicts. Where conflicts may occur, land exchange should be referred to as a management tool to achieve these management area goals. 25

MA 12, Big Game Summer Range, and MA 17, Viewing/Timber-Wildlife. These sections imply that the Forest will not need full use easements across private lands because of the proposed road standards. Is this correct?

MA 14, Grizzly/Timber. It is unnecessary for the Forest to encourage conservation easements on adjacent private lands for grizzly management. This statement implies that the Forest needs more grizzly habitat, yet, the Forest goal to manage for 30 bears is an achievable minimum viable population according to the Plan. BNTI does not intend to grant easements for grizzly habitat. We ask that reference to conservation easements be deleted. 26

We also ask that several of the MA 14 areas be eliminated. These are the areas which are so small and adjacent to or intermingled with private lands that they are unmanageable. These include: Sections 26 and 34, T26N, R30W; Sections 4 and 6, T25N, R29W; Sections 6 and 18, T26N, R29W.

MA 15, Timber Optimization/Facilities. In addition to considering transportation costs in its transportation planning, the Forest must evaluate mill prices in order to achieve a minimal cost program. 27

MA 24, Limited Use. We suggest combining MA 24 with MA 18, Minimum Use, since the goals of both areas are consistent.

In addition to the above comments, we ask that the Forest monitor and evaluate the Plan's affect on the adjacent and intermingled landowners' objectives. This is consistent with the monitoring goals on page IV-2 to inform the public of the Plan's progress. 28

We again express our appreciation for the Forest's attempt to prepare a thorough and well-written draft Plan and EIS. Along with the suggested changes, we fully support the proposed alternative.

Response to Letter #304 - Plum Cr. Timber Company, pg. 304i

23. Many designations have changed since the 11/82 DEIS. The 7/85 DEIS accomodates adjacent private lands to the best of our knowledge. Some of the adjacent private land has been identified as desireable to acquire.

24. Almost all of the land designations mentioned have been changed in the 7/85 DEIS.

25. See the 12/84 landownership adjustment map in the 7/85 DEIS. As stated in the Forest Plan, the recovery of the grizzly bear is a major consideration for proposing land exchanges.

26. We respectfully disagree. Conservation easements, as well as land exchanges, are considered a valuable tool to assist in the recovery of the grizzly bear. All of the land designations requested have been changed, except in the NW 1/4 of Sec. 6, T26N, R29W.

27. The goals are similar but MA 24 is used to designate non-commercial land.

28. Adjacent landowners will be notified when activities are scheduled. They can then inform us of of the potential effect on their objectives.

304j

COMPLIANCE WITH LAWS AND REGULATIONS

A. Coordination of planning with intermingled and adjacent landowner. As required by:

1. National Forest Management Act (NFMA) regulations - Code of Federal Regulations (CFR); sections 219(g), 219.8(b)

2. Forest Service Manual (FSM) 1920, 1922.46A

B. Landownership adjustment. As required by:

1. FSM 1921.21(7), 1922.46

2. NFMA regulations-CFR; section 219.10(7)

C. Notification of private landowner. As required by:

1. FSM 1920.73(g)

2. NFMA regulations-CFR; section 219.8(g)

D. Analysis of economic costs and benefits. As required by:

NFMA regulations-CFR; section 219.5(c) and (g). (There should be an economic analysis for a variety of landownership patterns.)

E. Adequate display of alternatives. As required by:

National Environmental Policy Act (NEPA); part 1502.1 requiring a full and fair analysis of the impacts and mitigating measures of each project. (A full range of landownership alternatives should be displayed.)

F. Management efficiency. As required by:

1. 1980 Recommended Renewable Resources Planning Program, pages 95-96.

2. President Reagan's February 17, 1981, Executive Order 12291, section 2(c), requiring selection of the alternative having the least cost to society.

3. Secretary of Agriculture's expectations on efficient management, as stated in a January 26, 1982, paper by D. MacCleery.

4. FSM 1970: Economic and Social Analysis

JAB/mc
3/15/83

Response to Letter #304 - Plum Cr. Timber Company, pg. 304j

No response needed on this page.

F. H. STOLTZE LAND & LUMBER CO.

Lumber Manufacturers

Box 1429 COLUMBIA FALLS, MONTANA 59912

October 30, 1985

James Rathbun
Forest Supervisor
Kootenai National Forest
Libby, Mt. 59923

Dear Mr. Rathbun:

After many years of hard work by the Kootenai National Forest planning staff, we now have a proposed Forest Plan which in its final from will determine the management direction for the next 50 years. In the draft Reviewer's Aid you state "The Future is a story of compromise and balance as we look for the best mix of resources to manage for in a given area". Your proposed plan is a result of this compromise and balance, but have you compromised away the valuable resources that will be necessary for the survival of future generations.

The wealth of a nation is determined by it's resources and how well they are managed. When I see an inventoried merchantable Lodgepole Pine volume of 2 Billion Board Feet and a plan which will only harvest 1 Billion Board Feet, I question the management of these lands. You have not only Lost the value of a resource, you have Lost the multiplier effect in the economy, you have Lost the productive capacity of these acres for an unknown number of years and you will not be meeting minimum management requirements to minimize hazards of flood, wildlife and erosion. One only has to look at the records of early fires, such as "When Mountains Roar" or more recently the results of the Houghton Creek Fire to know that this is not the direction management should follow. If we assume that there is 20,000 Board Feet on each of these acres, this 1 Billion Board Feet represents 50,000 acres of productive forest land. Economical prepared timber sales will certainly provide some help in getting these acres back in production. Your final plan must address this problem and get this land area back into production. 1

Response to letter #193 - F.H. Stoltze Land and Lumber Co., first page

1. The emphasis is already on the sell and harvest of lodgepole pine. We are working with industry and can adjust the level of lodgepole pine sell as the market allows. Emphasis has been on this species because of the mountain pine beetle since the early 1980's as evidenced in the following table:

LODGEPOLE PINE (LPP) - SOLD AND HARVESTED (mmbf)

Fiscal Year	Total Timber Sold on KNF	Total LPP Sold	Percent LPP of Total Sold	Total LPP Harvested
79	206	36	17	46
80	176	48	26	34
81	264	93	35	50
82	221	91	41	50
83	245	97	39	72
84	212	98	46	72
85	224	97	43	67

This shows that the level of sell of lodgepole pine has been quite high but the harvest level, while increased, has not kept pace. Efforts have been made to keep the Forest Program sell level high to allow a high level of lodgepole sell, but this will do no good unless the harvest also increases.

Even with this emphasis, much of the lodgepole will not be sold or harvested because; (1) it is located on steep and/or marginal ground where removal costs are prohibitive because of roading and logging requirements, (2) located within lands designated for other uses, such as wilderness, roadless, etc., (3) the wood will deteriorate faster than it can be physically removed. Our estimate was a 50% loss owing to the above factors and this loss has already been discounted in the timber yield tables.

James Rathbun
October 30, 1985
Page - 2

Unfortunately your proposed plan is doomed before it is adopted. Your budget will determine the success or failure of the plan. Under current direction your forest budget is $16.6 million. Your proposed alternative requires a budget of $20.3 million. Your agency is operating currently on a temporary appropriation which in all likelihood will be less than you received last year. Only government employees would produce a plan which they know can not succeed. The plan states that timber harvest levels are based on the assumption that the budget dollars will be available. At what level will current funding set the timber harvest and related activities. I am very disappointed that so much effort was put into a document that can not be used. 2

Your plan also needs to be up front on what the difference between the Regional utilization standards and current utilization standards means in terms of the annual harvest levels. Past experience has shown this to be about an 8 percent reduction in annual harvest levels. With current economic conditions in the timber industry there is a move at the Regional level to raise the current utilization standards. This will certainly cause a greater reduction in the cut. 3

The need for roadless recreation is still being over emphasized. This type of recreation is only being used by a very small percentage of the public. The economy must be such that people have money left over after paying for food and shelter that they can partake in any recreational activities. There is adequate existing designated roadless areas in the Inland Region to provide for present and future use.

I strongly oppose the creation of any more Wilderness on the Kootenai Forest. Those areas which should be best managed as recreational areas can be managed as such under your plan without wilderness designation. Special interest groups should not be dictating the setting aside of massive areas for their single use. By creating wilderness you are limiting the number of people who can use and enjoy those areas. In a recent newspaper article the true feelings of the wilderness advocates was shown when they stated that there could be no compromise, everything must be wilderness. 4

In your overview, your number one goal states that you want to "provide a sustained yield of timber volume responsive to National and Regional needs, scheduled to encourage a stable base of economic growth in the dependent geographical area and 5

Response to letter #193 - F.H. Stoltze Land and Lumber Co., pg. 193a

2. Timber sales will be directly influenced by the budget. If the funds are not available, timber sales may be reduced, deferred or dropped.

3. The Analysis of the Utilization Standards indicates that there could be a 7% difference (lower) in the first decade if the Regional utilization standards are not implemented. As of this date, there is no indication that the Regional standards will not be workable.

4. We have attempted to balance out all the demands from the public including timber, wilderness and roadless recreation.

James Rathbun
October 30, 1985
Page - 3

and help avoid rapid and drastic changes in economic and social conditions". This should be the number one goal of management on the Kootenai National Forest. The forest reserves were originally set up to provide a source of raw materials for industry and a source of income for our dependent communities. The current 25 percent funds are an important part of the financial support of the local school and county roads. You must insure that this income continues to grow. 5

If I had to chose one of your proposed alternatives, I feel that Alternative N provides the best management of the Kootenai Forest resources. It provides more suitable timber-land acres, no additional wilderness, less roadless designation more elk population, more employment, a greater present net value, and more annual allowable harvest. Because of drastic decreases in allowable cuts on the surrounding forests the Kootenai will be required to provide more of the raw materials needed in these areas. In 1984, the forest products industry was the 3rd largest industry (14%) in Montana-out ranked only by Government (22%) and other manufacturing (16%). It seems strange that an industry supported by the taxpayers should be the largest. 6 6 a

When the late Senator Hubert Humphery envisioned the National Forest Management Act, he truly believed that this act would provide the basis for management of our natural resources to insure a continued supply for all future generations. He recognized the tremendous potential the natural resources of this country had and how poorly they had been managed. He did not envision a planning process which does everything but insure an adequate supply of natural resources.

Your charge must be to do what is best for the greatest number of people and not what each special interest group wants whether it be people interested in wilderness, fisheries, endangered species, wildlife or timber industry. The general public should not be the endangered species.

Sincerely yours,

F. H. STOLTZE LAND & LUMBER CO.

Ronald Buentemeier

Ronald H. Buentemeier
Timber Manager

RHB/hb

Response to letter #193 - F.H. Stoltze Land and Lumber Co., pg. 193b

5. The insurance of the 25% funds is in place in the final Forest Plan. The income will grow if industry harvest levels increase. The timber supply under contract and the Programmed Yearly Sell provide for an increased timber harvest level.

6. No response needed.

6a. No response needed.

F. H. STOLTZE LAND & LUMBER CO.

Lumber Manufacturers

Box 1429 COLUMBIA FALLS, MONTANA 59912

October 30, 1985

Forest Plan
Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear James Rathbun, Forest Supervisor:

I would first like to take the opportunity to commend the planning staff for the long hours they devoted to this project and the very excellent job they did in producing the DEIS.

I am glad to see that the Kootenai National Forest will be the biggest timber producing forest in Region I because I feel those of us in the timber industry are going to need it. Adjacent forests have for the most part lowered their allowable cut and everyone will be looking towards the Kootenai National Forest to fulfill their timber supply needs. The Flathead National Forest had a historical cut of 132 MMBF (million board feet) of sawlogs per year, but due to ever increasing environmental concerns and the need for a cheaper timber supply, lumber companies have turned to private lands. The Flathead has lowered their allowable cut to 100 MMBF and possibly lower. The Idaho Panhandle National Forest has proposed an allowable cut volume of 275 MMBF compared to a historic cut volume of 290 MMBF. Again due to poor economic conditions, increasing environmental concerns and the need for a cheaper timber supply the lumber companies in Northern Idaho turned to private lands. Studies by the Forest Service in Northern Idaho show that harvest is exceeding growth on private lands by 12-15 percent/year. 17 percent of the volume for mills in St. Maries and Benewah counties come from federal lands. This volume amount will now drastically change due to the new Idaho State Water Quality law concerning Best Management Practices (BMP's). Companies with large tracts of private industrial lands will be forced to seek out federal timber in order to keep operating. In 1969 private lands in Region I supplied 900 MMBF annually or 33 percent of the region's total harvest. In 1978 private lands supplied 1.3 billion B.F. annually or 51 percent 1

Response to letter #194 - F.H. Stoltze Land & Lmb. (McCubbins), first page

1. This is one of the reasons that potential economic timberlands were designated for timber management.

of the region's total harvest, most of it from private industrial landowners, Champion International, and Plum Creek Timber Company. These two major land owners predict a significant decline from their timberlands in the next 2-5 years. These are just three of the major reasons timber companies will be looking to the Kootenai National Forest to supply their mills over the next 2 - 3 decades. 1

A couple of items which need to be better expressed and brought out to the public is the fact that the timber volumes in all Alternatives are based upon the new regional standards with a smaller DBH and top size requirement. In actuality the allowable cut in the proposed alternative is around 180 MMBF by today's sawlog standards rather than 202 MMBF. Also it needs to be shown in the final plan that convertible timber products such as firewood, post and poles, and pulp are a part of that total volume rather than just sawlogs. 2

Roads

In order to have a high timber harvest and yet be able to support increased wildlife populations it is imperative for the general public to understand why road closures programs are so important. The Forest Service in conjunction with the Federal Fish and Wildlife Service and Montana State Fish, Wildlife, and Parks has to provide for a continuing education program for the general public. First and foremost it needs to be stressed that in order to remove animals from the Threatened and Endangered Species list that security and proper habitat have to be provided. Most people which participated in the Issues part of the Kootenai Plan objected to road closures. With the amount of new road needed for future timber,local roads will be more than adequate to do the job and still protect resource needs. In most instances temporary spur roads built with hydraulic excavators (rather than dozers) do a much better job of protecting the resource than past practices. 3

In the DEIS reference is made "that roads probably cause more than 80 to 90 percent of the erosion and sedimentation problems". These same references also go on to say that "The chief sources of erosion and sedimentation are roads that disrupt or infringe upon natural stream channels, roads with steep gradients, and roads which lack adequate drainage facilities to prevent swift concentrated overland flow from their surfaces." 4

Response to letter #194 - F.H. Stoltze Land & (McCubbins), pg. 194a

2. The utilization standards will be specified in the final Forest Plan.

3. We will continue to use our system of public involvement and awareness and inform the public of systems we may use, such as the green dot system, etc.

4. State-of-the-art mitigation measures will be incorporated into new activities as they become practical on-the-ground. An example is filter windrows.

Page 3.

We now have the equipment and techonology to better control these erosion and sedimentation problems. Another mitigation measure which can be added to the list of mitigation practices on Page IV - 56 of the DEIS is to grass seed the whole roadway prism on all local roads which are to be closed. 4

One of my major concerns at this point in time is whether or not the Forest Service is going to have to re-do the DEIS to facilitate the 1985 Clean Water Act which was just put into law by congress. It is my understanding there is very stringent standards for sources of non-point pollution such as forestry practices. I guess I can see the writing on the wall - the Forest Service is going to have to answer to the Environmental Protection Agency for Water Quality the same as it now bows down to the Fish and Wildlife Service for Grizzly bear needs. 5

The proposed plan shows that 20.3 million dollars a year is needed to implement the plan. This is a 22 percent increase over current direction. While it is a noble gesture to want to appease all interested parties using national forests lands I feel congress will not appropriate the needed funds and everything will suffer accordingly, with timber harvest taking the brunt of the cost cutting measures. We have already seen congress cut 50 million dollars from the $190 million dollars needed for the road construction program and turn right around and up the trails program for a chosen few to use. 6

R. Neil Sampson, executive vice president of the American Forestry Association testified before the House Agriculture Committee's forests subcommittee in June of this year. He stated "It is certainly not a question of whether or not the Forest Service knows how to properly manage forest lands, they are clearly the world's leaders in that science and art. The problem is that the American public simply does not agree on how the national forests should be managed. The administration and congress have been sending confusing signals about how profitable the forests should be, if at all, and how much devoted to environmental quality. Let's not pretend we can have it both ways. We can't manage for multiple use and environmental quality while still maximizing revenues on a short-term basis. Congress needs to take strong leadership in forging a new social consensus about the use of the national forests." 7

Response to letter #194 - F.H. Stoltze Land & (McCubbins), pg. 194b

5. The National Forests are governed by laws and regulations. When new laws and regulations are passed they are usually incorporated into the management of the Forests over time by amendments, supplements or revisions.

6. The calculated budget is the estimated total to produce the potential results shown in the Final EIS. If those budgets are not received, the scale of operations will be reduced accordingly, if costs remain similar to those projected in the DEIS. Conversely, if cost-saving efficiencies can be achieved, higher potential results could be attained for a given level of funding.

7. No response needed.

Page 4.

I will conclude my comments about the Kootenai Plan with a statement made by Ben Stout, former dean of the University of Montana's School of Forestry.

"My God - there is a lot of land out there - if you decide that it's not horrendous to cut trees. The industry needs a timber supply it can count on." 8

Sincerely,

Floyd W. McCubbins

Floyd W. McCubbins
Forester
F.H. Stoltze Land & Lumber Co.

FM:tk

Response to letter #194 - F.H. Stoltze Land & (McCubbins), pg. 194c

8. No response needed.

45

Texaco USA

PO Box 2100
Denver CO 80201
4601 DTC Boulevard
Denver CO 80237

October 11, 1985

KOOTENAI NATIONAL FOREST
MONTANA

Mr. Paul Leimbach
Forest Planner
Kootenai National Forest
Route 3
Libby, Montana 59923

Dear Mr. Leimbach:

Thank you for supplying this office with a copy of the Land and Resource Management Plan and the Draft Environmental Impact Statement for the forest.

Texaco does not support the Preferred Alternative J because it would designate additional wilderness in Montana. Montana already contains over three million acres of wilderness, all of it in western Montana. The public served by the Kootenai Forest is also close enough to existing wilderness thereby eliminating the need for increased wilderness acreage. We support the adoption of either Alternative F or L as being reasonable alternatives which afford maximum opportunities for oil and gas exploration. These alternatives would provide the forest with increased revenue resulting from increased development of various commodities on the Forest including reasonable exploration activities for oil and gas while also providing for adequate protection of sensitive resource values. 1

Very truly yours,

TEXACO INC.

G. M. Barrow

G. M. Barrow
Land Department

GMB:JE

Respnse to letter # 45 - Texaco USA, first page

1. Alternatives F and L do provide the maximum opportunity for oil and gas exploration but they do not provide any resolution for the wilderness issue.

40

E. 5603 Third Avenue
Spokane, WA 99212

USBORAX

(509) 534-9321

October 8, 1985

Mr. Jim Rathbun
Forest Supervisor
Kootenai National Forest
Rt. 3, Box 700
Libby, Montana 59923

Jim:

I appreciate this opportunity to review and comment on the Kootenai National Forest Plan and DEIS. I apologize for submitting our comments at this late date, but as you are aware, our 1985 drilling program at Rock Lake did not leave me much time during the summer for reviewing the proposed Forest activities.

As you know, the Kootenai National Forest is richly endowed with world-class mineral resources, particularly silver and copper. Major deposits have already been discovered at Mt. Vernon (Troy), Chicago Peak, and Rock Lake. I would like to comment on some concerns I have regarding the manner in which mineral issues are addressed in the plan and DEIS.

1. Issues

Withdrawal from mineral entry is an important issue, but not the only one of concern. A second important issue is that access and land use required by mining activities must be assured, particularly on the east and west sides of the Cabinet Mountains. How does each alternative provide for an orderly development of the known mineral resources? This issue does not appear to be fully addressed in the DEIS. 1 2

2. Alternatives

Alternative J, the Proposed Action, is well conceived with regards to Wilderness additions and basically preserves and conserves truly unique resources without closing large areas to recreation and resource development. However, several proposed Wilderness additions should be modified based on known and projected mineral resource values. First, additional Wilderness in the upper Rock Creek drainage on the west side of the Cabinets does not seem appropriate considering the current direction of the U.S. Borax Rock Lake operations. This area was specifically left out by the Wilderness Act of 1964 to allow access to the mining properties at Rock Lake. Second, on the east face of the Cabinets, the area between Leigh Creek on the south 3 3a

UNITED STATES BORAX & CHEMICAL CORPORATION: 3075 WILSHIRE BOULEVARD · LOS ANGELES CALIFORNIA 90010 · (213) 381-5311
MAIL ADDRESS P. O. BOX 76128 SANFORD STATION LOS ANGELES CALIFORNIA 90075

Response to Letter #40 - U.S. Borax, first page

1. Access and land use required by mining activities on lands open to mineral entry is provided for by law.

2. It is true that the DEIS does not specifically address "how each alternative provides for an orderly development of minerals." However, the information in the DEIS taken as an aggregate does provide adequate information for this to be determined. The key measure for an opportunity for developme nt is access. Accessibility of lands is addressed under each alternative in that acres of withdrawal and restricted access are given.

3. Exceptions for mineral exploration are a Congressional prerogative.

Jim Rathbun
Page 2

and Treasure Mountain on the north should not be part of a Wilderness addition. The highly mineralized Snowshoe Fault trends through this area. Third, Wilderness additions on the Cabinet west face just east of Bull Lake would affect an area of good potential for buried silver and copper deposits. 3 a 3 b

Besides the above three suggested modifications to Alternative J concerning the Wilderness additions, of equal, if not more, importance is the amount of lands proposed to be managed to provide roadless recreation opportunities. Again, the upper Rock Creek drainage and essentially the entire east face of the Cabinets is proposed for this land use without considering access and land use required by future mining activities. The Area Plan on the Cabinets now being prepared by the U.S.F.S. plus data currently being collected by the U. S. Bureau of Mines in Spokane should be considered in this matter. 4

3. Affected Environment

The plan and DEIS should have: (1) a narrative and summary of existing mining operations; (2) a summary of major unmined mineral resources within the forest (e.g. Chicago Peak Ag-Cu, Rock Lake Ag-Cu); and (3) a summary of past mine operations and current exploration and development that may yield additional mineral reserves (e.g. Snowshoe Fault properties, Hunt Oil project, Amselco project). 5

These properties should be shown on a map and critical data on commodities, size, production, reserves, and location should be summarized in tables.

4. Activities and Their Effects

Anticipated or potential development of mineral resources should be more thoroughly reviewed in the plan. How much area will be affected if production begins at Rock Lake or Chicago Peak? Will special withdrawals be required to protect the forest near areas of production? When can development or production reasonably be expected to begin? Access requirements (roads and power supply) for development and their impact on the forest should be reviewed. How does each considered alternative impact or affect possible development? These types of questions should be considered in the DEIS and they in part are being considered in the U.S.F.S. Area Plan for the Cabinets. 6

In summary, the Kootenai National Forest contains some major developed and developing mineral resources. In addition, further exploration will undoubtedly find mineable Ag-Cu deposits in the near future. Approximately 300 million tons of Ag-Cu ore in the Revett Formation have already been developed, including the Troy deposit, to date in the Kootenai Forest. Sedimentary basins containing strata similar to the Revett Formation elsewhere in the world have been found to contain more than one billion tons of ore.

Response to Letter #40 - U.S. Borax, page 40a

3a. No conflict is anticipated with continued mineral exploration although scheduling and operational costs may be affected. If discoveries are made and the mineral proponent wishes to pursue development, the project will probably require an EIS similar to the current projects in the Rock Creek area. Any identified conflict with a proposed mineral project can be addressed in the project EIS.

3b. See 3a above.

4. Mineral development options are being provided in the areas that you mentioned, although it may not be in the precise form that you would recommend.

5. (1) A narrative summary of existing mining operations appears on page III- 51 in the DEIS. (2) A generalized summary of known mineralization appears on page III- 51 in the DEIS also. (3) Areas considered as prospective for future mineral activity are outlined on page III-51 in the DEIS. Discussion of historic properties, although relevant to a geologist, may be of little benefit to the lay reader.

6. The detail that you are suggesting is more appropriate in a mineral development proposal EIS.

A request has been made for more specific data but no response has been received to date.

Thus, the forest plan and DEIS should summarize and review more thoroughly the mineral resource situation and estimate how future development will affect other non-mineral resources and uses of the forest. 6

U.S. Borax would be willing upon request to provide more specific data to aid in making a more detailed mineral resource appraisal.

Thank you for considering these matters.

Sincerely,

Tom Henricksen

Thomas A. Henricksen,
Assistant Manager/Geologist

TAH/kw

Response to Letter #40 - U.S. Borax, pg. 40b

No response needed on this page.

19

CLAYTON W. WILLIAMS, JR.
WILLIAMS COMPANY

1401 LARIMER STREET SUITE 200
TELEPHONE 303 573-8448
DENVER, COLORADO 80202

September 5, 1985

Forest Plan
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

RE: Proposed Kootenai Forest Plan and
Draft Environmental Impact Statement
Northwestern Montana

Gentlemen:

Thank you for furnishing copies of the Draft Environmental Impact Statement (DEIS) and Proposed Forest Plan for the Kootenai National Forest to our office. The forest staff is to be commended for the completion of this gargantuan effort. Although the materials are hardly a substitute for light summer reading, we nevertheless reviewed them at length and are pleased to provide you with our comments.

Clayton W. Williams, Jr. is the owner of an interest in some 180,000 acres of oil and gas leases within the Kootenai National Forest. The reason for Mr. Williams' interest in this area is simple: we believe that the northwestern portion of Montana offers the potential for the discovery of more substantial hydrocarbon reserves than does any other onshore geologic province in the forty-eight contiguous states. The evidence which lends credence to such a statement is extremely limited at present; however, wells drilled in western Montana within the last two years are indicative of our industry's willingness to risk millions of dollars in the future to test this potential. As you might expect, activity has fallen precipitously since March of this year, when the Conner v. Burford decision was handed down. At such time as this case is favorably resolved, however, we are confident that seismic and drilling activities will be resumed and will continue at a high level in northwestern Montana for many years to come. It is therefore of great importance to Williams and other parties who own vested oil and gas lease rights on the Kootenai to be assured that such rights may be exercised to the extent permitted by applicable laws and regulations. 1 2

Under the Proposed Action alternative, only about 215,000 acres, or roughly 9.35% of the Forest, are planned to be withdrawn from oil and gas leasing. We have no particular quarrel with these figures. A closer study of the specific management standards for each of the various Management Areas, however, is extremely alarming.

Response to letter # 19 - Clayton W. Williams, Jr., first page

1. No response needed.

2. No response needed.

According to the management standards, 675,070 acres, or almost 30% of the Forest, will be subject to wilderness withdrawals and mandatory no surface occupancy stipulations. This constitutes an area of over 1,000 square miles which will be effectively closed off to exploration. Further, a total of 1,796,400 acres, or over 78% of the Forest, will be subject to wilderness withdrawals, mandatory no surface occupancy stipulations, and discretionary no surface occupancy stipulations. This constitues an area of over 2,800 square miles, which is about 2% of the size of the entire State of Montana, and only slightly smaller than the combined land areas of the States of Delaware and Rhode Island. (I should also point out that we are a bit uncertain as to the accuracy of these figures, inasmuch as the Management Areas set forth in the Proposed Forest Plan do not correspond with those on the Management Area Map in a couple of instances). In any event, "standard oil and gas lease stipulations," which themselves can be quite restrictive and give substantial discretion to the Forest staff, will be used on only 488,840 acres, or less than 22% of the Forest. We strongly feel that restricted oil and gas leasing on over 78% of the total lands in the Forest should be reconsidered. 3

Admittedly, the interest of the oil and gas industry in the direction in which the Kootenai seems to be heading is only one of many interests to which the Forest Service must be responsive. We regret, however, the very limited extent to which the DEIS and the Proposed Forest Plan addressed the oil and gas potential of the area, and more importantly, the concomitant impacts which a major discovery would have on both the biological and economic environment of the Kootenai and the State of Montana as a whole. In our opinion, the environmental degradation attendant to a significant oil and gas discovery would be substantially less than that associated with on-going timber operations in terms of areal extent, visual quality, impacts upon fish and wildlife habitat, and time necessary for reclamation. In economic terms, a major hydrocarbon discovery would result in the injection of hundreds of millions of dollars into the depressed regional economy and the federal treasury. The "present net value" of even a single discovery could far exceed the estimate for the most optimistic alternative considered in the DEIS. We would therefore suggest that more attention be given to this potential (both its positive and negative implications) as the planning process continues. 4 5

We are keenly aware of the legal constraints under which the Kootenai must move forward. We are convinced, however, based upon our own experiences and those of other companies, that oil and gas operations can indeed be compatible with environmentally sensitive areas. Our industry is capable of addressing the plethora of legitimate concerns in a responsible and cooperative manner. 6

Thank you for the opportunity to comment on this matter. It is our hope that this dialogue will continue and that our concerns will be given thoughtful consideration.

Very truly yours,

R. Alan Woodard

R. Alan Woodard
Division Manager

RAW/cjl

Response to letter # 19 - Clayton W. Williams, Jr., pg. 19a

3. The purpose of an EIS is to display environmental effects. The proposed plan will allow more opportunity for oil and gas exploration than some of the other alternatives but in doing so it will require some special consideration (such as timing of operations, etc.) to protect threatened and endangered species, etc. These special considerations are now being experienced with mineral exploration and it is logical to presume that similar retraints will evolve for oil and gas exploration whenever a Plan of Operation is presented for approval. We feel it is important for the oil and gas industry to be aware of the complex environmental and multiple-resouce management situation on the Kootenai when they prepare Plans of Operation.

4. The amount of environmental impact for an oil and gas discovery versus a timber sale can only be measured on a case-by-case basis. Without all the specifics, we cannot state that one type of activity will be more or less impactive than the other.

5. We agree that if a major hydrcarbon discovery occurred, a significant economic effect would take place. But the timing and probability is still uncertain and the Final Forest Plan can only accomodate the opportunity for exploration. If significant conflicts become apparent in the future, the Plan can be reassessed.

6. No response needed.

To: Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

November 27, 1985

48

After further consideration the following four priorities need to be added to the CBCH comment on the Kootenai National Forest proposed plan:

Priority #1
On page 11 and 12 of the KNFPP Table 11-1 (Projected Outputs and Activities by Time Period). Under "facilities" the miles of trail reconstruction is listed as : 1986-1995 at 7.5 miles; 1996-2005 at 7.5 miles; 2006-2015 at 10 miles; 2016-2025 at 12.5 miles, etc. - this is ludicrous considering the outdoor recreation potential of the area and considering present use. The present system has a history of underfunding - therefore, the system of trails is in shambles. The present high-use trails need to be reconstructed and other trails need development in order to dispurse impact. CBCH strongly urges that these figures be revised upward for each ten-year period a minimum of 5 miles per year or a minimum of 50 miles per ten-year period. This fifty mile figure should cover reconstruction and new trail construction. 1

Priority # 2
Page A7-1 Appendix 7 funding item 18 "trail maintenance". This figure shows $91,000 for FY 1984. This figure has proven to be far below the required dollars needed for each district by the time it is divided between the districts of KNF. CBCH feels this needs to have a minimum increase of 40% to meet the needs of local districts. 2

Priority #3
Page A7-1 Appendix 7 funding item 19 "law enforcement". Being a logging community the logging activity continues to access deeper into the little roadless area left. CBCH feels that the closed road system is an alternative to lost trails and that road closure is a must. In order to make the road closure work the law enforcement funding needs to be increased. CBCH would like to see a drastic increase in this budget item. We feel that the budgeted figures need to be doubled. 3

Priority #4
Page 3 KNFPP Appendix A7-1 Item 37 "Trail Construction/ Reconstruction". If $32,000 shows the results of present poor maintenance experienced in the Libby region this figure is woefully inadequate. CBCH here again sees a need for a drastic increase in this figure. We feel that $96,000 is a minimum based on our experience in our area. This should allow enough dollars to filter down the the local district level resulting in needed improvements and reconstruction. 4

The following are concerns of the Cabinet Back Country Horsemen about the Kootenai National Forest Management Plan:

Concern #1
Sheldon Mountain:
From Libby onto this mountain system; access from Libby across Sheldon and out toward Blue Mountain, Alexander, Fleetwood. 5
Quad #56 Old Trail #1843 See 5, 16, 15, 14, 11, 26
All roads to be gated.

E-104

Response to letters #48 & 313 - Cabinet Backcountry Horseman, first page

1. The figures shown in the table represent average annual targets which accomodate your decadal requests.

2. A 40% increase would be desireable but that remains a congressional prerogative.

3. Road closures in order to be effective must have an active enforcement program. Personnel from both the State and the Forest Service cooperate in this effort and do a large part of this job while carrying out other duties on the Forest. In recent years the public has also been a big help with the enforcement problem by turning in violations.

4. Significant increases in funding will still require congressional approval.

5. The area-specific information and recommendations supplied by your group, including a copy of the map, has been forwarded to the respective Ranger Districts for use in their annual Recreation and Trail Maintenance planning.

E-104

Concern #2
Swede Mountain:
From Libby onto the ridge system; access from Libby across Champion lands onto McMillian Ridge. 6
All roads to be gated.

Concern #3
Grambauer to Scenery Mountain: 7
Old trail exists and needs to be reestablished.

Concern #4
From Upper Cedar out Parmenter to Parmenter Trail system: 8
This trail now exists.

Concern #5
Parmenter Trail onto Cedar Creek Road system:
This access leaves the Parmenter trail system on the town side of the Flower Point Trail to roads from Cedar Creek. It allows for a loop ride. 9

Concern #6
Horse Mountain - Libby Creek Trail system from Horse Mountain Lookout toward Howard Lake: 10
This wildlife system needs gated roads to protect wildlife seclusion. Trail access should be reestablished through logging units.

Concern #7
Old Trail 6: 11
Reestablish #299 near Barren Peak. Maintain the system toward Bear Lakes. Logging activities should reestablish trail access and gated roads be a standard long-term practice.

Concern #8
A trail system from Libby to Troy via China Basin, Flagstaff, and LaMocca and Quartz would be desirable for long-range plans. 12

Concern #9
Lauerence Mountain - East Branch Big Creek:
This area, thought scheduled for logging, should be developed using gated roads and reestablished trail access. Trails in West Branch of Big Creek and Garden Ridge area should be scheduled for future maintenance. Trail #261 has potential. 13

Concern #10
Ziegler Mountain Area: 14
Gated roads and old trail system establishment would have moderate interest for maintenance and protection.

Response to letters #48 & 313 - Cabinet Backcountry Horseman, pg. 48a

6. See response #5.
7. See response #5.
8. See response #5.
9. See response #5.
10. See response #5.
11. See response #5.
12. See response #5.
13. See response #5.
14. See response #5.

Concern #11
Gold Creek to Thirsty Mountain - Webb Mountain:
This semi-primitive area has high interest for reestablishment of an old trail system that existed in the 1930's and 1940's. This would work well for a loop off the reservoir area. 15

Concern #12
McGuire Creek, Sutton area, Inch Mountain:
Semi-primative area could have loop trail system using closed roads and trails. Trail access for 10 Mile to Peck Gulch and lookout on McGuire could be included in this system. 16

Concern #13
Overall:
Trail systems off ends of the roads should be designated as connectors for loop possibilites. 17

Concern #14
Pelick Ridge:
Keep at semi-private system. Maintain present trails and connect the trails along Bull River at the base of Hamilton, Star, Napoleon, and Pelick Mountain Trail. 18

Concern #15
Whole McMillian Ridge system from Libby to Teepe/Tony Peak (entire ridge top):
This could extend up Lake Creek to Silver Butte and power line road to Thompson Falls. (Libby to Thompson Falls Trail or Libby to Trout Creek Route) 19

Concern #16
All trails be reestablished on logged areas at the end of those logging projects. 20

Concern #17
If roads are to be closed that enforcement of those closures be funded. 21

Concern #18
Any newly roaded areas determined to have wildlife value must, BCHM feels, have gated-road status or closed-road status to give the wildlife the security it needs. 22

Concern #19
Cabinet face fringe areas should have low-impact road building status. 23

Concern #20
Cabinet face fringe areas shall have closed-road status as soon as the logging contract is closed. 24

Concern #21
All forest trails, with the exception of manways, shall be scheduled to have USFS class 2 status. 25

Response to letters #48 & 313 - Cabinet Backcountry Horseman, pg. 48b

15. See response #5.
16. See response #5.
17. See response #5.
18. See response #5.
19. See response #5.
20. See response #5.
21. We agree.
22. We agree. See Management Area Prescriptions 10, 11, 12, 13 and 14.
23. Roads will be constructed to the lowest possible standard to meet the goal of the Management Area prescription.
24. Road closures are a part of the parent Management Area prescription.
25. This recommendation is consistent with recent Forest Service Manual Direction (FSM 2353, R-1 Supplement 92, Issued April, 1986.

Concern #22
Trail heads should be established for a trail on Old Highway 2 between Libby and Troy (about an 8- or 9-mile stretch) past Kootenai Falls ending at Savage Lake. We urge the Forest Service to work with the Highway Department to connect the two exiting sections of Old Highway 2 together and preserve this historic old road. 26

Concern #23
A trail system should be developed connecting Quartz Creek Trail with Mount Baldy continuing on to Northwest Peaks Scenic Area and perhaps ending near the Canadian line at Burke Lake. 27

Concern #24
A trail system should be developed through the Pete Creek Meadows following the Pete Creek Road south to the Yaak Road, then west to Pheasant Creek, then south to Grizzly Point, and on to Roderick Mountain and on to Pleasant View Mountain and then northwest to Skookum Mountain and finally westerly back to Sylvanite Ranger Station. 28

Concern #25
A connecting trail should be established south from Line Point south to Cross Mountain. 29

Concern #26
The trail to Teepee Mountain to Windy Pass should be maintained to a USFS level 2 trail system. This system could be extended to the Northwest Scenic Area. 30

Concern #27
A trail system up Feeder Mountain to Gunsight Mountain, across Ferret Creek to Teepee Mountain. 31

Concern #28
In the Kenelty Mountain Area - the Kenelty Mountain/McKillop Mountain Trail across to Fritz Peak and from this system down to various logging roads - trails should be developed and maintained at a USFS level 2 standard. 32

Concern #29
In the Eureka area - the Poorman Mountain Trail to Independence Mountain to Indian Creek to St. Clair Peak to Glen Creek to Road #9124 - this system should have the trails reestablished and maintained to a USFS level 2. 33

Concern #30
The Gibralter Ridge Trail should be reestablished and brought up to USFS level 2. 34

Concern #31
Mt. Wam #2198 road systems should connect to the trail which connects Whale or Lock Cabin and Tuchuck Mountain Trail system should be developed and maintained to USFS level 2. 35

Response to letters #43 & 313 - Cabinet Backcountry Horsemen, pg. 48c

26. See response #5.
27. See response #5.
28. See response #5.
29. See response #5.
30. See response #5.
31. See response #5.
32. See response #5.
33. See response #5.
34. See response #5.
35. See response #5.

E-107

Concern #32
The trail from Elk Mountain to Dunshire Creek should be reestablished. 36

Concern #33
In the Davis Mountain area the logging is acceptable, but CBCH feels that the trail should be reestablished after logging is complete and all new roads should be scheduled for closure. 37

Concern #34
In the Silver Butte area the trail from Allen Peak to the Himes Creek Trail should be reestablished and connected to the trail system from Silver Butte Pass to Canyon Creek Trail system. 38

Concern #35
A trail system from Blacktail Mountain should be reestablished extending south down Spring Creek to the Vermillion Falls up Catarac Creek to the Seven Point Mountain Lookout. 39

Concern #36
All trails proposed do not have written rights of way across private lands. The Forest Service should try to get these rights of way for the trails. 40

Linda A. Braber
Dec. 2, 1985

V.P.
CBCH.

Response to letters #48 & 313 - Cabinet Backcountry Horseman, pg. 48d

36. See response #5.

37. See response #5.

38. See response #5.

39. See response #5.

40. We agree.

Coalition for Canyon Preservation

Box 422
Hungry Horse, Montana
59919

October 28, 1985

TO: Kootenai National Forest Supervisor

From: Bradley Chase, Director
Canyon Coalition

RE: Kootenai Draft Forest Plan/DEIS

Please enter the following comments in the official public records for the above documents:

1) CCP is extremely concerned about the proposed "over-kill" with regard to timber harvest. The 78% increase in logging roads over the next 50 years is incredibly unreasonable, if not blatently so! CCP strongly OPPOSES CONSIDERATION of adding 10,692 miles of new logging roads to the Kootenai Forest in the Final Plan/FEIS. This proposal is an extreme, not one of reasonableness consistent with environmental laws. 1

2) CCP SUPPORTS A MORE RESPONSIBLE AND CERTAINLY MORE REASONABLE annual timber sale level of 173 million board feet. This would maintain levels closer to sustained yield and historic cutting levels. Sustained yield and historic cutting levels are realistic indicators of reasonableness for the future; the proposed 78% increase in logging roads appears to be some sort of scam to push exploitation to its farthest realms. 2 3

3) Substantive DEIS/Forest Plan comments submitted by the EPA and the MDFWP must be exhibited and RESPONDED TO in the final documents. The FEIS should indicate where in documents (page references and footnotes) that the Forest has specifically responded to these substantive comments as well as all others. The Forest does not have the right to ignore substantive comments submitted by affected agencies, and MUST respond by significantly adjusting the preferred alternative. 4

4) Support registered for Wilderness protection for Trout Creek area of the Clark Fork River; and for Pellick Ridge of the wild Scotchman area. 5 5a

5) Adverse impacts on wildlife such as Elk caused by the incredible proposed increases in roads and logging activity have been inadequately mentioned and discussed in the DEIS. 6

Response to Letter #127 - Coalition for Canyon Preservation, first page

1. The DEIS did not propose 10,692 miles of new road as stated. The proposal was for 4,690 miles of new road. Your concern for new road construction was noted, nonetheless, and the Final Forest Plan has reduced the miles of new road construction.

2. Historic harvest levels are not always a good indicator of the future. The following table indicates the point:

KOOTENAI NATIONAL FOREST TIMBER SOLD AND HARVESTED (mmbf)

Fiscal Year	Sold	Harvested
1979	206	185
1980	176	156
1981	264	162
1982	221	131
1983	245	181
1984	212	198
1985	224	180
Average	221	170

The table indicates that the average harvest is down but the trend for the amount harvested is increasing. This upward trend is expected to continue.

3. Road building is an effect of managing land for timber production. If timber is to be harvested then roads are necessary. The needed road miles shown are not "targets" or "goals", but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those necessary to manage the land base are ever built. For the most part, the roads called for are to be constructed in areas that are not defined as "roadless". This means that while some roads exist, additional roads are needed if timber stands are to be harvested. Helicopters, long-span skylines and other yarding techniques which reduce the total miles of needed road are to be used where appropriate and the estimated road mileages take this into account. The most direct way to reduce the needed road miles is to reduce the size of the land base which is managed with timber production as a goal (the regulated or suitable timber base).

See page 127a for responses to #4, #5, #5a and #6.

6) CCP supports Wilderness protection for Ten Lakes, the Cabinet Additions, and the Kootenai side of Tuchuck and Thompson-Seton. 7

7) CCP supports roadless, non-motorized management for the following wild areas in their entirety: Roderick Mountain/Catarack Creek/ Canyon Peak/Northwest Peak/Robinson Mountain. 8

8) Support registered for permanent conservation of no less than 15% of the Kootenai's "Old Growth" forest. More "Old Growth" should be maintained along riparian areas. All "Old Growth" areas should be removed from the timber base. 9 9a 9b

9) Riparian protection appears to be totally lacking in the DEIS/Forest Plan as indicated by the EPA's action to rate Kootenai's Plan as having the worst water quality rating of Montana's ten national forest plans. This is clear evidence that the proposed roading increases must be significantly moderated to achieve a level whereby riparian areas can be protected. A 50% increase in sediments in Kootenai Forest waters is entirely unacceptable and must be mitigated according to environmental requirements. 10 10 a

10) All provisions of NEPA regulations found in 40 CFR Parts 1500-1508 must be implimented in the FEIS for the Forest Plan. 11

Thank you very much for appropriately registering the above public comments on the Kottenai National Forest DEIS/Forest Plan.

Sincerely,

Bradley Chase

Bradley E. Chase, Director
Canyon Coalition--Associated Organization
National Parks & Conservation Association

Response to Letter #127 - Coalition fo Canyon Preservation, pg. 127a

4. See the EPA letter #49 in the appendix. No letter was received from the MDFWP as you have indicated. We believe that all of the comments have been adequately assessed and that the Final Forest Plan represents a balanced approach to resolving all of the issues.

5. Wilderness has been recommended on a significant portion of Pellick Ridge (See the Forest Plan map). Primitive Recreation (roadless) has been recommended for a significant portion of Trout Creek because of wildlife and mineral potential.

5a. See #5 above.

6. Effects on elk was addressed in the DEIS on pages IV-15, IV-53, and IV-58.

7. Wilderness has been recommended on a significant portion of the Ten Lakes Area and the Cabinet Mountains Additiions. Wilderness has not been recommended for Tuchuck and Thompson-Seton because of the need to do additional studies on grizzly bear management. See the Record of Decision for the Flathead National Forest Plan - North End Roadless Areas, pg. 10.

8. Roadless management has been designated for significant portions of Roderick, Cataract, Galena (Canyon Creek), Northwest Peaks and Robinson Mountain.

9. See the "Old Growth Analysis" in the Final EIS

9a. Old growth has been designated along riparian areas in many locations where it exists.

9b. The old-growth timber designation has been removed from the regulated timber base.

10. The EPA's letter (#49) did not mention anything to us about a lack of riparian protection.

10a. We are not aware of a 50% increase in sediment yield on the Kootenai National Forest. Nonetheless, your concern for increased sediment has been noted and new road construction has been moderated.

11. We believe that the intent of the NEPA regulations have been met.

Defenders OF WILDLIFE

October 25, 1985

Mr. James Rathbun, Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby MT 59923

Dear Jim,

Please consider carefully the following comments regarding the Kootenai Forest Plan on behalf of Defenders of Wildlife. As you know, we've maintained a strong interest in Kootenai Forest over the years, particularly in regard to the management of threatened and endangered species; we submitted extensive comments regarding the previous draft plan in 1983. The following comments primarily regard your grizzly bear habitat management program.

It's encouraging that the 1983 draft forest plan has been strengthened in several ways; certainly the fact that bears now receive supportive or compatible management emphasis in all alternatives, and that all alternatives purportedly meet recovery goals is a major improvement. What is more difficult to discern is whether these new management allocations will really make the necessary difference on the ground. We are very concerned that the amount of monitoring proposed in the plan will not be adequate to insure that the compensation measures proposed to offset the impacts of intensive timber management will be adequate. 1

The plan's faulty yield tables and unrealistic price trends also serve to pit grizzly recovery and timber management as competing resource uses. The current assumption in the plan is that every additional board foot of timber that's cut increases the present net value. We believe a more realistic evaluation would reveal that timber harvest on some of the marginal sites--particularly on the steep slopes or in dense lodgepole stands--actually decreases the PNV. To the extent many of these marginal areas are critical to grizzlies, the proposed alternative may present unnecessary conflicts. 2

Finally, we are completely supportive of the Kootenai Forest proposal to implement an augmentation program to more rapidly recover the bears in the Cabinet-Yaak Ecosystem. Certainly it must be recognized that expeditious recovery of threatened and endangered species benefits everyone--those whose primary concern is protecting bears as well as those whose primary concern is making a living from our public lands. Having species listed for a long time means those restrictions necessary to maintain existing populations will remain in place; if numbers are extremely low--as they are in the Cabinet-Yaak--these restrictions may be significant. With an active recovery effort, however, everyone can benefit. Increased numbers mean increased management flexibility, and the delisting of a species can signal 3

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Response to Letter #223 - Defenders of Wildlife, first page

1. Your concern, as well as many other publics, about the adequacy of the monitoring plan has been noted. See the Monitoring Plan section of the Final Forest Plan for the concerns that you have raised.

2. The timber values have been reanalyzed, but the original values were used in the development of the Final Plan for comparative purposes. Appendix B of the Final EIS shows that using an updated set of base timber values and road costs along with more recent projected real price increases results in a smaller suitable timber base when only the minimum management requirements are applied. The Final Plan has a smaller suitable base than this for a variety of reasons discussed in the EIS. There is no assumption in the Plan that all timber that is cut generates an increase in PNV. The suitable land base when PNV is maximized (Alt M) is 304,000 acres smaller than the suitable base when timber production is maximized (Alt L). Thus your belief that timber harvest on marginal sites actually decreases PNV is correct and was displayed in the DEIS.

3. No response needed.

a return to a more normal management scenario. My only criticism of the plan's augmentation proposal is that it doesn't emphasize enough that federal agencies are required to actively manage for the recovery of threatened or endangered species. 3

ALLOCATION OF GRIZZLY HABITAT

As a consequence of the proposed 1983 Kootenai draft plan, the Forest Service received a jeopardy opinion from the U.S. Fish and Wildlife Service, primarily because the alternatives failed to meet grizzly bear recovery goals and because much of the occupied grizzly bear habitat did not receive a supportive allocation.

With the current plan, these problems appear corrected, although it isn't displayed in the plan such that even a careful reader can be sure. Most notably, the alternatives are not geared toward any specific grizzly bear numbers; instead, all alternatives purport to meet the Cabinet-Yaak recovery goal of 45 bears. Thus it's not clear what constrains higher bear numbers, just as it's not clear what factors contribute to lower bear numbers.

Similarly, while the 1983 plan only had 77% of the occupied grizzly habitat in supportive allocations, the current plan has 100% of the occupied habitat in either supportive or compatible allocations. The premise of the "compatible" allocations is that compensation will take place in these areas to offset the impacts of timber harvest. 4

This might be a reasonable approach if a small percentage of the important grizzly habitat had an allocation where compensation would be necessary to offset problems caused by timber development. But given that the Cabinet-Yaak already has such a limited amount of high quality, secure grizzly habitat, it doesn't seem reasonable to road and develop large amounts of high quality habitat and then attempt to compensate for that loss.

According to the plan, fully 210,000 acres of the 628,000 acres of Situation 1 habitat on the Kootenai National Forest would be available for scheduled timber harvest and roadbuilding. Of the 199,600 acres of Situation 2 habitat in the CYE, 127,000 would be open to intensive timber management.

As the plan states in Appendix D, the management direction for Situation 1 habitat is that grizzly habitat maintenance and improvement and grizzly/human conflict minimization will receive the highest priority. It's stated flatly, "Management decisions will favor the needs of grizzly bears when grizzly habitat and other land use values compete."

While it seems realistic to compensate for occasional degradation of habitat on small portions of the forest, it doesn't seem reasonable to try and compensate for road construction and security loss on fully a third of the most

Response to Letter #223 - Defenders of Wildlife, pg. 223a

4. Any developmental activities proposed within idenified grizzly habitat must meet the Cumulative Effects Analysis Criteria. In practice, this usually results in approximately 8% of an area being affected at any one time.

critical grizzly habitat on the forest. Such compensation is premised on the assumption that closing roads alone mitigates for security losses caused by roadbuilding. Yet clearly even closed roads have an important impact on grizzly security, as these roads then become super-trails for hikers, hunters, bikers, etc. And it certainly must be recognized with even the most zealous enforcement program--and the budget for monitoring road closures certainly doesn't reflect a zealous program--use will take place despite road closures. 4 5

Further, it's completely unclear from reading the plan how the timber/grizzly prescriptions will adequately insure bear recovery. While road closures and timing of activities were mentioned, these actions alone won't compensate for the cumulative loss of security. On the Flathead Forest, a number of specific changes in the timber program were made to enhance grizzly recovery. First of all, special bear management areas were established--outside of designated wilderness--designed to enhance grizzly populations. While this acreage was removed from the commercial base, timber harvest still is an option, but only if such harvest demonstrably enhances specific grizzly needs. In this way, the forest guarantees that management decisions are driven by grizzly requirements rather than a need to meet timber harvest objectives. 5a

It's not readily obvious in the Kootenai plan whether actual timber yields are any different on timber-grizzly allocations; they don't read as though they are. Again, on the Flathead these allocations result in approximately a 25% reduction in timber harvest, a necessity if large blocks of undisturbed land are to be maintained. In Situation 1 habitat, logging is limited to 3 consecutive years, with one entry per drainage in a decade. For both Situation 1 and 2 habitat, reentry cannot occur unless 40% or more of the drainage is maintained either as hiding or thermal cover and blocks of security cover of 5,000 acres or larger must be maintained adjacent to cutting units. I found no such constraints in the Kootenai plan; if I missed them, please advise.

Similarly, the constraints on clearcut size in key grizzly habitat areas did not seem to reflect the Situation 1 habitat philosophy of the grizzly coming first. Your EIS notes carefully that small clearcuts present the most favorable habitat situation for bears, yet these small clearcut limitations aren't clearly built into the intensive timber management in Situation 1. Such a limitation should be incorportated as a standard.

In sum, it appears the plan overemphasizes the importance of forage to bears while underestimating the importance of security or cover. Given the projected increases in road mileage and the extensive miles of roads planned for Situation 1 habitat, security will become the <u>most</u> important grizzly concern on the Kootenai Forest during the next decade. It may become critical to maintain areas where humans can go only with great difficulty. 6

Response to Letter #223 - Defenders of Wildlife, pg. 223b

5. Road closures, in combination with monitoring and additional research, will all be needed to insure the recovery of the grizzly bear. This includes gaining public acceptance for threatened and endangered species recovery.

5a. See Item #4, above.

6. The final Forest Plan will have the least amount of land planned for roads and timber harvesting in grizzly habitat. It will also have the largest amount of land planned for roadless recreation in grizzly habitat which should provide the highest amount of security as you suggest. The percentage of road miles planned for construction in grizzly habitat in the first decade is approximately 22%. This is almost equally divided between Situations I and II. All of these new roads will be closed to public use.

No evidence has been introduced to support a contention that food is a limiting factor on the Kootenai, yet the uninformed reader might assume that given the emphasis on timber harvest in key grizzly habitat. While it's often asserted that timber harvest can improve grizzly habitat, the documentation for this is meager, particularly for areas where populations are already present. 7

It's also a notable omission that there's no discussion of uneven-aged management as an alternative for timber harvest in key grizzly bear habitat. Thus it remains unclear whether such an approach would be beneficial or not. 8

GRIZZLY BEAR MANAGEMENT STANDARDS AND GUIDELINES

On the whole, the grizzly bear standards and guidelines are direct and adequate. We do have questions, however, as to why some of the key elements of the grizzly management program are guidelines rather than standards.

For instance, careful silvicultural treatment would seem mandatory for timber harvest in Situation 1 habitat; maintenance of travel corridors, leave islands and spacing between units would seem like a given, or else the Forest Service wouldn't be living up to the spirit of the Situation 1 allocation. Therefore, it's not clear at all why this is simply a guideline rather than a more-difficult-to-overlook standard. 9

Similarly, the direction seems rather fuzzy on road management in general and on open road density specifically. Given that this is so critical to your grizzly management program as proposed, the public needs strong assurance that roads will be closed--by physical barriers where necessary--and that road densities will not exceed .75 miles/section except in extraordinary circumstances.

Finally, it's not clear why the specific grizzly management issues regarding operating plans and special use permits are stated as guidelines rather than standards. All of the concerns listed on page D-26 are significant and should have forest supervisor approval before there is any deviance.

AUGMENTATION

Defenders of Wildlife fully agrees that augmentation is not only appropriate for the Cabinet-Yaak Ecosystem, and feels that a program should be started as soon as possible. Certainly the population is so low that recovery might take a very long time without some assistance. It should be recognized that the Endangered Species Act of 1973 directs federal agencies to "use all methods and procedures necessary"--including reintroduction--to bring species to the point where they can be removed from the list. 10

While we are well aware of some of the political liabilities

Response to Letter #223 - Defenders of Wildlife, pg. 223c

7. Many of the forage plants preferred by bears grow best where timber canopies are light or absent. Through natural plant succession, closing timber canopies crowd out bear foods over time. One way of reversing succession is through timber harvest. This method is more desireable in many locations than alternative methods, such as fire, because it can improve bear habitat while supplying timber products. In order for logging to improve bear habitat, the proper harvest and post-harvest treatment methods must be used and security must be provided through road closures.

8. Uneven-aged management was discussed in the DEIS. It has been added as a research need in the Forest Plan.

9. Some elements have been changed in the final Plan from guides to standards. Others were kept as guides to allow sufficient flexibility to adapt projects to site specific needs. The bottom line, however, is that no activities will be permitted which adversely affect grizzly bears or their habitat, whether influenced by standards or guidelines.

10. An analysis of possible augmentation is presently underway. See the discussion in the augmentation section of the Forest Plan.

of proceeding too rapidly, we would urge the Forest Service to keep this issue moving expeditiously. 10

MONITORING

The adequacy of proposed recovery strategies can only be fairly assessed if good monitoring takes place. Because it's so difficult to determine actual numbers of bears, this can be very difficult. Nevertheless, the Forest Service needs to make a significant investment in keeping their cumulative effects analysis process accurate and up-to-date.

We would strongly argue that the Kootenai Forest should adopt a written policy that will reduce management activities when they cannot be properly monitored. In other words, if the Forest chooses to undertake high levels of timber harvest in Situation 1 grizzly bear habitat, adequate monitoring must take place to insure compensation is working. If the monitoring can't be done, the timber harvest should not be undertaken. 11

YIELD TABLES AND PRICE TRENDS

We strongly support the comments made CHEC regarding the economic assumptions of the Kootenai Plan. We agree that greatly overestimated timber prices and optimistic yield tables seriously flaw the plan and place different resources in greater competition than they should be.

Correcting timber yields and values should logically lead to a broader range of alternatives, options that would logically include less timber harvest and roadbuilding in Situation 1 grizzly habitat. It's both poor resource management and faulty economics to recommend timber sales on marginal lands when they are so important to the grizzly.

Policy changes in the regional office during the past year make it clear that below cost sales should be avoided in those circumstances where significant benefits can't be demonstrated. We feel strongly that it more realistic numbers were used in the plan, there would be far less pressure on Situation 1 grizzly bear habitat, and the wholesale compensation program wouldn't be necessary. Simply put, it's more cost-efficient to conserve grizzly bears by protecting the existing habitat than to conserve bears by degrading the habitat with below-cost timber sales and then engaging in costly compensation programs to make up for the losses. 12

It simply doesn't make sense that the PNV of the forest should increase with every board foot of timber that's cut--that doesn't reflect reality. In areas with steep slopes or low-valued species, it's obvious the costs may outweigh the returns, in which case it would increase the PNV not to cut the timber.

Response to Letter #223 - Defenders of Wildlife, pg. 223d

11. Added policy statements have been included in the Standards section of the Plan.

12. The timber values and yields have been reanalyzed as requested by Randy O'Toole (CHEC). In general, the timber values were found to be higher than the more recent projections. The original values were used in the development of the Final Plan for comparative purposes. The effects of using the more recent base timber values, price projections and road costs are described in Appendix B. The timber yield tables were found to still be appropriate.

The standards for harvesting in MA's 14 and 12 are stated in the prescriptions (Chapter III) and in the Grizzly Management Guidelines in the Forest Plan Appendix 8. All of these standards are supportive of the grizzly bear. As stated in #4, above, the Cumulative Effects Analysis will be used on a project-by-project basis.

SUMMARY

The Kootenai Forest Plan unnecessarily commits too much critical grizzly bear habitat to intensive timber development and roading. Correcting timber yields and values should result in more protection for important grizzly bear habitat while increasing the PNV. The figures used in the plan serve to accentuate a conflict that isn't as large as represented in the plan. Standards and guidelines should be strengthed for key parts of grizzly management such as road closures and silvicultural prescriptions. A strong monitoring program--predicated on adequate funding--needs to be built into the final plan. And finally, a grizzly augmentation program should be undertaken as quickly as the Forest Service can move through the process. 12 12 13

Adoption of these recommended changes will result in a stronger plan. Such a plan would not build so many roads into key grizzly bear habitat at a loss, it would firmly represent that permanent road closures would be part of any timber harvest in Situation 1 habitat, it would completely assure that silvicultural techniques would preserve key grizzly habitat components, and it would adopt a monitoring program that would shut down resource uses if the funds weren't available to adequately evaluate them.

Sincerely,

Hank Fischer

Hank Fischer
Northern Rockies Rep.

Response to Letter #223 - Defenders of Wildlife, pg. 223e

12a. See Response #11 above.

13. See item #10, above.

Dear Sir,

I recommend that the Trout Cr. Wild. Area be set aside from roading because of its wildlife value. 1

the Pellick Ridge area of 16,000 acres should be added to the Wild Scotchman proposed wilderness because of it's high wildlife and wilderness values. 2

Sincerely,

Joe Gutkoski

V. Pres. Gallatin Wildlife Association

Dear Sir,

I recommend roadless, non motorized mgt. for Rodorick Mtn, Cataract Cr., Canyon Pk, Northwest Pk & Robinson Mtn. 3

Recommend that 15% of the forest be maintained in old growth and should be removed from the timber base. 4

Recommend an annual cut of 173 million, which is more reasonable from the standpoint of sustained yield. 5

Your road construction plans are far beyond reason for watershed mgt. 6

Sincerely Joe Gutkoski V Pres. Gallatin Wildlife Assoc.

GALLATIN WILDLIFE ASSOC
JOE GUTKOSKI, V.P.
304 N. 18TH
BOZEMAN MT. 59715

Response to Letter #310 - Gallatin Wildlife Assoc., first page

1. The majority of the Trout Cr. roadless area has been designated for roadless management. See the Forest Plan map.

2. The majority of Pellick Ridge has been recommended for wilderness. See the Forest Plan map.

3. The majority of these roadless areas have been designated roadless. See the Forest Plan map.

4. The old-growth timber component has been raised to 10% and has been removed from the regulated timber base. The inventoried old-growth timber was 11% total available on the Forest, so a 15% level was not feasible.

5. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

6. See the new road construction figures in the Forest Plan.

Lance Olson
Great Bear Foundation
PO Box 2699
Missoula MT 59806
Nov 1, 1985

Mr James Rathbun
Forest Supervisor
Kootenai National Forest
Libby MT 59923

Re: Kootenai National Forest Plan

Dear Mr. Rathbun:

Subdivision of private land and road construction coupled with removal of timber are leading sources of jeopardy to grizzly bears on the Kootenai National Forest. Solving these major problems would significantly assist efforts to achieve recovery of the grizzly and would benefit other wildlife. It would also meet human needs and wants for maintaining locally desired social and environmental conditions. 1

Subdivision of privately owned land is a limiting factor for wildlife, including grizzly bears. As privately owned land is subdivided, wildlife is forced to greater dependency on national forest land. As wildlife is forced to greater dependency on national forest land, the Forest Service would be more restrictive in permitting resource development there. As the Forest Service becomes more restrictive, industry has fewer opportunities and less latitude in resource development. As industry loses opportunity for resource development, resource-related local jobs are also lost. Subdivision is therefore a limiting factor for wildlife, the Forest Service, industry and jobs potential.

Solving the subdivision problem, however, can head off or reduce limits it can place on wildlife, the Forest Service, industry and jobs. Solving the subdivision problem can also uphold local scenic and social values of people living in areas still undivided by subdivision. Solving the subdivision problem, in the Bull River Valley and associated lands, could qualify as a "success story." As such, we could support it. As you know, we have been working to achieve it in cooperation with other interested parties. Cooperative work toward this goal must include the Forest Service and major industry planning to operate in the general area, as well as conservation organizations concerned about the future of wildlife, including the grizzly bear. In essence, to protect wildlife including grizzlies is the key to opening opportunities for resource development and resource jobs now

Response to Letter #281 - Great Bear Foundation, first page

1. We are actively working to acquire private lands with key grizzly values in order to prevent future subdivision of these habitats. The Bull River Valley is the highest priority Forest-wide and some lands have already been acquired there.

   Timber removal itself is not necessarily bad, and can be good, for grizzly bears. Unrestricted roading and associated human activities can adversely affect bears. Therefore, we are holding road standards down to the lowest possible and have instituted an aggressive road closure program in grizzly habitat.

threatened by potential subdivision you must include in any cumulative effects analysis and/or EA or EIS related to permit applications by the mining industry. It's particularly relevant to link future mining to the subdivision problem because future mining can reasonably be expected to produce subdivision as a spin-off effect during the lifetime of mine operations.

Not all subdivision will be a problem. In certain areas, already subdivided too much to permit use by wildlife including bears, especially grizzlies, the damage is already done and further subdivision would have no further immediate effect on wildlife. Subdivision would, however, be a problem where the land is still accessible to and used by wildlife. The Bull River Valley and lands associated with the proposed ski facilities at Great Northern Mountain are cases in point. Subdivision of these and other privately owned lands in the Cabinet Yaak Grizzly Ecosystem would create long-enduring jeopardy to wildlife. The subdivision problem in these areas is limiting factor for wildlife, the Forest Service, industry and local jobs.

I believe a "success story" can be developed in the case of ASARCO operations, but we have no similar reason to yet see development of a success story in the case of Burax operations that may be forthcoming in addition to ASARCO's. A success story needs to be finalized in ASARCO's case and similar problem-solving put in motion in the Burax case.

We see severe and extremely complex difficulties in resort development at Great Northern Mountain. We oppose resort construction proposed for Great Northern Mountain because, like facilities at Fishing Bridge, West Yellowstone, West Glacier and similar resort developments, numerous problems would have a wide zone of influence well beyond the resort per se, and would be extremely costly to solve if they could be solved at all. You would in essence be creating a Situation 3 area by permitting that development, and you would certainly jeopardize grizzlies, your further options for permitting development, other industries such as mining, and jobs. You would also run the risk of creating food-conditioned, habituated grizzlies described in Herrero's 1985 book as the grizzlies most often involved in killings of humans, by permitting resort construction leading to / linked to subdivision 2

Response to Letter #281 - Great Bear Foundation, pg. 281a E-119

2. The resort proposal is being handled as a seperate issue outside the Forest Plan.

near Great Northern Mountain. Again, let me stress that we oppose resort development there. 2

When it comes to road construction and timber removal, the plan goes too far, is overdone, excessive and extremely costly. You jeopardize community stability by building costly roads for cutting of marginal and sub-marginal timber. See page 9 of MacCleery's 3 4 decision on Colorado national forests for evidence that promoting community dependency on marginal timber is to actually promote community instability. Also see the Autumn 1984 issue of the Montana Business Quarterly for corroborating evidence that promotion of community dependency on smaller diameter timber is to promote economic hardship for timber industry employees, their communities, and the state.

The Autumn 1984 Montana Business Quarterly article states that, in effect, economic hardship for loggers, their communities and the state is inevitable and soon to come, because large diameter timber has been (all but) eliminated by past cutting. The article predicts a loss of 1000 to 300 jobs and an overall economic impact of $20 million to $60 million lost from the economy of Montana, because large diameter has generally been eliminated by past cutting. The article states that those jobs will be lost in spite of the Canadian import situation and in spite of availability issues such as designation of wilderness. Thus it appears that the roads you plan will be roads to unemployment for individuals and roads to economic decline in the state. That's a hell of a way to run a forest.

Further, roads are trouble for wildlife, and have a record of creating jeopardy to grizzlies and other wild animals. This effect of ~~all~~ roads is well-known and needs no elaboration here, except to point out that they create hardship for wildlife that now seems coupled to hardship for loggers, their communities, and the state. This multiple hardship seems to defy and abuse the "multiple use" doctrine you are legally bound to observe. It certainly seems to abuse public trust in the Forest Service, and seems abusive of Forest Service public trust duties. While roads to skimpier timber do please

Response to Letter #281 - Great Bear Foundation, pg. 281b

3. The Final Forest Plan reduces the regulated timber land base below the level of the Proposed Action primarily to insure sufficient old growth timber habitats. This has the effect of reducing the need for road construction. The volume of timber planned for removal is the same as the Proposed Action because our analysis indicates that this is the most effective way to contribute to social stability in the impact area.

4. The Final Forest Plan minimizes the area of marginal land scheduled for timber harvest.

at least some timber industry stockholders are seeking only a normal return on their investment dollar, such roads are built with the dollars of a broader tax-paying public whose interests are not so clearly served. How ironic it is that grizzlies and other wildlife get blamed for jobs problems when such powerful other influences are the major, driving force; You will jeopardize grizzlies if you are party to public misperception of the jobs problem, because false blame laid at the feet of grizzlies creates antagonism counterproductive to achieving the bear's recovery. 5

Some roads will be built, and some timber cut. Industry will receive some satisfaction of its want for the smaller diameter timber that will be used in new technology that will replace manpower with mechanization. The money made will go to out-of-state investors. You should plan for long-term regeneration of large diameter timber even broader than current acreage, in order to bring back the local economic opportunity that old growth can provide, in addition to the scanty old growth you plan to preserve on a minimal basis for wildlife.

The past has been characterized by boom-bust forestry that has brought bust to loggers and the state now and for some decades in the future. Simultaneously, habitat for wildlife including caribou, trout and grizzly bears has declined. This decline may be permanent if your plans for roads and timber rotation force the people and wildlife of the area to adjust to wood farm forestry that maintains perpetually juvenile forests for satisfaction of plants designed to handle smaller diameter timber. 6

You are in effect making irreversible and irretrievable commitment by such road construction. Your plan encourages industry construction of plants designed for handling smaller timber, thus creating a demand for forestry practices geared to meet the specifications of those plants. Since those plants would employ machines rather than men, your plan would perpetuate conditions of unemployment, as well as conditions of reduced water quality, more volatile runoff, less wildlife security, and 7

Response to Letter #281 - Great Bear Foundation, pg. 281c

5. The Final Forest Plan will make more timber available for harvest in the next ten years than was cut over the last ten years without jeopardizing the recovery of the grizzly population.

6. Since younger timber stands produce more volume over a given time than do old-growth stands, shorter rotations permit more volume to be produced per acre over time. Improvements in wood processing technology allow improved utilization of this material so the end result is more lumber available for national markets over time. These shorter rotations do eliminate the potential for quality conditions for old-growth timber dependent species so the Final Plan provides more old-growth timber habitat than the Proposed Action and does so without any plans for eventual harvest of those areas.

7. It is important to realize that due to natural processes, particularly fire, only a small part of the Forest has ever been in old-growth conditions at any one time. Currently about 11% of the Forest's acreage can be considered "old-growth". Managing this area for non-declining yield with rotations of 250 years or greater could not produce volumes sufficient to keep the mills in the area operating and many more jobs would be lost than if smaller timber is used.

S 281 d

so on. It would be better to take the funds you intend for roadbuilding, and apply them to reforestation for regeneration of old growth employment potential in the future. As things stand now, your road spending is more or less directly poured toward distant stockholders without cycling through local communities and the state. This matter concerns us greatly because local economic hardship can create local social conditions inimical to wildlife conservation. We expect you will solve these issues of multiple hardship. 8

Sincerely
Lance Olsen
President
Great Bear Foundation

Important Note: It will be of high, mandatory importance that the Cabinet-Yaak grizzly population be augmented. We are opposed to translocation of habituated, food-conditioned grizzlies, which are problem bears, bears posing public safety risks. Other bears and other options for augmentation do deserve careful attention, however, and must be part of the Recovery Plan. One alternative is to discover suitable black bear females for any possible future use as adopting mothers of grizzly cubs.

Response to Letter #281 - Great Bear Foundation, pg.211d

8. Reforestation aimed at generating old-growth employment potential would not produce significant results until over 200 years in the future.

IFR INLAND FOREST RESOURCE COUNCIL
ROOM 320
110 EAST BROADWAY
MISSOULA, MONTANA 59802
PHONE (406) 728-1710

October 30, 1985

Mr. James Rathbun, Supervisor
Kootenai National Forest
P.O. Box 700
Libby, MT 59923

Dear Jim:

Attached are the comments of the Inland Forest Resource Council on the Kootenai National Forest Draft Plan and Environmental Impact Statement.

If all other things were equal, we believe that the proposed plan and timber sale program would be adequate to meet industry's raw material needs over the next decade. Unfortunately, the two neighboring national forests have reduced their sale programs substantially in the new plans. In view of this circumstance, the Kootenai must provide additional timber at least through this planning cycle if the dependent industry is to be maintained. The best way to obtain this is to implement Alternative K, the departure alternative. 1

We believe the Kootenai has done a good job of integrating elk, grizzly bear and other wildlife management into the overall plan. We also were glad to see that the forest did not try to make quantitative predictions of sediment yields and their impacts on fish at this level. The data and modeling techniques simply are not that good.

In general, the documentation appears to be thorough and well done. We have noted those deficiencies we were able to uncover.

1. All National Forests in this area (Flathead, Idaho Panhandle, Kootenai and Lolo) are proposing to cut more volume under their Plans than has been cut on those Forest's in the last 10 years (1976-1985). The average cut over the last ten years was 606 MMBF per year vs 736 MMBF per year in the Plans. This is an increase even when changing utilization standards are considered. The Kootenai National Forest is proposing to make available as much as 202 MMBF (regulated) plus 20 MMBF (unregulated dead lodgepole pine) plus 11 MMBF (unregulated - other) for a total of 233 MMBF per year over the life of the plan (see page A11-1 of the Draft Plan). In the last ten years an average of 179 MMBF per year was cut (182 MMBF per year sold - not counting volumes returned to U.S. ownership under the Federal Timber Contract Payment Modification Act of 1984).

Mr. James Rathbun, Supervisor
October 30, 1985
Page Two

Thank you for the chance to comment, and we will be following up with you once the comment period is closed.

Sincerely,

Richard G. Reid
Executive Vice President

Attachment

RGR:lk

cc: Regional Forester
Everett Towle, W.O.
Montana Congressional Delegation
Senators McClure & Symms
Representative Craig
Governor Schwinden
Doug MacCleery
Wayne Ludeman (NFPA)
Montana Wood Products Association
Kootenai National Forest Planning Committee

Response to Letter #138 - Inland Forest Resource Council, pg. 138a

No response needed on this page.

Response to Letter #138 - Inland Forest Resource Council, pg. 136aa

No response needed on this page.

TABLE OF CONTENTS

APPENDICES*

* Appendices are support data for *IFRC's response statements* to Region One Forest Plans. To save on mailing costs, we are sending the Appendices upon request. If you would like a copy, please call the IFRC office, (406) 728-1710.

EXECUTIVE SUMMARY

1. Analysis of mill capacity and historic timber supply trends show that the timber industry in Region One is facing a potential timber supply crisis within the next 10 to 15 years as a result of past Forest Service timber sale policy. The data show that the Region will have to resume its historic role as the region's leading timber producer and increase its timber sale program to at least 1.8 billion board feet per year (programmed sell) simply to maintain existing mill capacity. The data also show that the Region's national forests have the productive capability to do so. 2

2. Even though the proposed action probably would meet industry's needs under normal circumstances, because the two adjacent national forests are contemplating substantial reductions in their timber programs in the new plans, the Kootenai will have to offer more timber than is proposed. The best way to do this would be to implement Alternative K, the departure alternative. 3

3. The analysis provides no rational grounds for taking productive timberlands out of the suitable land base to meet roadless recreation objectives. We suggest that the Forest allocate no tentatively suitable forest lands to roadless recreation and delete the roadless areas on the east side of the Cabinet Wilderness from the wilderness recommendation. Intensified management of existing Wilderness and nonproductive roadless lands outside Wilderness will provide the best balance between roadless recreation objectives and timber production needs. 4 4a 5

4. The scientific literature suggests that the major source of conflict between timber harvest and big game management actually involves the potential adverse impacts of timber harvest roads rather than the impact of timber harvest itself. The Kootenai has done a good job of dealing with this issue, particularly as it relates to elk.

5. The forest also has done a good job of integrating management of threatened and endangered species into the overall resource plan, particularly as it relates to grizzly bears. The grizzly bear population goals set by the State of Montana will have to be addressed in the final plan, but the Forest Service's only obligation is to manage for a recovered population. An additional environmental analysis will be needed before proceeding with an augmentation plan.

6. The weakness and limitations of sediment and fish models is properly noted. The increased timber sale program should be accompanied to increased mitigation and monitoring to offset some of these inherent weaknesses. 6

Response to Letter #138 - Inland Forest Resource Council, pg. 138b

2. Our analysis is documented in the Forest Planning Records in a paper entitled "Development of Response to Public Comments - Timber Supply Situation". It is also summarized in Appendix B of the EIS. This analysis focuses on the five-county secondary impact area (Lincoln, Sanders and Flathead Counties in Montana; Bonner and Boundary Counties in Idaho) and shows that timber volumes harvested can remain at the level of past years even if the harvest from private lands declines by 25 percent given the harvest volumes called for in the Forest plans.

3. See response to #1 above.

4. No response needed.

4a. We disagree on the wilderness recommendation on the east side of the Cabinet Mountain Wilderness.

5. No response needed.

6. The Monitoring and Evaluation Plan and the Forest-Wide standards have been modified to address this concern.

7. Information in the DEIS is inadequate to determine the effects of meeting visual quality objectives both on potential timber production and the cost of preparing and operating sales. 7

8. The need to provide 8% of the forest in old growth is not clearly justified, the process to attaining this sustained level is not clearly described, and the effects of maintaining it are not adequately described. 8

Response to Letter #138 - Inland Forest Resource Council, pg. 138c

7. Management Areas 16 and 17 give emphasis to visual quality. These two Management Areas produce timber volume (on a volume per decade basis) at about 88% and 86% ,respectively, of that produced from MA 15 (timber emphasis). Sale preparation costs may be slightly higher than for MA 15, for example. Sale operation costs would be higher because shelterwood cutting is used rather than clearcutting.

8. The importance of old-growth is described in detail in Appendix 17 of the Plan. A review of applicable literature indicates that a minimum of 8 to 10 percent of available wildlife habitat should provide old-growth conditions ("Relationships Between Hole-Nesting Birds, Forest Snags, and Decay in Western Larch-Douglas Fir Forests of the Northern Rocky Mountains", B.R. McClelland, Missoula, MT, University of Montana PhD Thesis, 1977 and "Old-Growth Forests: A Necessary Element of Multiple Use and Sustained Yield National Forest Management", G.P. Juday in Environmental Law, Vol 8, 497-522). The Proposed Action called for old-growth at the 8% level. In order to reduce the risk inherent in managing at the very minimum level, the Final Plan calls for management at the 10% level. The Final Plan also removes MA 13 from the regulated base so that the process of attaining and maintaining the old-growth is greatly simplified. The effects of this are addressed in Appendix B.

COMMENTS ON THE KOOTENAI FOREST
DRAFT LAND MANAGEMENT PLAN
FROM THE
INLAND FOREST RESOURCE COUNCIL

TIMBER NEEDS

The volume of timber needed from the Kootenai National Forest over the next decade to sustain the dependent industry was developed by the Council's staff from an analysis of past relationships of the regional timber sale program to the industry and the timber supply and demand situation. The details of this analysis are in Appendices A and B attached. To our knowledge, no similar work has been done by the Forest Service.

The timber management objective of the proposed plan is to provide 202 million board feet of green timber annually. Region One Timber Sale Program Statistics show that the programmed financed sell for fiscal years 1974 to 1983 averaged 203 million board feet annually with an actual annual sell for the same period of 187.8 million board feet or 92% of the program.

In summary, our analysis shows that the present regional industry was built around the Forest Service timber sale program in the late 1960's and early 1970's; however, much of the mill capacity served by the Kootenai was in place prior to then. In 1972, the regional sale program was slashed drastically by over 500 million board feet in response to NEPA, wilderness withdrawals and other environmental controversies. Since that time, the regional sales program has averaged about 1.2 billion board feet annually.

However, regional log consumption did not diminish and has averaged around 2.4 billion board feet since 1969. This indicates that although some mills have closed, mill capacity has not diminished proportionately. Regional log consumption in 1984 was 2.9 billion board feet.

For the ten year period of fiscal years 1964 to 1973 the timber sale offerings on the Kootenai National Forest averaged 196 million board feet annually. During this period, the potential yield went from 164 to 234.2 million board feet (Region I Timber Sale Statistics). The annual average volume actually sold for the same period was 190 million board feet, or 97% of the program. The program on the Kootenai was not affected significantly by the drop in the regional program, but the gap between actual volume sold and programmed sales widened to 92% at this same time. While this still is a high percentage, it does reflect the increased cost of Forest Service sales in response to environmental requirements.

The Council's basic position is that the Forest Service must regain its historic position in the regional timber supply system. However, the Kootenai appears to be unique among the 9

Response to Letter #138 - Inland Forest Resource Council, pg. 138d

9. See response #2 above.

Region One national forests in that it has essentially retained its historic sale program levels. If all other things were equal, we believe that the proposed plan and timber sale program would be adequate to meet industry's needs. Unfortunately, the two forests adjacent to the Kootenai have reduced their sale programs substantially in the new plans. This amounts to 20 million board feet on the Flathead and 35 million board feet on the Idaho Panhandle, and much of the [redacted] taken from the Bonners Ferry area immediately adjacent to the [redacted]. In view of this circumstance, the Kootenai [redacted] provide additional timber at least through this planning cycle if the dependent industry is to be maintained. The best way to obtain this is to implement Alternative K, the departure alternative. This alternative will provide the timber in the short run to keep dependent mills operating while providing the same level of other resource use and protection as the proposed action. 9 10

We are concerned that the Kootenai Plan was developed in a vacuum with no appreciation for what was happening on neighboring forests or private land. The final plan should include this type of analysis which we believe will clearly show the need for additional timber now.

In addition, there should be strong emphasis in the plan, final EIS and Record of Decision as to the ten year nature of the plan and the flexibility of its implementation. For example, it should be stressed that allowable sale quantities represent the annual average program over the life of the plan and can be exceeded in any given year. 11

ROADLESS AREAS

Over 100,000 acres are being proposed for addition to the Wilderness Preservation System on the forest. Generally, we have no problems with these proposals except for those lands on the east side of the Cabinet Wilderness. Of the 50,000 acres of national forest land in the proposed addition, approximately 22,000 are considered suitable for producing timber. Local industry representatives believe that these lands could be operated economically at some point in the future and should remain in the suitable land base. The discussion of the timber resource in these areas on DEIS Page c-60 does not appear to adequately assess these opportunities. We urge that the allocation of these areas to the Cabinet Wilderness be reevaluated in the final plan and that local industry be consulted regarding the potential operability of these areas. 12

In addition, the boundaries of the proposed Scotchman Peaks area appear not to have been laid out in a readily locatable manner. This seems particularly true along both the north and south boundaries of the area. 13

In the plan, 296,180 acres are allocated to roadless 14

10. See response #1 above.

11. See Chapter #1 of the FEIS, the Final Plan and the Record of Decision.

12. The lands being recommended for wilderness do contain some tentatively suitable timberland but the access costs and geographic location make them equally suitable for wilderness.

13. No response needed.

recreation (MA 2). We question these allocations and ask that they be reevaluated for the final plan.

The plan indicates that 402,000 acres of tentatively suitable land was removed as "land not appropriate for timber production." There is no indication as to how much of this is in Management Area Two. The final documents should show clearly the trade-off involved with this prescription. 14

The DEIS Table III-8 estimates that demand for semi--primitive non-motorized recreation will be 47,000 RVD's for the first decade. However, there is nothing to indicate how much of this would be provided by existing and proposed wilderness and other parts of the forest where development would not occur. In view of what appears in the documents and the need for flexibility to provide additional timber, we must question this specific allocation. 15

Such allocations must be reviewed generally in light of the following:

1. Data presented in the *1985 RPA Program DEIS* indicate that current and projected demand for land based recreation in the Northern Rockies is the lowest of all regions of the country. Total outdoor recreation use in 1982 was lower in Region One than in any other region in the lower 48 states; less than half of levels recorded for the *other Rocky Mountain regions* and less than 30 percent of levels recorded for the west-coast regions (Appendix D). The RPA data also show that Region One has more classified Wilderness and primitive acreage (at the time the assessment was prepared) than any other region in the country; nearly as much as both *west-coast regions* combined and four times as much as the two eastern regions.

   Recent (and impending) wilderness legislation will change this situation somewhat; nevertheless, the basic relationship still holds. Compared to other Forest Service regions, Region One is especially remote from major population centers, has an abundance of existing Wilderness, and relatively low recreation pressure. The RPA statistics strongly suggest that providing an abundance of roadless recreation opportunities in Idaho and Montana will not contribute significantly to the recreation needs of the average working person in Detroit, Atlanta, or Los Angeles. It could, however, have a severe economic impact on the Montana and Idaho citizens who depend on the national forests for their living. 16

In our view, the Forest's analysis provides no rational 17

Response to Letter #138 - Inland Forest Resource Council, pg. 138f

14. About 23% of the tentatively suitable timberland that is unsuitable in the Final Plan is in MA 2. The tradeoffs between the alternatives, which have varying amounts of MA 2, are described in the EIS.

15. The projected demand for roadless recreation is adequately supplied. The alternative to the roadless designation would be a "Minimal Level Management" that would be essentially the same as a roadless designation (i.e. no development). For the most part, timber management was not deemed feasible due to the high costs of accessing and logging these lands. Should market conditions or demands for recreation change in the future, areas can be reconsidered for inclusion or removal from the regulated timber base.

16. See response #15 above.

grounds for taking productive timberlands out of the suitable land base to meet roadless recreation objectives. . . especially given the much greater risk of significant adverse economic impact of local timber dependent communities if timber supply from the Kootenai is inadequate to offset reductions on neighboring national forests and leads to mill closures. 17

2. The vast majority of the Kootenai's total projected recreation use in the preferred alternative between now and 2030 will occur in a roaded environment (DEIS Table II-24).

This corresponds with our view that demand for roaded recreation opportunities will increase a greater rate than demand for roadless recreation as the nation's median age increases. We believe that the access provided by timber sale roads will be an increasingly important component of the Forest's recreation opportunity base, including semi-primitive motorized. 17 a Given the potentially severe adverse economic impacts of timber harvest reductions on neighboring national forests plus the lack of documentable need for additional roadless recreation capacity, we suggest that the Kootanai allocate no tentatively suitable lands to roadless recreation . . .especially none of the Forest's more highly productive sites. 18

Given the inherent weaknesses of the Region's recreation demand computer models, we believe that projections beyond 50 years are virtually meaningless by any statistical standards. If anything, given recent state population trends, we suspect that the Region's recreation demand projections may be overstated. However, even if we accept the demand projections at face value, the fact remains that the Kootenai can probably meet its recreation objectives for the forseeable future and still meet the timber needs of the industry. 19

We recognize that some of the tentatively suitable lands allocated to roadless recreation management may *not be economical to manage for intensive timber* production (or even to log under current economic conditions). Nevertheless, they could produce timber over extended rotations with "low intensity" management, especially if the Forest Service can successfully reduce the cost of preparing, administering, and operating national forest timber sales. 20 We believe that keeping the suitable land base as large as possible will be a key element of minimizing the potential for conflict between timber management and

17. Much of the land designated for roadless management is expensive to access and are uneconomic for sustained yield timber production. If these lands were designated for timber management, they would not produce economic timber sales and contribute to the health of the local timber industry.

17a No response needed.

18. See #1 and #17 above.

19. See #15 above.

20 The final Forest Plan has attempted to designate the most productive and economically suited timberland for timber production. Those lands that have not been designated for timber management can be reanalysed in ten years when the Forest Plan is revised.

other resource management objectives.

We recognize that roadless recreation use will increase in the future. We believe, however, that the Region's existing Wilderness areas, along with roadless nonproductive lands outside Wilderness, will provide adequate opportunity to satisfy this demand. The data in the DEIS do not allow an analysis of that potential, but we suggest that it be done and shown in the final Plan.

We believe that intensified recreation management of the Wilderness and nonproductive lands rather than extensive additional set-asides of commercial forest lands, will provide the best balance between recreation and timber management objectives. The nation's Wilderness System includes millions of acres that are rarely, if ever, seen by people. Judicious expansion of trail systems, recognizing other wilderness values, could significantly increase the System's overall recreation use capacity and help reduce the impact of recreation on over-used areas. Public education, to increase public awareness of Wilderness ethics and low-impact camping techniques, would also help. A system to collect fees from wilderness users to help pay for these wilderness management activities may be appropriate. (The 1985 RPA document stated that the Forest Service currently recovers less than 8 percent of the costs incurred in providing wilderness recreation opportunities.)

3. Wilderness designation is an intensive single-use allocation that severely limits the Forest Service's flexibility to meet its multiple-use mandates, including recreation, wildlife production, and endangered species recovery. It should be limited in its application. Opportunities to manage for timber and wildlife habitat are foregone when lands are formally designated as Wilderness, and little can be done to improve habitat for T&E species. Similarly, the mandate to preserve wilderness values limits the agency's ability to increase the recreation capacity of designated Wilderness lands. These kinds of limitations put additional pressure on the remaining non-wilderness lands to meet recreation and wildlife objectives, generally at the expense of timber harvest.

Extensive Wilderness (and roadless management) allocations also concentrate the impacts of a given level of timber harvest on a smaller land base. Our experience has convinced us that this would, in turn, lead to even more pressure from anti-development groups to reduce the Forest's timber harvest even further. These

20 21. No response needed.

21 22. No response needed.

22

reasons, plus the increased fire hazard and difficulty of controlling insect epidemics, diseases, and noxious weeds, all argue against additional extensive wilderness designation on the Kootenai. 22.

4. We have serious reservations about the position (commonly advocated by preservationist groups) that the national forest's contribution to the region's economy would be greater if the Forests reduced timber harvest and emphasized roadless recreation and tourism as an alternative.

The Council supports measures to strengthen the region's tourism industry as a component of an overall economic growth strategy but not at the expense of the high-paying timber industry jobs we already have. In our opinion, there is no economic justification for limiting timber harvest on the Kootenai to provide additional recreation employment. 23

WILDLIFE

Our review of the scientific literature suggests that the major source of conflict between timber harvest and big game management actually involves the potential adverse impacts of timber harvest roads rather than the impact of timber harvest itself. The Kootenai has done a good job of dealing with this issue, particularly as it relates to elk. As the Montana Elk--Logging Study notes, some of the best opportunities to improve elk habitat and expand populations are in the forested mountains of western Montana. The forest's aggressive approach to road management goes a long way towards ensuring the compatibility of elk and timber management. 24.

Most biologists agree that timber harvest can, in fact, have beneficial effects on forage production and, as a result, improve elk habitat productivity where dense timber stands inhibit the growth of understory shrubs, grasses and forbs.[1] The scientific literature also shows, on the other hand, that the increased access created by open roads can have a major effect on elk behavior, habitat effectiveness, and the vulnerability of elk to hunters. The Montana Elk-Logging Study noted that roads, "and the people and traffic associated with them" have a more significant influence on elk security than "most other factors combined." Idaho researchers have gone even further and stated that "roads themselves are not at fault since closed roads are often

[1]Leege, Thomas A. 1984. Guidelines for evaluating and managing Summer Elk Habitat in Northern Idaho. Wildlife Bulletin No. 11, Idaho Department of Fish and Game.

23. No response needed.

24. No response needed.

preferred by elk as travelways."[2] These studies clearly suggest that "elk security" is a "people management" issue rather than a biological one. 24

One of the most significant results on the Montana Elk-Logging Study was the recognition that losses in habitat effectiveness for elk can be (1) "at least partially mitigated" by imposing strict design and location standards during road construction, and (2) "greatly reduced through appropriate traffic control and road closures (emphasis added)." Published guidelines for summer range management in north Idaho state that "if roads are closed completely with barriers such as tank traps, immovable boulders, or bridge removals, disturbance is reduced by 90 percent."[3] The Montana study concluded that areas with sparse cover and low open road densities may provide as much security as the same size area with heavy cover and high open road densities. It also stated that "few considerations in forest management appear to provide a better opportunity for immediate mitigation in the management of elk habitat than road closures." These studies strongly suggest that extensive areas of security cover are not "essential", even in hunted environments, if roads are aggressively managed to minimize harassment of elk by people. We believe that the road management program in the proposed action will adequately meet the needs for elk security reviewed above. 25

We also believe the forest has done a good job of integrating management of threatened and endangered (T & E) species into the overall resource plan. Given the rather stringent requirements of the endangered species act, potential adverse effects have been minimized as much as possible. We appreciate the fact that the U.S. Fish and Wildlife Service calls the shots with regard to T&E species, but the forest has been able to work reasonably within this handicap.

After the draft plan and EIS were completed, the State of Montana developed its own goals for grizzly bear populations within the Cabinet-Yaak ecosystem. These are substantially higher than those designated by the Fish and Wildlife Service as constituting a recovered population. In our view, the state's goals are a wish list which cannot in reality be obtained because of resistance by the local population; however, they should be addressed in the final EIS. The state's goals notwithstanding, the Kootenai properly should base its grizzly habitat management program on the number of bears needed for a recovered population according to the Fish and Wildlife Service.

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2 See: Leege (1984).

3 See: Leege (1984).

Response to Letter #138 - Inland Forest Resource Council, pg. 138j

25. We agree. We use these assumptions. The coefficients match our perpective of this balance.

26. In response to legal mandates and expressed public desires, the intent of the Forest Plan is to be responsive to the Grizzly Bear Recovery Plan. This will occur through providing quality habitat for grizzly bears in the recovery areas identified in the Recovery Plan. When a recovered population is reached in these recovery areas, some bears will likely move beyond the recovery line into the expanded area identified in the State EIS. Potentially, total populations could exceed those needed for recovery, depending upon State management of hunting regulations and social acceptance of higher bear populations. Any discussion of ultimate population levels is largely theoretical at this time because research to date is insufficient to provide a good estimate of habitat capability in the Cabinet-Yaak Ecosystem.

The draft EIS also considers augmentation as a way to hasten recovery of the grizzly bear population. As the forest probably is aware, this in itself is a very controversial issue and an augmentation program should be subjected to an environmental analysis in its own right before it is implemented. 26

As with elk, the proposed road management program will be a major factor in the forest's ability to enhance grizzly bear recovery.

WATER QUALITY/FISH

The Kootenai is the first forest that we have seen that correctly disclaims the accuracy of sediment and fisheries modeling. Unfortunately, that disclaimer is buried on page B-32 in the appendices. We strongly urge that it be moved into the main body of the DEIS and included wherever there is discussion fo sediment potential and its effect on fish. 27

We appreciate the fact that the plan may be vulnerable to attack by admitting to the limitations of the models, but we submit that this is a much better approach than trying to quantify precisely sediment production and its effect on fish when those numbers would be meaningless.

Given the statistical reliability of predictions of sediment production on fish population trends, we recommend that the increased timber sale program advocated here be accompanied by a program of mitigation and monitoring over and above that proposed in the plan. In addition, as has been suggested by the planning staff in a telephone conversation, these mitigation and monitoring procedures could be moved up in the plan itself to become part of the management area prescriptions. 28

More detail needs to be included in the plan and DEIS on the management of watersheds where there is substantial private land or the Forest Service is a minor land holder. The operating relationship is not clear. 29

VISUAL QUALITY

We appreciate the importance of the visual quality issue on the Kootenai, but the DEIS does not adequately describe the VQO allocations or their effects in the proposed action. The trade-off analysis discussion in Appendix B correctly does not include a visual quality MMR, so all the VQO constraints are applied by alternative. Yet the effects on PNV of the additional visual constraints applied to the preferred or any other alternative are not shown. The PNV of the preferred alternative is $247 million less than the MAX PNV benchmark (Run 114GG1). How much of that is attributable to additional visual constraints? 30

We are concerned that the Forest's attempt to minimize visual impacts has the potential to increase significantly the

27. We feel that the present location is adequate.

28. Monitoring and Evaluation has been modified to better address this area and additional Standards have been added to the Plan.

29. Additional provisions covering this concern have been added to the Soil and Water Standards in the Plan.

30. The portion of the opportunity cost of the Proposed Action related to visual quality constraints on timber harvest can not be directly determined from the information in the EIS. An estimate developed by comparing the maximum PNV contribution of Management Areas with and without the visual constraints indicates that the PNV would increase by about $27 million if the constraints were removed. Thus about 11 percent of the total opportunity cost of the Proposed Action can be attributed to the visual management issue.

    As noted in #7 above, management areas 16 and 17 which produce timber under the more restrictive visual quality objectives generate about 12 to 14 percent less timber volume per decade than does Management Area 15.

costs incurred by both the Forest Service and timber purchasers on the Kootenai. Constraining timber harvest activities to meet the visual quality objectives may not substantially reduce timber harvest volumes, but it will invariably increase the costs of timber sale preparation and administration, road design and construction, logging, slash disposal, and site preparation.

Our experience suggests that inclusion of these kinds of management objectives has had a significant adverse impact on the economic viability of Forest Service timber sales in Region One. As purchasers of national forest timber, our members have seen an increasing incidence of sales offered that they simply cannot afford to buy. The result has been an increasing incidence of unsold sales, reduced volume available to local mills, and growing accusations from those opposed to timber harvest that the Forest Service is giving away its timber and subsidizing the timber industry. We anticipate similar problems on the Kootenai if the final Plan includes excessive constraints imposed on timber harvest to meet non-timber objectives including visual quality. 30

OLD GROWTH

The forest proposes to manage 8% of the Kootenai for old growth retention. While we agree that some old growth retention is required under the law and regulations, the need to provide 8% in old growth is not clearly justified, the process of attaining this sustained level is not clearly described, and the effects of maintaining it are not adequately described.

If 8% of the forest is to be maintained in old growth; i.e., 250+ year old trees, the clear implication is that substantial additional acres must be in some type of recruitment status. The public needs to understand the total implications of old growth retention and the cost of that action. Obviously, this also is part of the $247 million opportunity cost associated with the proposed action, but just how much is not disclosed. 31

CONCLUSIONS

In summary, we believe that the proposed plan would be acceptable from a timber supply standpoint were it not for the situation created by the drop in sales programs on the adjacent national forests. Unlike other plans we have reviewed, however, a major reworking is not needed to meet industry's needs. We recommend that Alternative K (Departure) be substituted for the proposed action. 32

Implementation of this alternative would be easier if some of the allocations were reconsidered. Specifically, the allocation of 296,180 acres to roadless recreation should be reevaluated. We do not believe such allocations can be justified from a recreation need standpoint, and it certainly would make additional acres of suitable timber land available. While we generally 33 34

31. See response #8 above.

32. See response #1 above.

33. See response #17 above.

10

support the wilderness recommendations in the plan, we believe that reconsideration should be given to including the eastern additions to the Cabinet Wilderness. Finally, the visual quality allocations either should be reconsidered or their effects documented more clearly. 34 35 36

The treatment of elk and grizzly bear management was well done within the context of applicable laws and regulations. This appears to be a model plan demonstrating that wildlife and timber management can coexist. 37

In a plan of this magnitude, the effects of operations on water quality must necessarily be vague, but techniques do exist which will allow alternative comparisons. The forest is to be commended for noting this fact, although it could be a little more bolder in its presentation. To back up this known weakness, we recommend that mitigation and monitoring be intensified. 38

The documentation through extensive was well done and probably as tight as could be made. The array of alternatives considered was good. The discussion of inventoried roadless areas certainly should meet the requirements of the courts. A more thorough discussion of the effects of managing 8% of the forest for old growth is needed.

We recognize that some tradeoffs may be required in the areas of water, wildlife and recreation to permit increased timber harvest; nevertheless, it appears that these tradeoffs would be minimal in the departure alternative. The critical contribution of the forest products industry to the region's economic base must be weighed against these potential impacts in the decisions ultimately incorporated in the Kootenai final plan. 39

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Response to Letter #138 - Inland Forest Resource Council, pg. 138m

34. No response needed.

35. See response #4a above.

36. See response #30 above.

37. No response needed.

38. See response #28 above.

39. No response needed.

MONTANA LOGGING ASSOCIATION
P.O. Box 1716
Kalispell, Montana 59903-1716
406-755-3185

October 24, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

Following, please find the comments of the Montana Logging Association with regards to the proposed forest management plan for the Kootenai National Forest.

The MLA represent over 600 independent logging contractors from throughout the timbered regions of Montana, half of which are directly impacted by management of the Kootenai National Forest. Montana's independent logging contractors are responsible for the vast majority of timber harvested in this state; therefore, we are especially concerned about the proposed timber sale program for Region One as a whole and, because the Kootenai National Forest contains much of the Region's most productive timberland, we are especially interested in your timber management goals.

From our admittedly biased perspective the Kootenai Forest Plan's proposal to sell 202 mmbf per year has 2 serious flaws: (1) It fails to take into consideration that both of the adjoining Forests, the Panhandle and the Flathead, are proposing substantial reductions in their annual timber sale program. (2) Further, the plan fails to maximize the commercial forest acreage upon which you can practice intensive forest management without adversely effecting other resource values..a flaw which appears to restrict the proposed timber sell by approximately 20 mmbf/year. Mr. Rathbun, we cannot overemphasize our support for maximizing intensive forest management practices on every available commercial forest acre on the Kootenai National Forest. 1 2

Grizzly Bears We are pleased that the U.S. Fish and Wildlife Service has issued a non-jeopardy opinion regarding the proposed plan and recovery (?) of the grizzly. We have long felt that loggers and grizzlies can co-exist...we remain skeptical that loggers and grizzly researchers are compatible. 3

Wilderness We oppose any additions to the wilderness system simply because a wildness designation condemns all other resource values to management at "another" locality ..thereby, increasing resource conflicts in those areas. Montana has a vast and beautiful wilderness system, most of which is deserving of protection; however, Montana also has enough wilderness! In fact, we dare suggest that the day is approaching when an informed public will demand re-evaluation of the commercial forest acres currently locked-up within the wilderness system. 4

Fish and Wildlife We appreciate the unparalled value of the Kootenai's fish and wildlife resources and applaud the Forests commitment to mitigating any adverse impacts of logging activity; however, we respectfully suggest that a similar commitment to habitat enhancement will ensure that the Kootenai continues to maximize production of its abundant fish and wildlife resources. 5

Response to Letter #69 - Montana Logging Association, first page

1. Our analysis indicates that all of the National Forests surrounding the Kootenai (Flathead, Idaho Panhandle, and Lolo) are proposing to sell more timber in their Plans than they have over the last decade. The Forest Plans show a total "Timber sale program quantity" of 736 MMBF while 606 MMBF was sold over the last decade. Note that the volume sold over the last decade excludes volumes returned to U.S. ownership under the Federal Contract Payment Modification Act of 1984. The noted increase involves changing utilization standards, but even without these changes an increase is planned.

2. The final Forest Plan has attempted to designate the most productive and economically suited timberland for timber production. Those lands that have not been designated for timber management can be reanalysed in ten years when the Forest Plan is revised.

3. No response needed.

4. Wilderness is one of the multiple-uses of the national forests and Congress has reserved the prerogative of determining the amount and location of all Wilderness designations. Note that Wilderness designation is compatable with recreation, the needs of many types of wildlife, soil and water protection and visual quality.

5. The commitment level is demonstrated by the amount of acres that are designated for the production of both timber and wildlife. These designations are Management Areas 11, 12, and 14, and total over two-thirds of the regulated timber base.

Visual Quality and Roads The visual impact of logging is one of the few trade-offs which cannot be substantially mitigated. We cannot log and remain invisible...and we make no apologies for that simple truth. Logging remains today a proud industry with roots which date back to the first days of Montana's settlement. Undisturbed visual quality is abundant within Montana's existing wilderness and roadless lands. 6

Roads are simply an indispensible management tool if we are to manage and protect our vast forest resources...and the emotional non-truths spewed forth by our detractors are worth little more than your polite consideration. 7

Soils and Watersheds Smaller, dispersed timber sales accessed by roads which are properly designed, constructed and maintained/managed will effectively protect the Kootenai's soils and watersheds. 8

Mr. Rathbun, the preceding comments on resource values can best be summarized by the perception that Montana's forests are not some place where we work and/or recreate---Montana's forests are where we live. As such, we maintain a vested interest in protecting the forests water quality, wildlife, fisheries and other resources while we endeavor to provide employment opportunities which sustain our local communities and allow us to experience our quality of life.

This nations expanding population, while inhabiting a fixed land base, will forever place increasing demands on all the forest's resource values. Resolution of the resulting conflicts will require the reasoned minds of resource professionals who are dedicated to the production of multiple benefits.

As a professional forester, I am somewhat disturbed by the misconception of the past decade that man is a visitor to the forest and not an inherent part of the environment. That non-truth must be vigorously denied. 9 The timber industry directly produces 50% of the economy of Montana's 7 western counties; however, in those counties effected by the Kootenai National Forest that percentage is exceedingly higher. 10

The timber industries detractors frequently downplay the economic impact of logging while simultaneously promoting unsubstantiated values of other resource values; however, they seldom mention the effects of their economic goals on the standard of living of local communities. The opportunities they promote are frequently lower paying jobs (well under $10/hour) while the jobs they would replace in timber and mining are higher wage paying jobs (well over $10/hour). 11

The intent here is not to criticize growing industries such as tourism and recreation, but to point out that people who can afford to tour and recreate must first have a decent job somewhere...and we in the logging industry prefer to maintain our quality of life which includes well paying employment opportunities.

Thank you for this opportunity to respond to the proposed management plan for the Kootenai National Forest. Please feel free to contact this office should you desire additional input.

Respectfully yours,

Keith Olson
Executive Director

KLO/slb

Response to Letter #69 - Montana Logging Association, pg. 69a

6. Visual Quality is an assigned level in each Management Area where development may occur. It is recognized that visual change will occur when development happens and an acceptable level of change is determined for the assigned level.

7. No response needed.

8. We agree that properly designed, constructed and maintained roads will effectively protect the Kootenai's soils and watersheds. The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards will not be violated.

9. No response needed.

10. No response needed.

11. No response needed.

MONTANA WILDERNESS ASSOCIATION

30 October 1985

James R. Rathbun
Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

Attached are the Flathead Chapter's comments upon the Kootenai Forest Plan. We hope that our comments, including the material in the Appendix, will be of help to you in formulating the final plan.

We have stressed old growth protection because we believe that the Kootenai has the best potential for providing quality old growth of any national forest in Montana. We hope that you will give special consideration to our views on old growth.

Sincerely,

Richard A. Kuhl

RICHARD A. KUHL
Chairman
Flathead Chapter, Montana Wilderness Association

Flathead Chapter MWA, Box 543, Kalispell, Mt. 59903-0543

Response to Letter #237 - Montana Wilderness Association, first page

No response needed for this page.

Wilderness

The Flathead Chapter supports the Alternative W wilderness proposals of our state organization. Since this proposal is well known, we will not go into it in much detail. Maps and descriptions are included in the Appendix. 1

The main differences between the Kootenai's wilderness proposals and ours are in Trout Creek, Pillick Ridge, and the roadless country adjacent to the North Fork Wildlands of the Flathead (Tuchuck and Thompson-Seton). Look especially at the boundary of our Thompson-Seton proposal. We support wilderness for all these areas in addition to the areas being proposed for wilderness in the preferred alternative of the draft plan.

Until we see the "Report and Proposal for the Ten Lakes Study Area," it is difficult to comment with precision upon the KNF's recommendations. We do support wilderness for the Ten Lakes Study Area and support your plans to include some additional wilderness around the edges. We think the Mount Wam area should have wilderness status. We also question the continued encouragement of snowmobile activity in the Study Area, since this activity makes it harder to achieve classified wilderness status, and may be contrary to the intent of the Montana Wilderness Study Act. 2 3

Response to Letter #237 - Montana Wilderness Association, page 237a

1. The Wilderness recommendations in the Final Plan are similar to those of the Proposed Action except that a significant portion of the Pellick Ridge area has been added to the Scotchman Peaks recommendation.

2. The Ten Lakes Montana Wilderness Study Act Area Final Report and Proposal recommends roadless recreation, but not Wilderness designation for the Mount Wam area.

3. Snowmobile use of the study area is very limited. This use does not detract from the potential for future Wilderness designation.

Comments on the Kootanai Forest Plan Concerning the Northern Whitefish Range, Ten Lakes, LaBeau and Elk Mountain

1) We appreciate and support proposed designation of Ten Lakes as a wilderness. However, we see no viable reason for the exclusion of the Mount Wam lobe of the roadless area from the wilderness recommendation. Any trap tree areas on the flanks of Mount Wam could be provided MA 2 designations. We believe that wildlands should be places where nature can take its course. When one observes the damage done by man in the Williams, Blue Sky and Stillwater drainages in attempts to stop spruce beetle infestations, the treatment appears far worse a management than the natural course. We suggest a minimization of these treatments in the high and sensitive spruce basins as those on the flanks of Mount Wam. 4 5 6

2) The Flathead Chapter of the Montana Wilderness Association believes that the grizzly can be most cost-effectively managed by simply giving the creatures sufficient space in which developments by man are excluded. Therefore, we suggest the MA 14s adjacent to Ten Lakes and the Deep Creek RARE II should be MA 2 (where inappropriate roading has occurred in the past) or MA 8 (in unroaded areas adjacent to the Ten Lakes and Thompson-Seton Wildlands). We would prefer MA 8 in Williams, Blue Sky, Kopsi, Stahl, Clarance and Stillwater drainages, but unwise roading has occurred in these drainages in the past. In these drainages we suggest MA 2 designations with strict road closures. 7

3) The Deep Creek RARE II area should have a MA 8 designation and be fused into a Thompson-Seton Wilderness, which includes the Thompson-Seton and Young-Nasukoin area on the Flathead National Forest and the Deep Creek area on the Kootanai Forest. 8

4) No further logging should occur up Deep Creek. The roads are already to within one-quarter mile of avalanche chutes on the south-southeastern flank on Mount Petery. These are prime bear habitat. The road closure is so close to this prime spring bear habitat as to place bears in undue jeopardy during hunting season. The road closure should be moved from its present location, well down Deep Creek to provide additional security for grizzly and black bear. 9

5) Those unroaded areas of the Kootanai portion of the LaBeau area should remain unroaded (MA 2). Specifically, the lower Fire Lakes and Smokey lakes area should be more carefully divided between MA 2 and MA 3 designations, rather than given over entirely to MA 3. No new roads should be allowed on the northern fringe of LaBeau (sec 16 and E½ sec 17 R24W T33N). The MA 13 (old growth) designation in the upper Fire Lakes area is correct, this stand of old growth should be preserved with no cutting or roading. The western flank of Ketowke Mountain, which is in the LaBeau RARE II should have a MA 2 designation. We doubt cutting in this area will enhance big game forage. The area should be preserved as a buffer to the core of the roadless area. The Ketowke and Ketowke II timber sales are unacceptable to us if these are within the LaBeau RareII area. It is not apparant from the legal descriptions given on these sales whether they are in or out of the Labeau roadless area. 10 11 12

Response to Letter #237 - Montana Wilderness Association, page 237b

4. The rationale behind the recommendations for Ten Lakes are included in the Final Report and Proposal mentioned above. These recommendations have not been officially adopted by the Administration and presented to Congress so the report is not yet available to the public. Due to the Montana Wilderness Study Act, the Ten Lakes Study Area is not addressed in the Forest Plan except in terms of its retention as a Study Area. We can not address your concerns in the Forest Plan.

5. Two situations exist on the flanks of Mount Wam. Past spruce logging occurred during the 1950's and trap tree logging during the 1980's. The earlier logging is grown over and now provides excellent grizzly bear habitat. Any future trap tree logging will occur in Management Areas 12 or 14 where it is appropriate. We have no plans to salvage Management Area 2 which surrounds Mount Wam.

6. See response #5 above.

7. Designations in upper Williams, Blue Sky, Kopsi and Divide Creeks have been changed from MA 14 to MA 2. Deep, Stahl and Clarence Creeks have valuable timber sites and those areas have not been changed. Refer to the Final Plan map for details.

8. See response #7 above.

9. The goal of MA 14 is to maintain or enhance grizzly bear habitat and reduce grizzly/human conflicts while realizing a programmed level of timber harvest. If the area were removed from the regulated timber base (MA 2), then grizzly bear habitat would be retained, but timber would not be harvested and there would be little opportunity to enhance grizzly bear habitat.

   Any proposed timber sale would be evaluated through an Environmental Assessment as to potential impacts on grizzly bear or their habitat. If it were determined that potential impacts would result, then appropriate mitigation measures such as road closure, timing of logging, and changes in cutting units, would be prescribed to make the sale compatible with the grizzly bear.

10. The designations in the LeBeau area remain unchanged.

11. MA 13 has been removed from the regulated timber base.

12. This area is included in the Ketowke timber sale presently on the 5-year plan. It has mountain pine beetle infestation in the extensive lodgepole pine stands and can be economically harvested. The designation is unchanged from the Proposed Action.

(6) We agree with the MA-2 designation for Elk Mountain and the adjacent ridgeline south to Brush Creek Divide and north to Bowen Lake. The Elk Mountain country is one of the few pockets of roadless area in the Salish Range. Both the Kootenai and Flathead Forests should protect this island of roadless land awash in a sea of timber development. 13

(7) We support MA-21 designation for the West and East Branches of the South Fork of Big Creek. This area is obviously too wet to allow logging. The management plan for this area should emphasize old growth and riparian wildlife and its boundaries should extend up the drier slopes and not be just a linear strip along the creek. Widening the boundaries would allow a more diverse habitat component. The ROS should be semi-primitive non-motorized. 14

Snags should be given 100 percent protection.

Response to Letter #237 - Montana Wilderness Association, page 237c

13. No response needed.

14. We agree that widening the boundary might add diversity to the special management area, but the streambottom environment is considered to be the "Special Habitat" that needs protection. The ROS for the Upper Big Creek Riparian Ecosystem is semi-primitive non-motorized. See Management Area 21 in the final Forest Plan. Snags are protected under the Cavity-Habitat Management Guidelines in Appendix 16 in the final Forest Plan.

MA-2 Management Direction

The management direction for MA-2 needs to be clarified and made specific. The ROS is listed as semi-primitive non-motorized (PFP, III-9). Yet, exceptions are allowed, including snowmobiling on and off roads, trail bikes where established, and even some roaded recreation. In order to prevent future misunderstandings and conflicts between different user groups, all exceptions to the semi-primitive non-motorized ROS should be listed in the Final Plan. Which trails and roads will be open to motorized use? Which areas can snowmoibles operate in?

Without this specific information, we cannot comment accurately on the proposed management. If there are many motorized exceptions, it would be better to separate this management area into semi-primitive non-motorized and semi-primitive motorized categories. 15

Also needing explanation is the level of conflict which must exist before snowmobiling is prohibited (PFP, III-9). How many encounters with a snowmobile on roads by skiers will be considered too many? Why isn't a cross country encounter between a snowmobiler and a skier considered a conflict? Are groomed snowmobile trails going to be permitted?

We are also confused as to what kind of status the Northwest Peak Scenic Area will have. Does MA-2 designation for this area do away with the Scenic Area designation? Are any changes in management or protection anticipated? We support continuing the Scenic Area designation for this area, with a semi-primitive, non-motorized ROS. 16

Response to Letter #237 - Montana Wilderness Association, page 237d

15. This has been clarified in the standards for Management Area 2.

16. Northwest Peaks is now in Management Area 21 and the Scenic Area designation is retained.

Threatened and Endangered Species:

Caribou

The DEIS at IV-63 acknowledges there exists confirmed evidence of *mountain caribou* in the northeast corner of the Whitefish Range of the Kootenai Forest. This area "...is felt to represent the best potential habitat", and may offer the best chance for recovery of caribou in Montana. The status of mountain caribou is that they may be the rarest mammal in the adjacent 43 states. There is currently a petition to the U.S. Fish and Wildlife Service to ammend the Selkirk endangered species listing to include caribou in Montana. Yet the Kootenai Plan proposes only that "the status and range of the caribou will be determined within ten years" (Proposed Forest Plan [PFP] II-6). There may be only a handful of caribou left on the Kootenai Forest. Ten years from now may be too late. Caribou and their old growth habitat need adequate protection now.

The Kootenai Forest lists the mountain caribou as a sensitive species. " "Sensitive" status signifies that a species is not numerous and that efforts will be made to protect the species and its habitat from further degradation until further knowledge of its status can be gained" (PFP III-63). Furthermore, "caribou and their habitat needs will receive special consideration as more information is gathered thus not reducing future options for management [of caribou] " (PFP III-60, emphasis added). Such pledges to protect the species and its habitat have no substance without a management prescription and ample funds for monitoring and evaluation. Clearly the Kootenai Plan is deficient without these. Attached is a management prescription used for caribou in the Selkirks. Responsibility lies with the Kootenai Forest to develop such a prescription for this rare native species. 17

The DEIS at IV-62 claims that "caribou should not be adversely affected by any alternative...given that the Whitefish Range is all grizzly situation 1 and that portions are proposed for nondevelopment".

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17. During the past 3 years, the Kootenai National Forest has actively participated in an interagency effort to determine the status of caribou in Montana. This task has now been completed, so reference to status determination within ten years has been deleted from the Final Plan. Based upon repeated aerial surveys during this three year period, there is no evidence of a resident caribou population within Montana. Recent reports suggest that a few caribou may continue to use habitat in and adjacent to Montana.

Any caribou which may occur on the Kootenai are considered to be a sensitive species, and as such, will be managed to prevent their being further endangered. This management consists of 1) placement of potential caribou habitat in the Whitefish range in compatible management areas, 2) road management to provide habitat security, and 3) continued interagency cooperation in caribou management programs. The Kootenai will be responsive to proposals to reintroduce caribou to suitable habitats when and if such proposals are made by the Montana Department of Fish, Wildlife and Parks, which is the agency with primary legal authority in this matter.

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This statement presumes incorrectly (1) that areas proposed for non-development are sufficient to meet caribou needs; (2) that harvesting timber outside of these areas (e.g., MA 11, 12 and 14) will not reduce future management options for caribou; and (3) that the grizzly guidelines protect caribou habitat. Caribou require sufficient old growth habitat. The grizzly guidelines do not protect old growth habitat. In fact, the grizzly timber prescription, MA 14, allows 40 acre clearcuts (PFP III-57), and the potential is high to degrade old growth habitat. Solitude is another important element, and MA 14 permits unrestricted snowmobile use, a serious disruption on winter caribou range. 17

The DEIS states "...management for caribou needs should have minimal effect on other Forest programs" (pg. IV-63); but what will the impact of other Forest programs be on the future of the caribou? The Kootenai Forest, having one of the rarest indigenous mammals in the U.S., has an obligation to the American public to develop a program that protects and enhances the species.

Grizzly Bear

Land designated as MA 14 consists of Situation 1 and 2 grizzly habitat. MA 14 goals include: to maintain and enhance grizzly habitat; and, to assist in recovery of the bear (PFP III-57). However, the Plan states that "ORV use will normally be allowed except seasonal restrictions may occur on areas such as spring range or denning habitat " (PFP III-57, emphasis added). Security is an essential factor for recovery of the grizzly bear, therefore seasonal restrictions of ORV and other motorized vehicles should be required on spring range and denning habitat. 18

The Montana Department of Fish, Wildlife and Parks in the Draft Grizzly Bear Programmatic EIS (pg. 47, June 1985) has compiled data from studies in the Northern Continental Divide Grizzly Bear Ecosystem which demonstrated the importance of timber as a grizzly bear habitat component. Timber (as well as mesic sites and burn shrubfields) was shown to be disproportionately important to bears in all study areas. Studies by McLelland (USDA Forest Service IGBC Grizzly Bear Habitat

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18. We agree that security is an essential factor for the recovery of the grizzly bear. Due to the type of terrain involved, ORV use is usually unlikely, if not impractical, therefor restrictions on use are usually unneeded. The guidance for MA 14 allows for restrictions when needed.

All of the alternatives manage timber in ways which can not produce a homogenous stand of 10 to 15 foot high trees. Stands in a wide variety of age classes will occur in the future, providing more diversity than currently exists.

Recent publications indicate that timber harvest can indeed enhance grizzly bear habitat. See "Enhancing Grizzly Bear Habitat Through Timber Harvesting", by Mike Hollis and "Grizzly Bear Habitat Components Associated With Past Logging Practices On The Libby Ranger District, Kootenai National Forest", by Alan Bratkovich; both in Proceedings - Grizzly Bear Habitat Symposium, Missoula, MT May, 1985.

Unevenaged management is generally not practical for the reasons outlined in the DEIS (IV-9). There is a paucity of research indicating unevenaged management is more beneficial than even aged management even if such management could be accomplished. The management guidance in the plan allows unevenaged management even though the assumption is that even-aged management will generally be the practical approach.

Symposium, Missoula, Mt., 1985) showed that timber was the number 1 component in early spring and in autumn, and the number 2 component in late spring. "Timber is used for travel-search behavior... bedding and feeding at microsites" (McLelland, 1985). Forage, thermal cover, security, bedding habitat -- timbered areas may provide these values in any combination or simultaneously. Yet the Kootenai Forest does not give timber it due weight. The value of timber to the bear is seen by the Kootenai (and other National Forests in occupied habitat) as primarily one of hiding cover (PFP III-58). Consequently, it is generally assumed that reducing a diverse, uncut forest to a homogeneous stand of 10 to 15 foot high trees still "maintains" the integrity of grizzly habitat. There is no scientific evidence to back up this far reaching assumption. Furthermore, clearcuts up to 40 acres in size (PFP III-58) are also assumed to maintain, or enhance, grizzly habitat. There is no scientific evidence to back up this far-reaching assumption. Furthermore, clearcuts up to 40 acres in size (PFP III-58) are also assumed to maintain, or enhance, grizzly habitat in spite of scientific data that show bears generally avoid clearcuts (eg., Zager, 1980), and in spite of recommendations (eg., Zager and Jonkel, 1983) that small clearcuts and methods other than clearcutting, such as group selection or individual tree selection, be used when harvesting timber in grizzly country. 18

The DEIS at IV-16 discusses the positive benefits of small clear-cuts to grizzlies. If the DEIS recognizes this as a benefit, the MA 14 management direction should reflect this and a correspondingly smaller maximum clearcut size should be set. A preferred clearcut size tends to encourage units approaching that size (eg., 40 acres). 18

All alternatives presented in the EIS are biased towards even-aged management. Fourteen out of 15 alternatives use clearcutting on 93 to 100% of all acres logged! Clearly, this is not a reasonable range of alternatives as required by NEPA (40 CFR 1502.14(a)).

The DEIS discussion on choice of harvest systems reflects the Kootenai's inherent bias towards even-aged management (DEIS IV-9). Selection cutting is not generally considered "appropriate" even for riparian areas, or so it is claimed (DEIS IV-9). (For approximately 100 feet from water, land and vegetation must be given special attention to protect the water resouce, according to NFMA Sect. 219.27(e).

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see preceeding page.

Citations on advantages of uneven-aged management to the grizzly bear, to other wildlife species, to recreation values, to the watershed and to the long-term productivity of the land are missing from the DEIS. This is not a rigorous exploration and objective evaluation of reasonable alternatives as required by NEPA (40 CFR 1502.14(a)). It is also not in compliance with NFMA (Sect. 6(F)(i)) which requires that clearcutting be used only when determined to be the optimum method; nor with the ESA (Sect, 2(c)(1)) which requires the use of all methods and procedures to delist the bear.

There are ways to compensate for the stated disadvantages of uneven-aged management (DEIS IV-9). For example, group selection cuts can be designed to favor intolerant species. Impacts of repeated entries may be lessened by lengthening time between entries and by the use of snow roads. Innovative approaches to forest management are needed for timber harvest in grizzly country. MA 14 falls short of the mark, and a prescription that favors the needs of the bear, as required by Situation 1 guidelines, should be developed. Attached is a suggested management prescription for timber harvest in Situation 1 habitat, based on current scientific data and recommendations. 18

The driving force of any aspect of management that affects the bear should be recovery (ESA Sect 2(c)91)), not just maintenance. State-of-the-art management techniques are not an option. They are a requirement (ESA Sect. 3(3)).

Old Growth:

Only in the last 10 to 15 years of scientifc research and with the passage of Federal Laws (as NEPA and NFMA) has the National Forest system realized its biological and legal responsibility to assure an adequate and continued supply of the old growth resource. Given the speed with which this limited resource is being depleted, we can little afford to make mistakes. The Old Growth and Cavity Habitat Management Guidelines represent a substantial effort; but, unfortunately, many of the positive concepts never leave the conceptual stage and become management direction. We are most concerned with these and other serious shortcomings as follows. 19

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see next page.

Minimum and maximum dbh of old growth

We endorse the recommendation that no maximum diameter for snags be set; and as stated, "the larger the better" (PFP A 16-10). However, the minimum diameter given for large snags is 20". While there is no upper limit for diameter, all things being equal, the land manager is not likely to select snags larger than the minimum required. A larger diameter class (30-40"+) is needed for cavity nesters such as the pileated woodpecker. To quote from a March 12, 1985 letter from Dr. Riley McClelland to FNF Supervisor Edgar B. Brannon: "Co-workers and I now have a record of more than 90 active pileated woodpecker nests and roosts,...the mean dbh of these trees is 30 inches... A few nests are in trees 20 inches or even smaller, but the minimum cannot be considered suitable in the long-term. Our only 2 samples of pileateds nesting in trees <20 inches dbh ended in nest failure... At the current time there are many 20 inch or smaller larch, yet few pileateds select them. Pileateds select old/old growth because old/old growth provides habitat with a higher probability of successful nesting and long term survival. They are "programmed" to make that choice after centuries of evolving with old growth."

Results of the Kootenai Forest's 1983 old growth field survey (PFP A 17-4 - A 17-6) showed that stands in the 30-40"+ dbh class are typically in Habitat Group 1 (warm - moist). "Stands in this group often bordered stream courses and had large numbers of trees 30-40"+ dbh." These stands were regarded as "classic" mixed-conifer old growth, and showed high levels of pileated activity and of other cavity nesters. It seems reasonable that trees in the 30-40"+ dbh class are an important old growth component on the Kootenai Forest. Certainly they are part of the natural diversity of the Forest. For this reason alone they should be maintained: "Management prescriptions...shall preserve and enhance the diversity of plant and animal communities...so that it is at least as great as that which would be expected in a natural forest..." (36 CFR 219.27(g)).. 19

Guidelines should be mandatory

Much of the positive direction provided to the land manager is in the form of guidelines, rather than standards (PFP A16-5 to A16-11). However, because these recommendations are set forth to mitigate the effects of timber harvest, NEPA requires them to be implemented or harvesting cannot take place (40 CFR 1505.3). Therefore, the management direction should be made mandatory.

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19. Management Area 13 (Old Growth) has been removed from the regulated timber base. Timber management guidelines are no longer necessary for this management area because harvest will not occur.

Amount of old growth

The DEIS at III-61 states that "Approximately 20% [roughly 58 species] of all wildlife species found on the Forest find preferred habitats in old growth". We believe this figure underestimates the number of species that benefit from old growth (see following discussion). Regardless, we have strong reservations that sufficient old growth is being planned-for to meet the needs of wildlife, the public, or NFMA regulations on diversity (36 CFR 219.27(g)).

Omissions from the old growth species list include at least: caribou (see Jerry,1983; IPNF EIS, "Old Growth Management"); whitetailed deer (Jerry, 1983); and moose (Jerry, 1983). Arguments that old growth habitat serves only as cover for cervids have been challenged by evidence that old growth habitat plays a special role by providing food and cover simultaneously (and hence has been termed survival cover by LaFoulette, 1981). For example, research on the effects of logging in winter range of white-tailed deer in the northern Rockies showed that deer prefer old growth not only because of its thermal advantages. Old growth habitat generally ac- 19
cumulates less snow and provides greater ease of movement. These features result in higher useability of available forage. This role of old growth habitat is crucial on high snow ranges. (See for example Wright et al, 1983.)

Many species utilize old growth for at least a part of their life cycle. The Northern Region "white paper" on "Old-Growth Forests: Managing for Wildlife" (Harger, 1978; USDA Forest Service, pg. 7) assembled data showing of 373 forest-related species [in the Northern Region] 43% were associated with old-growth for either feeding or reproduction, *or both" (emphasis added). As expressed* by McClelland (1985; letter to E.B. Brannon): "One often hears that animal species found in old growth prefer rather than require such habitats. The propensity to differentiate habitat or habitat components as either preferred or required is, in many cases, illogical and without scientific merit. If [species select for old growth]...one must assume, unless there is compelling evidence to the contrary, that pressures of natural selection favor that choice. The selection is associated with species fitness. ...Minimum viable populations cannot be sustained if only marginal habitat is provided. We *base too many conclusions on short term observations."*

The Kootenai Old Growth Guidelines (PFP A 17-9) state: "A review of applicable literature on wildlife species and their habitat needs indicated that a minimum of 3-10 percent of available wildlife habitat

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should provide old growth conditions (McClelland, 1978; Juday, 1978) at any given time." This statement could mislead the reader to conclude that McClelland and Juday endorse a minimum figure of 8% old growth. This is not the case. To our knowledge Juday (1978) does not recommend amounts of old growth, and McClelland (1979 and 1980) recommended 10% as an absolute minimum. (Furthermore, managing for the minimum is not acceptable in the long term.) NEPA requires "explicit reference by footnote to the scientific and other sources relied upon for conclusions" (40 CFR 1502.24). Justification of the 8% figure is required. 19

Has the Kootenai evaluated whether 8-10% old growth is sufficient to support species that may already be below minimum viable populations as sensitive species and species of concern (caribou, fisher, wolverine)? Beyond wildlife habitat, old growth provides far more. It produces fisheries habitat, the highest quality water, and it enhances productivity of the land via rich soils and mychorrizal fungi (Juday, 1978). It offers unique, high quality recreation and scenic value (Juday, 1978). Old growth provides almost all of the multiple use requirements. Has the Kootenai evaluated whether 8-10% is sufficient for these purposes? Moreover, is this amount enough to meet the national demand for these multiple uses? Old growth is gone from the majority of our Nation's forests. In the NFMA of 1976 (Sect. 2(6)) Congress found that: "the Forest Service...has both the responsibility and an opportunity...in assuring that the Nation maintain a natural resource conservation posture that will meet the requirements of our people" (emphasis added). As the elimination of old growth is nearly complete, there is a biological and legal obligation to protect what little old growth is left. 20

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20. Management Area 13 (Old Growth) has been increased in size so that about 10% of the Forest land below 5,500 feet in elevation will be in old growth conditions. Our inventory indicates that a total of about 11% of the Forest land below 5,500 feet in elevation is currently in "old growth" condition. Old growth habitats have never been extensive in this area due to natural processes, particularly fire, as discussed in Chapter III of the DEIS.

    The best available evidence suggests that 8-10% old growth is sufficient for wildlife needs. Public input led us to increase old growth to the 10% level to reduce the risk of managing at the bare minimum. There is little latitude available to increase the size of Management Area 13 further at this time because existing inventories have only identified 11% of the Forest land below 5,500 feet elevation to be in an old-growth timber condition that meets the wildlife habitat needs of the dependent species. Latitude is being preserved to provide additional old-growth timber in the future. The Final Forest Plan retains 34% of all the mature timber (exclusive of Lodgepole Pine) in an unregulated timber status.

More information is needed

Data presented in the DEIS and Plan on old growth acreage is confusing and contradictory: 1) Old growth acreage figures are given in the DEIS as 149,000 acres on pg. II-73 and 177,000 acres on pg. A-10. 2) On pg. A6-2 (PFP), the Age Class Distribution is shown for the present and future forest; but "future" is not defined. 3) This Age Class Distribution table shows that the future forest will have only 46,000 acres of putative old growth (160+) on suitable lands. The public may not understand what happened to the 93,000 acres of old growth allocated to MA 13. It should be made clear that these acres will be harvested and replaced by unregulated (or unsuitable) acreage. 4) The DEIS should display a clearer picture of the present and future status of old growth acreage, esp. for those old growth acres not allocated to old growth management which will be harvested first. Information should include: How many acres exist now, above and below 5,000 feet,[1] of regulated old growth; of unregulated old growth; and, of nonallocated old growth within the commercial timber base? What will the picture look like in future decades? How many acres of regulated, unregulated and nonallocated old growth are riparian?[2] How many acres of riparian nonallocated old growth are scheduled for harvest within the planning period? 21

Wilderness areas should not be considered sources of old growth. Since the management goal in wilderness is to let the forces of nature predominate, natural fire may consume old growth at any time. To put out fires to save old growth would be contrary to the Wilderness Act. An adequate amount of old growth (15%) should be planned for outside of classified wilderness. The old growth present in wilderness should only be considered a temporary bonus.

The PFP (PII-6) seems to recognize the inability of wilderness to guarantee an adequate amount of old growth. Unfortunately, it says because wilderness old growth cannot be controlled the amount of old growth in a drainage may dip below 8%. This situation is not acceptable except in total wilderness drainages. The solution is to avoid counting wilderness old growth as part of the old growth inventory. 22

1. Acreage below 5,000 feet is generally considered the most useful for wildlife.

2. "Frequently, the best old growth...reaches its highest value for wildlife when in close proximity to riparian zones (McClelland, 1977)" (PFP A 17-2).

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21. Old growth was only inventoried on land below 5,500 feet in elevation because habitats above that elevation are not considered the most useful for wildlife. The inventory and Final Plan designations are as follows:

Lands below 5,500 feet	=	1,859,000 acres
Inventoried Old Growth	=	205,000 acres
Management Area 13	=	126,000 acres
Other non-timber mgmt	=	60,000 acres
Managed for timber	=	19,000 acres

Thus, at least 91% of the inventoried old-growth timber will remain through the life of the plan. This 186,000 acres represents 25% of all the mature timber, exclusive of Lodgepole Pine (729,000 acres). Data on the portion of the old growth that is in riparian areas is not available, however, many of the designations are in streamside locations. See the Final Forest Plan map for specific locations of Management Area 13.

22. There is a small amount of inventoried old growth below 5,500 feet in Wilderness. As indicated by the inventory data presented above, it is not possible to provide 15% old growth in the near future, but that option is being preserved for the future. See Response #20, above.

Replacement Stands

We support the following management directions in the Cavity Habitat Guidelines: 1. "Due to the need to provide a continuous supply of snags over time, and in light of the fact that snags of adequate diameters may not be produced in the future under normal rotations, there is a need to designate green trees as snag replacements" (PFP A 16-4); and 2. acknowledgement that to achieve good snag distribution means to account "for acreage currently devoid of snag s/replacements such as road/clearing zones and past cutting units" (PFP A 16-4).

The need for replacement stands for old growth stands under long rotation management (MA 13) also has been recognized. Replacement stands have not, however, been designated. Moreover, stands will be replaced with timber in an unregulated (or unsuitable) Management Area (letter from Kootenai Planning Staff, Kootenai Forest, Oct. 7, 1985). Unregulated MA's are 2,3,5,7,8,10,18,19 and 29. Timber in these MAs is unsuitable for harvest and is primarily low productivity, located on high elevations, on steep slopes, or in wilderness. The logic for replacement stands is to replace the habitat lost when the old growth is harvested (PFP III-53). How can this be done on lands of low productivity, at high elevations and on steep slopes? "Frequently the best old growth occurs on the most productive timber sites..(McClelland,1977)" (PFP A 17-2) and "most stands above 5,500'...are not suitable for reproduction of most old growth associated wildlife species" (PFP 17-3). How then has it been determined that this is equivalent habitat? The Plan states that replacement stands will be redesignated MA-13 (pg. III-53). How can a blanket assumption be made that lands designated unsuitable now can be made suitable in the future?

The guidelines (A 17-13) indicate that replacement stands will be treated silviculturally to stimulate old growth. However, there is no evidence this will stimulate old growth and it may be detrimental (see discussion on Thinning Old Growth). Will these replacement stands be designated in currently unregulated (or unsuitable) management area allocations? If so, what response is to be expected on these generally poor timber producing lands? The public needs more information on the plan for replacement stands.

As old growth harvesting on commercial lands outside of MA 13 is proceeding, there is a need to designate now stands that will be best

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23. Designation of old growth replacement stands is no longer necessary because Management Area 13 has been removed from the regulated timber base.

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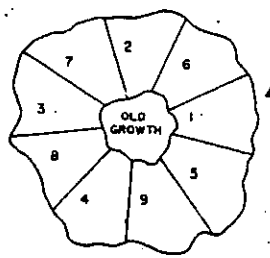
suited to replace MA 13 stands. The best replacement stands would be stands immediately adjacent to long rotation stands. This would increase the value of long rotation stands due to habitat usage overlap and by providing a climatic buffer (Harris, 1984). The Northern Region white paper on old growth management (Hargar, 1978) indicates that on the Lolo Forest "For 10 percent of the area to remain in old-growth at any one time, at least 29 percent of the area must be included in the 250-year rotation." A correspondingly appropriate acreage for the Kootenai Forest should be included in the 250 year rotation.

Harris (1984) in his recent book "The Fragmented Forest" has applied island biogeography concepts and enhaustive research data to the problems of old growth management. He arrived at a management scheme which provides long rotation management stands around an existing core of old growth, as illustrated below:

23



Replacement Stand (In this scheme, harvesting would be at 320 years, with entries 35 years apart)

Numbers indicate order of harvesting

We propose that such a management scheme be used for the Kootenai Forest.

Definition of Old Growth

Regulated old growth is on a 250 year rotation; however, it is assumed that old growth starts at 160 years (DEIS II-79, III-62). This produces a gross overestimate of the amount of true old growth present on the forest. It also overestimates the true old growth that remain in the future, for although stands are planned to be harvested by condition, not age (PFP III-53), the oldest stands on the Forest will probably already be cut, eliminating the old/old growth component. The Old Growth Guidelines do acknowledge that ecological characteristics, and not just age, are necessary for classifying old growth. However, they set the lower limit at an unrealistically young age, and they fail to recognize the major ecological differences among various ages of old growth (see Juday, 1978). 14

24

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24. Since Management Area 13 has been removed from the regulated timber base, harvest will not occur.

"A stand of 20 inch larch, 150 years old, would be only of minimal support for many old growth associated wildlife...Stands with tree components that are 300 years old and older may be much more valuable as habitat for cavity-nesting wildlife and many other guilds and species." Consequently, the Kootenai Plan fails to assure an adequate supply of true old growth in MA 13. As it stands, the PFP does not give enough information on unregulated old growth (PFP A 17-12) to conclude whether these allocations would provide sufficient old/old growth at all elevations and habitat types. Given that much of this acreage is at high elevations, we are doubtful that the unregulated old growth would meet these criterea. 24

The Plan at III-53 states that in MA 13 "final harvest will not occur until the stand, because of insects, disease or catastrophe will not provide old growth characteristics. Final harvest is expected to occur at about 250 years for an average stand, but the harvest age will be determined by stand condition and effectiveness as old growth, not age." While we support the concept of not harvesting old growth unless it is shown to no longer be "effective", by assuming an unrealistically low average harvest age of 250 years Forplan will overestimate the amount of timber that can be cut now and in the future.

Dedicated Old Growth

"We need to recognize diversity within old growth and to perpetuate stands with old/old growth...That is an essential part of forest diversity" (Mcclelland, 1985). This need could best be satisfied by the dedication of remnant stands of old growth. These stands could be surrounded by stands with long rotation management after the scheme proposed by Harris (1984). Dedicating old growth stands would resolve discrepancies over age definition. It would assure an equitable distribution of old/old growth throughout habitat types and elevations. Natural old growth in other management allocations (PFP A 17-12) may not have an equitable distribution. Dedicating old growth stands now would also assist land managers in the future when the pressure to harvest the remaining old ~~growth~~ growth will be immense. 25

Distribution

We support the Kootenai's proposal for a representation of old growth among the different habitat types. However, old growth stands should be planned in distributions and interconnected archipelagos to reduce the dangers of isolation (Harris, 1984). The effective size of an old

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25. Management Area 13 has been dedicated to old growth.

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growth habitat island decreases with the distance from a similar old growth island and with the degree of habitat difference of the surrounding environment: "Harris and his coauthors (1982) [have concluded that] in order to achieve the same effective island size of a stand of old growth that is surrounded by clearcut and regeneration stands should be perhaps ten times as large as an old growth habitat island surrounded by a buffer of mature timber" (Harris, 1984). 25

The Old Growth Guidelines (A 17-10) recognize the importance of corridors, but do nothing to insure them. Old growth stands should be connected by corridors and cannot be allowed to become islands in a sea of young or midsuccesional stands (eg., islands of MA 13 in MA 15 allocations). 26

Thinning Old Growth

The Old Growth Guidelines (A 17-12) state: "Given our current level of knowledge; intermediate harvest, salvage sales, or firewood sales are not compatible with the maintenance of old growth characteristics. In the future it may be demonstrated that certain types of logging can occur within old growth stands and still maintain their value to old growth dependent species, but until that time, old growth stands should not be scheduled or planned for salvage, pulping or intermediate harvest." However, the MA 13 prescription (PFP III-53) states that "Precommercial thinning and one commercial thinning may occur to produce lage trees of suitable spacing in stands destined to become old growth." This statement should be modified to read..."may occur only if it can be demonstrated that thinning is not detrimental to old growth". Note that the IPNF DEIS (pg. 36, "Old Growth Management") states: "Thinning is detrimental to old growth" (emphasis added). 27

Worst Case Analysis

Planning for an adequate amount and/or distribution of old growth clearly involves a high degree of controversy (40 CFR 1508.27 (b)(4)), uncertainty and unknown risks (40 CFR 1508.27(b)(5)). Errors in planning may cause the loss or destruction of significant scientific or historical resources (40 CFR 1502.27(b)(8)). Because of the scientific uncertainty and gaps in relevant information about old growth, a worst case analysis is required (40 CFR 1502.22(b)). 28

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26. See the Final Plan map.

27. Management Area 13 has been removed from the regulated timber base.

28. At least 91% of existing old growth will be retained through the planning period thus the loss of the resource will not occur.

Riparian Protection

On Deep Creek, recent logging in the riparian zone has been carried down to the stream with no buffer. It appears that bulldozers were in the stream. These practices are contrary to Best Management Practices for water quality and should not be permitted in the Final Plan's scheme for riparian management. 29

Given the high wildlife values of riparian areas, riparian protection needs strengthening. According to the PFP (III-6), dozer scarification, skid trails, and landings may all occur in riparian zones. 30 It would be better to adopt a plan similar to the Flathead Forest, where most of the riparian zone is taken out of the regulated timber base and managed for old growth and wildlife. This riparian old growth can serve as the connecting strand between the presently scattered spots of designated old growth. This connection will ensure the biological transfer necessary to produce high quality old growth. 31

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29. The Forestwide standards and the Monitoring and Evaluation Plan have been modified to insure that State Water Quality Standards will not be violated.

30. See the Riparian Area Guidance in Chapter II of the Final Plan.

31. See #30 above.

Monitoring Plan

Monitoring will play a key role in guiding future management actions and resource development whatever plan is adopted. If money is not available to fund a comprehensive monitoring program, resource development should be curtailed or stopped until the monitoring plan is funded adequately. This stipulation should be part of the Final Plan. 32

The estimated cost of the proposed monitoring plan (CPFP, IV 4-12) seems absurdly low. Only $300 is authorized per year to conduct summer range transects on elk populations. Only $900 is to be spent determining pileated woodpecker population trends. If some monitoring costs are buried in the general budget, these sums should be shown so that the public can judge if the amounts are realistic. 33

We are concerned over the variability allowed in some monitoring items before action is required. The pileated woodpecker population, used as an old growth indicator, is allowed to decline 10 percent from an already dangerously low level of 40 percent of ideal. Just how many birds would be left? Would this population level be viable? Also, why is there a concern if the population increases 10 percent over the 40 percent level? What action would be called for? Would old growth be cut to reduce the pileated woodpecker population? 34

We could cite other examples illustrating our concern over the variability allowance. A better explanation of

32. Monitoring is not planned as a separate budget item. Instead monitoring will be incorporated in the regular workload. Thus, timber sale monitoring needs will be incorporated into costs normally associated with sale design and road engineering.

33. The Draft Plan included only the additional costs expected beyond the costs already regularly involved. The Final Plan devotes the space to the requirement for monitoring and shows no costs.

34. The Monitoring and Evaluation Plan has been modified.

variability and how it will be interpreted by managers needs to be made a part of the monitoring plan. Surely, it is not intended that wildlife populations or habitat acres should sink below minimum viable levels before corrective action is taken. 34

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34. see previous page.

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EDUCATION PROGRAM

Many of the suggested management actions in the proposed plan will need broad-based public support and understanding if the results are to be satisfactory. If snag retention and road closures are going to work, people must understand why these practices benefit wildlife. Other examples of management actions requiring general public awareness and understanding are recreation management and national fire programs in wilderness areas. Rules, regulations, and law enforcement will not produce compliance by themselves. To obtain the necessary compliance, an information and education program is needed. Despite this need, no such program is described in the plan. 35

A definite commitment to an education program needs to be made and dollars allocated. If dollars can be budgeted for future monitoring activities they should also be budgeted for education. The plan should describe the future education program and provide an estimate of its cost.

The seeds of such an educational effort have been planted in the Regional I Office in cooperation with such groups as the MWA and Back Country Horsemen. The Forest Plan should allow these seeds to germinate.

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35. Although not specifically budgeted for in the Forest Plan, an on-going information program is part of the day-to-day operation of the Forest. News releases, distributed to a broad based media, with follow-up articles, are done on a regular basis.

We distribute brochures and pamphlets to the public and specific educational materials are available on request. In addition, members of the staff and sub-staff frequently give presentations to service organizations and other groups locally and State-wide. Schools are routinely visited by Forest employees who provide environmental education and distribute educational materials.

To get public involvement or gain compliance on high profile issues, media interviews are given, mailings sent out and public meetings held.

Range of Alternatives

We do not believe that the range of the management alternatives is adequate (DEIS II, 10-11). The 15 alternatives do show variable mixes of timber, wilderness, elk, PNV, and visual quality, but the results often seem unrelated to the special characteristics and values of the land. The figures used for timber prices and budget levels are also unrealistically high. The overall timber bias is clear, given that all but two of the alternatives have higher timber yields than the past decade's average regulated sold volume of 170 MMBF. And, one of the two exceptions is the current direction alternative---probably because of more realistic budget constraints. Since quality old growth is an important Kootenai resource, various average totals for old growth below 5500 feet should have been included in the different alternatives.

We propose that at least three other alternatives be developed and compared to the proposed plan through FORPLAN runs. 36

The first alternative would adopt our wilderness proposals, but would otherwise be the same as the proposed plan. The result would show the effects of one variable---the Alternative W wilderness proposal.

The second alternative would use the proposed plan as a base, but it would adopt our wilderness proposals and our recommendation for other specific roadless areas. This alternative would remove the riparian zone from the regulated timber base and devote it to old growth and wildlife. A 15

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36. The Final Plan includes more land in Management Area 13 (old growth). The Final Plan includes essentially all the lands Proposed for Wilderness by the MWA in either Management Area 8, 2, 29 or some other undeveloped designation. There is no significant difference between these Management Areas in the FORPLAN model. Significant exceptions to this are on the north face of Pellick Ridge (Scotchman Peaks), and a portion of Trout Creek. Alternative H included all areas with Wilderness potential in Management Area 8 (Proposed Wilderness).

The potential for additional old growth is discussed above.

Appendix B of the EIS describes the results of using different economic data both with a FORPLAN run similar to the Final Plan and with Alternative M. The Forest budget is $19.2 Million (excluding purchaser credit) for the Final Plan.

The three alternatives proposed are all well within the range of alternatives explored in the EIS except for the 15% old growth proposal which is not now possible.

percent per drainage old growth goal for lands under 5500 feet would be adopted. No wilderness old growth would be counted toward this goal. Full winter habitat protection for big game would be adopted. Our management prescriptions for timber harvest in Situation One girzzly habitat could also be used.

The third alternative would consist of the proposed plan being run with lower, more realistic, stumpage prices, and a more realistic budget constraint of approximately $20 million per year. These more realistic economic figures could also be used with any other alternative.

By using the variables suggested above in various mixes, we believe that a better range of management alternatives would be developed, leading to a better plan. 36

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36. see previous page

NORTH FORK WILDLANDS

Flathead & Kootenai Forests
1985 Roadless Net Acres: 110,600
Recommended Wilderness: 110,600

I. Description

Walk softly and keep your eye peeled for a climbing tree. This is grizzly country, maybe the best in Montana, hard against the border of British Columbia and just west of Glacier National Park and the scenic North Fork Flathead River. The proposed wilderness is comprised of three areas, Tuchuck, Mount Hefty, and Mount Thompson-Seton, that are separated by primitive, ill-advised logging roads. Most of the area lies on the east slope of the Whitefish Range, on the Flathead National Forest, and drains into the North Fork Flathead. A small section west of the divide is on the Kootenai.

Elevations range from approximately 3500 feet near Trail Creek to 7820 feet at the summit of Mount Thompson-Seton. Other prominent summits are Tuchuck, 7724, Thoma, 7180, and Hefty, 7585 feet high and just 500 yards south of the 49th parallel.

Extremely hot fires swept through the area in 1910, 1917, and 1929, denuding a considerable amount of land and creating the conditions that resulted in large stands of doghair lodgepole pine. In the late 1970s and early 1980s, the mountain pine beetle killed large tracts of lodgepole. Some pockets of old growth Douglas fir and larch are found in the eastern sections. High elevation areas are almost exclusively whitebark pine and alpine larch associated with beargrass, huckleberry, Indian paintbrush, and mountain heather.

Whale and Trail Creeks, major tributaries of the North Fork and important spawning streams, drain most of the area. Over a dozen subalpine lakes sparkle in glacial cirques.

II. Wilderness Qualities

Without question, this is the most valuable wildlife habitat on the Flathead. One of the densest concentrations of grizzlies ever studied resides here, thriving under Mother Nature's timber management plan. The endangered gray wolf roams these woods and is in the process of re-establishing itself in its native range.

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Over the years, mountain caribou, nearly extinct in the lower 48 states, has been sighted on occasion. The endangered bald eagle finds shelter here.

Less exotic, but no less important, are the herds of elk, densest on the Glacier View Ranger District, whitetail deer, and trophy mule deer. Other species include black bear, wolverine, bobcat, cougar, pine marten, and Canadian lynx.

Trail and Whale Creeks are among the four most important bull trout spawning streams in the North Fork Valley, and are also important for cutthroat trout. Changes in runoff or sedimentation regimes could have significant adverse impacts upon the bull trout population in the Flathead Basin.

These spawning grounds take on additional importance in view of the impending development of a giant, twin open-pit coal mining operation six air miles north of the border at Cabin Creek. U.S. scientists believe that the venture---which has received a Stage Two go-ahead from the government of British Columbia---would probably have a disasterous impact upon Howell Creek, the most important spawning stream for bull trout in the North Fork. The loss of Howell Creek as well as Trail and Whale Creeks would do irreparable, unacceptable, damage to the bull trout resource.

Wilderness designation would provide the highest level of protection for this resource.

More than 75 miles of trail, much maintained by sportsmen, provide outstanding opportunities for getting away from it all in some very wild country. Several caves near the Tuchuck campground lure spelunkers.

III. Resources

The draft forest plan for the Flathead National Forest identified approximately 21,000* acres of the North Fork Wildlands as being suitable for timber management. Many of these stands are almost pure lodgepole pine. In the late 1970s and early 1980s, the endemic mountain pine beetle killed most of the older trees. Existing stands are of little commercial value for sawtimber.

Harvest on these lands has been deferred until the mid-1990s, although the acreage remains in the timber base on which the allowable annual cut is calculated.

A supplement to the draft forest plan, expected to be issued in June, 1984, proposes deferring oil and gas leasing until the mid-1990s. The potential for recovering hydrocarbons in economic amounts is, at this time, impossible to quantify. Eternal optimists in the oil industry describe this area as being the Saudia Arabia of North America. On the other hand, Dr. David Alt, the highly respected geologist at the University of Montana,

*With the additions to the proposed Ernest Thompson-Seton Wilderness, this figure increases to approximately 28,000 acres. See the following area description.

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No response needed for this page.

cautions that this is an untried, highly speculative area. Investors, he warns, might get better odds at a gaming house in Reno.

Hardrock mineralization is, in practical terms, considered to be nonexistent on this section of the Flathead National Forest.

The wilderness values of the North Fork Wildlands far outweigh the limited commodity values of the timber resource, and of a hydrocarbon resource that may not exist.

IV. Boundary Rationale

The proposed boundary coincides with the roadless boundary.

V. Sources

Flathead and Kootenai National Forest data bases, reports from on-the-ground inspections by conservationists, North Fork Salvage Sale appeal record, the data base of the Flathead Coalition, the Final Report of the Flathead River Basin Environmental Impact Study, and the FRBEIS data base. 37

* * *

June, 1984

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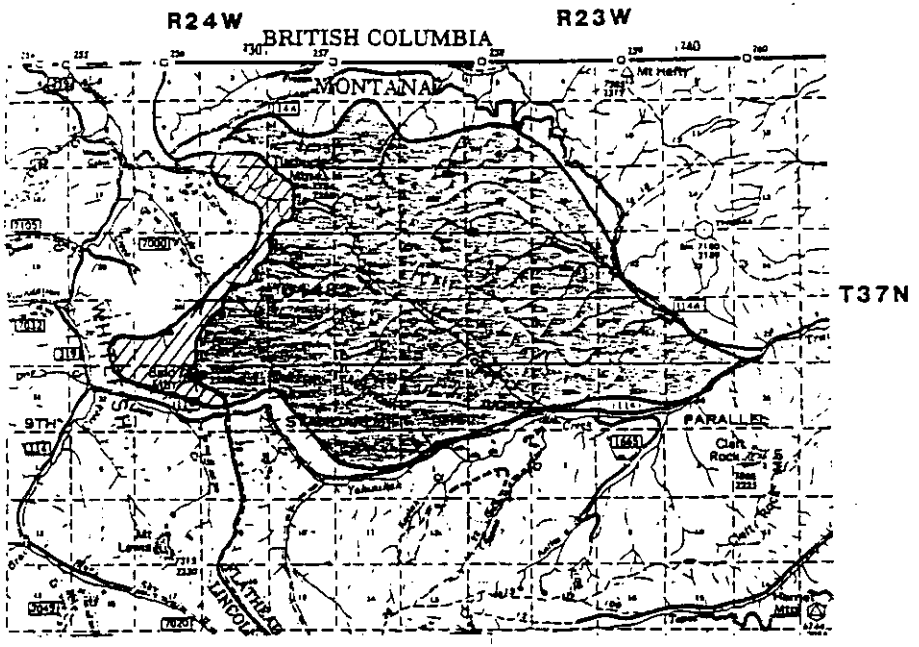
37. Almost the entire Tuchuck Roadless Area has been designated for roadless management. See the Forest Plan map.



TUCHUCK 01482 ROADLESS AREA

ROADLESS AREA ON FNF

ROADLESS AREA ON KNF

SCALE

1 0 1 3

MILES

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ERNEST THOMPSON-SETON WILDERNESS (Proposed)

Flathead and Kootenai National Forests February, 1985
Roadless Inventory Unit 01483
1983 Net Roadless Acres: 57,090 FNF, 19,950 KNF
Recommended Wilderness: 77,040

I. Description

The proposed Ernest Thompson-Seton Wilderness is named for Ernest Thompson-Seton, the turn-of-the-century outdoor writer, artist, naturalist, and co-founder of the Boy Scouts of America.

The proposal encompasses a core of roadless areas in the north-central Whitefish Range, west of Glacier National Park and the Scenic North Fork Flathead River. In the vicinity of Locke Lookout, the Thompson-Seton, Deep Creek, and Young-Nasukoin roadless areas fuse to form a wilderness of considerable size and great importance to the rare wildlife resources of northwestern Montana.

For the most part, the wilderness is above 5000 feet. Major peaks include 8086-foot Nasukoin Mountain, highest in the range, Lake Mountain, 7814 feet, Cleft Rock, Huntsberger Peak, Akinkoka Peak, Mount Lewis (named for Dutch Lewis, the principal character in Thompson-Seton's well known story, "Kootenai to Krag Ram," which is set in the region), the Krag, Whitefish Mountain, the mighty Krinklehorn, and of course, Mount Thompson-Seton.

Huntsberger Lake, the Whale Lakes, Nasukoin Lake, and the jewel-like Chain Lakes, which descend a series of hanging valleys beneath the cliffs of Lake Mountain, are the major bodies of water. Several nameless lakes and spring pools are found on the high mountain slopes.

As the result of earlier forest practices, the major valleys (Stillwater, Deep, Williams, BlueSky, Whale, and Shorty) through which flow the streams draining the area have been logged to the base of the steep slopes. The roadless areas are thus restricted to the high, steep slopes along the backbone of the range and the ridges which extend from the axis. Basins which have escaped cutting to date include the North Fork of Deep Creek, the upper Deep Creek Basin, and the East Fork of Fitzsimmons Creek.

Vegetation ranges from alpine communities to riparian stands of western red cedar at the lower elevations. Spruce-fir is the predominant forest type. The steep terrain is characterized by avalanche chutes and associated shrub communities. At several

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locations in the northeastern lees of the high peaks, subalpine larch forms a forest where it is the dominant tree and attains a respectable size. In autumn, these stands take on a brilliant golden hue. Forests dominated by genuine old growth spruce and subalpine fir are found in packets which were not burned by the wildfires of the 1920's. Major fires in 1926 and 1929 left vast openings on the high slopes of Mount Young and Huntsberger Peak.

Access from the North Fork side of the divide is possible from the Trail Creek, Whale Creek, or Red Meadow Creek Roads. Visitors approaching from the west usually take the Graves Creek Road. All entries require driving fair distances over challenging, unpaved roads.

Several low standard, alder choked ways intrude into the proposed area. The impact of these ways was examined by the Forest Service, an agency with an eye for purity, during the preparation of the draft Flathead National Forest forest plan:

> "Some respondents objected to the inclusion of old roads and cutting units in the roadless inventory. These intrusions do impact the natural integrity of the area; however, it is felt that these impacts can be lessened with time and boundary adjustments. After boundary adjustments, the effect of human activity in the area would be minor and natural integrity judged to be high." (Flathead National Forest forest plan supplemental Draft Environmental Impact Statement, page C-151.)

Conservationists have revised boundaries to enhance the area's wilderness integrity and manageability. Please see Section IV of this fact sheet, "Boundary Rationale."

II. Wilderness Qualities

In the lower 48 states, the rarest endangered mammal is probably the mountain caribou. Immediately after World War II, backwoodsmen frequently encountered this cervid in the remote high basins of the northern Whitefish Range. Commodity production activities encroached on the caribou's habitat during following years, and the animal was sighted less frequently. In the late 1970s, some opined that the caribou was gone from the range--- whereupon the elusive creature suddenly reappeared. Local residents occasinally glimpsed the caribou in the deep woods west of Polebridge, and the tracks of caribou have been persistently sighted in the snows of the high country of Ten Lakes.

Caribou need old growth habitat such as is found in the high, remote spruce basins of Thompson-Seton. Habitat mapping in the northern Whitefish Range reveals a rich supply of the caribou important spruce-fir forest. Informed opinion now holds that the

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northern Whitefish Range, especially the Thompson-Seton region, could very well harbor a remnant herd of mountain caribou.

Thompson-Seton is also prime habitat for the threatened grizzly bear. The bear has thrived on Mother Nature's proven management scheme, which provides an optimum mix of avalanche communities, mature forest, and open fire generated habitat.

Sightings of the Rocky Mountain gray wolf, an endangered species, have increased in recent years. According to the FNF, "Biologists believe the North Fork of the Flathead River drainage is the most likely location in the Rocky Mountains for re-establishing a viable gray wolf population."

Other wildlife species include Canadian lynx, black bear, wolverine, marmot, mule and whitetailed deer, and golden eagle. Whale Creek, whose pellucid waters originate in the undisturbed highlands of Thompson-Seton, is an important bull trout spawning stream. Trout fisheries are found in several of the lakes.

Recreation opportunities abound. Approximately 26 miles of trail provide access to most major physiographic features. The summits of Nasukoin Mountain, Mount Thompson-Seton, Lake Mountain, and the Krinklehorn provide spectacular views of Glacier National Park, the Cabinet Mountains Wilderness, and the snow-capped Canadian Rockies. Trail maintenance has obviously been conducted with a decent respect for the taxpayer's dollar, for nowhere is there found a foot or horse tread which is bereft of challenge.

Inclusion of this unique area in the National Wilderness Preservation System would provide the highest possible protection for the unique and priceless wildlife values found here.

III. Resources

(A) Hardrock minerals. So far as is known, none exist. The potential for recovery of hardrock ores is considered to be very low to nonexistent.

(B) Oil and gas. Approximately 29,000 acres have been leased. The remainder are within the proposed grizzly management area, and the Flathead National Forest now plans to withdraw the unleased lands from mineral entry for at least 10 years while the effect of gas and oil activity on the grizzly and other rare and threatened species is studied. Some seismic activity has occurred. At present, interest in the area is speculative. The U.S. Geological Survey rates the upper Whitefish Range as having "zero to low" oil and gas potential. At best, potential would be moderate. In any case, the region's extraordinary wildlife and wilderness resources far outweigh potential hydrocarbons that as yet exist only the the imaginations of the rhapsodically optimistic.

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(C) Timber. The Flathead National Forest's portion of the proposed wilderness contains approximately 14,000 acres of potentially suitable (i.e., capable of producing at least 20 cubic feet of wood fiber per acre per year) timberland. All but 3300 acres is within the proposed grizzly management area where logging would be deferred for at least 10 years while the effect of wide scale vegetation disturbance on the grizzly would be studied. "Most of these stands are on steep slopes," Forest Service planners report, "and timber management costs are generally high." Virtually none of the Kootenai portion of the area is suitable for timber management. In the draft Kootenai forest plan, the area is allocated for nonmotorized, primitive recreation.

An analysis of the impact of wilderness on the scheduled harvest for the first decade suggests that the allowable cut would be reduced by approximately 0.5 MMBF, or 0.5 percent. The long term sustained yield would be reduced by 2.3 percent if logging proves to be feasible in the grizzly management area. Such feasibility is not now proven.

IV. Boundary Rationale

For the most part, the boundary was established at or near the 5000-foot elevation in order to strike a balance between protecting invaluable wildlands and making available for harvest productive timberlands which can be managed commodities in an environmentally sound manner.

Along Trail Creek Canyon, the boundary was moved northward to form a relatively smooth line across several drainages whose impacted areas were found by ground-truthing crews to be rapidly fading from notice. Two purposes are served by locating the boundary in this manner: (1) poaching is rendered most difficult by depriving poachers of motorized transport, and (2) management costs are lowered because the managing agency will have far fewer miles of boundary to locate and patrol. 38

In the Nasukoin section, the boundary was adjusted on the area adjacent to the Stillwater State Forest to include a burned over area which the forest plan had allocated to primitive recreation. The northern section of the Nasukoin region is coincident with the old Nasukoin grizzly bear management area which mysteriously disappeared from Forest Service maps several years ago (grizzlies, however, have not disappeared from the land).

Were the Congress willing to close roads at the mouths of the BlueSky, Kopsi, and Williams Creek drainages, and to close the Whale Creek Road at a point approximately three miles east of Masonry Peak, the security of the proposed wilderness could be tremendously increased.

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38. Almost the entire Thompson-Seton Roadless Area has been designated for roadless management. See the Forest Plan map.

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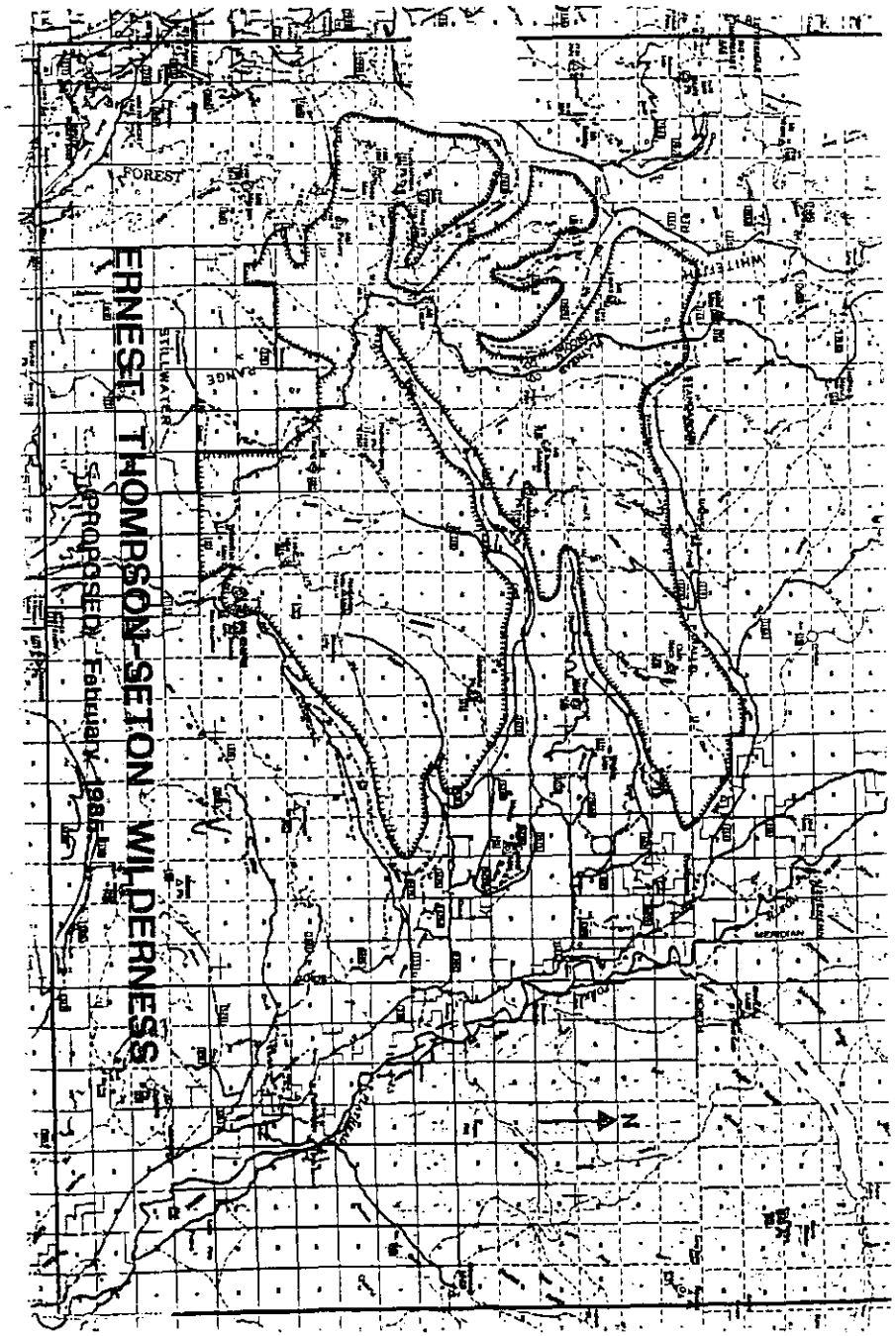

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Proposed Additions to the Cabinet Mountains Wilderness

Kootenai National Forest
1983 Roadless Net Acres - 76,700
Recommended Wilderness - 33,000

I. Description and Wilderness Qualities

Cabinet Face East (W): This 400 acre addition borders the north end of the Cabinets, with Sharron Lake being in the northwest corner. With steep, rocky slopes the use is light. Fishermen use Sharron Lake.

Cabinet Face West: This 6,866 acre western addition extends from near Swanson's Lodge south to the Middle Fork of the Bull River. The spectacular scenery of the steep, rocky cliffs signals low commodity resource potential. The area is a high water producer with a vertical relief of over 4,000 feet. Access is difficult, the terrain rugged. These side hills are mostly grizzly habitat, with critical winter range for mountain goats in the Carp Creek area, and mountain sheep in the Ibex Peak area.

Chippewa Creek: This 1,047 acre addition north of the East Fork of Bull River is an important recreational entrance to the Wilderness. The area contains bighorn sheep, goats, mule deer and grizzly habitat. The riparian old growth forest in Chippewa Creek is an increasingly scarce resource on the Kootenai National Forest.

McKay Creek: This 7,301 acre addition abuts the southeast corner of the wilderness south of Rock Creek, extending to lower Swamp Creek. The roadless area is critical fall grizzly bear range. The Goat Ridge area, prime habitat for mule deer. Swamp Creek is a good spot to fill one's creel with fat brook and cutthroat trout.

Cabinet Face East: This 17,357 acre eastern buttress to the Wilderness averages 2 miles in width and extends some 15 miles from the northeast corner of the Wilderness south to Leigh Creek. Attractions include numerous hiking trails, spectacular scenery, which adds a magnificant backdrop to Libby, and a wide variety of wildlife, including grizzly bear. The country ranges from 3,600 feet to 7,000 feet in elevation with steep, sparsely vegetated slopes.

II. Resources

These proposed additions are steep and rocky with low timber potential.

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Areas with mineral potential have generally been excluded. Watershed, scenery, wildlife recreation and wilderness are the existing uses and paramount values.

III. Boundary Rationale

Adjustments exclude state and private lands and resolve most potential conflicts. The remaining 33,000 acres of wildlands are essential and logical extensions of the Cabinet's boundary. If classified as wilderness, these additions would greatly enhance the depth, solitude, wildlife protection and recreational value of the existing Cabinet Wilderness. In particular, the 17,357 acre Cabinet East Face addition is now advocated for protection based on new data showing high wilderness value with minimal resource conflict. The growing pressure on grizzly bears and wilderness from mineral exploration and other activities lend increased urgency to these additions. 39

IV. Sources

Kootenai National Forest data base, site and area specific wildlife studies, and reports from on-the-ground inspections by conservationists.

* * *

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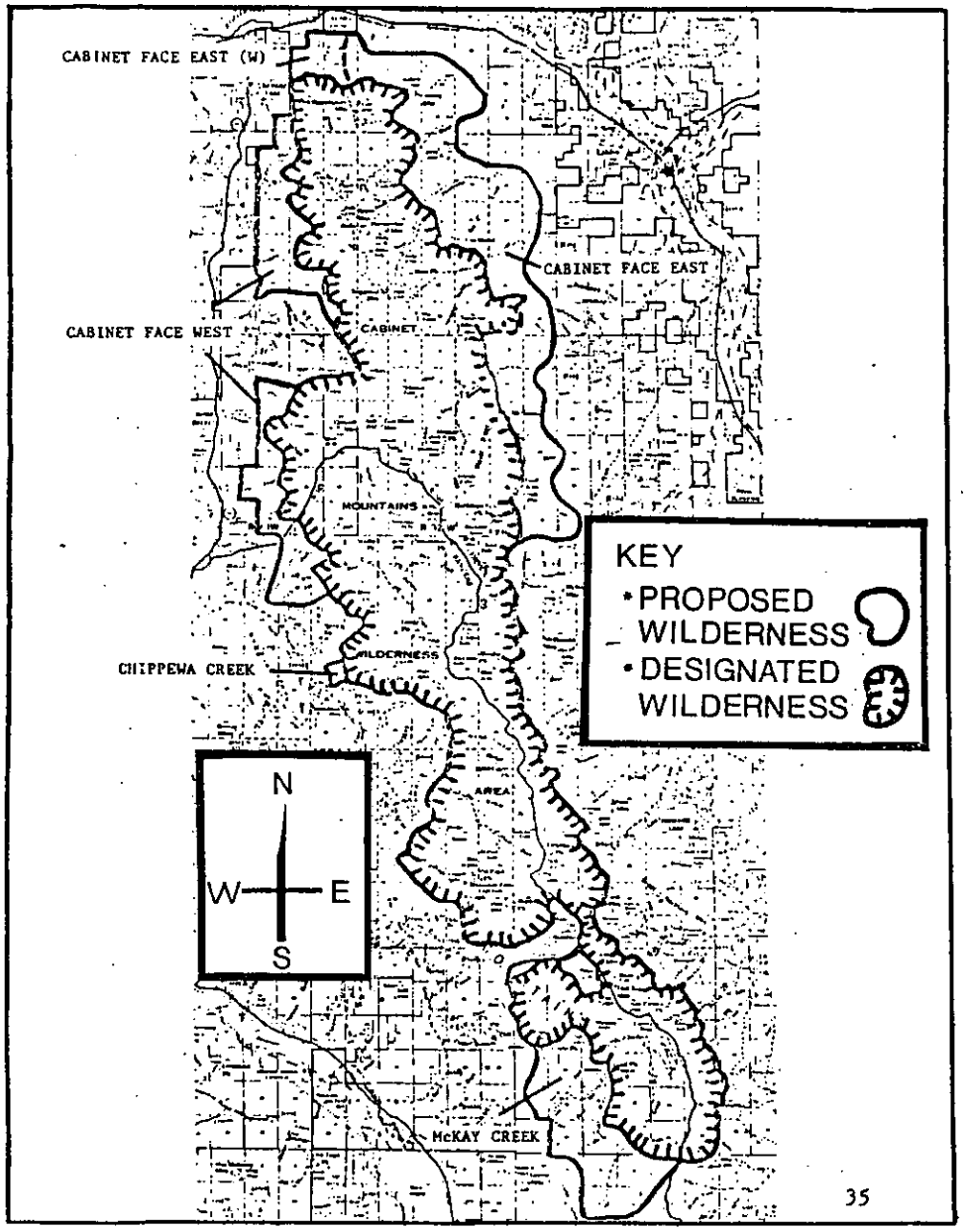
39. Almost the entire Cabinet Face Additions Area you have mapped has been designated for Wilderness or roadless management. See the Forest Plan map.

Proposed Additions to the Cabinet Mountains Wilderness



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MONTANA WILDLANDS COALITION

P.O. Box 820 • East Helena, Montana 59635

PROPOSED SCOTCHMAN PEAKS WILDERNESS

Kootenai National Forest (Area 1-662)
1983 Roadless Net Acres, Montana: 64,417 acres
Recommended Wilderness: 60,000 acres in Montana (approximately 80,000 acres total)

I. Description

The largest and perhaps wildest remnant of our unprotected wilderness heritage still surviving in northwestern Montana, Scotchman's is truly an island in a sea of development. Located in the west Cabinet Mountains, Scotchman's is bounded on the east by Lightning Creek and on the west by the Bull River. Most of the rugged, alpine scenery was left by glaciers. Classic glacial cirques dominate the upper reaches of Ross Creek. Deep glaciation is especially striking in Savage Creek. The relief varies from the alpine summit of Scothman No.1 (7,009 feet) to 2,400 feet at Lightning Creek. The rugged topography, rapid vertical relief and regular Pacific maritime influence combine to create an unusual mixture of stark alpine terrain and lush, temperate valley floors. Just over the deep cirque headwalls of Ross Creek are hillsides of alpine vegetation sloping into the West Fork of Blue Creek. The backsides of distinctive Sawtooth and Billiard Table Mountains drain through side hill parks and waterfalls to the east fork of Blue Creek. The U-shaped valley of the South Fork Ross Creek carves through green meadows and rock slides to the main Ross Creek. The scoured headlands of Ross Creek give way to stands of large cedar, hemlock and white pine, as the creek tumbles through a tangle of moss-covered boulders and devil's club on its way to the scenic Ross Creek cedar grove -- perhaps the oldest and largest stand of western red cedar in the world. Pillick Ridge tips rocky south slopes nearly 4,000 feet into the Clark Fork and lower Bull River valleys.

II. Wilderness Attributes

The natural integrity and appearance is extremely high throughout the entire roadless area, with the Squaw Peak lookout being the only structure. With the rugged topography, dense vegetation, deep valleys, and lack of concentrated recreational use , there are outstanding opportunities for solitude and primitive recreation. There are few miles of constructed trails and no mainline trails in the area. The rugged country and lack of recreation access provides a true wilderness experience, either for high quality backcountry hunting for elk, deer and goats in the fall, or for ski mountaineering in the winter. Still surviving in this breath-taking setting is a small population of the threatened grizzly. The protection of Pillick Ridge is key to the survival of the grizzly in that it provides an irreplaceable grizzly travel corridor between the heart of Scotchman's and the adjacent Cabinet Mountains Wilderness. As an indication of ecological diversity, a recent study documented the existence of 130 separate wild flower species in the area.

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III. Resources

The imporance of the wildlife resources can hardle be exaggeratdd. The habitat for almost all wildlife species is virtually self-contained within the 60,000 acre Montana portion of the proposed wilderness. The boundary contains both summer and winter ranges along with the migration routes between these ranges. Important fisheries include Little Spar Lake (brook trout), Ross Creek and Blue Creek. Although about one-fourth of the area could be tentatively suitable timberland, more than 90% of this total is located on slopes greater than 55% in the Pillick Ridge area. Road costs would be outrageous. Other constraints, such as wildlife, scenic and recreation, combine to make commercial logging marginal at best. Testing has shown water quality from the wild, pristine drainages of Scotchman's to be among the purest in Montana. Potential for economic copper/silver deposits is highest in the Ross Point area which is discussed below.

IV. Boundary Rationale

The entire roadless area, because of large size and even configuration, lends itself to wilderness management. The boundary is largely defined by topography and landforms. Because of the compact nature of the area, roadless lands on the perimeter are vital in order to maintain security for wildlife. Appoximately 7,000 acres have been deleted from the original "Alternative W" boundary based on extensive negotiations with ASARCO. The joint Montana Wildlands Coalition/ASARCO boundary assures vital watershed protection for the ecologically unique Ross Creek cedar grove, while relasing roadless lands in the Dry Creek/Cub Creek areas which may prove important to extending the life of ASARCO's Troy Project at Mt. Vernon. ASARCO has previously explored and abandoned their claims in Pillick Ridge due to low mineral potential. Wilderness is the highest and best use of the remainder of Scotchman's. 40

FACT: Only 2.8% of the Kootenai Forest is currently protected as wilderness compared to an average of 20.1% wilderness on Montana's 10 national forests.

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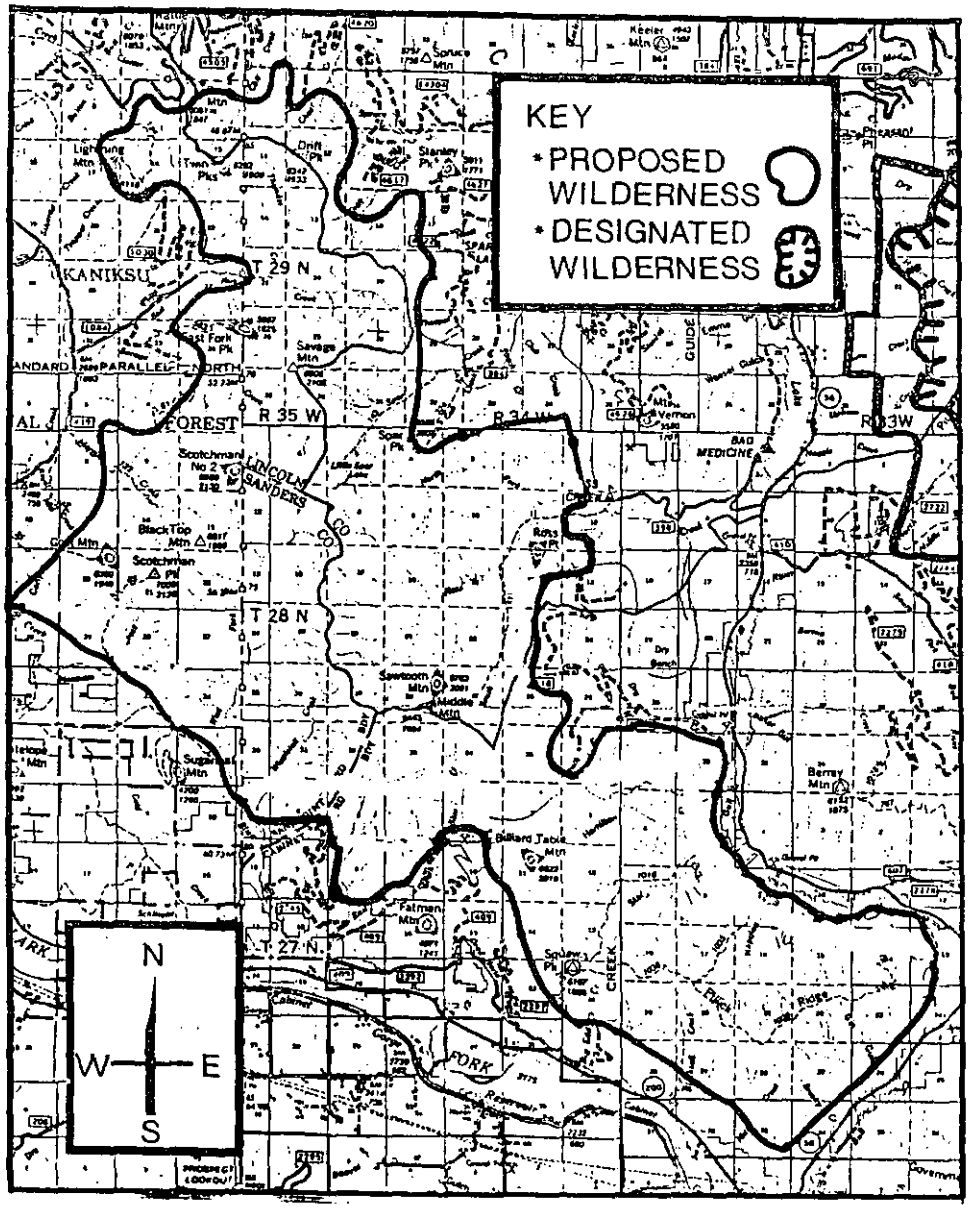
40. Most of your Scotchman Peak proposal except for the northeast side of Pellick Ridge has been designated for Wilderness or roadless management. We consider the timber values on a portion of Pellick Ridge important enough to exclude the area from Wilderness designation. See the Forest Plan map.

Proposed Scotchman Peaks Wilderness



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MONTANA WILDLANDS COALITION

P.O. Box 820 • East Helena, Montana 59635

Proposed Trout Creek Wilderness

Kootenai National Forest (Area 1-664)
1983 Roadless Net Acres, Montana: 31,800
Recommended Wilderness: 32,640 acres

I. Description
Located in western Sanders County on the southern border of the Forest, Trout Creek is often referred to as the "elk factory of the Kootenai Forest." Indeed, the large elk herd in the area is a key attraction for both viewing and hunting. The lower reaches of the area provide an irreplaceable nursery for large numbers of calving elk. Trout Creek is characterized by steep, rugged mountainous topography with the western boundary being the Montana-Idaho state line along the crest of the northern Bitterroot Range.

II. Wilderness Attributes
The rugged topography and high natural integrity of Trout Creek offer outstanding solitude. Primitive recreation, mostly in the form of hunting and hiking, are enhanced by the size and configuration of the area. The scenic stream-side trails lead the visitor to shallow subalpine basins with three small lakes and a variety of wild flowers and berries. High quality wilderness fishing is also available in the lower reaches of Trout Creek. Trout Creek has a good trail system with excellent access from nearby forest roads which helps to disperse use, thereby enhancing solitude. Once off the ridgetops, because of the concaveness of the roadless area, surrounding developments are not an intrusion.

III. Resources
The Trout Creek area is best known for its exceptional elk habitat and other outstanding wildlife values. It is estimated that the area could provide some 9,500 RVD's of wilderness recreation per year. Although much of the area is tentatively suitable for timber production, the loggers would have to anchor themselves to the steep slopes or else grow longer legs. Over 90% of this timber land is located on slopes in excess of 55%. The Forest Service concludes that "road construction will be difficult and costly."

IV. Boundary Rationale
The proposed boundary is easily manageable since the area consists of drainages which are completely roadless. The "state line" divide to the west forms the headwaters of these clear, rushing streams. To improve the boundary, the corridor along the very low standard Granite Creek mining access "road" should be included. 41

FACT: Only 2.8% of the Kootenai Forest is currently protected as wilderness, compared to an average of 20.1% wilderness in Montana's 10 national forests.

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41. Most of the Trout Creek area except for the eastern lobe has been designated for roadless management. We consider the potential for wildlife habitat management and the mineral potential important enough to exclude this area from Wilderness designation. See the Forest Plan map.

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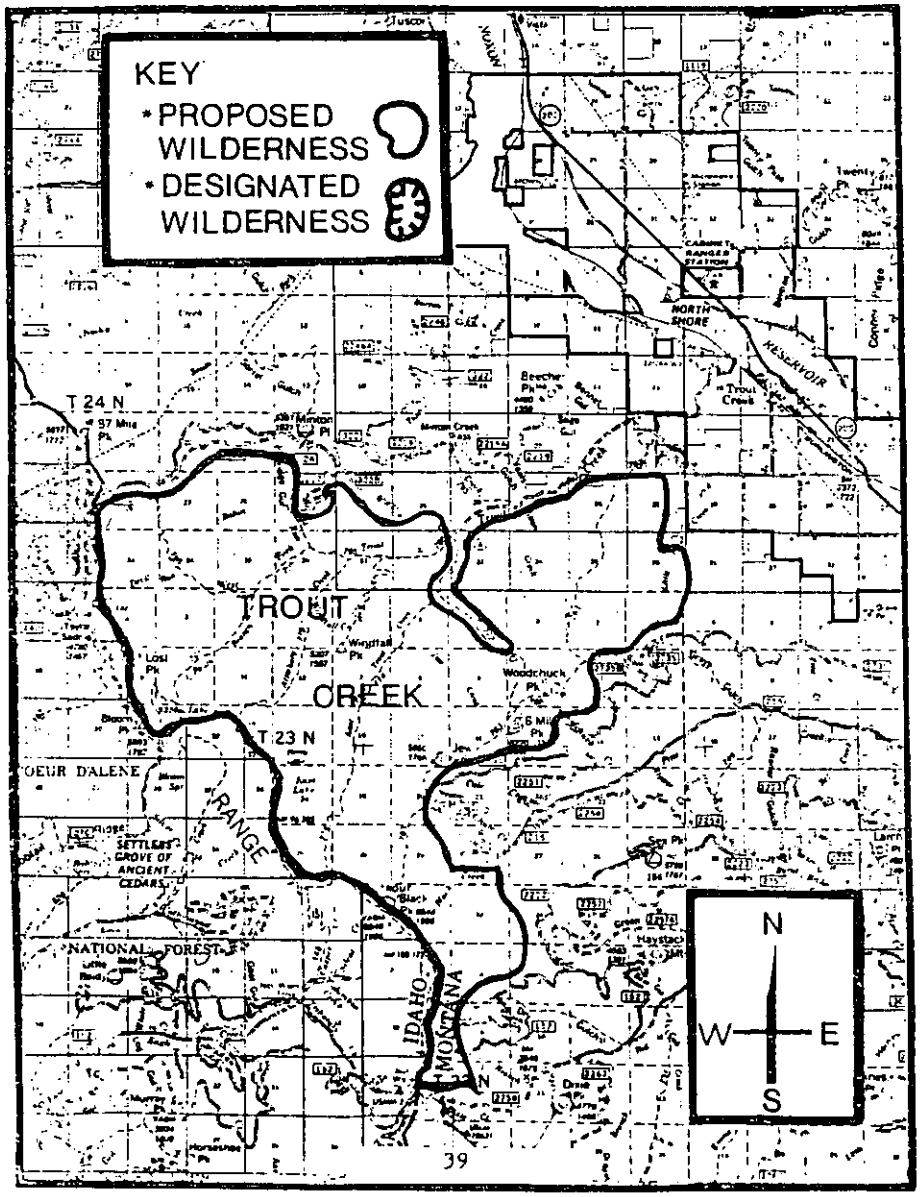
Proposed Trout Creek Wilderness



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Management Prescriptions - Mountain Caribou Habitat

Idaho Panhandle National Forest
(Selkirk Ecosystem)
Management Area 8
(_____ acres)

Key Caribou Habitat

Description:
Management Area 8 consists of those lands within caribou habitat on the Kaniksu that are considered key habitats Key habitats consists of Subalpine Fir series that are less than 40 percent slope.

Management Goal:
Manage to achieve optimum caribou habitat requirements.

Resource Element	Management Practice (MIH)	Standards and Guidelines
TIMBER	Timber Harvesting (unregulated)	Timber harvest permitted where necessary to maintain or improve caribou habitat. Productive forest land classified as unsuitable.
RECREATION	Dispersed Recreation Management	Manage towards primitive and semi-primitive non-motorized.
	Visual Management	Manage approximately _____ acres for retention, and _____ acres for partial retention visual quality objective. The remaining area will be managed for modification and maximum modification. Rehabilitation of existing areas that do not meet adopted VQO is permitted.
WILDLIFE AND FISH	Road Operations	Local roads generally closed through physical closure and law enforcement. Seasonal closures as needed.
	Habitat Improvement	Maintain all existing old-growth habitat.
		If feasible and desirable in less than mature stands thin to simulate old-growth ecosystems.
RANGE	Range Management	Utilize available forage for livestock commensurate with demand, cost efficiency, and wildlife needs. No new allotment.

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42. See response #17 above.

Management Area 8 Continued

Resource Element	Management Practice (MIH)	Standards and Guidelines
LANDS	Land Adjustment	Consider land acquisition and retention for key caribou habitat management.
FACILITIES	Road Construction & Reconstruction	Generally no new local road construction. Arterials and collectors constructed as needed to access adjacent areas.
PROTECTION	Initial Attack	Rapid and aggressive fire suppression to minimized wildfires.

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42. See response #17 above.

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Management Area 7
(_____ acres)

Caribou/Timber

Description:
Management Area 7 consists of lands on the Kaniksu working circle. It is composed of productive timber lands within caribou habitat that are in the Cedar Hemlock series or Subalpine Fir series on greater than 40 percent slopes.

Management Goals:
Manage to maintain or enhance Caribou habitat requirements, while achieving low to moderate levels of investment in timber management.

Resource Element	Management Practice (MIH)	Standards and Guidelines
TIMBER	Timber Harvesting	Even-aged and uneven-aged regeneration systems will be used. Uneven-aged regeneration systems are recommended in Subalpine Fir series to maintain a continuous forest cover. Use intermediate harvest commensurate with the level of investment, and as necessary to simulate old-growth ecosystems. 42
	Unsuitable Lands	This management area contains _____ acres of nonforest and non-commercial forest land.
	Reforestation	Planting as needed to meet silvicultural objectives as prescribed in the stand silvicultural prescription. Reforest with species compatable with caribou habitat needs. Reforestation of currently nonstocked lands commensurate with cost efficiency is permitted. Rehabilitation of cull stands and stagnated stands commensurate with cost efficiency is permitted.
	Timber Stand Improvement	Maintain stocking control commensurate with the level of management intensity and wildlife needs.
RECREATION	Dispersed Recreation	Manage for roaded natural appearing and semi-primitive motorized recreation.

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42. See response #17 above.

Management Area 7 Continued

Resource Element	Management Practice (MIH)	Standards and Guidelines
RECREATION Cont.	Dispersed Recreation Management Continued	Restrict motorized use when needed for caribou protection.
	Visual Management	Within this area _____ acres will be managed as retention and _____ acres will be managed as partial retention. Remaining area will be managed for modification and maximum modification. Rehabilitation of existing areas that do not meet adopted VQO is permitted.
WILDLIFE AND FISH	Habitat Improvement	Manage to achieve 2/3 of second order drainages remaining in mature and old-growth stands that have at least 40 percent crown closure. Strive for 1/3 old-growth, 1/3 mature sawtimber within Management Area. To achieve the above mentioned goal, regeneration harvest per decade should be limited to the following area: Old-Growth Series — Mature — Immature Cedar Hemlock — 6% — 5% Subalpine Fir — 3% — 3% Retain and manage established travel corridors of mature timber. No harvest or road construction should occur within ¼ mile of lakes, bogs, or fens over ¼ acres in size.
	Road Operations	Local roads generally closed through physical closure and law enforcement. Seasonal closure as needed. Arterial and collectors may be closed.

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42. See response #17 above.

Management Area 7 Continued

Resource Element	Management Practice (MIH)	Standards and Guidelines
RANGE	Range Management	Utilize available forage for livestock commensurate with demand, cost efficiency, and wildlife needs. No new allotments.
WATER	Soil and Water Protection	Refer to Best Management Practices Handbook Appendix #24.
LAND	Land Adjustment	Consider land acquisition and retention for caribou habitat management. 42
FACILITIES	Road Construction & Reconstruction	Road construction through lightly stocked mature stands should be limited to those instances in which no other access to closed-canopied stands is available. Snow roads are encouraged where possible.
PROTECTION	Initial Attack	Rapid and aggressive fire suppression to minimize wildfire.

V. Sources

Flathead and Kootenai National Forest data bases, on-the-ground inspections by conservationists, data from the Montana Department of Fish, Wildlife, and Parks, and various reports in the scientific literature on mountain caribou.

* * * * *

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42. See response #17 above.

APPENDIX

GRIZZLY BEAR GUIDELINES -- MANAGEMENT PRESCRIPTION

Suggested Grizzly Bear Management Prescription for Management Situation 1 Habitat

A. Selection Cutting

1. Selection cutting (individual tree selection or group selection) is preferred.[1.] (It takes only 2 to 5 years after selection cutting for recovery for the bear.[2.]) If selection cutting is used, omit point B. below.

B. Clearcutting

1. If clearcutting, Jonkel recommends 5-10 acres as the ideal size.[2.] (Generally, bears avoid large clearcuts, even when they contain preferred bear foods.[3.]) If topography is rough and if access is low, clearcut size can be greater, but with written justification.[2.] Mealey recommends 10-20 acre maximum.[1,4.]

2. Provide "leave patches" of timber[1,3.] (for security, bedding and feeding).

3. Provide uneven edges on cutting units[1.] (increases the "edge effect").

4. Minimize scarification (scarification destroys some important bear foods esp. berries). Mealey recommends no more than 20% of the land should be scarified[4.]; Jonkel recommends no more than 40 to 60% scarification depending on topography, access, cover, etc.[2.]

5. Broadcast burning or no site treatment is preferred over scarification[1.] (to encourage plant recovery).

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43. An Environmental Assessment (EA) will be prepared to cover each timber sale. The EA will address those items mentioned in the Management Area guidance in Chapter III of the Forest Plan. We consider the specificity in your proposed prescription to be unnecessary. See response #18 above.

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6. Stringers between clearcuts[1,3]. (These are important as cover for travel, bedding and feeding).

7. Stringers along roads[3]. (for effective visual cover -- 100' to 600', with written documentation justifying choice[2].)

8. Leave strips or selection cut, 100' each side of ephemeral streams[2]. (this protects feeding areas; increases edge effect).

9. Where tree removal has been excessive and recovery is slow; replant bear foods and cover[2], especially in recognized bear use areas or areas of high potential (mitigation for past clearcutting).

C. Select or Clearcutting

1. Minimize soil disturbance and compaction: use brush blades and light equiptment (to encourage plant recovery).[1]

2. No adjacent cuts until recovery of food and cover for the bear[1] (about 2 to 5 years for selection cutting[2]; roughly 10 times longer for clearcutting depending on how it's done, where it is, etc.) 43

D. Roads

1. Use of snow roads is preferred (this avoids construction of new roads, thereby increasing security). The next choice is temporary roads and skid trails.

2. Jonkel recommends horse logging whenever possible[2]. (avoids construction of new roads; also good for selection cutting).

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43. See page 237ss above.

APPENDIX

3. Obliterate (rip, seed or otherwise render unusable) temporary roads between major logging entries (this is the most effective method of road closure).

4. Dog leg in first 100 yards of side roads[2]. (for visual block).

5. Destroy first 100 yards of access roads inactive after logging[2].(use alternative transportation for admiistrative purposes, eg., trail bikes, mountain bikes, etc.)

6. Avoid all loop roads[2]. (encourages human activity and illegal mortality of bears).

7. Use portable bridges wherever possible (an easy, inexpensive, effective method to close roads).

8. Always restricts public access during current activities[2]. (sign closures should be adequate).

43

Footnotes:

1. ZAGER, P.E. and C.J. JONKEL. 1983. Managing Grizzly Bear Habitat in the Northern Rocky Mountains. J. Forestry. 81:524.
2. JONKEL, C.J. 1985. Personal communication
3. ZAGER, P.E. 1983. The Influence of Logging and Wildfire on Grizzly Bear Habitat in Northwestern Montana. Ph.d. thesis. Univ. Montana. 127pp.
4. HEALEY, S.P. 1977. Method for Developing Grizzly Habitat Quality and Estimating Consequences of Impacts on Grizzly Bear Habitat Quality. USDA Forest Service Northern Region. Contract No. 11-1200

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43. See page 237ss above.

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LaFoullette, C. 1981 "A Pilot Plan for Forest Diversity: Bureau of Land Management at Coos Bay." CHEC Research paper 9. Eugene, Oregon. 65 pages.

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No response needed for this page.

MONTANA WILDERNESS ASSOCIATION

November 1, 1985

James R. Rathbun
Forest Supervisor
Kootenai National Forest
Route 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

Enclosed are additional comments of the Montana Wilderness Association on the Kootenai Forest Plan. Please consider these as additional to the Flathead Chapter/Montana Wilderness Association comments. The council of the Montana Wilderness Association fully endorses the comments and requests of our Flathead Chapter Issues Committee.

I would also like to express our appreciation for the excellent cooperation we have received in working on the Kootenai Plan from you and your planning staff. We look forward to continuing this dialogue as you work to finalize the Kootenai Forest Plan.

Sincerely,

Dick Tenney
President
Montana Wilderness Association

P.O. Box 635 • Helena, Montana 59624 • (406) 443-7350

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No response needed for this page.

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No response needed for this page.

PERSPECTIVE

Only about 4% of the Kootenai National Forest is currently protected as wilderness. If citizen proposals for Trout Creek, Scotchman's, Cabinet Additions and Ten Lakes are adopted intact about 12% of the Kootenai would be conserved as wilderness. Far from being a representative cross-section of the Kootenai, the wilderness "slice of the pie" would generally be made up of unsuitable or difficult sites. This 12% would include much of the steepest, most difficult, and least productive public lands on the Kootenai. A large block of mineral claims have been substantiated inside that 12%.

We are not suggesting that the Forest should make decisions based on a percentage target. However, the overall picture on the Kootenai lends a valuable perspective to consider.

The relatively small area of the Kootenai proposed for wilderness would contribute a much larger share of diversity and uniqueness to Montana's wilderness land heritage. There are no other wildlands in Montana like the Scotchman and Cabinets.

Montana has a great deal of badlands and sagebrush, scrub lodgepole and juniper but very little like the remaining old growth forests of the Kootenai. The unique diversity of this sprawling state which straddles both sides of the continent's

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divide is more than anywhere else at stake on the Kootenai.

Because of its natural richness, some land management success, and the presence of wild reservoirs, the Kootenai also makes a very significant contribution to the diversity and health of Montana's big game wildlife, and fish resources. Old-growth forest users constitute a unique component of the Kootenai's wildlife contribution as do certain fish, (white sturgeon and native rainbow), Harlequin ducks, bald eagles, Yaak-Cabinet grizzly, possibly mountain caribou and grey wolf, and the Kootenai's exceptional moose, black bear and bighorn populations.

Members of the Montana Wilderness Association believe that the Kootenai's natural abundance can provide a healthy volume of timber and also conserve wild resources. A balanced forest management plan which includes a healthy distribution of undeveloped lands will provide a measure of stability that may enhance the success of multiple use management on developed lands by providing a reservoir of secure habitat and undisturbed watersheds. 1

MONTANA'S SACRIFICE FOREST?

In order to get closer to a healthy balance, we advocate that the final plan take a much more conservative approach to long term forest management. The Kootenai is a relatively productive forest and we believe it can sustain a higher allowable cut than any other forest in Montana. However, we reject the notion that the Kootenai National Forest be treated as a 'sacrifice forest.' This Kootenai sacrifice forest notion is 2

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1. We concur.

2. Our analysis, as summarized in Appendix B, indicates that timber volumes available for harvest in the five counties in this area will not decline in the next decade from volumes harvested in last decade unless the contribution from private lands declines by more than 25%.

implicit in the November 1st AP story:

> The Inland Forest Resource Council said increased lumbering on the Kootenai Forest is needed in light of a proposed annual reduction of 20 million board feet in the Flathead National Forest and proposed reductions of 35 million board feet a year on forests in the Idaho Panhandle.

This concept is not founded in actual resource characteristics, and values of the lands in question. As such it has no place in developing long range management plans for public forests. Furthermore, the pressing need to increase the allowable cut is hard to swallow in light of the huge backlog of sold, but uncut timber on the Kootenai and the recent turnbacks wherein industry actually paid the government to take stumppage off their hands. (Please note that the "reduction" referred to on the Flathead was in fact a paper reduction. Actual historic cutting levels for the last 10 years would be maintained. The Flathead also has a substantial volume of backlogged timber.) 2

The draft plan proposes substantive <u>increases</u> in timber sales, and also roading, over historic levels. In order to check the foundations upon which the proposed Kootenai Forest Plan is built the Montana Wilderness Association contracted CHEC analyist Randall O'Toole. A second copy of O'Toole's comments are enclosed for your reference. 3

TIMBER

1) Predicted growth of second-growth timber appears to be grossly inflated.

What documentation exists to justify increased growth in the basal area of stands and reductions in tree mortality? 4

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3. The Final Plan proposes to make available 233 MMBF (202 MMBF regulated, 25 MMBF dead lodgepole pine, 6 MMBF other products) per year over the next decade (Appendix 11 of the Final Plan). This is unchanged from the Proposed Action. In the last decade (1976-1985) an average of 182 MMBF per year has been sold (reduced to account for buy-back). There were 179 MMBF actually harvested in the last decade. From a timber perspective, the Final Plan calls for up to a 28% increase in sale volume over sale levels of the last decade.

   The Final Plan estimates that an average of about 237 miles of new road will need to be constructed each year for the next decade to support the potential level of timber harvest. Over the last ten years 157 miles of road was constructed each year to support the historic harvest levels. This would be a 51% increase in road construction on a mileage basis. Note that the amount of road construction is a function of where, when and how much timber is harvested. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction.

4. The timber yield tables used in the Forest Planning process have been reviewed and validated by comparison to existing stands on the Forest and by running selected stands through the latest version of Prognosis. The latest version is the state-of-the-art procedure for growth projections and has been revised several times since the yield tables were developed. The results show that the yield table projections compare favorably to the latest runs and to volumes of existing stands. There are some variences in stand attributes and no attempt has been made to justify or explain each one. The total volumes projected are reasonable based upon the comparisons and do not warrant revision of the tables.

   Culmination ages were also checked on the latest Prognosis runs and found to be in the 70 to 130 year range. This held true using either total cubic foot yields or only merchantable cubic foot yields. Therefore, the rotation ages used in the Forest Plan are considered to be within NFMA requirements.

   Comparison Prognosis runs are available for review at the Kootenai National Forest Supervisor's Office.

What documentation does the forest have to show that reduced mortality, and thus increased stocking of timber stands over natural levels will occur without subsequent reduction in growth?

2) The Plan predicts increases in growth from precommercial and commercial thinnings that greatly exceed Forest Service reports on actual growth resulting from thinnings (Technical Report PNW - 135).

3) There appear to be major errors in the calculation of culmination of mean annual increment CMAI used to set rotation ages.

Our analysis indicates that the forest rotation age for the Kootenai should be well over 100 years rather than the 70 year figure used in the plan. What documentation does the Forest have to substantiate use of shortened rotation ages? 4

Projected growth rates, yield tables and calculations of rotation ages must be carefully and accurately substantiated to insure that increased cutting levels should even be considered. Proposed cutting levels may not be sustainable on a non-declining basis. Thus proposed sale levels may actually consitute a departure from non-declining, even-flow sustained cutting levels.

We ask that projected growth rates, yield tables, and justifications for adjustments in rotation ages be carefully and accurately substantiated before increased cutting levels are even considered. This would be consistent with National Forest Management Act regulations 219.1(a)(1) and 219.16(a)(2)(iv).

In the event the evidence does not substantiate the draft

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4. see previous page

plan's sale levels, the proposed increases would appear to depart from sustained yield schedules. 4

Should the Forest choose to depart from sustained yield, documentation must be carefully laid out to show how this departure will enhance other multiple use values on the forest. (NFMA 219.16 (a)(3)(i-iv)). Given the current surplus of some 800 million board feet it would be difficult to justify a departure from sustained yield for "community stability".

Departures from sustained yield are standard practice on Montana's privately owned timberlands. This results in a strong trend toward a boom and bust economy that can devastate community stability even in relatively productive areas like Northwest Montana. Industry is on record supporting departures from sustained yield to increase cutting in the next 10 years. 5

Members of the Montana Wilderness Association support a more conservative approach to public land management on the Kootenai. Harvest levels should not exceed the historic level of 170 mmbf annually. Non-scheduled harvest should not exceed 15 mmbf annually without a reduction in scheduled harvest. Future increases in cutting levels could be considered in light of better data and other resources in the next planning period. 6

The current backlog of timber on the Kootenai is sufficient to make up the difference between 170 mmbf and 217 mmbf for about 17 years. The backlogged timber is also enough, averaged out over 10 years, to exceed industry's proposal for cutting 237 mmbf annually over the next decade. 7

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5. A departure harvest sequence is not proposed.

6. The timber volumes made available in the next decade under the Final Plan are at the same level as portrayed in the Proposed Action. The best available data indicates that this level can be sustained indefinitely. This level, without future decline, will also contribute to community stability as discussed in Appendix B of the FEIS. The "non-scheduled" harvest is technically called "unregulated" and includes volumes such as dead lodgepole pine which is not included in the yield tables. Removing this volume from the Forest can not affect the long-term sustained yield harvest levels.

7. The backlog of timber sold, but not yet cut is an important factor which allows industry to adjust quickly to changes in lumber markets.

TIMBER VALUES

The recent turnback of millions of board feet of Kootenai Forest stumppage underlines another major area that needs to be corrected in the final Kootenai Plan. 8

Timber prices used in the plan are not accurate. These prices are based on a unique boom period of the late 1970's that is not likely to repeat itself for the foreseeable future. 9

Industry has actually paid the government to take back timber sold during that same period. What stronger evidence could exist that the timber prices used in the plan are not realistic? The Kootenai draft was not yet complete when other Region I forests were already acknowledging the need to re-run alternatives with revised timber prices and trends.

Why didn't the Kootenai revise those prices <u>before</u> printing the draft in order to give the public the most accurate picture of the tradeoffs in forest management? 10

Calculations of Present Net Value used to select a preferred alternative and thus determine the extent of the timber base are themselves based on inaccurate timber values. Industry has demonstrated by their actions that these prices do not reflect reality.

We ask that you rerun management alternatives with the most recent stumppage prices, and reshape your final plan in light of the results. 11

We are also concerned that the draft plan does not contain a broad range of management alternatives as required by NFMA (219.12 f-g). The state organization specifically asks that you 12

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8. See response #7 above.

9. The effects of alternative base timber values, price projections and road costs are discussed in Appendix B of the FEIS.

10. The suitable timber base in the Final Plan is smaller than the suitable timber base determined only on the basis of the updated economics (see Appendix B of the FEIS). The PNV declines about 80%, but this decline occurs for all alternatives and doesn't affect relative comparisons.

11. Our analysis shows that the effects of changing stumpage prices do not warrant reshaping the Final Plan.

12. The three alternatives proposed are all well within the range of alternatives explored in the EIS except for a 15% old growth proposal which is not possible.

run the three alternatives suggested by the Flathead Chapter volunteers. 12

The Draft Plan does not appear to document why even-aged management is best-suited to the Kootenai's Multiple-use goals.*

*NFMA requires that:

219.27(b) Silvicultural prescription requirements

(b) Vegetative manipulation. Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall --

1) Be best suited to the multiple-use goals established for the area with potential environmental, biological, cultural resource, aesthetic, engineering, and economic impacts, as stated in the regional guides and forest plans, being considered in this determination;

2) Assure that lands can be adequately restocked as provided in paragraph (c)(3) of this section, except where permanent openings are created for wildlife habitat improvement, vistas, recreation uses and similar practices;

3) Not be chosen primarily because they will give the greatest dollar return or the greatest output of timber, although these factors shall be considered;

4) Be chosen after considering potential effects on residual trees and adjacent stands;

5) Avoid permanent impairment of site productivity and ensure conservation of soil and water resources;

6) Provide the desired effects on water quantity and quality, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yields; and

7) Be practical in terms of transportation and harvesting requirements, and total costs of preparation, logging, and administration.

MWA asks that you 1) reconsider the blanket prescriptions for even-aged management and document the rationale based on 13

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13. Uneven-aged management is generally not practical for the reasons outlined in the DEIS (IV-9). There is a paucity of research indicating uneven-aged management is more beneficial than even-aged management even if such management could be accomplished. The management guidance in the plan allows uneven-aged management even though the assumption is that even-aged management will generally be the practical approach.

these NFMA requirements for your choice. 13

Planners projected that timber prices would rapidly increase at rates originally predicted for the 1980 RPA program. Major and probably permanent changes in the lumber/housing/banking industry have led to changes in projected price trends too. For example, the 1985 RPA program predicts much smaller price increases over the next few years, and even these projections may be inflated, according to RPA planners, Adams and Haynes. 14

MWA asks that you rerun alternatives with no price trends.

SCOTCHMAN WILDERNESS

The wilderness recommendation for the wild Scotchman would seriously diminish the integrity of the existing wild area.

It is difficult to understand why the Forest proposes to delete the entire Pillick Ridge area.

The boundaries of the citizen wilderness proposal, along the Bull River Valley at Napolean, Star and Hamilton Gulches make good sense on the ground as stated on page C-7 of the DEIS: 15

"A considerable portion of the Kootenai National Forest portion of the Scotchman Peaks area has remained roadless to the very perimeter of its landform, making much of the area ideal in terms of boundary management. This boundary could be enhanced further with the inclusion of some older spruce logging areas such as those in Dry Creek. The roadless area in its entirety is of a size and configuration which, should it become a wilderness, should be relatively easy to manage."

The Pillick area includes valuable bighorn and elk winter

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14. As described in Appendix B of the FEIS, the effect of updated price trends (1985 RPA trends) was tested. A test was not run using no price trends at all.

15. The original boundary developed for the Pellick Ridge portion of Scotchman Peaks was based upon data indicating high mineral potential for that area. More recent data indicates that the area has moderate potential for mineral development. Much of the Pellick Ridge area has been added to the Wilderness Proposal in the Final Plan.

range which would benefit from roadless security and maintenance of forest canopy. Wilderness allows the option for allowing natural fires to occur or in some cases, prescribed ignition. It is also a vital link for wildlife travel between the Scotchman and the Cabinets. The wildlife value of the Scotchman Wilderness would be greatly reduced by cutting off its most valuable travel link to the Cabinets.

The steep forested areas of Napolean, Star and Hamilton Gulches also contain excellent old-growth forest. The steepness of the terrain, scenic values, and need for riparian and wildlife protection combine to make logging a poor management choice. It is a perfect opportunity to dedicate old growth, preserve high scenic values and maintain an exceptional, intact wilderness land area. The wild Scotchman is one of the most biologically diverse lands in Montana. 15

The occurence of over 130 different types of wildflowers is indicative of this. It is essential to maintain the diversity and unusual integrity of the existing wild Scotchman that the entire Pillick Ridge area including Napolean, Star and Hamilton Gulches be conserved as wilderness. Cutting out second rate mineral claims for Borax or leaving "timber options" open for the Cabinet District Ranger will seriously impair a very valuable wildland resource. That is precisely the type of mistakes that were made in drawing the original boundaries for the Cabinets. 16

The wild Scotchman also received overwhelming public support for wilderness in Rare II. Over 4000 comments in favor of wilderness were received -- the highest number to our knowledge 17

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15. See previous page.
16. See response to #15 above.
17. See response to #15 above.

of any roadless area in Region One. What rationale does the Forest provide for disagreeing with the public?

Volunteers of the Montana Wilderness Association have worked for over 16 years to keep the Scotchman wild. (Enclosed is an article from a recent issue of WILD MONTANA.)

We are disappointed in the Forest recommendations for the Scotchman. It is difficult to see a convincing rationale for deleting the Pillick Ridge area, founded on the actual characteristics and resource values of this land area. We hope you will take this opportunity to carefully re-examine the rationale behind your decision. Even ASARCO has endorsed a more complete Scotchman wilderness than the US Forest Service. 17 18

CABINET MOUNTAINS

Montana Wilderness Association wholeheartedly supports the Kootenai recommendations for additions to the Cabinet Mountains Wilderness. These additions will greatly enhance the depth, solitude, biological diversity, wildlife and recreational values of the Cabinets. Although sizeable timber exists in the Cabinet Face East addition near Libby, it is generally steep and difficult terrain with exceptional non-commodity values. Loss of this wildland resource to roading and timber development would substantially degrade the existing wilderness values. Note that trailheads and signs are often located on the periphery of the proposed addition. Many people already consider this to be part of the Wilderness. 19

Further south MWA supports the roadless designation for the 19 a

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17. See response #15 above.

18. See response #15 above.

19. No response needed.

Cabinet Face East from Leigh Creek to the West Fork of the Fisher River. We ask that you upgrade the Management Prescription to MA29 non-motorized. 19 a

We support the Allen Peak MA2 prescription and are particularly pleased with plans to consolidate public ownership in this area. 20 We support roadless management for the Canyon Peak MA2 and ask that it be upgraded to MA29 non-motorized. The adjacent MA's 11 and 5 near Twenty Peak, 14, 10, 19 and, where not roaded, MA 18 areas should be included in one MA29 roadless unit. 21

Likewise the Cataract Creek roadless unit should be kept as large as it is by blending adjacent MA's 5 and 10 near Water HIll, MA's 19,18 and 2 from the Vermillion River side to Vermillion Peak. Intact roadless lands are a vanishing resource on the Kootenai of increasing value as roads and timber development increase even further. 22 The Forest should not reduce these remaining wild areas without darn good reason and many of the aforementioned lands are very steep and difficult for development. Roadless values outweigh difficult timber sites.

TROUT CREEK

Trout Creek is one of the most vital wild areas left on the Kootenai. In combination with outstanding solitude and wildness, Trout Creek is known as the "elk factory of the Kootenai." 23 The wild area includes invaluable elk calving areas. Security is vital in these sensitive areas. It also provides opportunities later in the year for high quality hunting. Such hunting opportunities should be given a great deal of weight on a forest that

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19a. This area is designated as MA 2 (semi-primitive non-motorized) with specified seasonally-open roads. The existing roads and legal requirements for mining access make the "primitive" designation impractical.

20. No response needed.

21. The combination of wildlife values and the location of the area overlooking the highway leads us to conclude that MA 29 is not appropriate.

22. Again, wildlife values and the lack of solitude in the areas surrounding the Cataract Creek drainage lead us to conclude that MA 29 is not appropriate there. MA's 2, 5, 10, 18 and 19 will generally remain unroaded although some limited timber harvest and burning for wildlife habitat improvement may occur.

23. We have essentially retained the land designations of the Proposed Action. MA 13 (old-growth) has been removed from the regulated timber base and MA 19 is also not in the timber base. MA 12 is retained to allow management activities which maintain or enhance summer and fall big game habitats so that this area will remain the "elk factory of the Kootenai". The MA 16 portion is an area overlooking the highway which lacks the solitude generally associated with high wilderness quality. Two existing roads were placed in MA 3. We generally view the Trout Creek area as having high wilderness and wildlife values. MA 29 in combination with the designations mentioned above retains much of the wilderness value while providing the opportunity for wildlife habitat maintenance and improvement.

plans to be crisscrossed by over 10,000 miles of logging roads. The Forest has recognized its importance in the MA 29 roadless designation for the western portion of the wild area. However roading, logging and/or mining of the roadless lands north of Woodchuck Peak will degrade the existing wild values and wildlife security of Trout Creek.

Over ninety percent of this area is located on slopes of 55% or steeper. Road costs will be high as evidenced by Cabinet District plans to use capital investment funds to road this area. Use of such funds to build roads where none belong will provide powerful evidence that Congress should eliminate such funding. MWA council member Dan Heinz is collecting examples, such as the Small Frye and Hope sales, of the use of taxpayer road building funds to the detriment of forest resources other than timber. We have asked the Cabinet District to keep us abreast of any and all management actions which may further reduce this wild enclave. 23

We ask that you keep the entire roadless area intact and recommend it for wilderness in MA 8 including MA's 19, 13, 16 and 12.

The prescription for MA 12 is to provide security for important big game areas by compatible management of timber and roads. MA 19 is for areas "very steep and costly to road."

What can provide better security for big game than wilderness? Why should we pay to road extremely difficult wilderness quality lands?

Please reconsider the total value and combination of wild

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23. See previous page.

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resources in the Trout Creek proposed wilderness. We believe your recommendations are crucial here.

Note that only wilderness designation can provide protection for wildlife and wildlands from mining develpment. 23

KOOTENAI FALLS

We commend the Forest for designating this last major waterfall of the Northwest a special management area. Every effort you can make to officially recognize this unique treasure will aid Montana citizens to prevent its tragic loss. 24

OTHER UNIQUE AREAS

Roderick Mountain We recommend the entire Roderick Mountain roadless unit be upgraded to MA 29, including the big game winter range MA 10 areas and MA 2 from the Indian and Chief Peaks area including the North Fork of 17 Mile Creek to Independence Mountain. MA 17 near Sylvanite should also be included in roadless MA 29. 25

Dividing this wild area into a variety of management areas makes it less valuable and more difficult to manage. The natural integrity of this wildland and opportunities for solitude were rated by the Forest as quite high. We ask that you keep these values intact in the final plan.

Robinson Mountain roadless area should be kept intact and upgraded to MA 29. 26

Mount Pend Oreille wild area should be conserved intact and upgraded to MA 29. 27

We underline the Flathead Chapter's question: What happened 28

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23. See second page previous.

24. No response needed.

25. The area designated as MA 10 is considered to have higher wildlife values than roadless recreation values. Thus the designation permitting manipulation of habitat, primarily through burning, is retained. We generally view this area as having high roadless recreation values in combination with high wildlife values. The MA 2 and 10 designations allow management of both.

26. This area has opportunities for snowmobile use which can be retained with MA 2.

27. We feel MA 2 adequately protects this area while permitting a wider range of uses than MA 29.

to the North West Peak Scenic Area? We support keeping it wild. MA 29 would be better protection than MA 2. 28

Riparian Areas As pointed out by the Flathead Chapter of MWA, riparian protection is not provided by the proposed plan. We deem this to be most important and ask that you change this in the final plan. 29

Old Growth Conservationists from all over the state concur with Flathead Chapter Chairman Dick Kahl's cover letter emphasizing the prime role of the Kootenai National Forest to conserve Montana's old growth forests. The Kootenai has done more than any other Montana forest to inventory and establish a management prescription for old-growth forest lands. In fact, as far as we know, no other forest in Montana has done this. We believe the Kootenai deserves a great deal of credit for the work done thus far to manage for this unique resource. In light of how little information still exists about the old growth resource, we urge the Forest to walk lightly. 30

In order to keep management options open, high quality old growth should be given lowest priority for timber harvest in the next 10 years. This should be in a stated forest management goal. The current backlog of timber supply should help remove any immediate pressure to rapidly liquidate old growth. Anticipated and actual high mortality in lodgepole pine may also add another reason to go slow on high quality old-growth since the value of Lodgepole will not wait long. 31

Furthermore, we ask that the Forest dedicate old-growth

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28. Northwest Peaks is now in MA 21. The Scenic Area designation is retained.

29. See the riparian area guidance in Chapter 2 of the Final Plan.

30. No response needed.

31. MA 13 has been removed from the regulated timber base and increased in size so that 10% of the land below 5,500 feet in elevation is dedicated to old-growth. The inventory and Final Plan designations are as follows:

Lands below 5,500 feet	=	1,859,000 acres	
Inventoried Old-growth	=	205,000 acres	(11%)
Management Area 13	=	126,000 acres	(7%)
Other non-timber Mgmt	=	60,000 acres	(3%)
Managed for timber	=	19,000 acres	(1%)

As indicated by the inventory data above, it is not possible to provide a 15% level of old-growth timber today. The option to provide increased amounts of old-growth timber in the future has been retained in the Final Forest Plan. It retains 34% of all the mature timber, exclusive of Lodgepole Pine, in the unregulated timber category. This includes the 186,000 acres of old-growth timber management, shown above.

management areas, and remove them from the timber base. MWA urges you to adopt a more conservative approach that includes at least 15% of the Forest's inventoried high quality old-growth. Dedicated stands should include more riparian lands below 5000 feet for the highest quality combination of multiple use management (i.e. water quality, wildlife, recreation, old growth). 31

Please refer to the Flathead Chapter of MWA Issues Committee comments on old growth.

Water Quality The draft 1982 Kootenai Plan projected a doubling of stream sediments. It is not clear how water will fair in the recent draft. However, the dramatic road building scheme gives cause for great concern. EPA has given the Kootenai Plan the lowest marks for water quality of any forest in Montana. How do you intend to change this in the final plan? 32.

The lack of protection for riparian areas may serve to further aggravate water quality problems. MWA opposes clear-cut logging, bulldozer scarification and locating landing areas in streamside areas. 33

These type of activities may well cause detrimental changes affecting water temperature, condition (sediments) and trout habitat. The lack of a protected buffer around streams may aggravate problems of sedimentation from the enormous amount of roads on the Forest (present and planned). NFMA requires streamside protection and we feel the present proposal does not meet those requirements. 34

Wildlife We commend the Forest plan for developing an elk model which includes security of summer range as a limiting 35

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31. See previous page.

32. State-of-the-art methods for predicting sediment delivery to streams are not very good so we have reduced our reliance on those models and focused on insuring that problems do not occur in the field. We have added items to the monitoring and evaluation plan and the Forestwide standards to insure that State Water Quality Standards will be attained.

33. Refer to the Riparian Area guidance in the Final Plan.

34. See responses #32 and #33 above.

factor. We urge that you give this additional consideration in important roadless areas such as Trout Creek, Roderick Mountain and others. It is not clear how the proposed plan will increase elk populations, however. To our knowledge no clear documentation exists that demonstrates that logging improves elk habitat. 35

It is clear that roads degrade habitat, and that the Forest proposes to build an additional 244 miles of road per year. 36

Members of the Montana Wilderness Association also support a carefully planned program of augmentation to help conserve and restore the Cabinet-Yaak grizzly population to healthy levels. We feel augmentation is particularly necessary in the Southern Cabinets in light of proposed mineral developments. 37

ROADS

In the last few years, the Kootenai has made an excellent start of pursuing road closures to increase wildlife security. MWA feels that road management is essential on the Kootenai and that new innovations such as temporary road systems that are back bladed and revegetated are necessary to improve the manager's ability to mitigate some impact from timber practices. Snow roads might also be considered as another tool. 38

Road management, however, is not a substitute for roadless management. Backcountry values in aforementioned wild areas must be kept intact. 38 a

However, building an additional 4,600 miles of roads conflicts with nearly all forest resources and multiple uses, except timber. With 6,000 miles of road already in place, it is hard to 39

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35. Projected increases in elk habitat potential will result from providing a proper balance of cover, forage and security. Cover-forage ratios can be adjusted toward their optimum levels via timber harvest.

36. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. In addition, the guidance for each management area includes details on road use restrictions that are designed to provide secure habitat and minimize the impact of roads on elk habitat.

37. Appendix 8 of the Final Plan discusses augmentation.

38. Such options for road management exist and may be used where appropriate.

38a. No response needed.

see a pressing need for more recreational roads. Wildlife doesn't benefit by roading, in fact, some animals as birds (cavity nesters) and fish are adversely affected. 39 39 a

It should be recognized that additional roads are single-purpose, for timber only. With this in mind, more innovation will be needed to address the resource conflicts inherent in Kootenai plans to build thousands of miles of additional roads. 39 b

Recreation The prescription for MA 2 should distinguish between motorized and non-motorized uses. With the overwhelming predominance of roads already on the Kootenai, and thousands more planned, the Forest should emphasize non-motorized use in the remaining wild areas. Solitude is an important resource and public lands are the only place people can expect to find it. This is not the case with motorized use. 40

We encourage the Forest to identify those areas where motorized use is appropriate and limit off road use to those areas. Please refer to the enclosed letter on this subject of former Lewis and Clark Superintendent George Engler.

We also encourage the Forest to identify and conserve remaining opportunities for low-elevation easy gradient trails, particularly where these would be available for use by elderly, and those who require manual wheelchairs to get around. Most of these type of trails have likely been lost to road-building through the years. However some opportunity may exist to relocate cutover trails. Ross Creek Cedars trail is an example of this type of trail. 41

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39. We agree that there is no need for more roads for dispersed recreation use.

39a. Wildlife generally does not benefit from roading per se, however, as noted in the response to #35 above, timber harvest can benefit wildlife and roads are generally necessary for transportation of logs and machinery.

39b. Resource conflicts associated with roads are discussed in the EIS.

40. Due to terrain and tree cover most of MA 2 is inaccessible to ORV users. Most ORV use that does occur involves oversnow vehicles in areas not frequented simultaneously by other types of recreationists. The guidance for MA 2 in the Final Plan generally resolves conflicts in favor of non-motorized uses.

41. We have made no special provisions in the Forest Plan for this type of facility. This type of trail is generally considered in situations such as at Ross Creek (as you noted) or near developed campgrounds or other special interest areas.

CHEC

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1 October 1985

Review of the Draft Kootenai Forest Plan and EIS

Introduction and Summary

The Kootenai National Forest is one of the most productive timber forests in the Rocky Mountains. Located in northwest Montana, the Forest has recently been selling nearly 200 million board feet a year. Much of this timber is cedar, ponderosa pine, western white pine, and other high-valued species, so timber income generally exceeds timber costs.

Recent years have seen a depression in the market for timber, however. Yet the proposed Kootenai Forest Plan calls for increasing regulated timber sales by nearly 30 percent. Although sales during the 1970s were concentrated mainly in high-value mixed conifer forests, the Plan responds to bark beetle infestations by proposing to place over half of all harvests in lower-valued lodgepole pine forests.

This proposal will result in a significant decrease in the economic viability of the Kootenai timber program. Even if the Forest as a whole makes money on timber, a large share of timber sold will cost taxpayers money. 1

Because of concerns about the effects of the timber program on recreation, wildlife, roadless areas, and related resources, the Montana Wilderness Association has asked CHEC to review the draft Kootenai Forest Plan and EIS. The Plan, which is a revision of an earlier draft published in 1982, was distributed to the public in July 1985.

In September, CHEC visited Kootenai Forest offices to review FORPLAN runs, timber yield tables, timber sale reports, and other data relating to the Plan. This report is based on those reviews.

CHEC found serious problems with Kootenai timber yield tables. Although these problems had already been pointed in Andy Stahl's review of the 1982 draft Plan, no corrections have been made since that time.

In addition, the Kootenai uses timber prices that are far higher than the Forest has been receiving in recent sales. These prices are based on sales sold in the late-1970s, but as the EIS notes, as much as 250 million board feet of those sales may be returned under the Timber Purchaser Contract Modification Act of 1984.

A revision of timber prices to more realistic levels completely changes the apparent economic viability of the Plan. Where FORPLAN proposes a significant increase in harvests, the adjusted timber prices would lead FORPLAN to maintain or reduce harvests. 2

Much of the land which the Kootenai Plan proposes to include in the suitable timber base will be extremely costly to manage for timber. Lodgepole pine stands, roadless areas, and steep slopes are all likely to lose money.

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1. The Final Plan allows a sale level of up to 233 MMBF (202 MMBF regulated, 25 MMBF dead lodgepole pine, 6 MMBF other products) per year over the next decade (Appendix 11 of the Final Plan). The sale level over the last decade, adjusted for buy-back, was 182 MMBF per year. If all the volume available were sold, the increase would amount to 28%. Of this 233 MMBF per year, about 20 MMBF would be dead lodgepole pine (as noted above) and 78 MMBF would be from "lodgepole pine forests" (42% of the 233 MMBF).

   As discussed in Chapter III of the FEIS, the timber program is estimated to have returned a net loss of over $2 million in 1985.

   The timber yield tables were revised prior to the development of the DEIS of July 1985 although documentation was not developed until recently (Addendum to Timber Yield Table Coefficient Documentation, Park, May 23, 1986). This documentation also addresses some of the comments below and excerpts are provided where appropriate.

   The Forest Plan was tested with a new set of economic data which included:
   - base prices linked to transaction evidence data for the years 1975 through 1984
   - price projections used in the 1985 RPA process
   - road costs adjusted for real cost decreases experienced since 1978

   The effects are discussed in Appendix B of the FEIS.

2. The Final Plan maximizes timber production in the first decade to attain the same harvest levels of the Proposed Action. This was done primarily for local community stability as discussed in Appendix B of the FEIS. If the first decade regulated volume were not maximized at 202 MMBF, a level of 194 MMBF would maximize PNV using the original economic data. The new economic data reduces this to 185 MMBF. Regardless of the economic data used, maximizing timber production subject to non-declining yield will generate 202 MMBF per year of regulated volume in the first decade.

   The new economic data would have had a more significant effect if the plan had used a great deal of economically marginal land. In fact the Final Plan has 1,263,000 acres in the regulated timber base which is less than the 1,337,000 acres determined to be economically harvestable under the new economic data. For details refer to Appendix B of the FEIS.

(continued on next page)

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The EIS admits that proposed conversions of stagnant lodgepole pine stands will lose money even at the high prices assumed by planners. Yet the Plan proposes to convert 70,000 acres in the next fifty years. The value of this activity is extremely questionable.

2

In addition, CHEC found that several recent timber sales cost taxpayers money because they included steep slopes requiring sophisticated logging systems. Sales requiring major amounts of road construction also have little value.

Other problems identified by CHEC include the failure to consider uneven-aged management as the predominant harvest method in at least one alternative, economic inefficiency and a lack of alternatives in range management, and a poorly-designed monitoring program. To correct these problems, CHEC recommends that timber and grazing values be reduced and alternatives and benchmarks be rerun with FORPLAN. The results should point to the need to make significant changes in the preferred alternative.

3

Timber Yield Tables

Forest planners used a computer program called Prognosis to predict future timber yields. Planners made two modifications to Prognosis which significantly increased its predictions of timber growth. Planners also modified the Prognosis results which further increased growth predictions in younger timber stands.

CHEC uses four "rules of reason" to test whether timber yield tables are sound. First, existing stands of mature timber should not be predicted to grow faster than they have historically grown in the past. Such stands are past their age of maximum annual growth, so growth rates should be declining.

Second, unmanaged second-growth stands should not be predicted to grow significantly faster than existing stands have grown. After seedlings are established, such stands receive no more management than natural stands have received, so there is no reason to expect that second-growth stands should grow any faster.

4

Third, management of second-growth should not be predicted to produce huge increases in growth rates over unmanaged stands. Most long-term research studies show that thinnings do not increase total growth (that is, growth of trees over 0 inches in diameter). Thinnings can increase the volume of merchantable timber (that is, the volume of trees over 7 or so inches in diameter) by 20 or 30 percent.

Lastly, second-growth yield tables should be predicted to reach their age of maximum average annual growth ("culmination of mean annual increment" or CMAI) at the same age or later than is predicted in published yield tables using similar utilization standards. This is important because the National Forest Management Act (NFMA) requires that stands of timber not be harvested until they have reached this age.

The Kootenai yield tables fail three of these four tests.

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2. (cont) Conversion of stagnated lodgepole pine stands was modeled as having a significant cost and no financial return until the new stand is harvested. The stands are often stagnated at a size that is not commercial although some value could be derived from the sale of other products (posts etc.). The returns from converting these stands is obviously poor. The Proposed Action called for converting 70,000 acres over five decades to reduce risks (associated with fire and insects and disease), improve wildlife habitat and return these lands to timber production. The Final Plan calls for converting these acres over a 100 year period and PNV was found to be maximized when 32,000 acres were cut over the next 50 years. There is no conversion target established for the 10 year life of this plan.

See also the response to #1 above.

3. Uneven-aged management is generally not practical for the reasons outlined in the DEIS (IV-9).

The range program on the Kootenai NF is quite small due to economic problems associated with overwintering facilities, terrain, water sources and so on. The constant program that is addressed in the EIS is about as much as we ever expect to see and its impacts are minimal as noted in the EIS. To simplify the analysis, all grazing values were removed from the FORPLAN model and PNV was adjusted accordingly.

The monitoring and evaluation plan has been modified.

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Predicted Growth of Mature Timber: To make the yield tables, Kootenai planners divided the Forest into three forest types: high site mixed conifer (MC1), low site mixed conifer (MC2), and lodgepole pine (LPP). Mature stands of MC1 average 160 years old, MC2 130 years, and LPP 100 years.

Table One

Existing Volumes and
Projected Growth Rates of Mature Stands
Kootenai National Forest
(cubic feet per acre)

	MC1	MC2	LPP
Current volume	4,320	2,780	2,930
Historic annual growth	27	21	29
Predicted annual 10-year growth	23	14	-85
Predicted annual 50-year growth	19	10	-14

Table one shows that mature timber stands have historically grown at an average rate of 20 to 30 cubic feet of merchantable timber each year. The yield tables for mixed conifer stands predict that growth rates will decline over time. The table for lodgepole pine predict that much of the lodgepole -- which is considered "high risk" owing to its age -- will die in the next ten years. Growth after that time only partially makes up for this loss. 4

In sum, it appears that Prognosis did not make unduly high predictions of future growth rates in mature atands.

Predicted Growth of Unmanaged Second-Growth Timber: By the time second-growth timber has reached the age of existing mature timber, it is predicted to have grown far more wood than existing stands have today. As shown in table two, MC1 stands are expected to grow 60 percent more wood than existing stands, and MC2 second-growth is predicted to more than double the performance of existing timber.

Moreover, these rapid growth rates are expected to continue long after the growth rates of existing stands have dropped off. In the fifty years after second-growth mixed conifer stands reach the age of existing stands, their growth is expected to remain greater than the historic growth rates of existing stands.

LPP second-growth is not expected to grow as fast as after age 100 as existing stands have historically grown. Remember, however, that predicted growth rates of existing LPP stands are supposed to be negative.

Modifications to Prognosis may account for the rapid growth of second-growth compared to existing stands. Planners decided that the basal area of stands should be allowed to grow 25 percent faster than Prognosis originally predicted. Basal area is essentially the surface area of all stumps if a stand were cut at 4-1/2 feet above the ground.

4. Existing stands have average volumes that are much lower than projected yields for regenerated stands with no management. Analysis of the individual stands represented in the mature groups show a wide range of variability. This is expected since many of the stands were selectively logged in the past. In most cases, the larger trees in the stand were removed leaving mature stands of smaller average diameter. Other stands have developed two storied structures based on fire or insect occurance some time during their history. In both cases the stands were included in the mature group because of the age of the largest remaining trees. Fire, logging and, to some extent, insects will be excluded from the new stands so it is expected that volumes would be higher than current existing stands. Projected volumes are in line with the existing volumes on the better stands in the existing mature groups.

A basal area growth multiplier of 1.25 was originally used to adjust growth of small trees in managed stands to a more reasonable rate. Subsequent to the development of the yield tables using Prognosis Version 2.0, a new version (3.3) of Prognosis was developed. Several managed stand groups were rerun using the new version which contained revised small tree growth models. Comparison of the new results to the original runs showed that growth rates projected, beginning about age 50, were even higher than the original projections using the basal area mulitplier. These increases ranged from 4.6% at age 50 to 19% at age 80. These percentages were used to adjust the original yield tables. Analysis of version 3.3 runs also revealed that basal areas developed later in long term projections exceed the maximums specified for sites. Therefore, adjustments were made to level out the outyear projections. These resulted in minus adjust ments of 2% to 4.5% beginning at about age 170. An assumption was also made that the "no management" regimes of new stands should yield as much volume as existing pole and immature stands at the same age. Many of the original yield tables did not meet this and were adjusted accordingly. This growth difference was distributed between ages 40 and 60 years. Resultant yields correspond favorably to increased growth of small trees modeled in version 3.3. The rate of growth after age 60 was left the same as the original tables since embedded growth functions for larger trees appear to be reasonable.

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Table Two

Predicted Growth of Unmanaged Second-Growth Timber Compared With Actual Growth of Existing Mature Timber (cubic feet per acre)

	MC1	MC2	LPP
Existing stand age	160	130	100
Existing stand volume	4,320	2,780	2,930
Existing annual growth rate	27	21	29
Second-growth volume at age of existing mature stands	6,900	6,080	3,930
Predicted annual 10-year growth	37	32	17
Predicted annual 50-year growth	30	22	13

Planners also reduced tree mortality in Prognosis to 0.1 percent of the stand between ages 15 and 25. This allowed stands which may have been overstocked to remain overstocked -- with no reduction in growth.

By increasing basal area growth, planners allowed much faster diameter growth. By reducing mortality, planners effectively increased the assumed stocking capacities. In reality, it is unlikely that diameter growth would remain high at the high stocking levels which result. 4

The total stocking capacity of a forest site is not much greater than the actual stocking of that site if the area has been undisturbed for many years. Unless the stands represented in Kootenai timber inventories have been significantly disturbed, there is no reason to expect that second-growth stands will grow much more timber than is found is existing stands of the same age.

Growth Rates From Intensive Management: Planners predicted even more rapid growth of stands which are managed using precommercial and commercial thinnings. As shown in table three, mixed conifer stands receiving precommercial thinning only are expected to grow 25 percent faster than stands receiving no treatments, and precommercially thinned LPP stands grow over 40 percent faster than untreated stands.

The results of precommercial and commercial thinnings combined are even more amazing. MC1 stands which are thinned three times nearly double their growth. All stands which are thinned twice increase growth by about two-thirds or more. Moreover, existing MC1 and LPP stands which are 60 years old are predicted to grow 20 to 30 percent faster if they are thinned once.

The longest studies of the effects of thinnings on growth rates have been done in the Pacific Northwest. These studies have been incorporated into a computer model called Douglas-Fir Simulated Intensive Management (DF-SIM).

4. (cont) The yield tables were developed using an early version of Prognosis and emperically adjusted. There was no attempt to adjust all stand attributes throughout the regimes to match expected stand development characteristics. Emphasis was on obtaining reasonable projected volumes. The tables were validated, as a result of public comment, as described in the following paragraphs:

Individual stands were selected from established growth plots that were considered representative of the habitat productivity groups. These stands were projected using the prescribed treatments used in the yield table development with the latest version of Prognosis (5.1). Growth adjustments to the model were made so individual stand attributes compared to Regional Stocking Yield Tables, Site Index Curves, mortality results from studies and so on. The results compare favorably to yield table volumes used in the development of the Forest Plan. The following table displays the comparable volumes:

Productivity Class	Treatment	Table Number	Plan Vol (mbf)	Ver 5.1 Vol (mbf)
MixCon I	No management	1	18.1	23.3
	PCT Only	12	39.6	40.5
	PCT & CT	6	41.0	40.4
	PCT & 2 CT's	9	41.2	48.9
MixCon II	No management	2	21.8	27.5
	PCT	4	29.3	30.6
	PCT & CT	7	32.3	31.5
LPP	No management	3	10.7	9.7
	PCT	5	19.2	21.6
	PCT & CT	8	23.3	24.3

Further validation was done by linking the projected volumes to standing volumes actually existing on the Forest. In the MixCon I group, the top stands from each Ranger District were totaled. These stands accounted for 96 MMBF on 2406 acres, for an average of 40 MBF/acre. This compares to the range of from 39.6 to 41.2 MBF/acre generated by the yield tables depending upon management regime.

For the MixCon II group the same procedure was used. Total volume was 38.6 MMBF on 1132 acres for an average of 34.1 MBF/acre. This compares to the highest managed volume predicted in the Plan of 32.3 MBF/acre.

The lodgepole pine group is based on stands where the plurality of basal area is lodgepole. Samples of the highest volume stands on habitat types where lodgepole will be managed in the future were averaged. The weighted average was 23.0 MBF/acre compared to the 19.2 to 23.3 MBF/acre predicted in the Forest Plan.

Table Three

Increases in Growth Due to Thinnings
(percent increase over unmanaged growth)

	MC1	MC2	LPP	DF-SIM[1]
PCT Only	29	24	43	24
PCT + 1 CT	79	65	84	--
PCT + 2 CT	97	--	--	34
CT Only[2]	22	13	32	10

PCT = precommercial thinning
CT = commercial thinning

1) From GTR PNW-135
2) *Thin in 60-year old existing timber*

According to Forest Service General Technical Report PNW-135, which gives general results from DF-SIM, the volume at harvest of precommercially thinned stands should not be more than about 25 percent of the volume of unmanaged stands. Stands receiving both precommercial and commercial thinnings may produce 35 percent more volume than unmanaged stands. Commercial thinning only may increase volume by as much as 10 percent.

These results contrast sharply with those of the Kootenai yield tables represented in table three. Although Kootenai forest types are not the same as those of the Douglas-fir forests represented by DF-SIM, there is no reason to expect that mixed conifer stands -- which are 20 to 40 percent Douglas-fir -- will respond to thinnings any better than Douglas-fir alone.

Lodgepole pine stands may benefit from thinning if failure to thin results in stagnation of some stands. However, Prognosis is not predicting that lodgepole pine will stagnate without thinnings -- only that it will grow much slower than with thins.

In sum, yields which may already by 34 to 115 percent too high, as shown in table two, are predicted to be even greater by 20 to almost 100 percent with thinnings. In reality, the effects of thinnings will probably far less than half of the predictions.

Culmination of Mean Annual Increment: Prognosis runs indicated that unmanaged second-growth stands would reach CMAI at 110 to 170 years or more. Thinnings prolonged the age of culmination, and sometimes stands did not even reach CMAI by the last time period predicted by Prognosis.

Planners used normal yield tables such as **The Yield of Douglas-Fir in the Pacific Northwest** (USDA Technical Bulletin 201) and **Yield of Even-Aged Stands of Ponderosa Pine** (USDA Technical Bulletin 630) to conclude that stands would reach CMAI much sooner than predicted by Prognosis. Unmanaged stands would culminate no later than age 70. Thinnings would delay CMAI in mixed conifer until 110, and in lodgepole until 80.

4

4. (cont) Overall our analysis shows that the predicted yields closely match those developed using the latest state-of-the-art technology and that they are also consistent with actual stands measured on the ground.

Culmination ages were also checked on the runs made with the latest prognosis version and they were found to be in the same range as those used in the Forest Plan (basicly, 70 to 120 years).

To bring the yield tables into agreement with this decision, planners adjusted Prognosis outputs by increasing growth between ages 40 and 60 to make stands culminate earlier. Planners also that most lodgepole pine would die by age 110. The results of these changes for one forest type are shown in table four.

Table Four

Prognosis Yield Table and Adjusted Yield Table
High Site Mixed Conifer, Existing 20-Year Old Stands
(volumes in thousands of cubic feet,
PAI and MAI growth in cubic feet)

	Prognosis Yields			Adjusted Yields		
Age	Volume	PAI	MAI	Volume	PAI	MAI
20	.45	23	23	.45	23	23
30	.54	9	18	.54	9	18
40	.70	16	18	1.10	56	28
50	.89	19	18	1.80	70	36
60	1.18	29	20	2.72	92	45
70	1.66	48	24	3.14	42	45
80	2.08	42	26	3.50	36	44
90	2.63	55	29	3.82	32	42
100	3.16	53	32	4.13	31	41
110	3.71	55	34	4.45	32	40
120	4.34	63	36	4.95	50	41
130	5.00	66	38	5.47	52	42
140	5.60	60	40	5.94	47	42
150	6.20	60	41	6.41	47	43
160	6.81	61	43	6.90	49	43
170	7.43	62	44	7.17	27	42
180	7.90	47	44	7.62	45	42
190	8.40	50	44	7.92	30	42
200	9.00	60	45	8.20	28	41

PAI is periodic annual increment (growth in previous 10 years divided by 10)
MAI is mean annual increment (volume divided by age)

Table four shows that planners increased growth between ages 40 and 69 by three to three-and-one-half times. The Prognosis volumes do not catch up with the adjusted volumes until age 170, and then only because planners also assumed that all lodgepole pine would die by age 120. The result is that CMAI takes place at age 60, although planners did not really allow FORPLAN to harvest timber before age 70.

Planners based the assumption that unmanaged stands reach CMAI on tables in Technical Bulletin 201, Technical Bulletin 630, and other normal yield tables which represent all trees in the stand over a half inch in diameter. However, the yield data in FORPLAN represents only trees over six (for lodgepole pine) to seven (for other species) in diameter.

4

4. (cont) The original documentation included a discussion of ages at which culmination occurs based upon total cubic foot production. The yield tables developed with Prognosis did not culminate at these ages. It was recognized at the time the tables were developed that there was a problem in the Prognosis growth models for small trees and the long term projections did not slow growth to correspond to normal stand development. These two factors result in a delay in culmination age. The tables were adjusted to reflect reasonable culmination ages. Tests using later Prognosis models confirm the earlier adjustments and show that culmination ages are very nearly the same using either total cubic foot volumes or merchantable cubic foot volumes.

Copies of the comparison model runs and the existing stand data summaries are available for review at the Kootenai National Forest Supervisor's Office.

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This difference is important and correcting it results in major changes in the data. Technical Bulletin 201 indicates that site class IV stands of Douglas-fir (which are capable of naturally producing 98 cubic feet of wood per acre per year) over seven inches do not reach culmination until age 100. Under intensive management, it would take far longer.

Technical Bulletin 630 says that site index 90 stands of ponderosa pine (which are capable of producing 80 cubic feet per acre per year) also will not reach CMAI until age 100. In both cases, lower site classes, which are more typical of most of the Kootenai, take even longer to reach culmination.

Planners' assumption that stands will culminate sooner led to changes in the Prognosis outputs which -- besides violating NFMA requirements -- seriously distorts the yield tables and risks significant future problems on the Kootenai. This is because the Kootenai Forest is an "old-growth deficit" forest, which means that the average volume of timber which planners expect to grow in a rotation is greater than the average volume now found on the Forest. In such a situation, immediate timber harvest levels are limited by the amount of timber available for harvest rather than the expected future growth of the timber.

By assuming that CMAI takes place by age 70, planners greatly increased the amount of timber which will be available for harvest in the next few decades. This allows FORPLAN to greatly increase first decade harvests over the levels which could be allowed if a higher minimum harvest age were used. In effect, the reduced harvest age allows more rapid liquidation of old-growth timber. 4

To sustain sale levels, second-growth timber must grow three to three-and-one-half times as fast as projected by Prognosis. Otherwise, a major falldown in harvests may take place when the current old-growth inventory is gone. This would present serious problems for future timber managers.

In sum, planners misread normal yield tables, leading them to make major adjustments to Prognosis outputs based on guesstimates alone. These adjustments may be partially responsible for some of the other problems with the yield tables described above, and almost certainly will result in problems with future timber harvest levels.

Conclusion: Planners used the Prognosis computer model to predict future timber growth, but made several revisions in the model when it projected lower yields than they expected. However, they made no attempt to validate the model or study the apparent contradictions which have been identified here.

The yield tables can easily be validated using historic timber inventory data. Planners entered data from the most recent inventory into Prognosis to develop the yield tables. But older inventories also exist which included previous measurements of many of the same plots used in the recent inventory.

To validate the model, data from the older inventory should be entered into Prognosis and future yields predicted. These predictions can then be compared with the actual growth as measured by the most recent inventory.

4. See the discussion on the preceeding pages.

Such a procedure would determine if the basal area growth and mortality adjustments made by planners are appropriate. It may also help determine the age of CMAI and, if any plots have been thinned, the effects of intensive management.

Short of such a procedure, the Kootenai yield tables must be considered highly speculative and unreliable. It is likely that use of the uncorrected yield tables in the Final Plan will result in a serious falldown in future harvests. 4

Timber Values

Kootenai planners based timber values on high bid prices received from selected timber sales sold between 1974 and 1980. Information from these sales was used to develop the stumpage price equation shown on page B-46 of the EIS. Planners also projected that timber prices would rapidly increase at rates originally predicted for the 1980 RPA Program.

Yet timber values have fallen since 1980. Major and permanent changes in banking and savings and loan industries indicate that prices will not reach the late-1970s levels again soon. Even though housing markets have partially recovered in the last two years, increasing timber production in the Southeast and Canada has prevented of recovery of Western timber markets.

One result of these changes is that the 1985 RPA Program predicts much smaller price increases over the next few years. More recent work by Adams and Haynes, who made all the RPA projections, indicates that even the 1985 RPA projections are optimistic.

One major input into the stumpage price equation used by planners is the prices paid for lumber. According to data provided by Region 1 economists, lumber prices for timber sold by the Kootenai between 1975 and 1979 average $457 per thousand board feet. During the years 1980 through 1984, prices averaged only $369 per thousand. Entering these values into the stumpage price equation indicates a stumpage price decrease of nearly 30 percent assuming tractor logging. 5

A more recent stumpage price equation developed by the Regional Office indicates that the Kootenai Plan equation does not even accurately predict prices bid since 1980. Given the same inputs, the new equation, based on sales sold between June 1980 and June 1984, produces values over 20 percent less than the equation used in the Forest Plan.

Table five shows the stumpage prices used in FORPLAN for most existing timber which is to be harvested in the next 10 years. Except on the extremely steep lands, mixed conifer stands are expected to sell for $80 to nearly $130 per thousand board feet, and lodgepole pine stands are expected to sell for $40 to $80 per thousand.

CHEC reviewed 1984 and 1985 timber sale reports to determine actual sale prices. In those two years, timber values -- as measured by statistical high bid plus purchaser road credits -- averaged less than $36 per thousand board feet. Most of the timber sold is on slopes under 60 percent, indicating that prices assumed by planners are much greater from recent experience,

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4. See the discussion on the preceeding pages.

5. The effects of alternative base timber values and price projections are discussed in Appendix B of the FEIS.

Timber sale reports list bids by species. Using planners' estimates of the percentage of each species in each forest type, CHEC found only a small difference in values between forest types. Mixed conifer types averaged $37 per thousand board feet while lodgepole pine averaged $34 per thousand.

Table Five

Timber Prices Predicted by FORPLAN
Kootenai National Forest
(1978 dollars per thousand board feet)

Slope:	<40%	40-60%	>60%
Mixed Conifer 1	126	84	7
Mixed Conifer 2	113	72	10
Lodgepole Pine	83	43	-25

FORPLAN prices are per thousand cubic feet. These values were calculated by assuming 4.5 board feet per cubic foot in mixed conifer and 3.5 board feet per cubic feet in lodgepole pine.

5

However, table five makes clear that there are major differences in timber values between steep and gentle slopes. Planners estimate that lodgepole pine on slopes over 60 percent has a negative value, and when recent reductions in timber values are considered even mixed conifer timber on these slopes must have a negative value today.

CHEC examined several timber sales and found evidence that forest managers sell timber on very steep slopes only by "cross-subsidizing" it with timber on gentle slopes. The gentle-sloped timber was sold at a lower value to give purchasers an incentive to take the steep-sloped timber.

For example, the 1985 Pink Mountain sale included 15.12 million board feet of timber selling for an average of $21.70 per thousand. Eighteen percent of the sale required skyline yarding, costing an estimated $86.21 per thousand, 78 percent used tractor yarding costing $47.40 per thousand, and the remaining 4 percent requires high-lead yarding costing $53.82 per thousand.

This means timber cost an average of $53.78 to yard, $32.43 less than the skyline portions of the sale. Since the sale received only $21.70 per thousand, the skyline portions cost $10.73 per thousand. If these units had been deleted from the sale, receipts would have been nearly $30,000 greater.

Similar results were found with another 1985 sale, the Pinkham Hamilton sale. This sale included 8.2 million board feet of timber which received a high bid of $24.97 per thousand board feet. Four yarding systems were used: tractor (81 percent costing $39.30 per thousand to log), high-lead (7.7 percent at $$46.73 to log), skyline (10.6 percent at $83.08), and "swing" (0.7 percent at $97.57).

5. See response #1 above.

The average estimate cost of yarding timber in this sale was $51.07 per thousand. Both the skyline and swing timber cost far more than this, and if those parts of the sale were deleted the sale would have returned over $18,000 more.

These lost revenues cost counties as well as the Federal Government. Counties receive 25 percent of gross Forest receipts to use for roads and schools. These two sales cost Montana counties nearly $12,000.

Not all skyline units resulted in lost revenues. But many, if not most, returned so little that they were unlikely to cover sale preparation and administration costs. Corrected timber prices would probably show that most slopes over 40 percent will lose money.

Other type of sales which can be expected to lose money are commercial thins and sales in roadless areas. The highest-valued commercial thins were estimated by planners to be worth only about $48 per thousand to purchasers. Consider that lumber prices have dropped by nearly $100 per thousand, the value today is much less. Since sale preparation and administration costs alone are over $15 per thousand board feet, few commercial thins will be worthwhile.

The Forest Plan contemplates a considerable amount of commercial thinning, particularly in later decades. It is likely that much of this will have to be subsidized to be successful.

Timber sales in many roadless areas will also require a subsidy. Forest planners estimate that roadless areas will require, at maximum, 5.8 miles of roads per square mile of land. On slopes under 40 percent, these roads are estimated to cost about $27,500 per mile, or about $250 an acre. Roads on slopes between 40 and 60 percent will cost about $300 an acre. Roads on the steepest slopes will cost more per mile, but it is likely that fewer miles will be built.

In addition, planners estimate that road engineering costs will be nearly $95 per acre. This means that road costs in most roadless areas will average about $350 to $450 an acre. Existing mature stands of lodgepole currently have about 10,000 board feet per acre, mixed conifer 1 stands have 20,000, and mixed conifer 2 stands have about 12,500. This means road costs are about $20 (for MC1) to $40 (for MC2) per thousand board feet.

To this must be added the sale preparation and administration costs of about $15 per thousand board feet, resulting in total roadless area sale costs of $35 to $55 per thousand. It is possible that top quality mixed conifer timber will sell for more than $35 per thousand, but few sales in the lodgepole type will bring in over $55 per thousand.

Often, then, sales of timber in roadless areas will be cross-subsidized by timber outside the roadless areas where road costs are lower. As with the cross-subsidization across slopes, the timber outside the roadless areas will be sold for a lower price to give purchasers the incentive to buy the sale even though the roads into roadless areas are more costly than the timber they access is worth.

5

5. We generally agree with your conclusions about commercial thinning. The option to commercial thin was removed from the FORPLAN model because we expect that this treatment will not occur very often. It may, however, occur in some instances where sale analysis indicates that it is an appropriate management tool.

The road costs used in the EIS were developed based upon the 1978 cost guides and expressed in 1978 dollars as was all the economic data. These costs were redeveloped using the 1985 cost guide. A real cost decline was seen as displayed in the following table:

Land Class	Original Est 1978$/mile	New Estimate 1978$/mile	New Estimate 1985$/mile
Dep <40%	$27,500	$14,700	$22,600
Ero 40-60%	$34,500	$18,100	$27,800
Brk >60%	$84,000	$54,500	$83,500

These new road costs in 1978 dollars were used in the comparison of old and new economic data described in Appendix B. For consistency in comparing the original alternatives to the Final Plan, the original costs were retained in the development of the Final Plan. The budget displayed in Appendix 7 of the Draft and Final Plan includes an adjustment so that the expected road costs are better portrayed.

Cross-subsidies can be avoided by building roads with appropriated funds. The effect is still the same: the Forest Service will lose money to access the timber.

Planners overestimates of timber values had a major effect on FORPLAN. Except for the current direction, every alternative in the EIS proposes a large increase in programmed timber harvests. Alternative F, which focuses on big game management, proposes a five percent increase, and all other alternatives propose at least a 23 percent increase. Most benchmarks proposed even larger increases.

Correcting the timber prices would change this dramatically. Most steep lands, many roadless areas, and some of the lodgepole pine type would be eliminated from the suitable timber base unless constraints require that they be included. Commercial thinning would be selected much less often. As a result, both the suitable timber base and programmed harvests would fall by a large percent in many alternatives and benchmarks.

Of the 1.8 million acres in the tentatively suitable timber base, close to 0.3 million are roadless. Of the remainder, over 80,000 are on slopes over 60 percent and an additional 420,000 are on slopes over 40 percent. This leaves about 1.0 million acres, far less than are considered suitable in any alternative in the EIS.

Reducing timber prices will also have a major effect on the trade-offs between resources and values illustrated in figures B-3 through B-11. Although the analysis represented by these figures is commendable, it is completely unreliable because of the unreliability of the data used in FORPLAN. 5

For example, figures B-3, B-5, and B-7 show steadily declining present net values (PNV) as visual quality is improved and acres dedicated to wilderness or grizzly bear management are increased. With corrected timber values, the economically optimal timber harvest level would be much lower than found by planners.

The present net value might decline if prime timber lands were removed from the timber base for visual quality, wilderness, or grizzly bear. But as more acres -- or less prime timber acres -- are removed from the timber base, total economic value should increase.

Figure B-9 shows increasing PNV as increasing amounts of lodgepole pine is sold in the next 10 years, and figure B-10 shows increasing PNV with more roads. Both of these figures may need major modifications. Once again, some roads and some lodgepole sales may be worthwhile, but the optimum point is far less than shown in these figures.

Planners should correct both timber values and timber price trends and rerun selected FORPLAN runs to determine if the effects of these changes are significant. If they are, as CHEC predicts, then all alternatives should be rerun and new alternatives should be designed to respond to the changes in values.

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5. As discussed in Appendix B of the FEIS, we agree that certain lands that would have been economical to harvest under the original economics would not be economical to harvest under the new economics. As you note, these lands tend to be the less productive lands on steeper slopes. About 147,000 acres become uneconomical to harvest under the new economics, however, most of this land was excluded from the suitable timber base in the Proposed Action (and the Final Plan) for a variety of other reasons.

   The economically optimal timber harvest dropped from 262 MMBF/year to 240 MMBF/year (regulated) in the first decade (see Appendix B of the FEIS). This compares to 202 MMBF/year (regulated) in the Final Plan.

Other Problems With Timber

CHEC found several other problems with timber portions of the Kootenai Plan. Although these problems will have less effect on FORPLAN than the yield tables and timber values, they may still be important. These problems include an inadequate analysis of proposed changes in utilization standards, a possibly illegal calculation of programmed harvests, and the lack of an uneven-aged management alternative.

Utilization Standards: The Kootenai Forest currently requires timber purchasers to remove all lodgepole pine trees greater than seven inches in diameter and all other trees greater than eight inches in diameter. The Plan incorporates a Region 1 proposal to change these standards to six inches for lodgepole and seven inches for other species.

Most of the timber volume in the mature forests which are being cut today is in trees which are well over six to eight inches in diameter, so the change would appear to have little immediate effect. Yet the new standard makes it appear that more volume can be grown in future stands. This increases the timber yield tables, and could lead to a small increase in current harvests. If so, the change would have the effect of increasing the liquidation rate of old-growth forests.

Planners ran FORPLAN runs to determine the effects of the new utilization standards. They estimated that timber harvests under the old standard would be seven percent less in the first decade than under the new. Planners also estimated that the new standard would have a nine percent greater present net value than the old. 6

In light of the above discussion, the first estimate may be correct. However, it is unlikely that the new utilization standards will lead to an increased present net value. If anything, the new standards will reduce economic returns from timber.

The standards are imposed in the form of requirements that timber purchasers "clean up" harvest units by removing all trees larger than the minimum size. Planners reasoned that this would increase the volume of wood removed and milled per acre, in turn increasing the payments to the Forest Service.

Yet mills today may already be using the smaller logs. This would be true if the value of these logs to the mills outweighed added costs of logging, trucking, and milling such small material. If so, the mills would consider this value in their current bids. Changing standards would not lead to higher bids, and so there is no change in the present net value of the Plan.

On the other hand, it is more likely that small diameter logs have no value to mills in today's timber market. Requirements to remove these logs would increase the purchaser's costs, leading potential purchasers to reduce their maximum bids. Here, the new standard would actually reduce the present net worth of the Plan.

In short, planners' conclusions that the new standard would increase the economic benefits of the Plan may be completely wrong. It appears that the new policy will simply allow the Forest Service to liquidate the remaining old-growth on the Kootenai about eight percent faster than the old standard.

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6. The scenario described here is plausible. The scenario upon which the Forest Plan is based is also plausible. As the Plan is implemented, changing bid patterns can be analyzed. At this point we expect that the variablity in all the other factors which influence bid prices will make any correllation of unit bid prices to utilization standards unreliable.

Calculating the Programmed Sale Level: Section 13(a) of the Resources Planning Act (RPA) requires the Forest Service to insure that sales from national forests not exceed sustained yield levels. This is sometimes called the nondeclining flow policy. Although exceptions are allowed, the Kootenai explicitly does not plan to make use of these exceptions.

RPA also requires the Forest Service to calculate these programmed sale levels, as the Forest Service calls them, for each national forest. Two forests may be combined only if one has fewer than 200,000 acres of commercial forest land.

The policy was made because combining forests can lead to synergistic effects on programmed sales: the nondeclining sale level of two combined can be much larger than the sum of the two separately. Congress felt that these synergistic effects should be limited to the level of the national forest.

The Kootenai Forest Plan covers the Kootenai National Forest as well as a large portion of the Kaniksu National Forest. Both the Kootenai and the Kaniksu have much more than 200,000 acres of commercial forest land -- in fact, even the portion of the Kaniksu which is administered by the Kootenai has more than 200,000. Yet planners made no attempt to insure that harvest levels for the two Forests would individually comply with the nondeclining flow policy. 7

Table B-20 of the EIS makes clear that the two separate Forests do not meet nondeclining flow requirements. Annual sales on the Kootenai will be 44.7 million cubic feet over the next 10 years, but will fall to only 42.5 million in the 10 years after that and fall again to 42.3 after that.

Meanwhile, harvests on the Kaniksu will increase for the next 30 years to 8.2 million cubic feet per year, but will then fall to 4.9 million for the 10 years after that. Although the sum of the two Forests meets the nondeclining flow policy, harvests on each Forest are expected to rise and fall over the next 150 years.

The synergistic effect between two forests is greatest when the two have complementary age classes: the classic example is a forest that is mostly old-growth combined with one which is mostly very young second-growth. The Kootenai and the portion of the Kaniksu administered by the Kootenai do not have particularly complementary age classes, so the actual increase from combining the two is not large. Yet it still may violate RPA.

Uneven-Aged Management: The entire national forest planning process was created by Congress in response to controversies over even-aged management. One of the most important controversies took place in the Bitterroot National Forest which, like the Kootenai, is located in western Montana.

To address this issue, Congress directed planners to assure that clearcutting is used only where it is the optimal harvest method, and that other even-aged management systems are used only where they are appropriate. Despite this history of controversy and strong Congressional mandate, the Kootenai EIS only has two paragraphs on uneven-aged management (page IV-9). 8

7. The NFMA regulations (36 CFR 219.4[b][3]) indicates that forest plans will be developed for administrative units of the National Forest System and that these plans constitute the plans mentioned in section 13 of the RPA. Since the Kootenai National Forest is the administrative unit, no separate analysis of non-declining yield for the Kaniksu or Kootenai portions of the administrative unit is required.

8. The criticism of the Bitterroot was directed less at specific harvest techniques than at the costs of regenerating stands where terracing was necessary (Forest and Range Policy, Dana and Fairfax, McGraw-Hill, 1980). Such practices are not included in the Kootenai Forest Plan.

Depending upon the number of ages to be represented in an uneven-aged stand, entries occur over different periods (The Practice of Silviculture, D.M. Smith, John Wiley & Sons, 1962). Given an age-at-harvest of 130, 10 year entry periods would produce 13 ages, 20 year entry periods would produce 6 ages and so on. At the 30 year entries, 4 ages and 4 entries would be required over the 130 years. With two commercial thins and a three stage shelterwood, the Proposed Action called for at most five major (heavy equipment) entries over a rotation. This would occur only where visual quality was an important consideration, just as where unevenaged management may occur. The Final Plan does not call for commercial thinning as a regular practice so entries are reduced further. Obviously a one-acre group selection cut would require only one entry per rotation, but managing more than one acre using this system produces repeated entries just like the individual selection method.

Our experience on the Kootenai with repeated salvage harvests, that parallel an uneven-aged management scheme, indicates that alder and brush are often stimulated thus preventing regeneration. In other cases cedar, grand fir, hemlock and alpine fir (shade tolerant species) regenerate and the value of the stand declines dramatically. These stands tend to be lower quality than natural occuring stands of these species because these species are susceptable to mechanical damage (and subsequent rot problems) during harvest and the repeated entries of uneven-aged management increase the risk of such damage. They are also likely to be suppressed because of the remaining overstory. Long term yields can be predicted for this type of management (with difficulty), but they would be quite low and quite low valued. The existing stands on the Kootenai are valuable because they arose in an even-aged manner as a result of fire. The even-aged management generally called for in the Final Plan duplicates this natural regeneration process without the risks and costs of fire.

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These paragraphs note that uneven-aged management "is used rarely on the Kootenai (less than one percent of all acres logged) because it requires frequent entries (every 10 years) and is thus very costly and repetitively disruptive to wildlife." It also "favors shade tolerant species for which management is limited here." Lastly, planners note that yields of uneven-aged stands are difficult to predict.

For all these reasons, the EIS says uneven-aged management is only used "where shade tolerant species are preferred," "where a visual quality objective cannot be achieved in any other way, or where an area needs special protection." These statements are entirely conclusory and provide no analysis which would help readers decide the question for themselves. Moreover, some of the statements are simply wrong.

It is not true that uneven-aged management requires entries every 10 years. Individual tree selection is frequently used with 20 or even 30 year entry cycles. Group selection, another form of uneven-aged management, is simply clearcutting on a very small scale -- one acre or less. Under this system, any acre would receive no more entries than under even-aged management.

Moreover, proposed management regimes call for a precommercial thin, one or two commercial thins, and a clearcut or two-stage shelterwood cut all within 110 years -- fewer, in lodgepole. Thus, even-aged management will have three to five entries in 110 years, not that many less and possibly more than uneven-aged management. 8

It is also untrue that yields from uneven-aged management are difficult to predict, at least relative to yields under even-aged management. The Forest Service has no more experience with growing second-growth stands in the Rockies using even-aged management than using uneven-aged management.

As described above, the yield tables used by Kootenai planners are high speculative and may need major changes. With very little additional effort, planners could design uneven-aged yield tables which are at least as reliable as the even-aged tables.

It may also be untrue that uneven-aged management is more costly than even-aged management. Timber companies in California are urging the Forest Service to consider uneven-aged management because it is less costly when even-aged management is limited to 40-acre clearcuts, requires expensive reforestation treatments, and brush problems cannot be treated with controversial herbicides. While these factors may not all apply to the Kootenai, only an analysis of the alternatives will show for sure.

A memo to the Chief of the Forest Service from the U.S.D.A. Office of General Counsel on 20 January 1985 urged the Forest Service to consider at least one alternative in each forest plan which uses uneven-aged management as the predominant harvest method. The memo noted that such an alternative is probably required by both NFMA and the National Environmental Policy Act.

If developed in good faith, such an alternative could greatly benefit the Plan. It would identify areas where uneven-aged management might provide higher values or at least be no more costly, than even-aged management. It would give the public an opportunity to consider the options. And it may lead planners to proposed more uneven-aged management in other alternatives.

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8. (cont) As noted above, brush problems occur with uneven-aged management and would be a costly problem to solve. Likewise regeneration of high value species which are not shade tolerent and which require mineral soil for a seed bed would be quite difficult and costly with uneven-aged management. With group selection cutting, slash treatment is often necessary and this becomes more costly in a one acre unit than in a larger clearcut. Our experience with very small clearcuts shows that costs are much greater than for larger clearcuts.

The Final Plan does not ban uneven-aged management and silviculturists will prescribe that treatment where it can best meet the goals of the management area in question. Our experience is that such management can be effective on very few locations on this Forest. Modeling this treatment on those areas is not likely to produce an alternative noticably different from those already developed.

Grazing

Domestic livestock grazing is not a major program in the Kootenai Forest, and it receives little attention from planners. After determining that costs which average just over $6 per AUM are less than the benefits of $8.61 per AUM as assumed by the 1980 RPA Program, planners simply allowed all alternatives to provide current levels of grazing.

This is far from adequate, considering the grazing has major effects on wildlife and water quality. In addition, a more recent joint Forest Service-Bureau of Land Management study, the 1985 **Grazing Fee Review and Evaluation**, estimated that the true value of grazing on the Kootenai is far lower than that used in the 1980 RPA.

The Review found that grazing values in 1983 were about $6.84 per AUM. In 1978 dollars, which are used throughout the Kootenai EIS, this is equal to about $4.75 per AUM -- far less than the costs estimated by planners.

Although planners used only one cost in FORPLAN, they actually estimated that a low intensity grazing program would cost just over $5 per AUM, and a high intensity program would cost just over $7 an AUM. Planners gave no reason for assuming a medium intensity program when capacity is so much greater than use. However, in doing so they increased the apparent losses from $0.25 to $1.25 per AUM. 9

Of course, the actual losses are much more. Grazing fee receipts in 1985 were only $1.35 an AUM, or under $0.88 per AUM in 1978 dollars. If costs are $6.07 as estimated by planners, actual losses are about $5.20 per AUM or about $67,600 for the entire program.

Considering these facts, planners are highly remiss in not considering a variety of grazing alternatives. Public land grazing is a controversial program, and some alternatives should have considered eliminating all activities which lose money, if not the elimination of the entire program.

The Forest Budget and Monitoring

Information about costs and returns from the Plan and alternatives is found on pages II-174 through II-181 of the EIS. Interpreting this information is complicated by a Forest Service error in counting "timber returns" (pages II-180 and II-181). Instead of simply subtracting purchaser costs from mill values in FORPLAN, planners also subtracted sale preparation and administration costs. Since these are costs to the Forest Service, they should have been added to "timber costs" (pages II-174 and II-175) instead. 10

The Forest Plan proposes an annual budget of $25.2 million over the next 10 years, almost a 30 percent increase over the 1980 budget of $17.9 million. Over half of the increase is due to increased road costs, and the remainder is due to increased timber costs. Since virtually all new roads will be constructed primarily to access timber, the entire increase can be said to be due to timber.

9. We agree that livestock grazing is not a major program on this Forest. Because of the minor nature of the program we can not agree that it has major impacts on wildlife and water quality. The management direction provided in the Forest Plan provides the direction necessary to prevent significant conflicts with wildlife by assuring that wildlife will have precedence over livestock where insufficient forage exists for both. By conforming to the direction of the forthcoming "Soil and Water Conservation Practices Handbook" (FSH 2509.22), livestock management will also have minimal impact on water quality.

   The estimated value of grazing dropped from $13.11 per AUM in the 1980 RPA analysis to $7.56 per AUM in the 1985 RPA analysis (1985 dollars). The estimated cost to supply this grazing is $9.24 per AUM (again in 1985 dollars). Thus the loss can be calculated to be $1.68/AUM. Note that the value of each AUM exceeds the price which the Forest Service is permitted to charge for it (about $1.35/AUM). In terms of returns to the treasury, there is an estimated net outflow of about $7.90 per AUM on the Kootenai National Forest.

   The Forest could generate income to the treasury by charging at least $9.24 per AUM for grazing, however this is not permitted by law. By continuing to suppply grazing on this Forest at the permitted prices, we are making a contribution to the National policy of low food prices and providing some local social benefit in terms of jobs and income. The net public benefit is served by continuing the program at approximately the historic levels.

   The effects of eliminating the grazing program from the Proposed Action in the DEIS are summarized on the following chart (note that values and costs are as used in the EIS):

REDUCTION IN:		
PNV (4%)	$ 830,000	(0.07%)
FS costs (Decade 1)	$ 80,000/year	(0.32%)
Employment	10 jobs	(0.43%)
Income	$ 130,000/year	(0.33%)
Returns to Treasury	$ 20,000/year	(0.09%)
Market benefits	$ 110,000/year	(0.52%)
Discounted Benefits	$2,800,000	(0.18%)
Discounted Costs	$1,970,000	(0.30%)

   The economic effects of the program are tiny, making up less than 1% of the Forest's contribution in any category. As noted in Chapter IV of the EIS, the enviromental impacts of the program on this Forest are quite small so eliminating the program would provide for negligible improvement. Overall the impacts of the program are so slight that generating another alternative to describe them would not be fruitful.

10. See next page.

In return, planners project more than a doubling of timber receipts over the current direction. However, this forecast must be tempered both by the unrealistic timber values used and the fact that the current direction alternative appears to require extremely inefficient prescriptions.

For example, although alternative F produces less than 10 percent more timber than the current direction, planners project more than a 60 percent increase in receipts. If planners' projections of timber prices were valid, an "optimized current direction" would increase receipts by 50 percent, or to $13.65 million, while maintaining current levels of timber sales.

Yet the timber values projected by planners are far too high. Removing the timber price trends reduces annual receipts under the preferred alternative by $4.2 million or 20 percent. Reducing timber prices to reflect today's market should reduce stumpage values by at least another 40 percent. In total, the timber receipts reported on pages II-180 and II-181 are probably more than twice the actual amounts that will be received in any alternative. 10

Reducing the timber returns by half results in annual receipts of $10.6 million under the preferred alternative and $6.8 under an optimized current direction. Thus, the additional timber cut under the preferred alternative is likely to produce less than $4 million in annual receipts. Yet roads and timber costs will be $5.6 million more than under the current direction.

It is clear that much of the timber proposed for harvest under the preferred alternative will lose money. While the Forest Service says that roads may provide benefits for recreation and other resources, it is clear that there is already a vast surplus of recreation roads on the Kootenai Forest.

The Forest Service also says that many roads built in the next few years will provide access to timber which may not be cut in several decades. Yet timber values in many roadless areas are so low that the timber in those areas will never pay for the roads needed to access them. 11

Not only is the proposed budget highly inefficient, the Plan provides no contingencies for when actual budgets are less than planned. timber and roads now account for 77 percent of the Kootenai's budget. If the Plan is implemented yet Congress appropriates no additional funds, timber and roads could consume the entire budget, leaving nothing for other resources. 12

This sort of problem should be addressed by the Plan's monitoring program. The program should specify how reduced budgets should be allocated to various resources. If certain wildlife activities are needed to mitigate the effects of timber management, for example, then the monitoring program should insure that funds for those activities are not cut unless timber sales are reduced to compensate.

Yet the Kootenai monitoring program provides no such assurance. If appropriated funding fails to meet the requirements of the Plan, the program only says that this "will be evaluated as to [its] significance, and appropriate amendments or revisions made" (Plan page IV-3). 13

CHEC asked planners what would happen if budgets were not increased as required by the Plan. They noted that the budgets include line item allocations to various activities, such as sale preparation or road construction. 14

Response to letter #301 - Montana Wilderness Assoc. (CHEC), pg. 301gg

10. We agree that the sale preparation and administrative costs should not have been subtracted from the lumber value in calculating returns to the treasury. The corrected figures are displayed in the FEIS. The sale preparation and administrative costs were included as costs to the Forest Service as you suggest. They are correctly shown on pages II-174 and II-175 of the DEIS as a portion of the timber costs. Correcting this error has the effect of increasing timber values without increasing costs. The alternative with the highest contribution to Present Net Value (Alt M) generates almost 19% more timber than the Final Plan, even if a set of economic data such as you describe is used. The Final Plan is not as efficient as Alternative M, because non-priced values such as the risk of losing old growth and the value of a scenic view are considered. As discussed in Chapter II of the FEIS, the average cost of the Final Plan, on a timber volume basis, is one of the lowest of all the alternatives.

11. Because all timber is not removed from all areas adjacent to roads, those roads that already exist and those that will be constructed provide access to timber stands that will be harvested in the future.

12. The budget associated with the Final Plan is our best estimate of the funding needed to produce the outputs associated with the Final Plan. The minimum management requirements and the guidelines provided for the Forest and for each Management Area must be carried out for timber harvest to occur. Funding for these items is typically provided as part of the timber costs ("Other Resource Support" in the Timber Program Balance Sheet for 1985 displayed in Chapter III of the FEIS). Funding for items such as wildlife habitat improvement, campground maintenance, trail construction and so on, may in fact not be appropriated by Congress, but if timber harvest is funded certain other items must be funded (forestry and silvilculture, general administration, road engineering, reforestation and other resource support). The Monitoring and Evaluation Plan points out the levels of monitoring that are considered essential for all programs and the levels which vary by program size.

13. As pointed out in the Decision Flow Diagram (Page IV-15 of the Draft Plan), where the budget is insufficient to produce projected quality and quantity of outputs and the future budget outlook is not favorable to accomplish projected flow and backlog of outputs, the Plan will be revised.

Through these allocations, Congress "directs" the Forest to emphasize certain activities. If the emphasis is to cut more timber at the expense of other resources in the Plan, the Forest Service will have to obey, said planners.

This indicates a very naive few of the budgeting process. The Administration presents Congress with a line item budget, but that budget is not broken down by national forest or even by region. There is no guarantee that the budget has anything to do with RPA objectives or the forest plans. 14

Few members of Congress have the time to review even the line items they are given, much less determine how they will affect individual national forests. Thus, the budget can hardly be called a "directive" from Congress to cut more timber at the expense of the Forest Plan.

The Forest Service has invested millions of dollars in forest planning. Unless it designs monitoring programs which can guard against misguided budgeting, there is little chance that the plans will ever be successfully implemented.

Conclusion

The Kootenai Forest Plan proposes a 30 percent increase in timber harvests, requiring a 35 percent increase in timber and road costs. Yet actual timber receipts over the next ten years are likely to be less than 1980 receipts, both because of changes in the marketplace for timber and because the Plan proposes increased harvests of marginal timber lands. 15

Yet this is obscured by greatly overestimated timber prices and inflated price trends. Correcting these estimates will probably reduce timber receipts estimated by planners by half.

The timber yield tables also need correction. Projected yields of second-growth, particularly the increased growth ascribed to thinnings, are unrealistic. Correcting these assumptions, along with related assumptions regarding the age of culmination of mean annual increment, is likely to result in changes in the proposed Plan and alternatives. 16

Correcting timber yields and values should lead to a wider range of timber alternatives. None now propose a decrease in harvest levels, yet at today's timber prices much of the land in the suitable timber base probably loses money. More accurate timber values may show that reduced timber harvests could produce increased present net values.

A wider range of domestic grazing alternatives is also needed. Planners should revise the estimated grazing values used in FORPLAN. Since grazing values are probably less than costs, planners should seriously consider alternatives which reduce or eliminate livestock grazing from the Forest. 17

Altogether, these changes should result in a greatly improved Plan. Such a Plan would not proposed to build roads into roadless areas at a loss, spend huge amounts of money on stagnated lodgepole, or harvest timber on steep slopes unless the benefits of these activities clearly outweigh the costs. 18

14. As noted in response #13, above, insufficient funding will eventually lead to revision of the Plan. The process you describe for the budgeting process is essentially correct. The intent of Congress is derived from the manner in which it deals with the budget items presented to it. If for example all funds for road construction are eliminated, that is interpreted as a directive to the Forest Service to stop the practice. The intent of Congress is passed from Washington to the Regional level in the form of goals and budgets on the basis of the RPA analysis (which will eventually be closely linked to the Final Forest Plans). The goals and budgets are further subdivided by the Regions and assigned to Forests on the basis of the Forest Plans. The feasibility of overall programs (such as eliminating road construction while greatly increasing timber harvesting) is negotiated between the Washington level and Congress through official testimony and related staff work. Goals and funding provided to Forests are negotiated with the Regional level to avoid impossible situations. Once the goals and funds reach the Forest level, the Monitoring and Evaluation Plan is used to insure that the work is properly carried out. Where a problem appears, the Decison Flow Diagram is used to identify the appropriate resolution.

15. The future is difficult to predict. As discussed in several of the above responses, we have explored two different scenarios and displayed the results in the FEIS. A different scenario will probably occur and the Monitoring and Evaluation Plan will be used to identify any problems. The five year review, the normal ten year revision and the mandatory revision of the Plan in 15 years plus the option for earlier revisions provides many opportunities to adjust as the future unfolds.

16. See response #4 above.

17. See response #9 above.

18. See above responses.

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MONTANA WOMEN IN TIMBER

Star Rt 1 Box 36
Libby, Mt 59923

October 29, 1985

J.F. Rathbun
Kootenai National Forest
Rt 3 Box 700
Libby, Mt 59923

Sir;

Our area needs must be considered in conjunction with plans being made for Kootenai Nat'l Forest. A need to protect our forests is not only compatible but essential. More wilderness areas do not further either cause. 1

Please consider alternative N as appropriate for our area.

Sincerely,
Jeddye L Beebe, president
Montana Women in Timber

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Response to Letter #224 - Women in Timber, first page

1. Alternative N, in our judgement, does not resolve all the issues as well as the Final Forest Plan. Please see the discussion on the Net Public Benefit in Chapter II of the Draft and Final EIS.

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302

Our regional office urges you to consider the importance of riparian habitat, wilderness in the Scotchman Peak, Trout Creek, Ten Lakes & Cabinet additions & Tuchuck / T. Seton, and a reasonable timber removal (173 mil. bd. ft) and less roads. 1, 2, 3, 4

R. K. Turner

NATIONAL AUDUBON SOC.
4150 DARLEY SUITE 5
BOULDER CO. 80303

Response to Letter #302 - National Audubon Society, first page

1. Riparian Habitat is provided for in the Final Forest Plan. See the Riparian Area Standards in Chapter II.

2. Wilderness has been recommended in Scotchman Peak, Cabinet Additions, and in Ten Lakes. Roadless designations were recommended in Trout Creek, Tuchuck and Thompson-Seton. See the Final Forest Plan Map.

3. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

4. The total road miles have been reduced in the Final Forest Plan. See Chapter II of the Final EIS.

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NATIONAL WILDLIFE FEDERATION

Northern Rockies Natural Resource Center
240 N. Higgins, Missoula, Montana 59801
(406) 721-6705

November 1, 1985

James Rathbun
Forest Supervisor
Kootenai National Forest
Route 3, Box 700

Dear Mr. Rathbun:

Enclosed find the comments of the Montana and National Wildlife Federations on the draft Kootenai Forest Plan. In addition to our own comments we would like to endorese the comments submitted by Defenders of Wildlife, the Montana Wilderness Assocation and CHEC. We hope you find our review of the Forest Plan helpful.

Very truly yours,

Thomas France, Esq.

Response to Letter #268 - National Wildlife Federation, first page

No Response Needed on this page

INTRODUCTION

These comments are presented on behalf of the National and Montana Wildlife Federations. While in 1985 draft of the Kootenai Forest Plan represents a significant improvement over the 1982 draft, much work remains to be done if the Kootenai Forest is to achieve a reasonable and fair balance between commodity and non-commodity resources. The comments submitted herein are divided into two parts. First, we have attempted to examine the plan in light of Forest Service regulations and the National Forest Management Act. We can only conclude that the plan and EIS are legally deficient in a number of important areas. Second, we have reviewed several issues which represent important policy issues for the Forest. In these areas we have a number of serious questions about the planning direction identified by the Forest.

LEGAL PROBLEMS WITH THE PLAN:

I. <u>The Forest Plan Fails to Adequately Protect Fisheries or Riparian Areas and is Illegal Under the National Forest Management Act.</u>

The National Forest Management Act requires the Forest Service to insure that timber will only be cut where soil, slope or watershed conditions will not be irreversibly damaged and to protect all water areas where harvests are likely to seriously affect water quality and fish habitat. 16 U.S.C. 1604(g)(3)(E)(i),(iii). These provisions of law are in turn reflected in Forest Service regulatory requirements. <u>See</u> 36 C.F.R. 219.29; 36 C.F.R. 219.27 (a)(1) and (4); 1

Response to Letter #268 - National Wildlife Federation, page 268a

1. State-of-the-art methods for predicting sediment delivery to streams which affects fisheries habitat are not very reliable. Because of this low reliability we have reduced our reliance on those models and focused on insuring that problems do not occur on-the-ground. We have added items to the Monitoring and Evaluation Plan and the Forestwide Standards to insure that State Water Quality Standards will be attained. An important addition to the Forest Plan is the statement that directs the following; "Activities found not to be in compliance with with the State Water Quality standards will be brought into compliance, modified, or stopped". See the Final Forest Plan document.

36 C.F.R. 219.27 (c-f).

Despite these clear requirements of federal law, the forest plan indicates that the Kootenai Forest will continue past policies which have allowed for the degradation of water quality and fish habitat. Unless these serious deficiencies are remedied in the final plan, the Kootenai will be in violation of federal law and the Forest Service's own regulations. The Plan will also be internally inconsistent in that it will contradict its own stated management goals.

1

The Kootenai Plan sets forth the goal of meeting or exceeding state water quality goals while also maintaining and enhancing fisheries habitat. Plan, P. II-2, P. II-6. Yet there is no indication in the plan that these goals will be achieved or any explanation for this failure. Instead, every aspect of the Plan dealing with fish and water quality indicates a steady degradation of these resources.

The Plan notes that fish numbers will be reduced at the end of the first decade because of sedimentation. Plan, P. II-15. The Plan misleadingly states that fish numbers will be stable at the end of the fifth decade without explaining that fish populations will have declined through the first four decades of Plan implementation. Compare, Plan, P. II-16; DEIS Vol. I, P. II-34. Moreover, this decline comes on top of past management practices which have already seriously degraded fish habitat. DEIS, Vol. 1., P. II-9.

2

These fish losses are most severe on migiatory trout. DEIS, Vol. II-34. As the EIS makes clear, sedimentation from road building and

3

Response to Letter #268 - National Wildlife Federation, page 268b

1. See previous page.

2. As stated above in #1, sediment predictions have low reliability for predicting fisheries numbers. Because of this low reliability, in addition to the natural variability in fish populations irrespective of managent activities, fish numbers will not be used as an indicator of management activities. We will monitor the habitat parameters such as redd numbers, embeddedness, and sediment deposition which are considered to be more meaningful and consistent with proper fisheries management. These habitat parameters in addition to the State Water Quality standards should produce a more useful and workable tool to insure that fisheries habitat will not be degraded. See the Monitoring and Evaluation Plan in the Final Forest Plan document.

3. The Draft EIS projected declines in the number of catchable trout under all alternatives and were the result of the sediment calculations mentioned above which were considered to be of a low reliability. They were the best information available at the time and were useful in comparing the relative differences betwwen alternatives. In general, the alternatives that constructed the higher amounts of road resulted in higher projected adverse effects on the fish population. The public has expressed it's dissatisfaction with potential fish habitat degradation and the Final Forest Plan has been modified to ensure that fish habitat including water quality will not be degraded. See the Monitoring and Evaluation Plan.

timber harvest, coupled to related activities in riparian areas will lead to a reduction of fish numbers under all management alternatives. DEIS, Vol. 2, P. IV-55-56. Such degradation is illegal under the National Forest Mangement Act and Forest Service regulations. An institutionalized 40 year decline in fish popluations can only be characterized as irreversable damage to watersheds and a failure to protect water conditions and fish habitat from serious and adverse impacts. 16 U.S. 1604 (g)(3)(E)(i),(iii). 3

The Kootenai intends to rely on habitat imprivement projects to off-set the serious and adverse impacts of excessive sedimentation. Table IV-32 indicates that the preferred alternative relies on 120 habitat improvement projects per year to increase population, yet current projects have been averaging 30-50 per year. DEIS, IV-66. Information from the Northern Region office indicated only 14 projects were submitted in fiscal year 1985.
Fish populations are likely to decline even further than envisioned if funding for increased numbers of projects is not forthcoming. 4

Again this is contrary to the intent of the NFMA, which prohibits degradation of fish habitat. There is no assurance that increased levels of funding will be available to construct the number of projects called for in the plan.

In addition to these violations of law, 36 C.F.R. 219.19(a) states that each alternative in the Forest Plan "shall establish objectives for <u>the maintenance and improvement</u> of habitat for management indicator species..." (emphasis added). Again, the 5

Response to Letter #268 - National Wildlife Federation, page 268c

3. See previous page.

4. The Kootenai Forest intends to rely on using the best resource management procedures, including Soil and Water Conservation Practices and monitoring, to prevent sedimentation and other adversities from occurring to the fisheries. Any annual instream work will supplement these procedures to improve fisheries habitat. The Forest Plan proposed approximately 120 projects developed annually. This figure was based on past P&M and KV targets which are correlated to the annual projected harvest. In 1984 and 1985, the Forest accomplished 95 and 93 targets, respectively, (P&M and KV) two years of low funding as KV funding (based on previous years timber cut) was down from previous years. If KV funds continue to drop, it would be because timber harvest (and the associated road construction) had also decreased which would result in a lower potential for fish habitat degradation.

5. As stated in #3 above, Fish Numbers will not be used as an indicator of the fisheries resource because of the high variabilty in the population irrespective of the management activity occurring. The state-of-the-art management practices, as outlined in the Soil and Water Conservation Practices Handbook (FSH 2509.22) including road construction methods using filter windrows, will insure the maintenance of the fisheries habitat. In addition, fish habitat improvement projects as stated in #4 above will assure the improvement of the fisheries resource.

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institutuionalized decline in trout populations fails completely to meet the plain intent of this regulation. In all alternatives, the Kootenai Plan does not even approach preservation of the status quo much less identify a management strategy that will improve trout populations. This failure must be rectified before adoption of a final forest plan. 5

Another concern is the plan's failure to identify site specific riparian areas. Plan III-3. The planning regulations clearly require "special attention" to be given to land areas in riparian zones for a minimum of 100 feet. 36 C.F.R. 219.27(e). By failing to delineate these areas in the plan the "special attention" is left to the discretion of forest managers, contrary to the intent of the regulations. 6

The standards provided in the plan also fail to protect riparian zones. The expressed preference for even age management (clearcutting) will not protect riparian areas. Plan P. III-6. Similarly, the statement that "simulteneous openings resulting from timber harvest on both sides of a stream is undesireable" offers no assurance that such practices can't be pursued at the whim of the district rangers. Plan, P. III-6.

The plan's frank admission that degradation will occur under nearly all alternatives indicates a disregard for the fish resource in the preferred alternative. Inadequate riparian protections and misplaced reliance on habitat improvement further evidence the plan's disregard for fish. In sum, the Kootenai plan violates both the law 7

Response to Letter #268 - National Wildlife Federation, page 268d

5. See previous page.

6. Site specific delineation of riparian areas occurs at the project design level. The Forest Plan Riparian Area Managemnt Guidance states that the riparian area is "at least 100 feet from the aquatic feature". Guidance in the Forest Standards in Chapter II in the Forest Plan have been modified to ensure that State Water Quality Standards are met.

   It has been found that small regeneration harvest units along streamside zones have been more beneficial in terms of fish production and sediment prevention than unmanaged buffer strips. Unmanaged buffer strips encourage heavy blowdown which increases sediment from exposed root wads adjacent to streambanks, and channel braiding from excess debris accumulation. Whenever small timber-harvest units occur next to streams, harvest activities are modified to protect against soil compaction and streambank destruction, minimizing sediment introduction.

7. The Forest Plan's stated goal of the maintenance of the fisheries habitat will be assured through a combination of the application of the Riparian Area Guidance, Management Prescriptions, and Monitoring and Evaluation. The maintenance of water quality is a key indicator of the "health" of the Forest which includes the fishery habitat. The standard is clearly stated in the Forest Plan that if activities are found to not be in compliance with the State Water Quality Standards then the activity will be brought into compliance, modified, or stopped.

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and associated planning regulations.

7

II. The Plan Does not Provide for Proper Wilderness Management.

The applicable planning regulations require the Kootenai Forest to "provide for limiting and distributing visitor use of specific areas in accord with periodic estimates of the maximum levels of use...." 36 C.F.R. 219.18(a). The plan fails to satisify this regulation because there are no concrete proposals for distributing visitor use in the Forest's wilderness areas.

For example, Management Area 7 covers the Cabinet Mountains Wilderness Area. See Plan III-27-III-32. Management Areas 8 and 9 encompases the Scotchman Peaks, Cabinet Additions and Ten Lakes Wilderness areas. See Plan III-32-III-37. While the plan does attempt to monitor visitor use in these areas, there is no provision to limit or redistribute visitor use.

8

The failure to comply with this regulation is important because the plan notes that "since use (in wilderness areas) tends to concentrate in a few popular areas, management problems can be expected to intensify." DEIS IV-82. The current situation requires that this problem be addressed immediately. While the plan notes that current RVDs do not exceed capacity in the Cabinet Mountains Wilderness, major recreation use areas are already "sustaining increased degregation from the loss of vegetation in soil." DEIS IV-82. The plan must therefore be revised to specifically address existing and future problems pertaining to overuse of certain areas within the Cabinet Mountains Wilderness.

9

III. The Plan Fails to Adequately Address Vegetative Management.

Response to Letter #268 - National Wildlife Federation, page 268e

8. See the Cabinet Mountain Wilderness Action Plan.

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National Forest Management Act planning regulations state:

> "When vegetation is altered by management, the methods, timing and intensity of the practices determine the level of benefits that can be obtained from the affected resources. The vegetation management practices choosen for each vegetation type and circumstances shall be defined in the Forest Plan with applicable standards and guidelines and the reasons for the choices." 36 C.F.R. 219.15.

This regulation is of course the product of the intense public debate over Forest Service management practices which culminated in passage the of the National Forest Management Act. One of the principle concerns underlining this debate was the predominance of even age management practices on the national forests (clearcutting). To address this problem, Congress directed planners to assure that clearcutting be used only where it is the optimal harvest method and to use other management systems where they are appropriate. Despite the clear intent of Congress and the above regulation, the Kootenai EIS has only two paragraphs on uneven-age timber management. DEIS IV-9. According to the EIS, uneven-age harvest is "rarely used on the Kootenai (less than 1 percent of all acres logged) because it requires frequent entries (every 10 years) and is thus very costly and repetitively disrupted wildlife including the threatened grizzly bear." DEIS IV-9. The use of uneven-age management is thus summarily dismissed for the Kootenai plan.

The plan relies on uneven-age management in only those few isolated areas where shade tolorance species are preferred for visual quality objectives or where an area needs special protection. DEIS IV-9. This failure to realistically assess the use of uneven-age timber management violates the NFMA. The Kootenai relies on the unsupported conclusion that this type of management system is too

9

Response to Letter #268 - National Wildlife Federation, page 268f

9. Clearcutting was used as a modeling technique to estimate effects, primarily. The use of seed-tree and shelterwood cutting actually account for approximately 50% of the harvest method used on the Kootenai. Uneven-aged management is available as a silvicultural tool and can be applied as silvicultural prescriptions warrant. Riparian areas are an example where this system can be utilized.

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disruptive for wildlife, while failing to evaluate ■ in a similar fashion, the impacts of clearcutting. Clearcutting, can be even more disruptive to wildlife because it eliminates secure areas and thermal cover. It is the lack of secure areas that may be a key limiting factor for grizzlies on the Kootenai.

In order to comply with the above regulation, the forest must document the costs and benefits it attributes to uneven-age managements and provide ■ rational basis for rejecting this system. To comply with the intent of Congress, we feel that the Kootenai should actively pursue an alternative that places a greater importance on uneven-age management. 9

IV. The Kootenai Fails to Adequately Address Grazing.

While grazing is not a significant management activity on the Kootenai when compared to other national forests, it is still governed by Forest Service planning regulations as well regulations under the National Environmental Policy Act. Forest Service regulations require that forest planners identify land suitable for grazing and determine their condition. Lands in less than satisfactory condition shall be identified in appropriate action plan for the restoration. 36 C.F.R. 219.20(a). In addition NEPA requires that a reasonable range of alternative management directions be considered for various resources. The Kootenai has failed to comply with both of these directives. 10

Despite NEPA's requirement that forest plans consider a broad range of alternatives, there is no management alternative identified in the EIS which reduces grazing levels. Instead, it appears that forest planners simply allowed for all alterntives to provide for a

Response to Letter #268 - National Wildlife Federation, page 268g

9. See previous page.

10. We agree that livestock grazing is not a major program on this Forest. Because of the minor nature of the program we can not agree that it has major impacts on wildlife and water quality. The management direction provided in the Forest Plan provides the direction necessary to prevent significant conflicts with wildlife by assuring that wildlife will have precedence over livestock where insufficient forage exists for both. By conforming to the direction in the "Soil and Water Conservation Practices Handbook" (FSH 2509.22), livestock management will also have minimal impact on water quality.

The site-specific evaluation of grazing lands are on file in the Forest Supervisors headquartes.

The effects of eliminating the grazing program from the Proposed Action in the DEIS are summarized on the following chart (note that values and costs are as used in the EIS):

REDUCTION IN:		
PNV (4%)	$ 830,000	(0.07%)
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The Forest could generate income to the treasury by charging at least $9.24 per AUM for grazing, however this is not permitted by law. By continuing to suppply grazing on this Forest at the permitted prices, we are making a contribution to the National policy of low food prices and providing some local social benefit in terms of jobs and income. The Regional Forester has concluded that the net public benefit is served by continuing the program at approximately the historic levels.

The economic effects of the grazing program are small, making up less than 1% of the Forest's contribution in any category. As noted in Chapter IV of the EIS, the enviromental impacts of the program on this Forest are quite small so eliminating the program would provide for negligible improvement. Overall the impacts of the program are so slight that generating another alternative to describe them would not be fruitful.

continuation of curent grazing patterns.

This failure is compounded by the fact that we were unable to find the site specific evaluation of range condition as required by the planning regulations. These regulations require that grazing lands be identified and their condition and trend be determined. The anaylsis of the range resouces under the Affected Environment section of the plan consists of four paragraphs. DEIS III-75. The Environmental Consequences of the plan for grazing is similarly brief. DEIS IV-111. In addition, the plan fails to define "appropriate action" for the restoration of grazing lands in poor condition. 10

The Kootenai plan must be revised in order to include the information required for grazing lands. In addition, we urge the Kootenai to examine an alternative which reduces or eliminates the grazing program. In addition to saving the taxpayers dollars, other adverse impacts of grazing would be reduced.

V. <u>The Yield Tables for the Kootenai's Timber Resource are Inaccurate.</u>

A review by the National Wildlife Federation of the 1982 draft of the Kootenai plan pointed to serious problems with the Kootenai timber yield tables. It appears that the present plan incorporates similarly inaccurate information which has produced overly optimistic timber harvest schedules. 11

A new analysis by CHEC economic consultants found three major problems with the Kootenai yield tables. For example, CHEC found that the predicted growth of unmanaged second growth timber was as much as twice the performance of existing timber. In addition, these rapid

Response to Letter #268 - National Wildlife Federation, page 268h

10. See the previous page.

11. The timber yield tables used in the Forest Planning process have been reviewed and validated by comparison to existing stands on the Forest and by running selected stands through the latest version of Prognosis. The latest version is the state-of-the-art procedure for growth projections and has been revised several times since the yield tables were developed. The results show that the yield table projections compare favorably to the latest runs and to volumes of existing stands. There are some variances in stand attributes and no attempt has been made to justify or explain each one. The total volumes projected are reasonable based upon the comparisons and do not warrant revision of the tables.

    Culmination ages were also checked on the latest Prognosis runs and found to be in the 70 to 130 year range. This held true using either total cubic foot yields or only merchantable cubic foot yields. Therefore, the rotation ages used in the Forest Plan are considered to be within NFMA requirements.

    For a more detailed respose to Chec's comments see the Forest Service Response to the Montana Wilderness Association Letter #301.

    Copies of the comparison model runs and the existing stand data summaries are available for review at the Kootenai National Forest Supervisor's Office.

growth rates were expecated to continue long after the growth rates of existing stands dropped off. This lead to over optimistic future harvest volumes. However, there is no reason to expect that second growth stands will grow much more timber than is found in existing stands of the same age.

In addition, the planners predicted even more rapid growth of stands which are of precommercially and commercially thinned. Yet studies conducted in the Pacific Northwest show that intensive management does not lead to an increase of tree growth at the rates assumed by Kootenai planners. CHEC Kootenai Plan Analysis, P. 4-5. Finally, forest planners assume that stands will culminate in mean annual increments faster than normal yield tables indicate. This assumption allowed forest planners to assume harvest could occur more quickly on many stands. As CHEC notes, planners greatly increased the amount of timber which will be available for harvest in the next two decades which in turn allows a greater increase in first decade harvest over levels which could be allowed if a higher minimum harvest age were used. The result: "reduced harvest age allows more rapid liquidation of old growth timber." CHEC review at P. 7 11

VI. <u>The Proposed Plan Does Not Provide for the Reclamation of Existing and Future Roads.</u>

Federal regualtions require that planners provide that all roads are planned and designed to re-establish vegetative cover on the disturbed area within a reasonable period of time, not to exceed ten (10) years after the termination of a permit, unless the road is determined necessary as a permanent addition to the transportation system. 36 C.F.R. 219.27(a)(ii). Nowhere in the plan is this 12

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11. See previous page.

12. These are the guidelines for temporary roads and are presently existing Forest Service Manual Direction which is not repeated in the Forest Plan. Most of the roads on the Kootenai Forest are permanent system roads.

addressed. While it is possible that this regulation is addressed in the forest transportation plan, it is clearly the intent of this regulation that the reclamation of forest roads be addressed in the forest plan. The final plan should reflect this intent. Standards should be established in order to provide managers with clear objectives for road reclamation. 12

VII. The Kootenai Forest Plan Fails to Adequately Estimate Real Dollar Costs and Returns That Would Result From the Proposed Plan.

The proposed Kootenai plan does supply real dollar evaluations of costs and returns. Plan at EIS Vol. 1. This estimation, however, is a misrepresentation due to "lumping" of the overall forest values. While some areas of the forest may prove to be self-sufficient, the lumping together of costs may hide the fact that some areas of the forest may be on economic to harvest, therefore not justifying the level of logging projected in the plan. 36 C.F.R. 219.12 clearly requires forest planners to provide realistic estimations of planned costs and returns. In order to completely comply with the clear intention of this regulation, the plan should separate the various categories of costs and returns, including separation of harvest areas. Only by doing this can real-dollar evaluation be adequatly assigned. 13

VIII. The Proposed Plan Does Not Correctly Portray a Nondeclining sustained yield for the Overall Forest.

NFMA regulations require the Forest Service to schedule timber sales in a manner which ensures a sustained yield of timber over time. The requirement is specific to each national forest. 36 C.F.R. 14

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12. See previous page.

13. Every timber sale or acre does not have to contribute to increasing present net value. Some high-return lands will not be harvested unless low-return sale areas are harvested first, and vice-versa, because of geographic distribution, scheduling priority, etc. We have separated costs by categories, and all contributions to benefits are available. Multiple-use benefits occur in a mixture of sale opportunities.

14. The NFMA regulations (36 CFR 219.4[b][3]) indicates that forest plans will be developed for administrative units of the National Forest System and that these plans constitute the plans mentioned in section 13 of the RPA. Since the Kootenai National Forest is the administrative unit, no separate analysis of non-declining yield for the Kaniksu or Kootenai portions of the administrative unit is required, although it can be displayed as was done in the Draft EIS.

219.16(a)(2)(iv). As CHEC has pointed out, however, the Kootenai Forest has planned for two separate forest units, the Kootenai and the Kauiksu, but has not developed timber harvest schedules separately. As a result, each forest will experience declining timber yields in later decades. CHEC Comments, P. 13. This failure to plan timber harvest schedules which assure a sustained yield of logs from both forests clearly violates NFMA regulations and must be corrected in the final forest plan.

THE PLAN FAILS TO ADEQUATELY PROTECT NON-COMMODITY VALUES

I. Concerns over the Future of the Grizzly Bear in the Plan.

A. The Plan represents represents an improvement from the 1983 draft.

We note at the outset of this discussion that the revised Kootenai Plan is an improvement over the 1983 draft with respect to grizzly bears. In particular, the current plan's 100 percent allocation of occupied habitat in either supportative or compatable allocations is an improvement from the 77 percent allocation in the 1983.

In addition, we fully support the plan's efforts to augment grizzly populations in the Cabinet Yak Ecosystem. Given the low existent populations, we hope this effort is undertaked in the very near future.

B. Timber Harvesting is Overemphasized in Critical Grizzly Habitat.

210,000 acres of the 628,000 acres of Situation 1 habitat on the Kootenai National Forest will be available for scheduled timber harvest and road building. In addition, 127,000 of the 199,600 of Situation 2 habitat would be open to intensive timber management. These allocations pose a threat to grizzly bears.

It will be difficult for the forest to compensate for road

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14. See previous page.

15. No response needed.

16. The acres of grizzly bear habitat designated for timber management does not, in itself, indicate the degree of compatibilty with grizzly bear management. Other factors which are important include the standards and guidelines which are applied to logging in grizzly bear habitat, and the scheduling of activities which controls the amount of logging at any one time in an area.

construction and security loss on a third of the most critical grizzly habitat on the forest. Such compensation is largely premised on the unproven assumption that closing roads can mitigate for security losses caused by the road building. Even closed roads have an important impact on security because they still provide easy acess for hikers, hunters and others either on foot, horse or motorbike into areas that were previously inacessable. Effective road closures require case substantial enforcement program. The budget for monitoring road closures in the plan does not reflect the type of enforcement program that is needed to monitor road closures.

We support the management direction for Sitituation 1 habitat: "Management decisions will favor the needs of grizzly bears and grizzly habitat when other land use values compete." However, even under this guideline logging can take place under the guise of improving forage for the bears. Yet nowhere does the plan indicate that forage is a limiting factor for grizzlies. We would insist that the forest fully document the benetifs of timber management activities on grizzly habitat before utilizing this form of habitat manipulation.

Another aspect of the problem steming from an over emphasis on timber production is that it does not appear that timber yields in the new plan are any different from old plan as a result of the new timber-grizzly allocations. On the Flathead, these allocations resulted in approximately 25 percent reduction in timber harvest, a necessity because of the requirement of leaving large blocks of undisturbed land. For the Flathead in Situation 1 habitat, logging is limited to three consecutive years with one entry per drainage in a decade. For both Situation 1 and 2 habitat reentry cannot occur unless 40 percent or more of the drainage is maintained either as

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17. Compensation is addressed through the Cumulative Effects Analysis Process as prescribed in the Grizzly Management Guidelines in Appendix 8 of the Final Forest Plan; not through the premise that road closures can mitigate the necessary security. The amount of area that will be effected by any activity at any one time has a large bearing on the security that can be provided.

18. Budgets were speculative and have been removed from the Monitoring and Evaluation Plan. The Monitoring and Evaluation Plan concentrates instead on the objectives, frequency, and what will initiate further action.

19. Many of the forage plants preferred by bears grow best where timber canopies are open or absent. Through natural plant succession, closing timber canopies crowd out bear foods over time. One way of reversing succession is through timber harvest. This method is more desirable in many locations than alternative methods (e.g. fire) because it can improve bear habitat while supplying timber products. In order for logging to improve bear habitat, the proper harvest and post-harvest treatment methods must be used and security must be provided through effective road closures.

20. The constraints for operating in grizzly habitat are outlined in Appendix 8 of the Final Forest Plan (Grizzly Management Guidelines) and through the use of the Cumulative Effects Analysis Process.

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hiding or thermal cover and blocks of 5000 acres or larger are maintained adjacent to cutting timber. We found no such constraints in the Kootenai plan. 20

C. Monitoring

Grizzly bear standards and guildlines, on the whole, are adequate. As stated earlier, the plan represents an improvement from the 1983 draft in terms of grizzly land allocations. However it will be difficult to assess the success of the Kootenai grizzly program unless the bears are adequately monitored. Monitoring is expensive and time-consuming. There is nothing in the plan that assures the proposed monitoring will take place because monitoring ulimately depends on funding levels. In order to counteract possible future reductions in monitoring budgets, we urge the Kootenai forest to adopt a written policy that will reduce management activities when they cannot be properly monitored. This policy would ensure that if the forest to chooses to harvest large volumes of timber in Situation 1 habitat, that adequate monitoring would be included as a cost of administrating these sales to ensure compensation is working. If such monitoring cannot be undertaken as a part of the timber harvest activities, then such *harvests should not be undertaken.* 21

II. <u>The Plan Projects Unacceptably High Levels of Road Cosntruction that Degrades other Multiple-Use Resources.</u>

The proposed alternative projects an increase in road construction from a current milage of 6,000 to 10,692 at the end of the fifth decade. DEIS IV-51. In fact every alternative considered by the forest projected substantial increases in road construction, with the minimum amount considered being 3,833 miles (alternative I). 22

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21. We believe that the concerns you have mentioned will now be adequately met in Item C-7 in the Monitoring and Evaluation Plan in the Forest Plan document, section IV.

22. Road building is an effect of managing land for timber production. If timber is to be harvested then roads are necessary. The needed road miles shown in the various documents are not "targets" or "goals", but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those necessary to manage the land base are ever built. For the most part, the roads called for in the Final Forest Plan are to be constructed in areas that are not defined as "roadless" and recent experience has shown a declining amount of roads are being built because of the public concern for the amount and cost of roads (See Chapter II of the Final EIS).

    The most direct way to reduce the needed road miles is to reduce the size of the land base which is managed with timber production as a goal (the regulated base). The Final Plan has reduced the regulated base, from that shown in the Draft EIS. Reducing the regulated base directly reduces the quantity of timber that may be harvested over time under a non-declining yield schedule which reduces the need for roads. As depicted in the Minimum Management benchmark in the Draft EIS, elimination of the regulated base will eventually end all timber harvest and the need for additional roads. This, in turn, will have severe effects on the local economy. Alternative F, as displayed in the Draft EIS, had a regulated base 255,000 acres smaller than the Proposed Action (Alt. J) and 900 miles fewer roads. This alternative describes a realistic low end of the timber harvest spectrum when all impacts and issues are considered.

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It is apparent that Kootenai forest managers intend a vigorious road construction program on their forests no matter what alternative is selected. Of course, the increase in road construction can be traced to the fact that all alternatives considered by the forest project substanital timber harvests. See Table IV-2.

We feel that the Kootenai Forest, in order to fully comply with NEPA's requirement that a reasonable range of alternatives be considered, should project an alternative showing a substantial reduction in timber harvest and road construction. 22

The road construction program envisioned under the preferred alternative will have adverse consequences on a variety of multiple-use resources. Road construction and their use by vehicles impact big game habitat more than any other forest management activity. DEIS IV-53. Increased vehicle access results in a loss of security areas, displacement of animals, increased competition amoung animals for more limited resources and increased vulnerability of animals to legal and illegal harvest. DEIS IV-53.

In order to off-set the consequences of road construction on big game animals, the Kootenai proposes an extensive system of road closures. In fact, under the preferred alternative nearly 60 percent of the forest's roads will be resricted. DEIS IV-54. While we support the concept of the road closures to protect big game, there are obvious problems with relying on road closures. Formost among these is the enforcement effort required to assure that closures are effective. This enforcement requires additional personnel, both from the state and the Forest Service. 23

In addition, roads even when resricted still provide far easier access by hunters either on foot or horseback into remote areas. In

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22. See previous page.

23. Road closures, in order to be effective, must have an active enforcemet program. Personnel from both the State and the Forest Service co-operate in this effort and do a large part of this job while carrying out other duties on the Forest. In recent years the Public has has also been a big help with the enforcement problem by turning in violations and we expect this trend to continue.

addition to impacting big game, roads generate sediment which in turn degrades the fishery resource. DEIS IV-55. This problem has been discussed in another section of these comments and will not repeated here. In addition, roads increase access to streams, which can lead to overfishing. DEIS IV-55. This problem can be particularly acute for west slope cutthrout trout a species that is suseptible to overfishing. 23 24

Finally, construction of roads in previously prystine areas means that these areas can no longer be considered for inclusion into the National Wilderness Preservation system. DEIS IV-52. Of the forest's 403,700 acres of roadless lands, only 50 percent of this will remain unroaded by the end of the fifth decade. See Table II-6. Thus a direct consequence of the forest's road building program is the permanent destruction of 50 percent of the remaining roadless resource. 25

Related to the availability of the roadless resource is the forest's ability to satisfy increasing demand for roadless and semi-primitive recreation. As roadless areas become eliminated, use is concentrated into the remaining areas, degrading the quality of experience. Unfortunatly, the Kootenai projects that beyond the sixth decade, the demand for semi-primitive motorized recreation opportunities is expected to exceed the capacity. DEIS IV-74.

In sum, the timber harvest and road construction programs projected by the Kootenai forest will cause substantial degredation of other multiple-use resources. We feel that the preferred alternative violates the Multiple-use and Sustained Yield Act because of the overriding dominance of the timber resource at the expense of other multiple-use values. While the Forest Service does have discreation 26

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24. Closing roads immediately following timber activities should discourage fishing access to streams vulnerable to fishing pressure. Also, designing roads away from the immediate streamcourses should minimize access opportunities. Where a problem still exists following road closures, coordination with the Montana Department of Fish, Wildlife, and Parks may be necessary to consider changing the States' fishing management of a given watershed (e.g. decreasing harvest limits, fishing season, etc.).

25. The statement made about a ..."permanent destruction of 50 percent of the remaining roadless resource"... is incorrect. 202,000 acres were proposed for roadless designation (50%) plus 66,500 acres of wilderness (15%) for a total of 267,500 acres or 65% of the total inventoried roadless resource will be protected. During the life of the Propsed Action and the Final Forest Plan, 10,000 acres (2%) are scheduled for development which would remove the future option of reconsideration for wilderness (See Figure II-45 in the Draft EIS). This is the lowest amount of inventoried roadless area scheduled for development of all the alternatives, except for Alt. H and Alt. O which recommended wilderness and roadless, respectively, on all the inventoried roadless areas.

26. The Proposed Action and Final Forest Plan were developed with the purposeful intent of maximizing the Net Public Benefit which included the highest possible integration of all the multiple-uses to resolve the Issues in a manner that appeared both desireable and feasible. The programs projected by the Proposed Action and Final Forest Plan are a result of the estimated potential of the Kootenai National Forest, which is considered to be a highly productive forest in many of the natural resouces such as timber, wildlife, fisheries and minerals. If incorrect projections are being inadvertantly made because of incorrect or inadequate data, these shortcomings should become quickly evident through the process of monitoring and evaluation which would display the need for a prompt revision of the Final Forest Plan.

in managing these multiple-use resources, there's nothing the plain language of the Multiple-use and Sustained Yield Act that justifies the management direction called for in the Kootenai Plan. 26

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26. See previous page.

The Nature Conservancy

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October 11, 1985

James R. Rathbun
Forest Supervisor
Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun,

Following is some information which should be useful to you in the forest planning process. The Montana field office of The Nature Conservancy has begun a biological inventory in the state, as part of a nationwide effort called the Natural Heritage Program. The primary goal of The Nature Conservancy is to preserve species diversity, and the Natural Heritage program is the scientific data base we use to identify species and communities which are in need of protection. At this point we want to provide you with a list of special occurrences on your forest, at least those that we know of through our fledging inventory.

I do not envy you the arduous task of creating your forest plan, and I imagine it is an exercise in frustration to respond and incorporate all of the public comments into these plans. Hopefully our input will over the long run simplify your job, rather than complicate it. The Forest Planning Act recognizes many of the same concerns which are important to The Nature Conservancy. Long term maintenance of our biological life-support systems requires long-range planning which is in turn dependent on a thorough understanding and inventory of those systems.

The Forest Service is mandated to maintain viable populations of existing native and desired non-native plants and animals, and to share in the recovery plans for endangered and threatened species (FSM 2621.1). To do this, the Forest Service manual describes the kinds of inventories that are needed, and recommends that this information be obtained from other resource inventories, instead of using Forest Service time to collect this data (FSM 2621.3). The Nature Conservancy designed Natural Heritage to be a widely used source document of previously scattered or unavailable information. The Oregon Program provides information for 27 public agencies, 11 private institutions and consulting firms, and eight colleges and universities.

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No response needed for this page.

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Presently, we have an initial list of critical species and communities and their occurrences in Montana. Where that information is relevant to your forest, it is included in this commentary. During the '85 state legislative session, the Natural Heritage Program was deemed important enough to be funded, and the inventory will now move into formal operation with the hiring of specific natural heritage biologists. National Natural Heritage staff will supervise the implementation of this program, using the standardized system which has been used in 39 states. However, the state of Montana has ultimate authority over the program and the information system will be housed in the state library system.

In recognition of your planning deadlines, we want to provide you with what information we have at this time. However, our data bank is far from complete. As more information becomes available, we will be happy to provide it to you. We would also appreciate your feedback on what particular kinds of information will be most valuable. As our data base begins to take shape, we will be in a position to suggest areas for special management consideration, as well as notify you of unusual occurrences. Although this inventory will add to the list of species to worry about, we find that the inventory research also results in removing some species from the "worry" list. I have included a key to our ranking system so you will understand how we determine our protection priorities.

Thank you for the opportunity to participate in the forest planning process.

If you have any questions about this commentary, or about The Nature Conservancy and the Natural Heritage Program, please feel free to call me.

Sincerely,

Joan Bird

Joan Bird
Montana Protection Planner

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No response needed for this page.

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page three

GENERAL COMMENTS ON THE KOOTENAI NATIONAL FOREST PLAN

The Kootenai National Forest has done an admirable job of writing a plan which is coherent and well-organized. The many people responsible deserve much credit for their efforts. Although it is obvious that timber production is the major theme of the management plan, it is also obvious that other uses are increasing in importance. Given the current economics of the timber market, and the increasing demand for other kinds of resources, this is a logical shift. It is also bound to be difficult, as any major changes in traditional management emphasis will be in such a large organization. This is a particularly delicate community relations problem where the local economy is closely tied to forest management.

One of the goals of forest planning as delineated in the National Forest Management Act is the preservation of diversity in both plant and animal communities (NFMA Regulation 219.27 and NFMA Law Section 6 (g)(3)(B) Diversity). Certainly the intent to maintain species diversity is inherent in the Kootenai Forest Plan, and several specific goals will contribute to maintaining species diversity (#8, 9, 10, 16, 19, 23, p 11-3, proposed forest plan). However, maintenance of plant species diversity for its own sake (different from habitat or age class diversity) is not covered by any of these. The Nature Conservancy feels that maintenance of species diversity is a fundamental tenet of prudent land management which merits inclusion in the list of formal goals at the beginning of the plan. 1

Inventorying, as well as monitoring and management of rare elements, is necessary to ensure the existence of viable populations of these native species. This level of concern is mandated by the Forest Service Manual (Title 2600), but forest planners have told me that few if any funds have been budgeted for this purpose. The Nature Conservancy is well aware of the difficulty of doing a job without adequate funding. We urge the Kootenai National Forest to request additional funding to adequately meet your responsibility to identify rare, endangered, and threatened species, and to maintain viable populations of existing native plants and animals (FSM 2670.12). The Nature Conservancy is open to suggestions as to how we can assist you at the local, regional, or national level in obtaining funding which will get the job done. 2

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1. We agree and feel our plan provides for this requirement, however, we do not repeat statuatory requirements in the plan. We have added an Objective dealing with sensitive species (See the Final Forest Plan document).

2. Budget requests will be made as a normal management process, but the final outcome will remain a congressional prerogative.

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RARE PLANTS ON THE KOOTENAI NATIONAL FOREST

1. Allium fibrillum (Fringed onion) G3/S1 3 (1)

Status: Listed by The Nature Conservancy as critically endangered in *Montana and threatened globally. Listed as Recommended Threatened* by the Montana Rare Plant Project. Regional endemic with only one known occurrence in the state. Old records exist for Glacier National Park, but none in the last 40 years.

Habitat: Moist (vernal) meadows and forest openings at low to mid-elevations.

Location: Troy Ranger District, Mt. Vernon (SE 1/4 of Sec. 35, T29N, R34W). Site is 1/4 mi west of the Mt. Vernon summit, south facing rock ledges at 5300' (See Appendix B).

Management Recommendations: The site needs to be assessed for present and future threats, especially regarding mining activity. The proposed management (MA 2) offers some protection. If the plant occurs on the mining claim, the landowners should be notified. There may be additional sites in the area. More inventory work is needed. This plant will be nominated for the USFS Region 1 sensitive species list.

2. Comandra livida (Northern bastard toadflax) G4/S1 3 (2)

Status: Listed by The Nature Conservancy as critically endangered in Montana, but apparently secure globally. Listed as Recommended Threatened by the Montana Rare Plant Project. Peripheral species, three known locations in Montana.

Habitat: Moist coniferous forests at low elevations.

Location: Yaak Ranger District, Pete Creek (NE 1/4 of Sec. 30, T36N, R32W). In lodgepole pine forest on slightly peaty soil with Arabis nudicaulis, Vaccinium spp. and Lycopodium complanatum, 3250' (See Appendix C).

Management Recommendations: The proposed management (MA 12) is not necessarily incompatible with protection. However the site needs to be assessed *for threats from future timber harvesting. The Nature* Conservancy would like to see this site protected. Further inventorying may turn up additional locations which could be alternative protection sites. This plant will be nominated for the USFS Region 1 sensitive species list.

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3(1) This list of three rare plants and five rare animals, and the recommended management protection has been distributed to the District Rangers and Forest Staff. It will be used when planning any activity in the respective areas.

3(2) See response #3(1) above.

3. Cypripedium calceolus var. parviflorum (Yellow lady's slipper) G5T2/S2 3 (3)

Status: This variety is listed by The Nature Conservancy as endangered in Montana and globally, though the species itself is widespread and secure globally. Recommended for federal status in Idaho. Listed as state threatened in Washington, state endangered in Oregon, and rare in Wyoming. The species is fragile and prone to extirpation. Ten collection sites in Montana, but several are not presently locateable and may be lost.

Habitat: Moist woods and (often calcareous) bogs at lower elevations.

Location: Fortine Ranger District, Dickey Lake (SE 1/4 of Sec. 9, T34N, R25W) Near Hwy. 93 at the north end of Dicky Lake (See Appendix D).

Management Recommendations: The proposed management for this site is MA 6. The site needs to be assessed for present and future threats from recreation and road maintenance. This is a very showy plant, and may need protection from collectors. One possible solution would be to designate the site as an SIA and/or put up information signs forbidding collection of the orchid. This plant may be nominated for the Region 1 sensitive species list.

(Maps are on file in the Planning Department Of the Kootenai National Forest)

3(3) See response to #3(1) above.

RARE ANIMALS ON THE KOOTENAI NATIONAL FOREST

The Nature Conservancy's data on Montana animal species is not as developed as the data for rare plants. We have just hired three full-time biologists to work on the Natural Heritage inventory, including a zoologist. We expect that this will rapidly increase our data base in the next year. However, we do have several significant occurrences on our rudimentary scorecard.

The Kootenai Forest has obviously taken great pains to address management of federally listed threatened and endangered species. The agency expertise of U.S. Fish and Wildlife, and Montana Department of Fish Wildlife and Parks should be heeded to determine if the proposed plan will in fact aid in the recovery of these species.

Besides the officially recognized listed species there are several additional native species which The Nature Conservancy deems in need of protection to maintain viable populations. All of these will be nominated for the USFS Region 1 sensitive species list.

1. Couer d'Alene salamander (Plethodon vandykei idahoensis) G2Q/S1 4. (1)

In July, 1984, a group of Idaho biologists petitioned the U.S. Fish and Wildlife Service for emergency listing of this subspecies as threatened or endangered. A recent master's study had shown that several historical occurrences had disappeared, and extensive searching had turned up only two new locations. Two herpetologists consulted for comments on the petition questioned the abilities of this master's student, and expressed the opinion that the salamander was not threatened and that a competent researcher could easily find many more populations. Last summer a field biologist was hired by the Idaho Natural Heritage Program to do a status survey on this subspecies. The biologist, Dr. Lowell Diller, met the approval of the two critics of the petition. After a summer of extensive searching, including vain efforts in areas which were indicated by the critics as good possibilities, a total of three new sites were found.

Jay Gore, of the USFWS Endangered Species office in Boise has told the Idaho Natural Heritage Coordinator that the salamander will not be listed. However, this subspecies is undoubtedly rare, and The Nature Conservancy is concerned about the large number of populations which have been lost or have apparently dwindled. At this time there are thirteen extant populations in Idaho and four in Montana. Two of these sites are on the Kootenai National Forest.

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4(1) See response to #3(1) above.

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One site is Big Hoodoo Mountain (Sec. 34, T49N, R31W) which is primarily proposed timber management (MA 16, 17, and 18). There is a small area of old growth (MA 13), which would provide protection for the salamander if this is its location. It is likely to be found in talus slopes, wet seepage areas, and under surface litter in dense forested areas, especially on north slopes. When last visited, only one individual could be found, and the researcher noted that there had been timber cutting in the area. The viability of this population is unknown and needs to be assessed.

The second site is between five and seven miles southeast of Troy in talus slopes along the Kootenai River Gorge roadcut. (Sec. 14, T31N, R32W). This is the best site in Montana and one of the few sites which is considered to be stable. The Kootenai National Forest biologists should be aware of the existence of this rare population, and watchdog it for threats.

2. White Sturgeon (Acipenser transmontanus) G4/S1 4 (2)

The white sturgeon is a native species which is listed by Montana Dept. of Fish, Wildlife, and Parks as a Class A Species of Special Concern. During the last legislative session, this species came very close to being listed on the state list of endangered species. The last minute failure of the proposal was probably due to political rather than biological reasons, because the fish is very rare, and definitely in need of protection.

The Nature Conservancy hopes that there is still potential for retaining this species on the Montana list. Even though there have been no recent sightings, we are delighted to see the shoreline along this stretch of the Kootenai River designated as MA 21, offering some protection for the sturgeon. Any proposed activity in this area, should be carefully considered in conjunction with MDFWP to prevent any negative impact on this species. The Nature Conservancy again urges close cooperation with MDFWP to insure that upstream activities do not degrade the water quality of the Kootenai River. The white sturgeon has a tenuous hold, at best, in Montana, and only a committed effort will give us hope of keeping it around. We feel strongly that this species is in need of careful monitoring, and protection.

3. Rainbow trout (Salmo gairdneri) G5T1/S1 4 (3)

The Kootenai National Forest harbors in Callahan Creek the only known occurrence of pure strain native rainbow trout (Salmo gairdneri) in the state. According to the two experts on fish taxonomy in Montana, Dr. Fred Allendorf (U of M) and Dr. Robert Behnke (MSU), the great majority of the original populations of interior native trout have been lost in the last 100 years, and the remaining populations should be preserved. Montana Department of Fish, Wildlife and Parks has designated this species as a Class B Fish of Special Concern in Montana. This means that the species is limited in numbers or habitat in Montana but fairly widespread and numerous elsewhere in North America. Elimination of the population would be at least a moderate loss to the total gene pool.

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4(2) See response to #3(1) above.

4(3) See response to #3(1) above.

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The Nature Conservancy has an interest in protecting species which are rare in the state even though they may be secure globally. There are good biological reasons for protecting peripheral populations, especially in this case, where so many populations in this genus have been lost as a result of genetic contamination and habitat destruction. This is a highly significant occurrence, and it deserves special consideration in management. The management directions for the stream (MA 2, 11, 12, 14, and 19) may not necessarily threaten the population. The first order of protection for this population is to ensure against genetic contamination by preventing introductions and maintaining the natural barrier which has preserved this population thus far. The second order is to manage for the health and vigor of this population by careful monitoring, and by minimizing all development which could result in habitat degradation. Potential roadbuilding and timber harvesting should be carefully scrutinized in this drainage. The Nature Conservancy encourages the Kootenai National Forest to work closely with MDFWP in ensuring the long term survival of this unique population. 4 (3)

4. Woodland caribou (Rangifer tarandus caribou) G5T1/S1 4 (4)

The Kootenai should be commended for including the woodland caribou in its management considerations as a sensitive species, even though it is not federally listed in Montana. Our information sources indicate that this diminishing subspecies is particularly vulnerable to poaching, and that its primary food source is lichens in old growth spruce, fir, cedar and hemlock forests. This makes woodland caribou management incompatible with development of almost any kind.

The Ten Lakes Wilderness Study Area and the Whitefish Range are protected by "Grizzly Situation 1" designation which is very good news for the caribou. However, there have also been unverified reports of woodland caribou in the Yaak River Valley and Purcell Mountains, which is part of their historical range. There are large parcels of grizzly management areas (MA 14) in the Yaak, which could be compatible with caribou, if disturbance is minimized. Also, the relatively large tracts of roadless area (MA 2) might possibly offer sanctuary if there is some recovery. Management plans for the Northwest Peaks and Buckhorn Ridge Roadless Areas should recognize some potential there for caribou recovery. I was unable to find any discussion of this possibility in these roadless area descriptions, and hope it will be included in the final draft.

5. Common Loon (Gavia immer) G5/S3 4 (5)

The common loon is a species which is extremely sensitive to disturbance and which appears to be declining everywhere in the lower 48 states including Montana. There are old breeding records from Lake Koocanusa and Bull Lake within the Kootenai National Forest boundary. Sightings and especially breeding records should be monitored to insure against the disappearance of this special animal from Montana's lakes. Protection should be focused on the tulle marshes around lakeshores where the loons nest.

Response to Letter #73 - The Nature Conservancy, pg. 73g

4(4) See response to #3(1) above.

4(5) See response to #3(1) above.

TNC comments, Kootenai Plan
page nine

EXEMPLARY NATURAL COMMUNITIES ON THE KOOTENAI NATIONAL FOREST

In addition to rare plants and animals, The Nature Conservancy also inventories and ranks natural communities. This is not an easy task, and we are in the process of developing a community classification system for Montana. Our regional ecologist is collaborating with Forest Service Scientists and other habitat specialists to devise a system which is compatible with Forest Service as well as other eco-community classifications.

The goal of The Nature Conservancy is the preservation of biological diversity. In the pursuit of that goal, we have acquired over 900 preserves on private land. However, we are finding more and more rare occurrences on public land. Happily, the Research Natural Area system is remarkably similar to our preserve system in its goal. In the Forest Service Manual (4063.02), the first objective of Research Natural Areas is the preservation and maintenance of genetic diversity. Special Interest Areas are another way to recognize biological significance for less sensitive species and areas. The Nature Conservancy is a strong supporter of the RNA and SIA program, and we are designated participants with the Forest Service in establishing and maintaining RNA's (FSM 4063.03). Janet Johnson, in the Regional Office says that the Kootenai Forest has been a trailblazer in the Research Natural Area Program. Whoever is responsible for that active involvement should be congratulated. Although the six proposed RNA's are not on our scorecard, we support them based on our confidence in Janet Johnson's judgement, and her strongly favorable reviews of the Kootenai's efforts to identify and propose RNA's.

There are an additional number of areas which are also given special designation under MA 21. The Kootenai Falls special management area will help protect the white sturgeon, if they are still there. We know of no rare occurences on the other sites, nor do any of them occur on our rudimentary scorecard. However, this may only reflect the gaps in our data. 5

As our Montana Natural Heritage Program gets up to speed, we would like to be more involved in identifying sites and providing information for establishment reports and management plans. We would like to suggest that there be provisions in your planning process to allow future RNA or other special designation on presently unidentified sites. As our data base increases we will be better able to assess our protection priorities, and will be contacting managers about specific goals.

One natural community which is on our rudimentary scorecard is Stanley Spring Creek. This was identified as a significant site by Mt. Dept. of Fish, Wildlife, and Parks. It is evidently an important spawning site for westslope cutthroat trout, and is threatened by the Asarco mine. To our knowledge, these are not pure-strain westslope cutthroat, and because we have not systematically inventoried spring creeks, it is hard to judge how high a protection priority this will be. 5 a

Response to Letter #73 - The Nature Conservancy, pg. 73h

5. Forest Service Manual Direction currently exists for the on-going identification of special areas. See FSM 2362.

5a. We have noted your concern. The Kootenai Forest will be responsive to any pure-strain westslope cutthroat trout populations identified by the Montana Dept. of Fish, Wildlife, and Parks.

TNC comments, Kootenai Plan
page ten

Old Growth

The Kootenai Forest is the only National Forest in Montana which is inventorying its existing old growth forests and recognizing their value as a special habitat. These late successional forest communities are becoming increasingly rare especially in forests that are large timber producers. Areas of higher annual rainfall can support a greater total biomass than dryer climate zones and these dense stands cause microclimate modifications which create truly unique habitats. Recognition of the value of these habitats for the sake of diversity is commendable.

Given the current economics of the timber market, and the extensive loss of roadless areas and old-growth timber in the recent past, the Nature Conservancy urges a cautious approach to the harvest of existing old-growth. The science of conservation biology is still in its infancy. Currently the size and number of "preserves" necessary to maintain minimum viable populations of native species is being debated in the scientific community. Some experts believe that large preserves are necessary, with extensive buffers to guard against "island effects". Others feel that a number of small preserves is a better way to save genetic diversity. And the answer varies with the species being protected. 6

We are currently just in the beginning stages of a biological inventory of the state. Undoubtedly there will be a great deal of new information collected in the next five years. The Nature Conservancy has never been an organization which tries to protect everything. Our motto is "the last of the least, and the best of the rest." But, the more pristine sites we have to inventory, the better the chance that some rare plant, animal or community will not be destroyed before we even know its there. Also, the retention of options will ultimately result in better management plans for minimum viable populations of old-growth dependent species. The insight coming from the mushrooming literature in the field of conservation biology may only be hindsight, if too many options for management are lost. Please treat these pristine old-growth sites with the respect that they deserve, and weigh carefully any plans for their demise.

Response to Letter #73 - The Nature Conservancy, pg. 731

6. The designated old-growth timber Management Area (MA 13) has been removed from the regulated timber base.

4.2 Element Ranks

Each element is assigned a single global rank and a state rank for each state in which it occurs. State ranks within each state are assigned by the state Heritage Program and will vary from state to state. Global ranking is done under the guidance of the national Science Department.

For elements actively being inventoried (those considered imperiled or rare either range-wide or state-wide), documented ranks are assigned using the global and state element ranking forms.

For elements not being inventoried (such as the majority of vertebrates), ranks are assigned "by inspection," i.e. for each such element a "best guess" as to rank (no higher than G4 for global rank and no higher than S4 for state rank) is entered on the state list of biota. (G ranks will be supplied as computer printouts by the national Science Department as available.) It is not necessary to document these ranks by completing element ranking forms.

4.2.1 Definition Of Ranks

7

Global and state element ranks are listed and defined below. Definitions used for the previous element ranks (A1, A2, etc.) have been included in abbreviated form in brackets for comparison purposes. Note that use of the term "in North America" refers to North America north of Mexico.

GLOBAL ELEMENT RANKS:

G1 = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor of its biology making it especially vulnerable to extinction. [Critically endangered throughout range.]

G2 = Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of other factors demonstrably making it very vulnerable to extinction throughout its range. [Endangered throughout range.]

G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the east) or because of other factors making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100. [Threatened throughout range.]

Response to Letter #73 - The Nature Conservancy, pg. 73j

7. No response needed.

G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

GA = Accidental in North America, i.e. not part of the established biota (e.g., European Cuckoo, Yellow-nosed Albatross, many other bird species).

GE = An exotic species established in North America (e.g., Japanese Honeysuckle).

GH = Of historical occurrence throughout its range, i.e. formerly part of the established biota, with the expectation that it may be rediscovered (e.g., Ivory-billed Woodpecker).

GU = Possibly in peril range-wide but status uncertain; need more information. NOTE: This rank should be used sparingly. Whenever possible, assign the most likely rank and add a question mark (e.g., G2?) to express uncertainty or indicate a range (e.g., G1G2, G1G3).

GX = Believed to be extinct throughout range (e.g., Passenger Pigeon). 7

STATE ELEMENT RANKS:

S1 = Critically imperiled in state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor of its biology making it especially vulnerable to extirpation from the state. [Critically endangered in state.]

S2 = Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of other factors demonstrably making it very vulnerable to extirpation from the state. [Endangered in state.]

S3 = Rare in state (on the order of 20+ occurrences). [Threatened in state].

S4 = Apparently secure in state.

S5 = Demonstrably secure in state.

SA = Accidental in state, including species which only sporadically breed in state.

SE = An exotic species established in state; may be native elsewhere in North America (e.g., house finch or catalpa in eastern states).

7. Continued from previous page. No response needed.

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NORTH FORK PRESERVATION ASSOCIATION

P.O. Box 4, Polebridge, MT 59928

October 30, 1985

James F. Rathbun
Forest Supervisor
Kootenai National Forest
RR #3 Box 700
Libby, Mt. 59923

Dear Mr. Rathbun:

On behalf of the North Fork Preservation Association, I would like to comment on the Draft Kootenai Forest Plan and the Draft Environmental Impact Statement. Thank you for sending these weighty documents to me and for extending the comment period to November 1.

It is good that you have an old growth management plan for the Kootenai Forest. However, 7 or 8% is not enough. If you check the Forest Service reference manual on old growth management you will find that 10% is the very minimum for the maintenance of the diversity of widlife that old growth harbors. Some biologists believe 10% is not enough. 1

Multiple use seems totake a back seat to timber harvest. Your projections for timber harvest seem unreasonably high. Will the economy justify such high harvest? Will the Forest be able to have sustained yield under these circumstances? 2 What about increased sedimentation from all the roads and its effects on fisheries? 3

I notice that much of the western edge of the Whitefish Mountains are in Management Area 2, roadless recreation. This is very good. However, the roadless area around Mount Lewis and Mt. Locke should be part of the Thompson Seton Wilderness (see enclosed map). 4 The enduring protection of Wilderness will accomplish your goals of MA2, MA13 (old growth) and MA14 (grizzly bear habitat) — basically the bears need security from humans and mother nature will make the openings for forage. 5

I appreciate the recommendation of the Ten Lakes area for Wilderness. I spent 5 days early last November backpacking there so I can attest to its beauty. It is unfortunate that past roading has intruded into the core area of Ten Lakes. 6

A nonprofit corporation dedicated to preserving the integrity of the North Fork of the Flathead River Valley on the western edge of Waterton/Glacier International Peace Park.

Response to Letter #271 - North Fork Preservation Assoc., first page

1. The Final Forest Plan now provides for the maintenance of 10 percent old-growth forests.

2. The Allowable Sale Quantities (ASQ) are projected limits that appear to be reasonable while satisfying other resource needs and issues, including sustained yield management. They are not targets to be obtained unless the demand materializes. Timber sales are purchased by private timber companies who are responsive to national markets which are not accurately predic table over the short or long-term. See the writeup entitled "Timber Supply in the Impact Area" in Appendix B.

3. State-of-the-art methods for predicting sediment delivery to streams are not very good so we have reduced our reliance on those models and focused on insuring that problems do not occur in the field. We have added items to the monitoring and evaluation plan and the Forestwide standards to insure that State Water Quality Standards will be attained.

4. The roadless designation (MA 2) provides acceptable results for the grizzly bear and has been expanded to provide increased security as well as recreational solitude (See the Final Forest Plan Map). This expanded roadless management area complimenets the management direction on the adjacent Flathead National Forest.

5. See #4 above.

6. No response needed.

term The Kootenai Forest is planning too many roads — wildlife and good, long-hunting will suffer. I sugges. you close one mile of old road with Kelly humps for every new mile of road created thus keeping road milage at about 6000 miles. 7 8

The knowledge of the North Fork Preservation Association of the Kootenai Forest is primarily limited to the Murphy Lake Ranger District and except for some general commens about roads and logging, have limited comments to these areas.

Thank you for reading this.

Sincerely,

John Frederick

John Frederick
President
NFPA

CC: Tom Hope

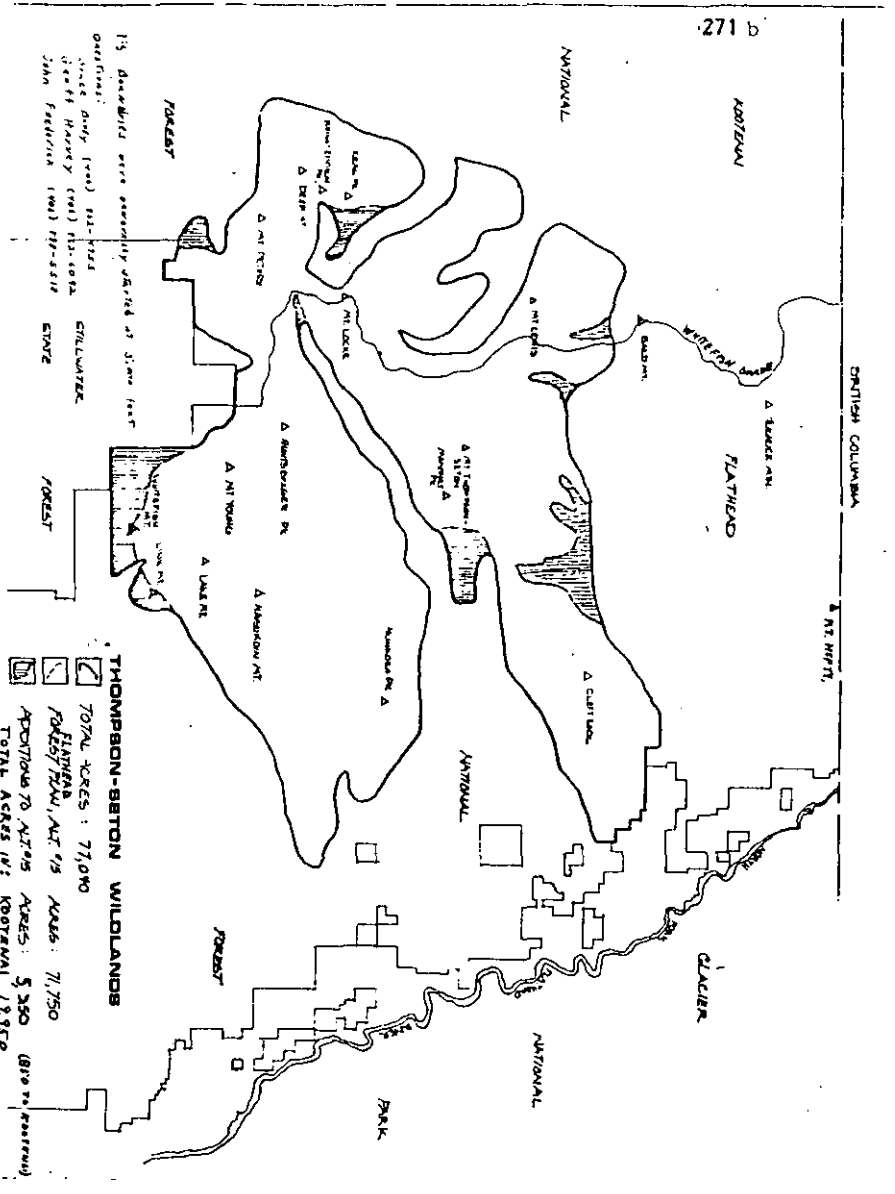
Response to Letter #271 - North Fork Preservation Assoc., page 271a

7. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. In addition, the guidance for each management area includes details on road-use restrictions that are designed to provide secure habitat and minimize the impact of roads on wildlife habitat.

8. Total road mileages that will be restricted under the Final Forest Plan is displayed in Chapter IV of the Final EIS. The miles that are projected to be closed yearlong are 3,423. This will result in a total of 6,527 miles open, both yearlong or seasonally, which is similar to your suggestion of 6,000 miles.

Response to Letter #271 - North Fork Preservation Assoc., page 271b

No Response needed on this page



N.E.E.D.

P O BOX 1158, LIBBY, MONTANA 59923

October 31, 1985

Kootenai National Forest
Forest Plan
Rt. # 3, Box 700
Libby, Mont. 59923

Dear Sirs:

As residents of Lincoln County and the State of Montana, Northwest Energy, Employment & Development, Inc. would like to present our concerns to you regarding the Kootenai National Forest Plan.

We favor alternative N, as it seems to offer more for the wood products industry and does not seriously affect other concerns. The allowable timber volume needs to be maintained, if not increased. A reduced volume should not be considered as demand could increase during this forest plan time frame. Jobs are extremely important to our local economy and should not be jeopardized. Local people have to have jobs and income before recreational advantages can be enjoyed. 1 2

We also feel that our natural resources be available for sensible development instead of being locked up in wilderness and roadless area designations Do not consider an increase in wilderness acreages as this land is unavailable forever for mining, logging, grazing and some recreation. A renewable resource, such as timber, needs to be properly managed. To remove this resource from access to cultivation is mismanagement. As a locality and a nation we can not afford that luxury. Past experience has proven that once an acquisition or rule is in existance it is next to impossible to repeal. 3

As an organization, we have no animosity toward the grizzly bear but there is too much emphasis and consideration given to the grizzly. It appears the grizzly bear is being used as a tool to achieve greater wilderness acreages and increased restrictions. We urge that the Forest Service not increase acreage and restrictions with respect to the grizzly bear.

Increased expenditure for the sake of the grizzly bear is negative dollars and should be reduced to a minumim expense. Our national debt can never be reduced if requests for additional funding for nonproductive programs keep expanding. Grizzly bear management programs do not generate new money but only consume money generated from primary jobs, such as logging, mining and agriculture. Senator Max Baucus has requested recently 81 million dollars for grizzly bear management programs while many humanitarian programs are being put on hold or have reduced funding. These priorities are wrong. 4

We would urge the Forest Service to reduce engineering standards on roads for log hauling operations to help reduce the cost of operation. High road building standards are negative dollars, as well as, gate installations. 5

Attached to our Forest Plan letter is our 1985 questionaire with respect to grizzly bear transplanting for your consideration and entry into the record. Our 200 individual survey responses were taken mainly at the 1985 Logger Day event

(continued page 2)

Response to Letter #195 - NW Energy, Employment & Development, first page

1. Alternative N does offer more for the wood products industry but it does not resolve other issues as well as the Proposed Action or the Final Forest Plan in our judgement.

2. We agree.

3. Wilderness is a resource as much as timber, minerals and grazing; and once it disappears, wilderness cannot be replaced. The question is how much wilderness and where should it be located. We feel that the Final Forest Plan strikes a balance between the amount of area recommended for wilderness and the amount retained for potential development.

4. The grizzly bear is listed as an endangered specie under the Threatened and Endangered Species Act which establishes it as a national concern. Because of this national concern, Federal Programs need to insure that the grizzly bear is not inadvertantly placed in jeopardy. The research to date on the grizzly bear indicates that there are positive benefits that can be provided for grizzly habitat if the proper care and design is given to the many programs and projects that normally take place on a National Forest. There may need to be some inconvenient scheduling or deferrals of some projects, but to date, most projects have been accomodated. See the Grizzly Management Guidelines in Appendix 8 of the Final Forest Plan.

5. See the Forest Goals in the Final Forest Plan, section II.

and are available for your inspection and information upon request. This has been our effort to get a feel for local sentiment regarding this subject even though we surely are not professional questionaire writers.

Thankyyou for your consideration of our concerns.

Sincerely,

Charles F. Woods

Charles F. Woods, President
Northwest Energy, Employment & Development, Inc.

cc: Sen. John Melcher
Rep. Pat Williams
Rep. Ron Marlenee
Sen. James McClure
Sen. Steven Symms
Sen. Allen Simpson

Response to Letter #195 - NW Energy, Employment & Development, page 195a

No response needed for this page.

JULY --- 1985

This questionaire has been prepared by NORTHWEST ENERGY, EMPLOYMENT & DEVELOPMENT, INC. for the purpose of obtaining general feeling with respect to GRIZZLY BEAR transplanting.

1. Should people of Lincoln County have anything to say as to whether or not the grizzly is planted in Lincoln County?

   yes 97 % no___ undecided___

2. Do you feel restrictions will increase with grizzly bear transplants on items listed below?

   A. Mining & Logging restrictions yes 76 % no 19 % undecided 5 %

   B. Recreation restrictions
      1. Hunting & Fishing yes 65 no 30 undecided 5
      2. Increased road closures yes 76 no 21 undecided 3
      3. Berry picking yes 68 no 29 undecided 3
      4. Wood cutting yes 66 no 30 undecided 4
      5. Camping yes 77 no 22 undecided 1

   C. Development in Lincoln County Area yes 72 no 22 undecided 5

3. Do you have concern about increased human-grizzly conflicts, should there be grizzly transplants?

   yes 46 no 47 undecided 7

4. Do you feel the grizzly bear would be further endangered if transplanted into areas where there is general public opposition? YES 76 NO 18 UNDECIDED 6

5. A. Is the Cabinet Wilderness enough area for the Grizzly?

   yes 60 no 24 undecided 16

   B. Do we need any additional Wilderness?

   yes 24 no 63 undecided 13

6. Since the Grizzly bear is listed as a threatened species, should there be Grizzly bear hunting in Montana?

   yes 36 no 46 undecided 18

7. With respect to transplanting of grizzly bear in Lincoln County:

   54 Against the transplanting of Grizzly Bears in Lincoln County

   31 In favor of transplanting of Grizzly Bears in Lincoln County

   15 Undecided

COMMENTS_____

RESIDENT OF MONTANA YES___ NO___

RESIDENT OF LINCOLN COUNTY YES___ NO___

Not required, but would be appreciated completing:

NAME_____

STATE OF RESIDENCE_____

THESE ARE PERCENTAGES COMPILED FROM THE SURVEY TOTALS FOR 1985 SURVEY.

C.J.L.

SUBMITTED TO KOOTENAI NATIONAL FOREST — FOR LATEST 1400 FOREST PLAN COMMENTS

E-252

Response to Letter #195 - NW Energy, Employment & Development, page 195b

No response needed for this page.

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Kootenai National Forest Plan

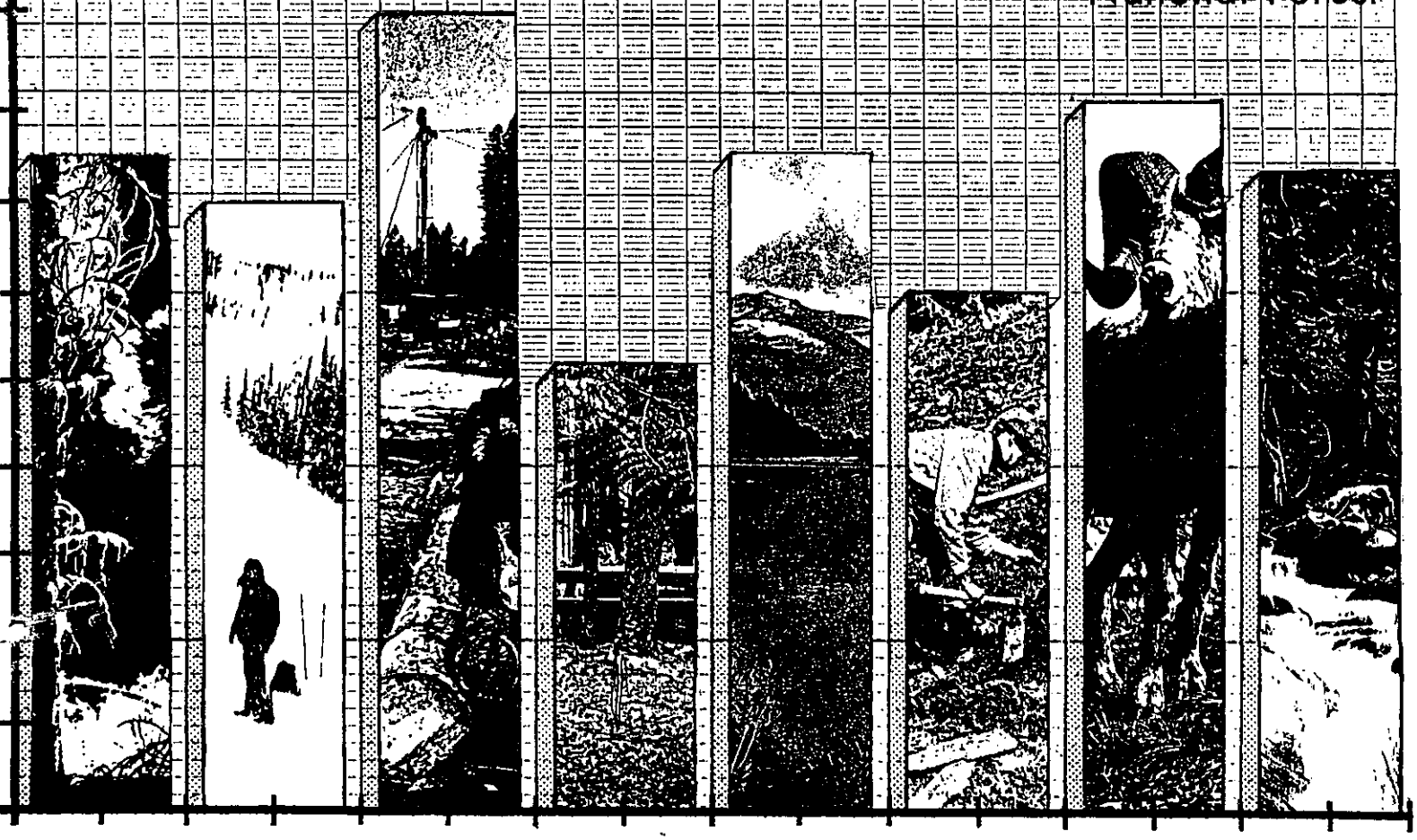
Final Environmental Impact Statement

Appendix E - Public Comments and Forest Service Response-Volume 2

United States
Department
of Agriculture

Forest Service

Kootenai
National Forest



FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KOOTENAI NATIONAL FOREST PLAN

APPENDIX E

PUBLIC COMMENTS

ON THE

KOOTENAI NATIONAL FOREST PROPOSED PLAN

AND

DRAFT ENVIRONMENTAL IMPACT STATEMENT

AND THE

FOREST SERVICE RESPONSE

VOLUME TWO

APPENDIX E

PUBLIC COMMENTS AND FOREST SERVICE RESPONSES

I. Introduction

This Appendix presents the comments received on the Draft EIS and displays the Forest Service response to the various Federal and State Agencies, Elected Officials, Business and Industry members, Organizational groups, and Individuals. The material is presented in the order mentioned and the Table of Contents is arranged alphabetically and indicates the page number of each letter for ease of reference. The "Individuals" group is subdivided into three sections. The first section lists the individual letters that provided information that was generally specific and in-depth to the Kootenai National Forest land base or the Proposed Forest Plan and/or Draft EIS. The second and third sections are grouped because of their close similarity and in the interest of reducing bulk and expense.

Each letter displayed outlines the individual points noted with a number. Beside each page is the Forest Service response indicated by the corresponding number. The Forest Service responses can usually be categorized as one of the following:

(1) Responses needed to correct technical errors or inconsistencies, or to clarify points of misunderstanding identified by the public. These types of comments usually resulted in a change in the wording of the final documents.

(2) Responses needed to indicate what additional analysis was done, or why some requested analysis was not done. The additional analysis is presented in the final documents or are identified as Forest Planning Records available upon request.

(3) Responses needed to indicate what specific changes were made in the Forest Plan land designations, management direction, or intensity, or why the requested changes were not made. These types of comments resulted in changes to the Forest Plan Map or the wording in the Forest Plan document.

For a complete summary of what the overall Public Response was and how the Kootenai National Forest responded to the changes requested by the public, see Chapter VI, Consultation With Others, in the Final EIS.

PUBLIC LETTERS LISTED BY AGENCIES, ELECTED OFFICIALS, BUSINESSES, ORGANIZATIONS, AND INDIVIDUALS

FEDERAL AGENCIES

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
ENVIRONMENTAL PROTECTION AGCY.	49	1	E-1
U.S. DEPT OF ENERGY	298		E-3
U.S. FISH AND WILDLIFE SERVICE	1		E-5
USDA, SOIL CONSERVATION SERV.	53		E-9
USDI, OFFICE OF THE SECRETARY	31		E-11

STATE AGENCIES

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
COOPERATIVE EXTENSON SERVICE	192	1	E-15
MONTANA HISTORICAL SOCIETY	5		E-17
MONTANA STATE DEPT OF HIGHWAYS	50		E-19

ELECTED OFFICIALS

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
MONTANA OFF. OF THE GOVERNOR	305	1	E-21
PETERSON, MARY LOU (MT REPR.)	22		E-53
SWIFT, BERNIE (MT REPR.)	142		E-54

BUSINESS AND INDUSTRY

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
AMOCO PRODUCTION COMPANY	234	1	E-57
CENEX	220		E-59
CHAMPION INTERNATIONAL, INC.	59		E-61
CHAMPION INT. (JOHN MCBRIDE)	11 & 197		E-63
CONOCO	3		E-66
EMETT TRUCKING & LOGGING CO.	153		E-68
LOUISIANA PACIFIC CORPORATION	72 & 218		E-69
MARATHON OIL COMPANY	139		E-77
OWENS & HURST LUMBER COMPANY	105		E-79
PLUM CREEK TIMBER COMPANY	304		E-80
STOLTZE LAND & LUMBER COMPANY	193		E-91
STOLTZE LAND & LBR.(MCCUBBINS)	194		E-94
TEXACO USA	45		E-98
U.S. BORAX	40		E-99
WILLIAMS, JR., CLAYTON W.	19		E-102

ORGANIZATIONS

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
CABINET BACKCOUNTRY HORSEMEN	48 & 313	1	E-104
COALITION FOR CANYON PRESER.	127		E-109
DEFENDERS OF WILDLIFE	223		E-111
GALLATIN WILDLIFE ASSOC.	310		E-117
GREAT BEAR FOUNDATION	281		E-118
INLAND FOREST RESOURCES CNCL.	138		E-123
MONTANA LOGGING ASSOCIATION	69		E-130
MONTANA WILDERNESS ASSOC.	237 & 301		E-132
MONTANA WOMEN IN TIMBER	39 & 224		E-216
NATIONAL AUDUBON SOCIETY	302		E-217
NATIONAL WILDLIFE FEDERATION	268		E-218
NATURE CONSERVANCY	73		E-235
NORTH FORK PRESERVATION ASSOC	271		E-247
NW ENRGY.EMPLY.& DVLMT.(NEED)	195		E-250
PROTECT THE YAAK COMMITTEE	312	2	E-253
ROCKY MTN. OIL & GAS ASSOC.	55		E-284
TROUT UNLIMITED	147		E-286
WESTERN FOREST INDUST. ASSOC.	62		E-288
WESTERN ENVIRON. TRADE ASSOC.	264		E-292
WILDLIFE CLUB, FLTHD.VLY.C.C.	140		E-297
WILDLIFE MGMT. INSTITUTE	30		E-298

INDIVUDUALS LETTERS

NAME	LETTER NO.	VOLUME NO.	PAGE NO.
ALDRICH, DONALD	20	2	E-300
ANDERSON, MAURY	158		E-302
BAIRD, DENNIS	270		E-303
BARCOMB, JOE	278		E-304
BEASLEY, KEN	265		E-305
BOSWELL, MR. & MRS. TYLER	161		E-307
BUSTAMENTE, ROBERT G.	65		E-308
CHALGREN, BILL	6		E-310
CHVILICEK, SARAH	7 & 236		E-311
CLARK, CHARLES	159		E-314
CONKLIN, GLEN H.	219		E-323
DALIMATA, MARY C.	206		E-335
DAVIES, JILL	56		E-336
DAYTON, JIM	155		E-338
ENGLAND, TERI	141		E-339
ENNENBACH, JIM & SUSAN	86 & 108		E-342
ENSIGN, DIANE	267		E-347
ERICKSON, OLGA	196		E-350
EVANS, JUDY	144		E-351
FERRELL, DOUGLAS	46		E-352
GREEN, DAN	12		E-357
GREGAS, NORMAN	38		E-358
HADDEN, DAVID G.	71		E-359
HARGROVE, MRS. JAY	10		E-364
HARVEY, GEOFFREY W.	207		E-362
HAUGEN, LUCY	52		E-364
HERNANDEZ, CESAR	300		E-365
HIDDICE, JOE	235		E-310
HILDEBRAND, RICK	160		E-366
HOLIDAY, ROBERT	8 & 113		E-372
HOWARD, IVY	225		E-376
HUDSON, RUSSELL	61		E-378
HUTCHINS, JUDY	295		E-379
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PROTECT THE YAAK COMMITTEE'S
REVISED ANALYSIS
OF THE KOOTENAI FOREST PROPOSED PLAN

312

1 Dec. '85

The Kootenai Forest Proposed Plan (KNFPP) is not adequate, either to promoting a healthy economic context for our local community or to promoting the ecologic health of the forest. Many of the persons involved in creating the KNFPP have done their sincere best to reconcile a wide array of drastically conflicting demands. Where these demands have been destructive, but too powerful to resist, they have used their best ingenuity to preserve remnants of threatened values. Nevertheless, they have produced a policy which will be very damaging both to the local economic structure and biological values on the Forest.

How and why did this strange denouement come about?

AN HISTORICAL PERSPECTIVE

In recent years there has come a parting of the ways between the interests of large corporate industry in the Kootenai and the common local interest. Such a situation was unimaginable to most people in the previous few decades. Wherever there was some rich resource base and a large, efficient organization to exploit it, local economies concentrated on extracting this resource and exporting it, and jobs were assured, at least two/thirds of the time, when markets were reasonably active. The timber industry is, of course, classically unstable. Good times can be very good, and bad times, horrid. Horrid times, however, in the wood industry were somewhat stabilized by other industries in the past. 1

In fact, minerals, rather than timber, provided the backbone of Lincoln County's economy in the first decades of the century. Mining declined to a distinctly secondary status, however, prior to the second World War.

World War II was followed by a long period of rising national wealth. Through the fifties, sixties and into the early seventies, housing markets grew at an unprecendented rate. Large scale corporate wood industries dominated the scene locally as well as nationally. Another factor to notice here is that this was a period in which the great stands of huge trees on the western coasts began to be depleted. This boosted the compatitiveness of our local industry. While the Kootenai never possessed the great size classes of coastal areas, and our forest areas in old growth timber had been previously reduced by the great fires earlier in the century, nevertheless timber quality in this area was quite high, and the volumes were great enough to fuel a long period of boom times.

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1. No response necessary on this page.

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This boom, however, was not uniform in character. Periods of high activity attracted workers who were let down (and laid off) during slumps. Other resource developments have reinforced this trend: The Libby dam is a case in point. During its construction heyday it employed hundreds of workers, and hundreds more were required to provide them housing, school facilities, consumer services, etc. With the completion of the project at a period in which lumber markets were beginning to cool off, the area entered a period of deepening recession, from which it has never emerged. In the mid-70's when ASARCO's Troy Project offered some relief, local citizens welcomed it eagerly for the most part, despite the warnings of a minority that the benefits would be short-lived and that the aftermath of unemployment and environmental degradation would outweigh those benefits.

In the meantime, the local timber industry settled into a slump which is now widely recognized to be permanent. This slump is only partially due to the sluggishness of the national economy. The most profitable core of the area's old growth stands have been cut out. 1

VARIETIES OF PROSPECTS FOR ESTABLISHING A RENEWED ECONOMIC BASE

Claims that Canada's subsidization of its timber industry unfairly damages our market access, and could be remedied by import controls, are a great distortion. Canada's industry is not subsidized by government nearly so much as by nature. They have vast resources of untouched timberlands, while we do not, except on the Alaskan coast, and it goes without saying that wholesale exploitation of the Alaskan reserves will not help Lincoln county.

The Canadians, with 1/10th our population, view their timber resources as inexhaustible, the way we did in the past. They clearcut vast areas without thinking twice or looking back; they spend far less money on fire suppression and every form of resource protection, erosion mitigation, etc.

Some would argue that the nature of their competition advantage is irrelevant to the question of whether this advantage can be reduced by import controls, voluntary or otherwise.

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1. The situation in Canada has been described (by a Canadian) as follows: "The old growth stands are becoming less accessible and recovery costs are escalating. Similarly, existing natural stands have lower density and quality of timber, hence the value of timber harvested per acre is declining. Eventually, Canada will have to shift from old growth timber-based economy to a managed second growth economy. However this will take years because Canada has been very lax in her forest renewal program." ("The Need to Update Canada's Wood Products Manufacturing Facilities", Albert Schuler, Forintek Canada Corp, Ottawa, Canada - Published in: "Proceedings from a series of regional seminars on microelectronics in the wood products industry", Forintek Canada Corp., 1984)

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The hope for such controls will prove futile. The Canadians will not voluntarily limit themselves and we do not have a national administration which favors enforced measures. But even this last fact is subsidiary to the reality that such controls are inimical to the interests of larger blocks of our society than lumbering communities and companies. Housing construction people and the nation's consumers at large benefit from the lower prices available from the Canadians. There is no way to beat the fact that they've got the big timber while Lincoln county's resource has been greatly depleted. 2

Will metal mining then offer us a way out? Rumors, fairly substantial ones, offer the possibility that the Troy mine may be enabled by upgraded production schedules to close as soon as five years in the future. 3

Evidently there are going to be one or two more large mines in the Bull River valley, but, as the Troy Project has taught us, these mines will be capital intensive and provide limited economic relief for limited periods of time. The shopkeepers of Libby, the many people who own and run motels, grocery stores, pharmacies, and other businesses of the community are plugging for the development of a recreational industry. They make their living supplying domestic goods and services. With a failing industrial base, it is perhaps only natural that they should dream of a consumer clientele that requires no local industrial base. Tourists. Voila!

While such a recreational industry can, and is, supplying a reasonably dependable segment of our economy, and can perhaps be expanded, we must not waste our energy and time for structural change in pursuing an attempt to transform this sector into a major factor.

Here's why: 1. One will search in vain to find booming tourist industries in any area lacking intrinsic dramatic qualities of particular types: The stock in trade of recreational industries is spectacular alpine scenery, sun-drenched beaches, panoramas of desert mesas, etc. Of course, our superb wildlife resources account for a seasonal influx of hunters. This, however, is of short duration in the year. Too many local people already resent sharing the native game with an influx of outsiders seeking blood sports and drunken fun. 4

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2. The Canadian forests in the vicinity of the Kootenai National Forest have developed, much like our own, as a result of fire and a tendency toward suppression due to overstocking. As a result the size of the trees is not much different from those produced here. The major difference seems to be in production efficiency. The United Nations Yearbook of Industrial Statistics indicates that Canadian labor productivity (cubic meters per labor hour) has consistently exceeded the U.S. level at least since 1965.

3. Official estimates are that the Troy mine has a remaining life of around 15 years. This could decrease or, as likely, increase depending upon a variety of factors. Production schedules have been about as predicted and are limited by the current size of the milling facility.

4. The Final Plan has been adjusted, particularly in monitoring and evaluation, to insure that State Water Quality Standards will not be violated.

We agree that, while tourism is an important component of the local economy, it is not likely to supplant heavy industry (logging and mining) as a provider of jobs and income. Huge increases in recreation use (doubling and tripling current use levels) would be necessary to do this. Recreation use levels are projected to increase 10% over the next decade.

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2. The local populace is ill-suited to supply the working force basis of such an industry. We are a county of loggers and mill-workers with families to support. We need substantial incomes and steady work. Recreational industries depend on seasonal recruitment of large numbers of young people, mostly students, who work for low wages.

3. Heavy logging has badly damaged our area in terms of characteristics necessary to such industries. What recreational business we have will depend on salvaging what remains of these values. The KNFPP, for instance, forecasts up to a 50% increase in stream siltation and predicts from this fish losses that many of us fear may be too optimistically conservative. 4

4. Tourism is a luxury industry. It is too "iffy" in the context of a world economy which will be increasingly beset with resource scarcity problems. As we watch the last of our old growth timber stands go into the mills and the last loads of ore being hauled up from the depths of Mt. Vernon, a few years in the future, we should realize that we are not unique in our situation.

We should plan for an economy solidly built on a wisely managed basic renewable resource.

The creators of the KNF plan would tell us, then, that timber must remain our economic mainstay and that it is a renewable resource. They are right about this and absolutely wrong about the manner in which we should utilize this resource.

IMAGE OF THE FUTURE TIMBER INDUSTRY

The KNF management claims that we can cut in excess of 260 million board feet of lumber out of this forest every year in perpetuity and remain within National Forest Management Act (NFMA) guidelines regarding sustained yield and environmental protection. In the technical body of this report we will demonstrate that their own statistics reveal an absolute gap in harvest age timber at the end of the fifty year planning horizon. Failure to remain competitive in the market will, of course, occur long before that, and is in fact occuring now. It seems ridiculous that we shall have to set out to prove this, as it is not a minority opinion. It is widely held in the industry, among the public, and within the ranks of the Forest Service itself. Working people, especially those sawing and hauling timber, know it too. The age class structure of the Forest, as a result of past fires and heavy logging, is already compressed. One only has to look at the average butt diameters going out on log truck loads to know this. 4 a

Why does the KNFP Plan persist in telling us that we can expand our employment base by cutting greater and greater

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4a. Alternative L was aimed at maximizing the total volume of timber produced over a 200 year time horizon without a decline in any future decade (note that non-declining yield is always defined in terms of cubic measure, board foot measure may vary). The allowable sale quantity for this alternative began at 255 MMBF/year and climbed to 455 MMBF/year at the end of 200 years. To do this requires that all tentatively suitable lands be intensively managed for timber production. This is, of course, very costly both in terms of budgeted dollars and some non-priced values. The Final Plan estimates a live green sale quantity beginning at 202 MMBF/year and climbing to 291 MMBF/year after 200 years (these volumes do not include dead lodgepole or other products available for sale).

Average dbh (diameter at breast height) was running at about 12 inches until recently when markets for lodgepole pine improved and harvest of these smaller diameter trees began to increase. We expect to harvest lodgepole pine heavily during the life of the plan (10 to 15 years). Because of this we expect about 31% of the harvest (on a volume basis) to be in the 10 to 12 inch dbh range (6% smaller and 63% larger). By the fifth decade, we estimate that this will drop to 16% (3% smaller and 81% larger) because the proportion of lodgepole being harvested will decline. Details are provided in the discussion on utilization standards in Appendix B of the FEIS.

amounts of smaller and smaller timber for which no one seriously believes there will be a market?

The answer is dismaying in the extreme. Champion International, possessing lands which have been largely depleted of presently merchantible timber under the management of St. Regis Corporation, will at the end of ten years beco totally dependent in this area on the remaining reserves in public ownership. This condition is expected to persist for some thirty years. The tree size classes in the federal domain which can profitably be processed by their capital equipment will be depleted past practicability within the coming decade. They want to finish up milling the last of the old growth timber and then pull out their capital equipment. They may then withdraw completely, or they may install small log mills or some other type of wood utilization, but this will be at a lower operations employment level as they have said themselves. The story will not ultimately be different for the rest of the industry, as they share the same resource base. The KNFP plan intends to accomodate this industry strategy, which for simple, hard-headed effective logic is difficult to beat. This logic, however, is directed at industry interests and not at that of the local working population or the public ownership of the forest, as one would expect. This intention to quickly liquidate the remaining old growth stands is made evident by the Plan schedule (p. V-2 of the Proposed Plan) for road building. Of some 5,890 miles indicated in this schedule, some 3,070 will have been completed by 1995. These will primarily be roads driven into the remaining unroaded old growth stands (excepting a token 8% of these stands reserved to protect biological values) and into lodgepole salvage units whose utility will be exhausted for the eighty year interim needed to grow another crop. Will the stumpage returns on this first entry pay for these roads? No way. This explains one reason the KNF must claim that these high cutting levels can be carried into the distant future. This contention is necessary for economic justification of the road building program. Our arguments will indicate why this return will never be realized. What are some other motives for this prospectus, whose lack of realism is an open secret? They are three: 1. The Forest Service must make some pretense of remaining within NFMA legal standards, which require a nondeclining flow of timber harvested at the end of maximum growth ages (culmination of mean annual growth increment ages, CMAI).

2. The political implications of planning to assist the corporations in liquidating the last of the old growth, and then abandoning the community to marginal "pick over the leavings" type of industries is politically unsaleable. They must pretend that something else is happening.

4 a

4a. (Cont.) Our analysis of timber availability from all ownerships in the area is summarized in Appendix B of the FEIS.

We apologize for an imprecise definition of "old-growth" in the Draft Plan. The glossary now defines "old-growth" as it was in the "Old Growth Habitat Guidelines" (Appendix 17 of the Plan):

> A distinct successional stage in the development of a timber stand generally characterized by 1) large diameter trees (often exceeding 20" dbh) with a relatively dense, often multilayer canopy, 2) the presence of large standing dead or dying trees, 3) down dead trees, 4) stand decadence associated with the presence of various fungi and heartrots, 5) an average age often in excess of 200 years and 6) a basal area ranging from 150 to 400 square feet per acre.

"Overmature timber" is defined as individual trees or stands of trees that in general are past their maximum rate in terms of physiological processes expressed as height, diameter and volume growth.

"Old-growth" is a condition of a stand that involves a number of factors related to wildlife use and physical appearance of the stand. "Overmature timber" is a type of stand that is generally past its prime from a timber production standpoint. Old-growth stands are typically overmature, but all overmature stands do not necessarily provide old-growth habitat.

With these definitions in mind, we have inventoried old-growth on the Forest and determined that about 11% of the Forest acreage below 5,500 feet in elevation is in this condition. The Final Plan retains 10% of the Forest acreage below 5,500 feet in elevation in this condition. Thus over 90% of the existing old-growth will be retained. The roads are developed to access the mature and overmature stands that are scheduled for harvest.

If the first entry into a drainage involved building the roads and harvesting all adjacent timber, the roads would pay for themselves in the first entry. For many reasons, as covered in the EIS, this is not a practical approach. Roads are built, but most of the adjacent timber is not harvested in the first entry. When the remaining timber is harvested, during several future entries, the road costs are minimal. The entire analysis of long term forest management looks at the relationships between timing of costs (roads, logging etc.) and timing of returns (stumpage). Our analysis shows that the roads will pay for themselves over the long run. It is important to remember that the road mileages shown are not a target. Rather they are an estimate of the mileage needed to access the projected timber harvest. There is a Forest goal to minimize road construction. As the plan is implemented these estimates will be continually tested to insure that only the minimum road network needed for the timber program is ever built. Recent experience indicates that the rate of road construction is declining. See Chapter II in the Final EIS.

3. Unbelieveably, some people in the agency actually believe in their own scenario. The halls of silvicultural academia echo with whispers of greatly accelerated production rates through timber stand improvement techniques. What this kind of thinking neglects is the fact that it takes greatly accelerated budgets to apply these techniques, and their own prospectus does not reflect this monetary commitment, even though it assumes higher appropriations than ever for the KNF general account. Political leadership is highly unlikely to grant these unprecendented funding levels and, furthermore, the budget prospectus is dominated by road building and timber sale administration. 4 a

Forest management Utopia also comprises the notion that small size classes will become competitive through the development of new utilization technologies and market changes conditioned by the fact that everyone else's old growth will be gone, too. This idea neglects to consider that everyone else will also have vast acreages of small timber. There cannot ever be a competitive advantage in having a forest of beanpole trees.

The KNFP Plan collapses the age class structure of the forest on the grounds that maximum production can be gained by harvesting at CMAI. This strategy neglects the fact that market competitiveness is more important to the local economy than theoretical yield potentials. What good is it to grow more and more wood that we can't sell? We're already doing that. In simple language: Harvest at CMAI yields higher production; but a longer rotation, say 200 years, produces a more profitable operation and greater competitiveness in the market. Which will be more desirable to future loggers? The same thing that's desirable to present day loggers. Big trees. 5

ECONOMIC RESTRUCTURING AND THE KNFP PLAN

Well, if the plan represents an unwise management policy, how should it be changed? NFMA § 219.12(f)(5) states "Reasonable alternatives which may require a change in existing law or policy to implement shall be formulated if necessary to address a major public issue...". If the Forest Service has the legal authority to develop alternative plans that require significant departures from past policy, then it certainly has the authority to implement practical program changes in the public interest. 6

This is what we suggest: We must diversify our local wood products industry in the direction of small and medium scale finished and partially finished products. By this we mean items like pre-fabricated building panels and utility furniture. The Forest Service is fully aware that discussion

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4a. (CONT.) The Proposed Action included a great deal of commercial thinning which enhanced stand growth. This practice will not be common under the Final Plan and enhanced growth is not expected from it. The growth rates used in development of the Plan have been carefully reviewed and compared to growth rates seen in existing stands. Our conclusion is that the timber volumes estimated for the Forest Plan are realistically achievable because similar volumes occur in existing natural stands.

5. Our experience has been that the older trees (200+ years) become disproportionatly more expensive to mill. A combination of factors causes defects in the logs. The key to economic viability (competitiveness) of a mill operation is the unit cost of producing lumber. When the cost of dealing with a defect-riden, but very large tree is compared to the value of the lumber produced, a smaller tree is often more desireable. Recently the industry has shown increased interest in purchasing lodgepole pine which is more valuable on current markets than larger trees of other species.

of economic restructuring has dominated the local media for over a year. The agency has the clear public responsibility to aid this restructuring, because there is a public consensus that it is necessary, and because the agency controls the resource which is necessary to that restructuring. Such a process cannot occur without agency cooperation and leadership.

Concentration on high-end products will allow necessary industrial development while keeping timber requirements within more reasonable limits. It will be hoped that large scale industry will cooperate with this strategy, and in that case they can play a role which will benefit all parties. Nevertheless, the industry must be diversified in scale to benefit concerns for stability and independence. We hope that the emergent economy will possess a broader range of organizational types, for instance, cooperatives, small partnerships, etc., as well as medium scale facilities owned by larger interests. It is necessary for the Forest Service to seek a consensus among all parties for such a restructuring and then to formulate a Forest Plan based on this consensus. Pursuance of the present course represents a misappropriation of public resources. 6

RESTRUCTURING AND THE LARGE CORPORATIONS

Here is a preferred scenario for the next ten years: Local business groups and government will concentrate their development program on high-end product wood industries of several different types. Large industry will aid this process by sharing expertise. They will downscale their large log milling rather sooner than they might otherwise have done, in order to preserve a resource base both for small local industry and to strengthen the future resource for their own return some thirty or so years down the line. They will begin immediately to recapitalize with smaller facilities aimed at supplying raw materials for the more diversified local industries, with some mix of ship-out lumber as well.

What does the industry have to gain in giving up a share of their last returns on their present capital equipment? They have the opportunity to transform what will otherwise be a glaring example of the despoilation of a public resource into a demonstration of corporate responsibility. Such a move should prove valuable to them. More than most industries, the timber corporations cultivate a public image of being long term caretakers of a renewable resource. Here on the Kootenai they have a golden chance to reap a public relations coup by proving that their "caretaker" image is more than a public relations posture, and we promise to help them realize this PR benefit if they will move in this direction.

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6. We agree that diversification of the local industry to include finished products would be an important step toward stabilizing the economy. There is nothing in the Final Plan that would hinder this development nor is there any change that could cause it to occur. Agencies exist at both the State (Department of Commerce) and the Federal (Small Business Administration) level to support this sort of restructuring.

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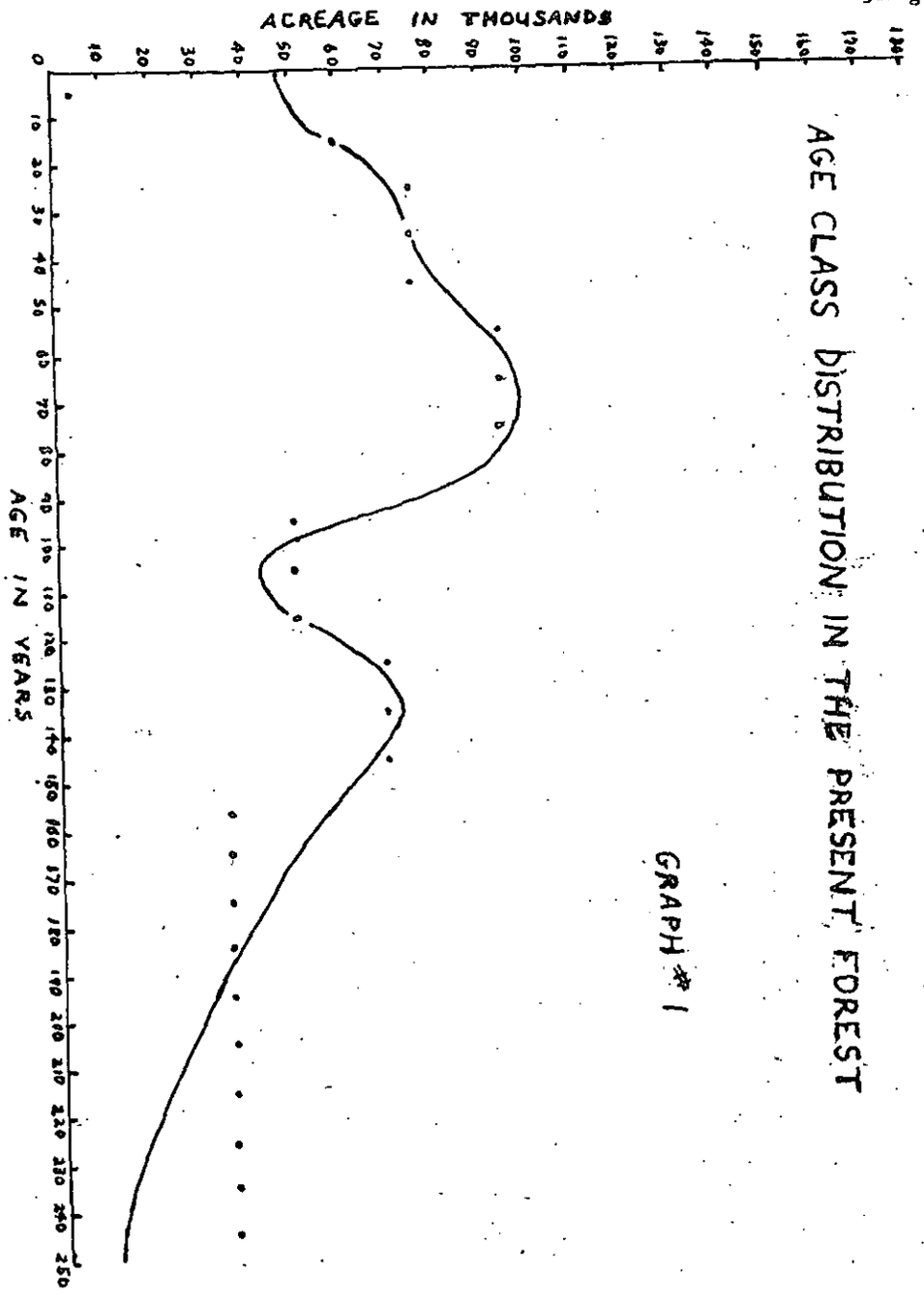

AGE CLASS DISTRIBUTION IN THE PRESENT FOREST

GRAPH # 1

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No response needed on this page.

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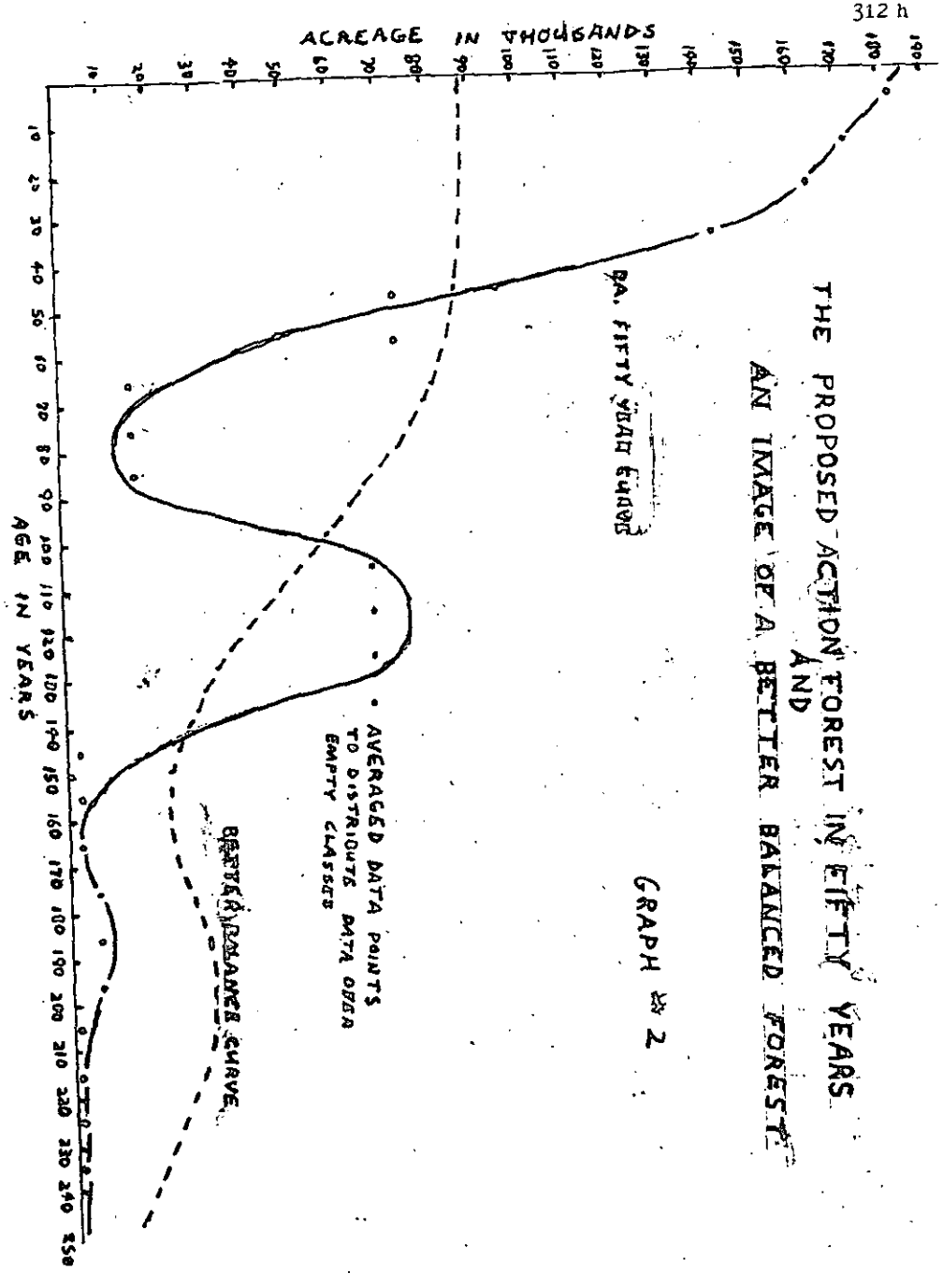

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No Response needed on this page.

312 i

We also promise to defend them in the inevitable controvery which surrounds any consequential move.

How would such an agreement affect the Kootenai Forest Plan? The agency's planning staff will naturally fear that the whole planning process will become untracked and be set back to a rudimentary stage of development. Let us note here that the entire purpose of presenting a Proposed Plan for public review is to solicit broad scope comment which will result in Plan modification. If there is not enough elasticity in the planning process to accomodate significant modification, then this circumstance is a tacit admission that public participation is not wanted.

AN EXPLANATION OF OUR GRAPHIC DISPLAYS

on page A6-2 of the volume Proposed Forest Plan (not the appendix of the Draft Environmental Impact Study, DEIS) is a table titled "Age class distribution acres (suitable lands)". This table is significant, as it represents a profile of the age distribution of the present day forest and a profile of the future forest as it will devolve under the management of the proposed action. The future forest column, unfortunately, is not labeled inregard to date, and we wrongly assumed that it represents the forest profile on the 50 year horizon, and completed an analysis based on that assumption. Actually, the future forest column depicts the 200 year horizon, a date so far removed as to be rather irrelevant to a meaningful discussion of near term policy. 7

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7. The intent of this appendix was to display an estimate of the situation after a long period of management. The table has been edited to make clear that the "Future Forest" is 200 years in the future.

On the following page we have provided charts depicting the age class distributions projected by the Final Plan. Notice that the projection is that the timber in the regulated base that is over 150 years old will be "liquidated" sometime between 50 and 100 years from now. The age distribution at the 200 year horizon is provided to indicate the long-term potential effects of the shorter term decisions that are incorporated in the Forest Plan. The 50-year Forest is shown in the following table and the 200-year forest is displayed in Appendix 6 of the Final Plan:

AGE CLASS DISTRIBUTION - FINAL PLAN
(Acres in the Suitable Timber Base)

AGE CLASS*	PRESENT FOREST	FIFTY YEAR FOREST
0 -10	4,000	130,000
20	57,000	148,000
30	0	168,000
40	0	158,000
50	218,000	166,000
60	356,000	0
70	0	57,000
80	0	0
90	0	0
100	140,000	103,000
110	0	243,000
120	0	0
130	190,000	0
140	0	0
150	0	0
160	297,000	0
170	0	0
180	0	41,000
190	0	0
200	0	0
210	0	49,000
TOTAL SUITABLE	1,263,000	1,263,000

* For modeling purposes average ages of existing stands were used as follows:

All Seedling/Sapling Stands	- 20 years
Poles & Immature Sawtimber (Mixed Conifer)	- 60 years
Poles & Immature Sawtimber (lodgepole pine)	- 50 years
Mature Sawtimber (Mixed Conifer I)	- 160 years
Mature Sawtimber (Mixed Conifer II)	- 130 years
High Risk Lodgepole Pine	- 100 years

Non-stocked stands are shown as age 0 to 10 years

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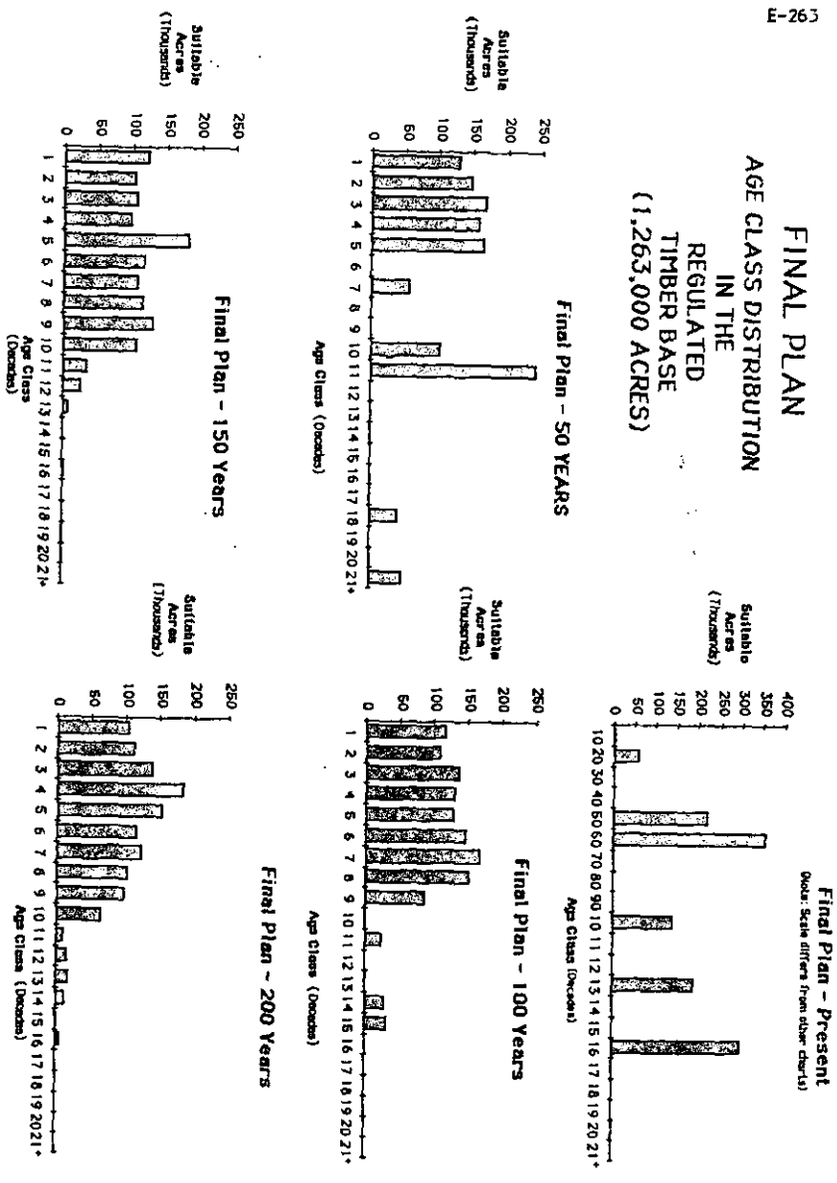
Therefore, we obtained the data for the 10, 20, and 50 year horizons from KNF planning personel in the form of computer print-out sheets. This data proved to be in so rough a form that it was not possible to validly track the exact changes that would be wrought at 10 year intervals. Therefore we decided to use only the year 0 and the year 50 horizons. We give this data in the following table:

AGE CLASS DISTRIBUTION ACRES (SUITABLE LANDS)

AGE CLASS	PRESENT FOREST	FIFTY YEAR FOREST
0- 10	4000	182368
20*	59000	171535
30	0	163560
40	0	143326
50	228000	143155
60*	376000	0
70	0	57710
80	0	0
90	0	0
100*	149000	58190
110	0	256764
120	0	0
130*	206000	0
140	0	0
150	0	9660
160*	364000	0
170	0	0
180+	0	66706
190	0	0
200	0	0
210	0	115706

*Present Forest Age Classes are lumped as follows:
20-40, 60-90, 100-120, 130-150, 160+.

Many of the implications of this data are more readily apparent in graphic form, therefore we extrapolated it in two displays titled "Age class distribution of the present forest" and "The proposed action forest in fifty years." These displays render the data as two normalized curves. Here are a few comments on our method of deriving these curves:



The data we received was presented in a very rough and inconsistent form. The figure 228000 listed for age class 50 in the "Present Forest" column apparently must be divided between classes 30 and 40, which are quantified by 0's. The same is true for several other classes. These groupings are of different lengths, and it will be noted that age class 50 must be divided between previous classes, while others must be divided between succeeding classes. We performed this averaging and transferred the data points to our graph. Notice that age class 160+ in the "Present Forest" column and age class 210+ in the "Fifty Year" column are open ended. We averaged the 160+ figure over decades 16 through 25, and the 210+ figure over decades 19 through 25.

It will be noted that age class 10 means 0-10, 20 means 10-20, and so forth. Therefore we placed these data points at the halfway marks, that is, 5, 15, 25, etc.

We have sketched normalized curves through our data points by a simple "eyeball" process. We dealt with the tail end of the curve by tapering off with a normal distribution curve figured to approach 0 at 500 years. Surely this is as good an assumption as any.

The "Present Forest" data gives an impossibly low figure for age class 0-10. We sketched our line to conform to data in the Fifty Year column.

The dotted line on the "Proposed Action" graph represents Protect the Yaak Committee's visualization of a future forest with a better age class distribution than that prognosticated by the KNF Proposed Plan.

WHAT DO THESE GRAPHS TELL US?

First let's look at the profile of the present forest on graph #1. We see from our curve that we have a predominately young forest here. The peak of the curve centers near age 70, and we have another lesser massing at age 135. The first peak represents the enormous acreages that regenerated subsequent to the great fires in the early part of the century. The second peak may correspond to similar events in the early middle 1800's, or it may be an artifact resulting from some later die-off of classes in the 90-120 year group indicated by the slump in the middle of the curve. In the absence of this slump we would have something approaching a normal bell curve. In any event, we have a fairly balanced distribution with a maximum in the younger classes.

The 135+ year grouping represents the presently utlizable timber as well as our biologically valuable old growth resource.

Now observe the curve on graph #2, representing the forest 50 years in the future following the implementation of the Proposed Plan. We see here a radical transformation of the age class structure. The great bulk of the forest is less than 70 years old; age classes greater than 160 years are almost non-existent; and there is a minor grouping of classes centered around age 115. The dip centered at age 75 is hard to understand, but may represent lodgepole stand conversion and the effects of a lodgepole rotation cycle set at 80 years.

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The age class groupings are averaged at the ages shown. See the footnote above. This footnote has been added to Appendix 6 of the Final Plan for clarity.

The figure shown for age class 0 to 10 represents non-stocked land and is modeled in FORPLAN with an initial age of zero.

We have carefully reviewed your philosphical position and your charts and discussion. As we understand your position, you would like to increase the proportion of larger trees being harvested on the Forest, but with total harvest volumes at some level lower than the Proposed Action. We belive that Alternative I (Current Direction) effectively achieves your desires. A series of charts depicting the anticipated age class distributions generated by Alternative I are displayed on the following page. Your "Better Balance Curve" displays an age class distribution more like it would actually be in Forest, while our column charts show the effects of age grouping that was necessary for modeling purposes. The following Table compares Alternative I to your proposal which we will call Alternative PTY (Protect The Yaak):

AGE CLASS DISTRIBUTION - 50 YEAR FOREST
Current Direction (Alt I) VS "Better Balance Curve" (Alt PTY)
(Thousands of Acres)

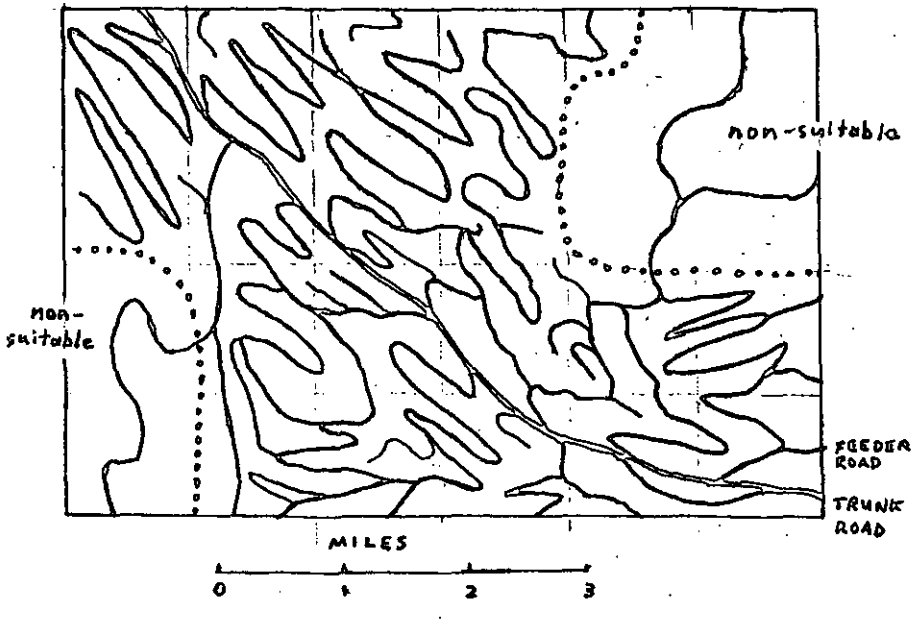
AGE CLASS	ALT I	ALT PTY
10	126	88
20	124	89
30	140	88
40	102	87
50	0	86
60	58	85
70	0	81
80	0	72
90	135	64
100	310	56
110	0	47
120	0	38
130	0	31
140	10	27
150	0	22
160	0	21
170	127	23
180	0	28
190	0	30
200	290	29
210	0	28
220	0	25
230	0	21
240	0	17
250	0	13
TOTAL	1422	1196

THE REAL FUTURE FOREST

Note from page V-2, Proposed Plan, that the KNF anticipates by year 50 that it will have constructed a total of almost 11000 miles of road on the Kootenai. Note further, on page A1-1, that of a total Forest area of 2,245,000 acres the Kootenai has assigned 1,386,000 to the suitable timber base. This last is the land to which the preceeding graphs apply. Most of those 11000 miles of road will be built on this suitable timber base, which constitutes about two-thirds of the Forest. This averages out to a road every 330 yards or so across the entire timber base. Some of these roads will be elsewhere than the suitable base so we'll call it a road every 400 yards.

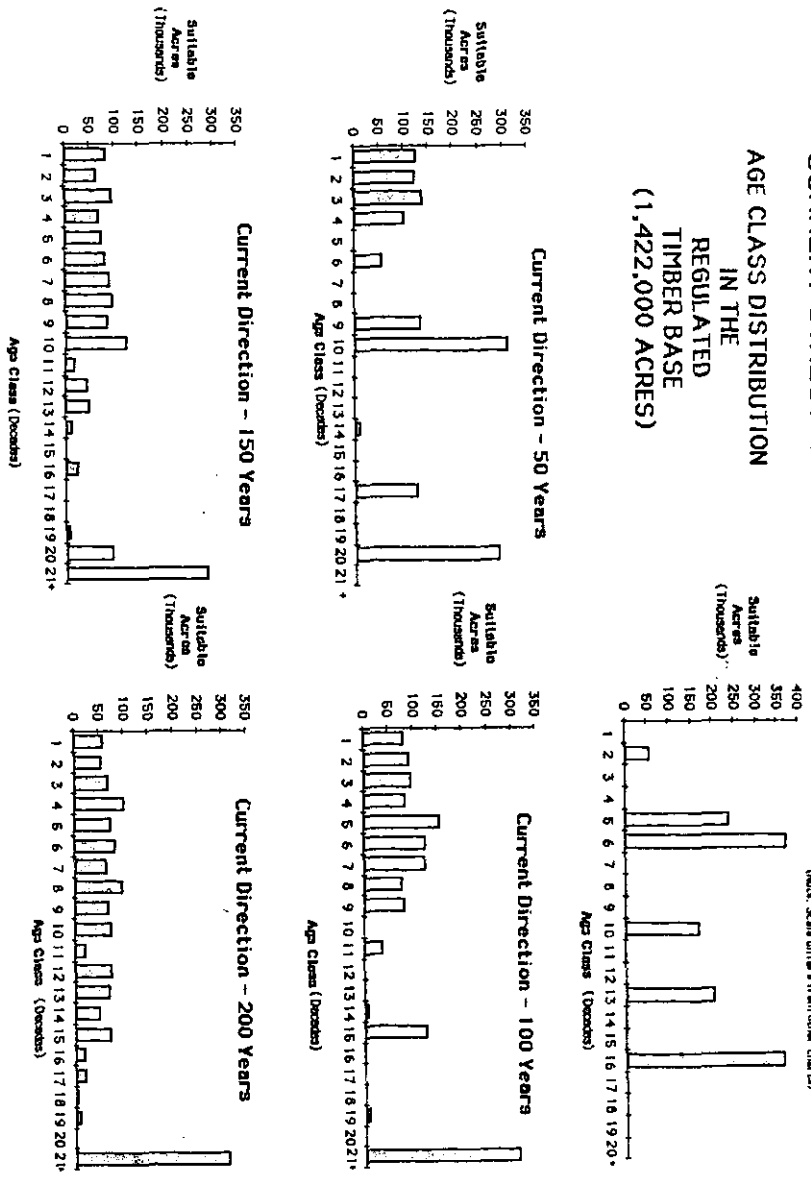
So: we'll have one-third of the forest in non-harvestable categories, mostly land too expensive or erosionally damaging to log, with some small percentage (around 5) in wilderness designations. The rest will be patchwork of even age stands, mostly less than 100 years old, and clearcuts, all laced together with a maze of roads, switchbacking several times through every square section, averaging 400 yards apart. We thought we'd make a scale drawing using these specs so everyone could get a picture of what they're buying into:

THE FUTURE FOREST



CURRENT DIRECTION

AGE CLASS DISTRIBUTION IN THE REGULATED TIMBER BASE (1,422,000 ACRES)



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Unfortunately we couldn't figure out any way to depict the raw, heaved earth, the slash piles and general debris, the vast stands of sapling trees, and the silt-laden streams that go with this picture, but perhaps the reader will exercise a modest quantity of imagination. One can find a corroborating description, titled "The Forest in 2034", on p. II-16, Proposed Plan, but this employs such carefully bland language, that it elicits no vivid image.

If anyone thinks that this vision of the road system is comfortably far in the future, they should refer to "Average Annual Road Construction", p. V-2, to discover that the system will be 90% complete within 15 years under the proposed action.

TIMBER HARVEST AND YIELD ESTIMATES

CHEC analyst Randall O'Toole (c.f."CHEC, Review of the Draft Kootenai Forest Plan and EIS", 1 Oct. '85, on file at the KNF supervisor's office or available from CHEC, P.O. Box 3479, Eugene, Oregon 97403) reviewed the mathematical reasoning of the KNFP Plan. He discovered that yield estimates were grossly overestimated, and he spelled out the specific scientific invalidities which produced this overestimate. We would like to point out that these invalidities are not the result of random carelessness, but systematically created to inflate long term yield estimates, thereby justifying high cutting levels for the coming ten year period. Let us quote some of the salient passages of O'Toole's report:

"CHEC found serious problems with Kootenai timber yield tables. Although these problems had already been pointed out in Andy Stahl's review of the 1982 draft Plan, no corrections have been made since that time.

"..Forest planners used a computer program called Prognosis to predict future timber yields. Planners made two modifications to Prognosis which significantly increased its predictions of timber growth. Planners also modified the Prognosis results which further increased growth predictions in younger timber stands.

"...By the time second growth timber has reached the age of existing mature timber, it is predicted to have grown far more wood than existing stands have today.

"...Planners also reduced tree mortality in Prognosis to 0.1 percent of the stand between ages 15 and 25. This allowed stands which may have been overstocked to remain overstocked-- with no reduction in growth.

"... Planners predicted even more rapid growth of stands which are managed using precommercial and commercial thinnings...mixed conifer stands receiving precommercial thinning only are expected to grow 25 percent faster than stands receiving no treatment, and precommercially thinned LPP stands grow over 40 percent faster than untreated stands.

" The results of precommercial and commercial thinnings combined are even more amazing. MC1 (MIXCON I, highly productive mixed conifer stands) stands which are thinned three nearly double their growth.

8

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While the limitations of state-of-the-art forest modeling makes an exact match to the distribution you propose extremely difficult, Alternative I does come quite close and should essentially respond to your concerns.

8. The timber yield tables used in the Forest Planning process have been reviewed and validated by comparison to existing stands on the Forest and by running selected stands through the latest version of Prognosis. The latest version is the state-of-the-art procedure for growth projections and has been revised several times since the yield tables were developed. The results show that the yield table projections compare favorably to the latest version and to volumes of existing stands. There are some variances in stand attributes and no attempt has been made to justify or explain each one. The total volumes projected are reasonable based upon the comparisons and do not warrant revision of the tables.

Culmination ages were also checked on the latest Prognosis runs and found to be in the 70 to 130 year range. This held true using either total cubic foot yields or only merchantable cubic foot yields. Therefore, the rotation ages used in the Forest Plan are considered to be within NFMA requirements.

CHEC's comments are addressed in the response to the Montana Wilderness Association which presented the CHEC report in its entirety.

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"All stands which are thinned twice increase growth by about two-thirds or more.

"... The longest studies of the effects of thinning on growth rates have been done in the pacific Northwest. These studies have been incorporated into a computer model called Douglas-Fir Intensive Management (DF-SIM).

"...According to Forest Service General Technical Report PNW-135, which gives general results from DF-SIM, the volume at harvest should not be more than about 25 percent (higher) than the volume of unmanaged stands. Stands receiving both precommercial and commercial thinnings may produce 35 percent more volume than unmanaged stands. Commercial thinnings only may increase volume by as much as 10 percent.

"These results contast sharply with those of the Kootenai yield tables... Although Kootenai forest types are not the same as those of the Douglas fir forests represented by DF-SIM, there is no reason to expect that mixed conifer stands-- which are 20 to 40 percent Douglas-fir-- will respond to thinnings any better than Douglas-fir alone.

"... In sum, yields which may already be 34 to 115 percent too high, as shown in table two, are predicted to be even greater by 20 to 100 percent with thinnings." (In fact, this would produce a compounded effect and create errors which could be wrong by orders of magnitude. This means that KNF yield estimates may be out of reality's ballpark altogether. Ed., PYC)

"...Planners used normal yield tables such as The Yield of Douglas-Fir in the Pacific Northwest (USDA Technical Bulletin 201) and Yield of Even-Aged Stands of Ponderosa Pine (USDA Technical Bulletin 630) to conclude that stands would reach CMAI much sooner than predicted by Prognosis.

"...planners adjusted Prognosis outputs by increasing growth between ages 40 and 60 to make stands culminate earlier.

"...planners increased growth between ages 40 and 69 by three to three-and-one-half times.

"Planners based (their) assumption (of the age) that unmanaged stands reach CMAI on tables in Technical Bulletin 630, and other normal yield tables which represent all trees in the stand over a half inch in diameter. However, the yield data in FORPLAN represents only trees over six (for lodgepole) to seven (for other species) in diameter.

"This difference is important and correcting it results in major changes in the data.

"...Planners' assumption that stands will culminate sooner led to changes in the Prognosis outputs which -- besides violating NFMA requirements -- seriously distorts the yield tables and risks significant future problems on the Kootenai. This is because the Kootenai

8

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8. See Previous page.

Forest is an "old-growth deficit" forest, which means that the average volume of timber which planners expect to grow in a rotation is greater than the average volume now found on the Forest. In such a situation, Immediate timber harvest levels are limited by the amount of timber available for harvest rather than the expected future growth of the timber.

"By assuming that CMAI takes place by age 70, planners greatly increased the amount of timber which will be available for harvest in the next few decades. This allows FORPLAN to greatly increase first decade harvests over the levels which could be allowed if a higher minimum harvest age were used. In effect, the reduced harvest age allows more o rapid liquidation of old-growth timber.

"...a major falldown in harvests may take place when the current old-growth inventory is gone." Perhaps in, say, 15 years?

Well, garbage in, garbage out, but just the garbage the timber companies wanted to hear.

O'Toole's review is cogent and and thorough. It should be read by everyone interested in Kootenai Forest management.

Now let us look at our graph #2. The bump in our 50 year age class distribution curve extending from year 85 to year 145 represents the timber which will be utilizable in the fiftieth year or that is moving into utilizable ages. Our data table tells us that this bump signifies 400,000 acres. By the time the 60 year old timber group moves into a 120 year old utilization age, 60 years later, we will have had available an additional 143,000 acres for a total of 543,000.

Will this land supply enough timber for projected harvest needs during that sixty year period? The Kootenai predicts an average increase of 30% in timber put up for sale over the next 50 years above that which has prevailed during the last 10 years (see p. V-1, Proposed Plan). They anticipate 11,900 acres in clearcuts and 2000 acres in seed tree cuts per year during the next decade, to sustain a lesser harvest than that of the following decades (Appendix 2, A2-1, KNFPP). Let us assume that they achieve some reasonable increase in yield rates during those decades and thereby can acquire their 30% using the same yearly amount of land as the first decade, 14,000 acres.

So how much land will be required to provide timber during the aforementioned sixty years following the end of the planning horizon? 14,000 X 60 = 840,000 acres needed for the whole period, or 297,000 less than the 543,000 acres that will have been available. They will be far short, and this argument assumes that they totally obliterate the entire 60 to 140 year age class. This is what O'Toole means by "...a major falldown in harvests...", although we have not even brought inflated yields into the question. Those inflated yields are needed to avoid the above conclusion.

Is this kind of shortfall inevitable if the KNFP Plan is adopted? No. Failure to maintain market competitiveness will bring the whole program crashing down long before that.

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8. See second page previous

TIMBER VALUES AND THE MARKET PLACE

Let us delve once again into O'Toole's review:

"Kootenai planners based timber values on high bid prices received from selected timber sales sold between 1974 and 1980." And we would add that much of this timber has recently been turned back in the Great American Buy-back precisely because it was overbid in the first place.

"Yet timber values have fallen since 1980. Major and permanent changes in banking and savings and loan industries indicate that prices will not reach the late-1970's levels again soon." In other words, you don't have to be John Maynard Keynes to figure out that you don't predict long-term price trends from the most extreme period of bidding frenzy that you can isolate in the long annals of history. 8

"...the 1985 RPA Program predicts much smaller price increases over the next few years. More recent work by Adams and Haynes, who made all the RPA projections, indicates that even the 1985 RPA projections are optimistic.

"A... recent stumpage price equation developed by the Regional Office indicates that the Kootenai Plan equation does not even accurately predict prices bid since 1980... the new equation, based on sales sold between June 1980 and June 1984, produces values over 20 percent less than the equation used in the Forest Plan."

The foregoing indicates that the Kootenai stretches the receipt side of the ledger as far as a bullish imagination will take it. What about costs?

O'Toole reveals that the KNF has techniques for concealing "below cost" sales, that is, sales where receipts are less than costs: "CHEC examined several timber sales and found evidence that forest managers sell timber on very steep slopes only by "cross-subsidizing" it with timber on gentle slopes. The gentle-sloped timber was sold at a lower value to give purchasers an incentive to take the steep-sloped timber."

He points out: "These lost revenues cost counties as well as the Federal Government. Counties receive 25 percent of gross Forest receipts to use for roads and schools. These two sales (that he had previously discussed) cost Montana counties nearly $12,000." 9

Furthermore, "...most (skyline) sales returned so little that they were unlikely to cover sale preparation and administration costs. Corrected timber prices would probably show that most slopes over 40 percent will lose money.

"Other types of sales which can be expected to lose money are commercial thins and sales in roadless areas.

"Timber sales in many roadless areas will also require a subsidy. Forest planners estimate that roadless areas will require, at maximum, 5.8 miles of roads per square mile of land. On slopes under 40

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8. The use of any discount rate (4% in Forest Planning) incorporates the concept of "time value of money". This concept infers that income derived now is more valuable than income derived later and that expenses incurred now are more costly than expenses incurred later. This concept is best illustrated as follows: Given the choice, would you prefer that I give you $100 today or wait and give it to you two years from now. If you chose to take the money now, you understand the concept.

   In order to maximize the value of a resource in dollar terms the general approach is to delay costs as long as possible and gain returns as soon as possible. Thus, your suggestion that timber values be reduced is an argument that reduces the value of the longer rotation you have proposed. In the simple case where roads already exist, the site preparation and planting costs occur at the very beginning of the rotation so for present net value to be maximized we want to gain the return from harvesting the timber as early as possible. Obviously the timber must be at least merchantable before it has value and at some time the discounted value is maximized. Delaying the harvest reduces the present net value of the stand. Reducing anticipated returns makes the economically-preferred harvest age even younger.

   Appendix B of the FEIS includes an analysis that explored the effects of changing economic values.

9. Our analysis (Appendix B of the FEIS) shows that the present net value of the Forest can be maximized by managing 1,337,000 acres for timber production given a new set of economic data as you suggest. The Final Plan calls for managing 1,263,000 acres for timber production. The positive net present value is calculated in terms of 200 years of Forest management. Any particular entry to a stand or area may produce a net cost as long as the present net value of management over 200 years is maximized.

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percentt, these roads are estimated to cost about $27,500 per mile, or about $250 an acre. Roads on slopes between 40 and 60 percent will cost about $300 an acre.

"... road engineering costs will be nearly $95 per acre. This means that road costs in most roadless areas will average about $350 to $450 an acre.

"To this must be added the sale preparation and administration costs of about $15 per thousand board feet, resulting in total roadless area sale costs of $35 to $55 per thousand.

"Often, then, sales of timber in roadless areas will be cross-subsidized by timber outside the roadless areas where road costs are lower. As with the cross-subsidization across slopes, the timber outside the roadless areas will be sold for a lower price to give purchasers the incentive to buy the sale even though the roads into roadless areas are more costly than the timber they access is worth."

"Planners overestimates of timber values had a major effect on FORPLAN.

Except for the current direction, every alternative in the EIS proposes a large increase in programmed timber harvests.

"Correcting the timber prices would change this dramatically. most steep lands, many roadless areas, and some of the lodgepose pine type would be eliminated from the suitable timber base..."

O'Toole concludes, " Planners should correct both timber values and timber price trends and selected FORPLAN runs to determine if the effects of these changes are significant. If they are, as CHEC predicts, then all alternatives would be rerun and new alternatives should be designed to respond to the changes in vlaues."

So much for the cost effectiveness of Forest Service operation. What about competitiveness in the market? We've already mentioned our current poor market position, the unlikelihood of escaping competition from the rest of the real world, and the lack of desirability of the young age classes on which the Proposed Plan will increasingly depend. Now consider that the Plan's operation requires an increasing budget for timber sale administration and road building, and ask yourself how likely it is that a tax-paying constituency, cramped by a Star Wars federal budget, will continue indefinitely to fund a deficit timber sale program. How competitive will the industry be when it has to foot these bills alone? Let's get real, as they say.

Of course, the Proposed Plan was never meant to be real. It merely aims to provide a facile context for the next ten years of rapine in which the lumber companies hope to run the bulk of the remaining high-value, old growth sawtimber through their mills.

9

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10. Sorry, we inadvertently skipped number 10 when numbering the comments.

OLD GROWTH AND FOREST AGE CLASS DIVERSITY

While KNF personnel must be applauded for presenting the only specific program for old growth management to be found among the Forest Plans of Region One, we must insist that their proposal is quite inadequate to give reasonable protection to the resource. 11

This issue is extremely important. These old growth stands, now drastically diminished from 20 years ago, represent the core of the resource upon which we must depend for a viable, near or mid-term industry.

They also represent, as the Proposed Plan allows, important and sometimes critical habitat for approximately 20% of all wildlife species on the Forest. Most of these listed species are birds, but weasels, martens, fishers and flying squirrels are also included among old growth dependent species. We would add that, although the Plan does not mention them, black bears also find a very important food resource in the carpenter ants and grubs which infest large class rotting timber. We cite the Plan's lack of attention to the ways in which old growth diminishment may affect the feeding and denning needs of the black bears.

The KNFP Plan stipulates that 8% of the old growth found within the "suitable timber base" will be given special management. They list only one reference in their bibliography (the Juday, 1978, mentioned on p. A17-9 was not to be found therein): McClellan, B.R., "Relationships between hole-nesting birds, forest snags, and decay in western larch - Douglas fir forests of the Northern Rocky Mountains". How reliable is this single source as a basis of policy for one of the biologically most critical aspects of forest management? This document is nothing more than a University of Montana Ph.D thesis. We have not had the opportunity of seeing it, and while it may well be a piece of valid and useful research, we must strongly doubt, given its title, that it supplies an adequate basis for determining that the Kootenai Forest can safely cut down 92% of the old growth within the timber base. Note also that the Plan (KNFPP p. A17-9) indicates this 8% as an absolute minimum given in their McClellan reference. As KNFPP II-17 and IV-9 make clear, this 8% aims at preserving only minimum viable populations of old growth dependent species. This leaves no safety margin for these populations whatsoever. Recent biological history has demonstrated all too thoroughly that animal species reduced to minimum habitat bases are perched on the edge of disaster.

The KNFPP, DEIS, vol. II, p. III-61 states, "Approximately 25% of all the wildlife species on the Forest find preferred habitats in old growth and some may be entirely dependent on such habitat." We will absolutely not stand still for the KNF attempting to manage these species on the edge of viability using Mr. McClellan's Ph.D thesis as a management guideline.

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11. The Final Plan calls for removing Management Area 13 (old-growth) from the regulated timber base and increases its size so that 10% of the Forest acreage below 5,500 feet in elevation will be in old-growth conditions at all times. This protects over 90% of the existing old-growth on the forest (see response #4a above).

The Plan provides internal evidence that even the 8% to be retained in old growth Management Areas (MA 13) will not be treated in such a manner as to provide their optimum habitat potential. MA 13 Timber Standards (p. III-53) state, "This MA is suitable for timber production. Final harvest will not occur until the stand, because of insects, disease, or catastrophe will not provide old growth characteristics." This is a rather peculiar statement. As the KNFPP Appendix discussions of Cavity Habitat Management Guidelines (A-16) and Old Growth Habitat Characteristics and Management Guidelines (A-17) makes clear, the most important characteristics of old growth reside in its decadent qualities, which provide nesting cavities and insect food for old growth wildlife. How can such a habitat be too decadent to maintain old growth values and yet still be valuable for timber harvest? Page III-53 now becomes more specific, "Final harvest is expected to occur at about 250 years for an average stand...", and then goes on to make the disclaimer that this decision will be based on an evaluation of the particular stand and its old growth effectiveness.

The telling point in the KNF's old growth policy is the fact that the old growth designations have been retained in the timber base and must be harvested to fulfill the projected timber yield outputs. As it stands, the policy represents little more than an intention to extend the rotation age of 8% of the suitable base to 250 years. Most biologists would doubtless argue in any case, that 250 years represents a low figure for attaining old growth effectiveness, rather than an average high, as stipulated in the KNFPP. 12

And now we have a further revelation: observe the curve in graph #2. Notice that the line drops to near zero at age class 160. In fact, the sum of all acreage in all 160+ age classes is 67,000 acres. What happened to the 8% to be managed as old growth timber, the 93,000 acres preserved in the timber base? Well, we found out that Montana Wilderness Association was informed in a 7 October '85 letter from the Kootenai planning staff that these stands willbe harvested and "replaced" by stands in the unsuitable land categories. This is a classic Catch 22 formulation: "We're going to preserve 8% of the old growth until we cut it down."

Old growth in the timber base can't be replaced by old growth in unregulated areas. The unregulated OG already exists, and presumably will do well to supply the needs of the unregulated areas, as the Forest has a generally low percentage of old growth acreage. Furthermore, the unregulated lands are largely poorer habitats, and in any case will not satisfy the areal distribution characteristics which the Plan indicates as being necessary to supply old growth functions, i.e. they are not distributed in the regulated lands.

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12. See response #11 above.

"Replacing" the timber base old growth is a purely semantic conjuration, rather as if the angel Michael were going to descend bearing behemoth trays of the stuff. In fact the Forest is simply intending to rename portions of the unregulated lands "Old Growth Management Areas." So why not rename it now and claim twice as much old growth for the first fifty years? But then one could hardly use it to "replace" old growth one cut down, could one?

This policy does not represent a sound approach to old growth management, but rather supplies a veneer of scientific rationale to an intention of liquidating the old growth capital in the timber base. It must be changed in several regards: 1. The KNF must press for a broader scientific understanding of the nature and role of old growth in this particular Forest. This must be done on a priority basis, before large portions of the remaining resource are hauled away to the mills.

2. The KNF must develop a biological definition of old growth in place of the age class catagories now in use. 13

3. Until old growth needs are more adequately defined the Forest should adopt a more cautious figure of 15% retention. We do not feel that future knowledge is likely to support a figure much lower than this is any case. 14

4. Old growth management designations (MA 13) must be dedicated and removed from the timber base. 15

5. A much more specific plan for future recruitment of old growth must be built into the structure of the Plan.

This last point deserves special attention. MA 13 Timber Standards states, "An existing stand in this MA will not be harvested until a stand of equal or nearly equal effectiveness as old growth habitat is available." What if there is no available such stand in the area at the time thedesignated old growth stand begins to become moribund? If the Forest carries out its intention of reducing the suitable timber lands to CMAI age classes and below, this denouement will become inevitable in the absence of adequate designations for replacement stands. Such measures must be taken relatively soon to be effective. There must also be some redundancy in the replacement stands to insure a safety margin. 16

13. See response #4a above.

14. Eleven percent of the Forest below 5,500 feet in elevation meets the biological definition of "old-growth" (see Glossary) thus retention of 15% is impossible today. We have retained the option to increase the amount of old-growth timber in the future because 34% of all the mature timber, exclusive of Lodgepole Pine, is in the unregulated timber category.

15. This has been done.

16. Removal of MA 13 from the regulated timber base resolves this concern.

What this argument boils down to is that a management policy of reducing the age class structure to at or below CMAI is not wise. Although NFMA (Section 6 (m)(1)) requires that "stands of trees...shall...generally have reached the culmination of mean annual increment of growth" prior to harvest, this in no way indicates a desideratum that all stands shall be reduced to CMAI. The intent of the law is to set a minimum standard and not a maximum. In addition to producing larger and more valuable forest products, longer rotations retain soil nutrients depleted by short rotation cropping, reduce site damage and erosion resulting from more frequent harvest operations and enhance the value of the stand for watershed protection, recreation, and habitat for fish and wildlife species. Once again, the only value in providing a vast production of low value timber is to permit the near term removal of larger age classes. We protest this disingenuous and short-sighted aim.

THE MOUNTAIN CARIBOU

In our communication with Jasper Carlton, founder of the Montana Caribou Ecology Project, we have learned that the sighting data for caribou in the Yaak area is as strong as that for north Idaho prior to the Endangered Species listing for the animal in the Selkirk range. MCEP possesses a report of a band of caribou on Lick mountain for the winter of '84-'85, and British Columbia Fish and Game phographed a small herd in the North Fork Yaak, only ten miles from the boundary, during that same winter. There have been two confirmed sightings and the finding of tracks in the Yaak during the last five years. Carlton, who located and tracked the Selkirk herd in the face of local skepticism, report that there is a good probability that the northern Kootenai possesses a small but viable caribou herd on winter and spring range use. Wildlife experts view the mountain caribou as the currently most endangered animal in North America. It is the responsibility of the KNF management to take quick action to determine caribou status here and to move aggressively to secure critical habitat for this creature. They have not done so. Their stated intention (KNFPP, p. II-14) to determine the status of caribou by 1995 is a travesty. By 1995 the Mountain caribou will surely have declined beyond recoverability if positive action is not taken in the interim. 17

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17. During the past 3 years, the Kootenai National Forest has actively participated in an interagency effort to determine the status of caribou in Montana. This task has now been completed, so reference to status determination within ten years has been deleted from the Final Plan. Based upon repeated aerial surveys during this three year period, there is no evidence of a resident caribou population within Montana. Recent reports suggest that a few caribou may continue to use habitat in and adjacent to Montana.

Any caribou which may occur on the Kootenai are considered to be a sensitive species, and as such, will be managed to prevent their being further endangered. This management consists of 1) placement of potential caribou habitat in the Whitefish range in compatible management areas, 2) road management to provide habitat security, and 3) continued interagency cooperation in caribou management programs. The Kootenai will be responsive to proposals to reintroduce caribou to suitable habitats when and if such proposals are made by the Montana Department of Fish, Wildlife and Parks, which is the agency with primary legal authority in this matter.

The Scotchman Peaks area is being proposed for Wilderness designation thus any potential for Caribou habitat will not be altered by human activities.

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According to Carlton, the rapid diminishment of caribou during the last three decades has probably been consequent upon the indiscriminate removal of mature spruce-fir stands during the spruce bark beetle infestations of the 1950's. If Forest policy was the agent for the disappearance of the caribou, then Forest policy must be responsible for its recovery. Even if we do not currently possess viable caribou numbers, we could in the future, through habitat enhancement and transplant programs, regain this species. The KNF must commit itself to such a course of action, or stand accused of ignoring the intent of the Endangered Species Act.

17

We wish also to note that there is evidence that the rugged and inaccessible Scotchman Peaks area may harbor a remnant band of caribou and that this possibility should be investigated on a priority basis.

Critical habitat designations in the north Yaak and the Scotchman area should be undertaken now, prior to status determination, as status determination may come too late.

THE BLACK BEAR

The black bear is a creature almost completely ignored in the KNFPP. As anyone familiar with the local hunting scene is aware, black bears seem to have suffered a startling decline in the last ten years. Bears are usually killed from vehicles. The KNF's ambitious road building program and its general neglect of the bear in habitat planning will inevitably result in further declines. We strongly recommend an evaluation of black bear habitat needs and the elaboration of planning guidelines fashioned to protect this animal. We also recommend the black bear as an indicator species to be given equal ranking with elk. It has been pointed out that the choice of elk as the prime indicator species is a disingenuous decision aimed at minimizing the apparent effect of timber activities on game populations. This defect would be largely remedied by using the black bear as a co-equal in this role.

18

18. Designation of the black bear as an indicator species is not necessary. The concept of indicator species is that one species can serve as an indicator of habitat conditions for other species with similar habitat needs. The habitat needs of black bears are well represented by two indicator species, elk and grizzly bears, both of which live in similar habitats and require a high level of habitat security. The Kootenai contains quality black bear habitat and healthy populations of black bears. Habitat quality for black bears will be maintained or improved in the future along with the habitats for elk and grizzly bear.

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WATER QUALITY AND RIPARIAN AREA MANAGEMENT

We will quote here from a circular issued by the Montana Wilderness Association. "The Environmental Protection Agency gave the Kootenai Forest Plan the worst water quality rating of Montana's ten national forests plans. 19

The draft Forest Plan estimated sediments in Kootenai waters would increase by 50%."

We cannot find such a figure in the KNFPP, or indeed any overall sediment increase estimate. We know, however, that the situation in this regard is not good. To continue our quotation - "The Montana Dept. of Fish, Wildlife and Parks predicts this could cause a substantial decline in trout populations." 20 The riparian area guidelines for the Plan state (p. III-7) that dozer scarification will be permitted in riparian areas and requires that skid trails and landings must merely be "restored to nearly normal conditions." It is not conscionable for a civilized society to permit this kind of activity in riparian zones at all. Stream banks and flood plains must be protected by a much more restrictive policy than that given in the current proposal. We further suggest that all major riparian areas, including the federally owned parts of the main Yaak, the West, North, East and South Forks; Pine creek; Pete creek; the Vermillion river; and Seventeenmile creek be given total retention status to the full extent of their 100 year flood plains. 21

Roads, of course, are the greatest contributor to sediment problems. If the aggregate of suggestions in our analysis is followed, road mileage would be reduced, and this would help alleviate the problem. So will longer rotation cycles and adherence to normal hydrologic and soil conservation restraints in salvage operations. 22

Beyond that, we can only say that we cannot solve this problem on paper in this analysis. The KNF must take a hard look at the erosion and water degradation quandary implicit in their Proposed Plan. They are to be required to come up with real solutions. This is their legally required responsibility. 23

A CRITIQUE OF THE MANAGEMENT AREA GUIDELINES

We will omit a number of these MA's either because we discuss the issues involved in other places, e.g., MA 13 - Old Growth Timber, or simply because we wish to make no comment on them at this time.

MA 2, Roadless recreation - The primary comment we wish to make here is that the wording of the guidelines leaves the dedication of this MA in doubt. Some of these areas are 24

19. The EPA said:
"Your DEIS is rated EO-2 (environmental objections - insufficient information). The Agency believes that the potential for adverse water impacts is a significant environmental concern..."

The forestwide standards and the monitoring and evaluation plan have been modified to insure that State Water Quality Standards are met.

20. There was no estimate of sediments entering streams included in the DEIS. In an earlier DEIS issued in 1982 we showed a figure for soil movement which was wrongly interpreted as being soil moving into streams. There is no available technique for reliably estimating either human-caused erosion on the Kootenai NF or sedimentation into the streams of the Kootenai NF. Thus we have keyed our management to insuring that damaging sedimentation does not in actuality occur; an approach that focus es on reality rather than mathematical modeling.

The estimates for migratory trout populations shown in the EIS are based upon a mathematical model with low reliability as to absolute numbers calculated. The results were presented to allow relative comparisons between the alternatives. Again, modeling of these relationships is valid in a comparative sense, but the actual proving ground is out in the Forest where management guidelines and monitoring and evaluation will be performed to insure that State Water Quality Standards are not violated.

21. The riparian area guidelines (in Chapter II of the Final Plan) say: "landings will not be located in riparian zones unless other locations would create more resource damage." They also say: "dozer scarification is not permitted in riparian areas unless there is no possibility of undesireable soil compaction or additional stream sedimentation."

22. As indicated earlier, your proposals seem to approximate Alternative I. For comparative effects, see the discussion of Alternative I in the EIS. Note that a constant regulated timber base acreage will require the same total road mileage, but the schedule of construction will vary depending upon harvest rates.

23. We agree, that is why the Final Plan focuses on insuring that actual activities meet the State Water Quality Standards.

adjacent to, or have been proposed as, wilderness. If such areas are genuinely to be managed for roadless recreation, why are they not recommended as wilderness by the KNF? Note the language under "Wildlife and Fish", p. III-10, "...habitat enhancement may occur using prescribed fire or timber harvest..." and under Timber, "Timber harvest may occur to minimize the spread of insects or disease to adjacent MA's...". Timber harvest and the concommitant road building are completely incompatible with roadless management, and the guidelines should reflect this. Insect and disease control should depend on pre-emptive harvest in the adjacent MA's. There should also be some recognition that insect depredation and disease are natural characteristics of all forest ecosystems and do not necessarily constitute an emergency justifying the jettisoning of all other values. As the present guidelines are worded, MA 2 would be completely open to the type of unrestrained and massive "salvage and sanitation" operations occuring in many of our large lodgepole stands now. This MA must receive language changes that insure the dedication of these areas to the stated goals. 24

24 a

MA 3, Roaded recreation - Our criticism for this MA is similar to the previous one. Why is a Visual Quality Objective (VQO) of maximum modification allowed in low viewing areas? Is this MA seriously dedicated to recreation values or not? This category should receive the same protections as those we recommended for MA 2.

24 b

MA 5, Sensitive Viewsheds - On p. III-20 it is stated, "Catastrophic events such as fire, windstorm, disease, or insects, especially the periodic infestations of the mountain pine beetle in mature lodgepole pine, may create situations where harvest is necessary." It is apparent that under these guidelines many of these viewsheds are destined to become gigantic salvage units. If the MA is classed as "unsuitable for timber production", why is it necessary to remove the timber from them if it dies? Without a change in these guidelines many, if not most, of our scenic panoramas visible from major travel corridors will become as visually devastated as the remainder of the country.

MA 10, Big game winter range - Once more, salvage harvest should be excluded from these areas. This MA, like the previous ones, is not included in the timber base. Therefore, there is no justification for permitting salvage operations, as it is not necessary to do so in order to maintain yield projections. Fire, rather than harvest, should be used as the exclusive tool for habitat enhancement.

MA 14, Grizzly situations 1 and 2 - We have generally no recommendations for grizzly management at this time. This reflects, not a lack of concern on our part, but a lack of

24. These areas were not recommended for wilderness designation primarily because of wildlife values that can be enhanced with low impact management activities such as prescribed fire. As noted in the Final Plan, timber harvest will not occur.

24a. The wording has been modified.

24b. The motorized types of recreation, toward which MA 3 is aimed, may involve facilities that are incompatable with the more restrictive visual quality objectives.

The wording of the timber guidance for MA 5 has been clarified.

All management areas attempt to do several things simultaneously. While MA 10 is primarily directed toward winter range management, some timber benefit (in the form of reduced losses on adjacent areas due to insects and disease) can be attained from the area without compromising the winter range values. Salvage harvest may be the most practical or cost effective way to attain this benefit so it is permitted.

time and expertise. We must rely here on the recommendations which may be given by the Great Bear Foundation and the Montana Department of Fish, Wildlife and Parks.

MA 17, Sensitive viewsheds, programmed timber - Salvage opportunities must not allow VQO and water quality standards to be thrown out the window. Salvage operations should be permitted, but only under the same constraints that apply to normal harvest.

MA 18, Slopes in excess of 40% with sensitive habitat types - Once more, salvage opportunities do not justify abandoning normal standards. In this case the relevant standards relate to erosion potential, and no salvage opportunity excuses what amounts to a deliberate decision to create excessive environmental harm in order to grab available timber that was excluded from the timber base to prevent this very sort of damage. 24 b

MA 19, Slopes over 70% - The previous criticism applies more strongly here. Salvage, road building, and the use of dozers in fire suppression should be catagorically excluded from this MA.

The KNF must establish a general policy that fire and disease salvage operations must conform to the same environmental protection standards, regarding soil and water quality conservation and wildlife habitat security, as all other harvest operations. Without such a policy, forest management becomes one long series of "emergencies". The Kootenai presently contains great acreages cut beyond ordinary hydrologic areal constraints, damaged riparian areas, and lodgepole units subjected to unacceptable soil compaction - all perpetrated under the rationale of salvage necessity. Outbreaks of fire and insect infestation are not catastrophic emergencies in general. They are normal, predictable aspects of forest ecology and should be subject to rational, conservative management, like all other aspects of forestry. 24 c

RECOMMENDED CHANGES IN LAND USE DESIGNATIONS FOR THE YAAK RIVER AREA

This is the area of our special interest and greatest knowledge.

1. The Boyd Hill cemetary - We find it completely astonishing that the KNF has designated the beautiful old growth larch stand surrounding our cemetary as a timber harvest catagory. Almost everyone in the Yaak has acquaintances, friends, or relatives buried here. Many of us expect to be laid to earth 25

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24b. Regardless of the type of activity, State Water Quality Standards are not to be violated.

MA 19: There is no need to categorically exclude an activity if it can be carried out under the goals of the Management Area. The direction explicitly states that roads won't normally be built here, but could be if "a location can be discovered that will protect the soil and water resources." The constraints on logging systems are also designed to insure soil stability. The use of dozers in fire suppression will not normally occur, but could be essential in certain circumstances so the option is retained.

24c. All activities on the Forest must be aimed toward accomplishing the Forest-wide goals spelled out in the Forest Plan. Among these goals are maintenance or enhancement of water quality and other goals that address your concerns.

here ourselves. We insist that this timber stand must be retained. We will not settle, either, for a narrow visual barrier. We want the whole stand preserved for the contemplation for those who visit the dead.

2. Roderick, Independence, Dooley and Flatiron mountains - This entire contiguous roadless area should be redesignated MA 2. 25

3. Caribou, Robinson mountains - The MA 2 area should be extended westward down to Blacktail creek and southward to cover all presently unroaded lands north of the Dodge Summit road.

4. Turner creek - The MA 13's should be expanded to preserve a unique old growth habitat.

5. Zulu creek - If the KNF is going to start logging the Zulu creek inventoried roadless before public discussion of the KNFRP is even over, then they can at least give us some better MA 13 representations. 26

6. Red Top - Ditto.

7. Stonechest grade - The magnificent panorama surrounding this point on the Yaak road deserves a higher VQO rating. We do want the Yaak valley to retain <u>some</u> of its visual character after 1995. 27

8. Riparian areas, main branch and all forks of the Yaak river, Seventeenmile creek, Pete creek, Pine creek, Kilbrennan lake, and Spread creek - One hundred year flood plains in the federally owned portions of these riparian areas should be off limits to all development. These are lands which have been heavily exploited in the past. Now it is time to protect what's left of the riparian zones and old growth here. 28

All lands visible from the inhabited and heavily traveled portions of these valleys should receive top VQO ratings. We who live here are going to have to look at the results of KNF land use planning for the rest of our lives. The lack of attention to this fact is especially glaring in the Seventeenmile and main Yaak areas. 29

9. Yaak river gorge, Yaak falls to highway 2 - This rugged, beautiful and inaccessible canyon should have top priority for MA 2 status. It represents the last, largest section of the Yaak to remain in a virtually untouched condition. These are primarily steep lands, expensive to log, and difficult to revegetate. Erosion rates will be high and result in sedimentation directly into the river. These lands should be redesignated MA 2 on a priority basis. There are high old growth values here as well. 30

25. (1) We agree, this area has been moved to MA 21 (Special Interest).

(2) We have retained the original designations. This enhances opportunities to manage wildlife in concert with recreation in the area.

(3) Our analysis indicates that timber values in this area outweigh the need for additional acreage in MA 2.

26. (4) MA 13 has been expanded in this area although this is not shown on the Forest Plan map (the map will be revised). USGS Quads with the MA 13 designations shown are available for review at the Troy Office or in the Supervisor's Office.

(5) MA 13 has been expanded in this area. Again, it's not shown on the Forest Plan map, but USGS Quads are available for review.

(6) MA 13 in Red Top - ditto.

27. The wording in the Management Area Guidance protects the sensitive viewing.

28. Additional MA 13 has been added in many of these areas, refer to the Forest Plan map for the Troy District and the USGS Quads for the Yaak District, available at the Troy Office or the Supervisor's Office.

29. As noted in the Final Plan, the VQO in timber management areas important for their visual qualities is partial retention. MA 15 is Maximum Modification, but it is not located in areas of high visual significance. MA 16 is modification, but it is located only in areas of moderate visual significance.

30. (9) Management Areas 10 and 13 have been expanded in this area and Management Area 11 has been reduced (see the Final Plan map). These management areas, rather than MA 2, are used to permit wildlife habitat management options.

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10. East bank of the Yaak, immediately below confluence with East fork - The excellent OG larch stand here is the last remnant of what once must have been one of the most impressive larch forests in the world. It deserves retention in MA 13.

11. Hawkins creek - The MA 2 areas of Cooney - Marmot and Northwest peaks should connect throughout the Hawkins creek drainage.

12. Garver creek, Roswell, Mt. Obermayer - This area should be changed to MA 2. 30

13. Upper Quartz creek - A change from MA 12 to 2 will give the surrounding 2's a much higher value.

These redesignations do not represent a great deal of the timber base, as, in many cases, they do not involve timber emphasis catagories. They would go a long way, however, toward preserving some of the wild character of the Yaak.

LAND USE REDESIGNATIONS ON THE REMAINDER OF THE FOREST

Most of these recommendations involve only very small land transfers from the timber base or transfers from nontimber designations to roadless or wilderness status.

1. Cataract creek - The inventoried roadless should all be amalgamated in one MA 29 catagory. 31

2. Pellick ridge - This should be added to the Scotchman peak wilderness allocation. It's difficult to understand KNF's withdrawal of this area for purposes of mineral development, given the fact that ASARCO has endorsed it for wilderness, and that, presumably it could be mined from adits outside the boundary, as in Rock creek. Pellick ridge contains winter range for bighorn and elk, excellent old growth and a high wilderness quality rating. This redesignation is number one priority on our list. 32

3. Trout creek - If this is going to be managed roadless, it may as well be designated wilderness. In general the refusal to designate wilderness in areas with high quality ratings, that are to be allegedly managed in a roadless condition, makes us suspect the sincerity of management's commitment to protect its MA 2's in the long run. This area has been called "the elk factory of the Kootenai" and deserves the highest level of protection. As the KNF admits, this area received the greatest public response of any wilderness recommendation on the Kootenai, with 67% of respondents favoring wilderness designation. Refusal to so designate is a simple flouting of the public will. Redesignate. 33

30. (cont) (10) We agree, but it's not shown on the Forest Plan map. See response #26 above.

(11) We have retained the designations as in the Draft because of the timber values that exist in the drainage.

(12) We have moved portions of MA 14 into MA 13 (again, not shown on the Forest Plan Map - see response #26 above), but most of MA 14 is retained because of the timber values that exist in the area.

(13) We have retained MA 12 in this area because of the timber values and the opportunity for elk summer range management that exist there.

31. The lack of solitude in the area surrounding the Cataract Creek drainage make it generally not suitable for MA 29.

32. Much of Pellick Ridge has been proposed for Wilderness designation (see the Forest Plan Map).

33. We have essentially retained the land designations of the Proposed Action. MA 12 is retained in a portion of the roadless area to allow management activities which maintain or enhance summer and fall big game habitats so that this area will remain the "elk factory of the Kootenai". We generally view the Trout Creek area as having high wilderness and wildlife values. MA 29 in combination with the designation mentioned above retains much of the wilderness value while providing the opportunity for wildlife habitat maintenance and improvement.

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4. Cabinet faces, east and west - These areas are important to the visual integrity of the Cabinet Wilderness Area, and, one would think, to the recreation industry ambitions of the Libby community. They should receive wilderness designations. 34

5. Ten Lakes - We recommend wilderness allocation for the entire inventoried roadless. The possibility of caribou inhabitation here advances the value of this area. 35

6. Tuchuk and Thompson-Seton - Wilderness allocation here, too. These areas are important grizzly habitat and have close proximity to other areas of high status as wild country and wildlife habitat. 36

PROTECTION OF REPRESENTATIONAL STANDS OF ALL SPECIFIC FOREST HABITAT TYPES

The KNF Plan should iterate an active policy of identifying and protecting significant representations of all forest habitat types found on the Kootenai. These representative allocations should receive a special Management Area title to mark out their significance to future management personnel.

The most important need in this regard is to identify mature red cedar habitats. This ecotype has been one of the most ruthlessly exploited forest types on the Kootenai. It is one of our most unique and characteristic habitats, yet is has been subject to such an unrelenting campaign of extraction and management neglect that high quality representations are now rare. If the KNF fails to move to protect what remains of these biological communities, they will be guilty of a particularly execrable omission. 37

The fate that has befallen the great and ancient cedar groves of the Kootenai can only be called "ecocide".

SUMMARY: A PROPOSED FORPLAN RUN

We feel that no consideration of this critique can be called serious if it does not result in a FORPLAN run which will examine its implications for future timber harvest.

Therefore, we state the outline of producing such a run: 38

1. Analyze the critique for its effects on the timber base. This will involve totalling acreage changes involved in specific area use redesignations, estimating yield effects of our proposal for tightening up riparian area protection, and estimating acreage changes involved in increasing old growth withdrawals to 15%, etc.

34. Most of these areas have been proposed for Wilderness designation.

35. A major portion of the Ten Lakes area has been proposed for Wilderness Designation.

36. The management for these areas was developed in cooperation with the Flathead National Forest planning effort. The MA 2 designation is retained in the Final Plan to be consistent with Flathead proposals.

37. The Forest and Northern Region currently have an active program for the identification of habitat types. (See the Northern Regional Guide, available in the Kootenai Forest Headquarters in Libby.) The final Forest Plan has identified eight habitat types and one vegetative type, including western red cedar. See management Area 21 in the final Forest Plan. In addition to Special Interest Areas and Research Natural Areas, old-growth timber designations (MA 13) and roadless area designations (MA 2 and MA 29) also include mature stands of western red cedar.

38. (1) As noted earlier, the maximum available "old-growth" is 11% of the acreage below 5,500 feet in elevation. We have retained over 90% of the existing old-growth habitat by removing it from the regulated timber base. Many of your specific area recommendations were incorporated in the Final Plan. The effects of this are described in Appendix B of the EIS.

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2. Determine the adjusted suitable timberlands base.

3. Produce a future forest age distribution curve with a shape defined by the following table:

AGE CLASS	ACRES	AGE CLASS	ACRES	AGE CLASS	ACRES
0-10	88	100	56	190	30
20	89	110	47	200	29
30	88	120	38	210	28
40	87	130	31	220	25
50	86	140	27	230	21
60	85	150	22	240	17
70	81	160	21	250	13
80	72	170	23		
90	64	180	28		

4. The 250-500 year classes will be represented by a normal distribution curve with value 500 acres for 500 years (or whatever figure exists for the total 500+ year classes, if you have one: these age classes are so rare they should be preserved in their entirety).

5. Regulate this curve to the acreage figure determined in step 2.

6. Ask the program what maximum yearly yield can be obtained under the constraint of producing this curve or something near to it by year 50.

7. The following constraint must also apply: 15% of all present 160+ year classes must be retained and 50% of all 300+ year classes.

8. Apply corrected timber yield and timber value parameters as suggested by Randall O'Toole.

9. Produce a sounder range of alternatives based on the foregoing. Notice these suggestions are quite compatible with the MWA recommended alternatives and can be profitably combined with them. Please consult us for details.

With the results in hand, we will then see if we have a basis for discussing our general proposal. Note that we realize that our curve may have to be adjusted in different ways to produce a realistic alternative.

Note also that the intent of this run is to produce a future forest with a better balanced age class distribution, both in the interests of future economic competitiveness and to preserve biological values of maintaining a more diverse forest.

The Kootenai possesses some of the best softwood timber in the world. We must use this resource in a lower volume, higher quality type of industry if we are to avoid becoming the western Appalachia of the near future.

LAST WORDS

While this analysis has been prepared solely by Protect the Yaak Committee, it is not idiosyncratic. We have gone to a great deal of trouble to collect and coordinate opinion from

Response to Letter #312 - Protect the Yaak Committee, page 312cc

38. (cont) (2) The effects of these changes on the suitable timber base are described in the EIS.

(3) As displayed earlier, the age class distribution of Alternative I is quite close to what you are proposing.

(4) "Old-growth" habitats already include most existing stands of age 500 or more. Most of this acreage has been removed from the regulated timber base (MA 13) in the Final Plan.

(5) The 200 year forest for Alternative I displays this.

(6) See the discussion of Alternative I in the EIS.

(7) The constraints applied to create Alternative I resulted in retention of considerably more of the older age classes than you request.

38 (8) We have carefully reviewed Mr. O'Toole's comments and the yield tables that were used. We have concluded that the yield tables used in development of all the alternatives are reasonably accurate and may be slightly conservative. The effects of changing economic values are described in Appendix B of the EIS.

(9) The alternative you propose is quite similar to Alternative I and is within the range of alternatives displayed in the DEIS.

Based upon the information displayed in the EIS, your comments, the comments of many other individuals and groups and the rationale discussed in the Record of Decision, we have developed the Final Plan. This plan addresses economic competitiveness by maximizing timber production levels during the first decade while retaining a non-declining harvest schedule into the future. The regulated timber base will generally be rotated at between 70 and 160 years depending upon species and management intent. The timber produced will not be as large as you propose, but quality should be better. Biological values are retained by operating on a smaller regulated timber base than currently and by removing over 90% of the existing "old-growth" habitats from the timber base.

a broad range of organizations and persons. The goals of this critique will be pursued on a broad front and with a great deal of energy.

The Kootenai has been the "sacrifice" Forest ever since reform was enforced on the Bitteroot. As such, it can serve admirably as a point of concentration to demonstrate the need for reform throughout the National Forest system.

Having pronounced this caveat, we can declare that many of us in the conservation movement are tired of adversarial relationships. We know that our aims are complementary to the interests of long term economic stability in the Kootenai, and we would appreciate an opportunity to reconcile our goals with those of the industry and the Forest management. Such an outcome could provide a tremendous boost to the public image of all parties.

Reasonable production schedules can be achieved while remaining within the bounds of decent restraint. We commit ourselves to fighting hard for this outcome. We will speak to the benefit of those who aid us.

The titanic forest, standing in silence here for millenia previous to our arrival, deserves respectful treatment at our hands. If we do not grant that respect, we will deserve the misery that will devolve upon our community.

cc: Jim Rathbun, Supervisor, KNF
John Righter, District Ranger, Yaak Ranger District
Jim Overbay, Region I, USFS
Max Peterson, Chief of USFS
Champion International Corporation
Senators Melcher and Baucus
Representative Pat Williams
Lincoln County Commissioners
Governor Schwinden
Bob Martinka, Montana Dept. FWP
Small Loggers Association
The Western News
Great Falls Tribune
The Missoulian
Cabinet Resource Group
National Audobon Society
Friends of the Earth
Judy Hutchinson
Montana Wilderness Association
Great Bear Foundation
National Wildlife Federation
National Resources Defense Council

Response to Letter #312 - Protect the Yaak Committee, page 312dd

Substantive comments such as yours are valuable in reducing the adversarial climate that often surrounds Forest planning. We appreciate the time and effort that went into your analysis.

Alice I. Frell
Lands Director

55

Rocky Mountain
Oil & Gas Association, Inc.

345 PETROLEUM BUILDING • DENVER, COLORADO 80202
303/534-8261

October 14, 1985

Mr. Paul Leimbach
Forest Planner
Kootenai National Forest
Route 3, Box 700
Libby, MT 59923

Dear Mr. Leimbach:

I am writing on behalf of the Rocky Mountain Oil and Gas Association (RMOGA) to comment on the Kootenai National Forest Draft Land and Resource Management Plan (LRMP) and Environmental Impact Statement (DEIS). RMOGA is a trade association representing hundreds of members who account for more than 90% of the oil and gas exploration, production, and transportation activities in the Rocky Mountain west. Our members have expressed a strong interest in public land management practices, and Western Montana has been an area of increasing interest. We have some observations and concerns about the proposed Kootenai National Forest Plan which we provide for your consideration.

First, we support the Forest Service's reasonable approach to oil and gas leasing, exploration and production. We concur that leasing stipulations and mitigation measures should be implemented on a case-by-case basis, rather than through the imposition of blanket restrictions without consideration of the tradeoffs between resources or methods for resolving conflicts. Moreover, we agree with the Forest Service's decision to allow leasing where feasible in Grizzly Bear Situation 1 habitat. As you may know, Congress, in enacting the Endangered Species Act, clearly intended for oil and gas leasing to continue in grizzly bear habitat, but required special attention to be paid to protection of the species. Industry has proven again and again that its operations are fully compatible with sensitive environmental values, and the stringent operating stipulations and mitigation measures ensure minimal disturbance to wildlife or its habitat. 1 2

Second, we believe it is important for the public to understand that although an area is managed for dispersed recreation or aesthetic use, the law still provides for oil and gas exploration. We therefore endorse the Forest Service's statement on Page IV-82 of the DEIS that areas managed for uses not dependent on roads can be roaded for oil and gas exploration activities. 3

Response to Letter #55 - Rocky Mountain Oil & Gas Association, first page

1. No response needed.
2. No response needed.
3. No response needed.

October 14, 1985

Mr. Paul Leimbach
Forest Planner
Kootenai National Forest

page two

Third, we are pleased to see the inclusion of specific information concerning what constraints will be placed on oil and gas activities by Management Area. In this way, the Forest Service provides a further basis for conflict resolution, as well as allows industry to identify management goals for a particular area prior to filing for a lease, seismic permit, or application for permit to drill. Industry's understanding of management objectives may also lead to consideration of alternative management practices that would accomplish stated goals of the Forest Service in an equally beneficial manner. 4

We have identified, however, two primary problems with the Draft Plan. We are concerned that the acreage figures for proposed withdrawals and wilderness used in the draft planning documents are not consistent. For example, we have calculated the proposed acreage for withdrawal at 206,320 acres. Yet the Forest Service states in the Preferred Alternative that the proposed acreage for withdrawal is 215,000 acres. If this discrepancy is the result of new withdrawals currently under consideration, it should be clarified in the final documents. It is critical that the figures used by the Forest Service be consistent throughout the planning documents, and we recommend that the Final EIS accurately reflect the acreage proposed for withdrawal by category. 5

Most importantly, we do not support the Preferred Alternative (J) because it recommends additional wilderness acreage in the Forest without adequate justification. There are already over 3 million acres of wilderness in the State of Montana, and all of it is contained in Western Montana. From a revenue standpoint, as well as from a multiple use standpoint, we support the adoption of either Alternative F or L as reasonable alternatives which will allow maximum opportunities for mineral exploration, while protecting sensitive environmental values. 6 7

Thank you for the opportunity to comment on the Draft LRMP and EIS. We hope you will consider our suggestions in the final Plan.

Sincerely,

Alice I. Frell

Alice I. Frell
Public Lands Director

AIF:cw

Response to Letter #55 - Rocky Mountain Oil & Gas Association, page 55a

4. No response needed.

5. The total existing and proposed withdrawals by category are displayed in Chapter II of the EIS.

6. We respectfully disagree. We have attempted to provide wilderness opportunities where the wilderness quality was high and the resource and/or economic opportunities appeared low.

7. Although Alternatives F and L provide maximum opportunity for mineral exploration, they do not provide for the resolution of other issues as well as the Final Forest Plan, in our judgement.

147

Northwest Montana Chapter
371 1st Ave E
Kalispell MT 59901

Supervisor
Kootenai National Forest

On behalf of the N.W. Montana Chapter of Trout Unlimited I would like to make the following comments on the proposed Kootenai Forest plan.

The Forest plans substantial increases in timber harvest to 217 mbf, increasing eventually to 277 mbf. The plan shows definate bias in projecting these increases while projecting decreses in numbers of fish produced on the Forest. Large increases in timber harvest should not be allowed if losses to other values, such as fisheries, are the result. 1

The method of measuring the value of recreational benefits, using "recreation visitor days" underestimates (at $3.00 per day) many types of recreation. 2

Road building increases under the proposed plan. This is the primary source of sediments entering streams. The Kootenai Forest earlier pedicted increases in sediments of 50%. The plan does not examine individual road building projects or individual drainages in respect to sediment increases. Has a sediment model been used to estimate damage? If so, where are the results? As the plan is now, overall estimates in forestwide sediment yeilds are useless in determining impacts on fisheries. Figures for individual drainages must be used. 3 4

The Plan would allow increases in water yields above current direction. This will result in further deterioration of streams. 5

The plan does not identify critically important streams in terms of spawning, rearing, quality of fishing, or potential for downstream impacts. 6

Riparian areas are of critical importance. Management of these areas in the plan seems vauge. Evidently, some streamside areas, perhaps many, will be logged, roaded, bulldozed, etc. These areas should be protected. 7

Ephemeral streams carry sediments during runoff. They should be given more protection to keep increasing amounts of sediment from entering streams. 8

The monitoring program is vague, lack in specifics. It is, though, clearly underfunded. It is insulting and totally irresponsable for the Kootenai Forest to propose such large increases in timber related activities yet allocate so little to monitoring the results of these activities. It makes one wonder if the Forest is hiding something, perhaps that timber harvest is more damaging to other values than the 9

1. The projected increases in timber harvest are potential increases only and are subject to actual demand in the timber industry. The projected fish losses are possibilities using the fishery models available today which indicates the need for timber harvesting to meet the State Water Quality Standards. Projects that do not meet the State Water Quality Standards will be brought into compliance, modified or stopped. See the Monitoring and Evaluation Plan in the Final Forest document, section IV.

2. The estimated capacity for most forms of recreation on the Kootenai is in excess of the projected demand which indicates that regardless of the assigned price the recreation potential would have no value.

3. The earlier projections of 50% increases in sediment were not considered to be reliable. Actual experience on-the-ground in rates of road construction indicate that fewer miles are being constructed than previously projected. See Chapter II, Facilities, in the Final EIS.

4. The fishery calculations were totals projected from individual drainages using criteria such as sensitivity to sediment, present threshold levels, recovery rates, and harvest intensity by alternative. The raw data is available in the Forest Planning records. A list of the sensitive drainages is displayed in Chapter III, page III-73 in the Draft EIS.

5. The Final Forest Plan does not allow increases in water yield above the standards being used today and the projected water yields are within the guidelines used today.

6. The Plan purposely omitted the identification of important spawning streams as this "advertisement" could easily increase fishing pressure in these areas which could be detrimental to these fisheries.

   Aquatic habitat downstream from the Forest could possibly be affected by on-Forest management activities, however, the effects are not expected to be significant throughout the life of the Plan. Due to the difficulty in isolating Forest activities from other activities resulting in any downstream changes, and the question of how far downstream should the Forest concern itself, the Planning Team opted not to speculate on the possible effects.

7. Riparian Areas will receive special on-site protection. See the Riparian Area Guidance in the Final Forest Plan.

8. Ephemeral stream channels are not excluded from the riparian area. The parameters and duration of monitoring will be determined by the impact and characteristics of the riparian area.

public believes. 9

Guidelines for monitoring will allow considerable damage before action is taken. The plan needs strict standards for water quality. Any activity that exceeds these standards should be stopped.

Stream improvements are mentioned as mitigation. Mostly these consist of structures creating pools. Since the natural limiting factor on Forest streams is the food supply (nutrients) and the threat being mitigated against is sediment, it will do little to create pools since pools will not offset the impacts of either. 10

The Forest should adopt mitigation measures for road construction as best management practices to be used in all critical areas. 11

The plan does not allocate enough land to old growth or wilderness. 12

In general, the proposed Forest Plan shows little, if any, concern for fisheries. There is insufficient data base due to lack of concern in the past. The plan and EIS both fail to predict the results of timber related activities in any way other than vague, general, forest wide estimates. Such a lack of information make it impossible to weigh the various factors in management of the Forest. The Kootenai National Forest is not the sole property of timber companies. Yet management plans would give these interests more and more. The Forest's fisheries would decline, giving less and less to fisheries interests. 13

We feel this plan is so badly flawed as to be useless, and if necessary we will take whatever legal action is necessary to stop it. 14

Don Alley
Trout Unlimited

Founded in 1959... Over twenty years of trout and salmon conservation
Washington, D.C. Headquarters • 118 Park Street, S.E. • Vienna, Virginia 22180 • (703) 281-1100

Response to letter #147 - Trout Unlimited, page 147a

9. See the revised Monitoring and Evaluation Plan in the Final Forest Plan document, section IV.

10. The State Water Quality Standards are to be met for all Forest activites, and projects not meeting these standards will be brought into compliance, modified or stopped. See the Monitoring and Evaluation Plan in the Final Forest Plan document, section IV.

11. The "Soil and Water Conservation Practices" (FSH 2509.22) are the mitigation measures that are to be used for all Forest activities.

12. Recommended Wilderness and designated Old-Growth Timber have been increased in the Final Forest Plan. See Chapter II in the Final EIS.

13. The general concern for fisheries and water quality has resulted in the revision of the Monitoring and Evaluation Plan to insure that these resources are protected throughout the life of the Forest Plan. If conditions change that threaten these resources beyond an acceptable level of risk, the Forest Plan will have to be amended or revised.

14. No response needed.

2 6 4

WETA

Western Environmental Trade Association

1714 Ninth Avenue · Helena, Montana 59601
Phone (406) 443-5541

October 31, 1985

James R. Rathbun
Forest Supervisor
Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

WETA's Land-Use Committee, made up of forest user groups that includes motorized recreation, timber, minerals (energy and non-energy) and agriculture has reviewed and analyzed the proposed Kootenai Forest Plan and supplement.

The method used to comment on the plan was to review each Management Area and analyze the implications of future management of those lands and the impact of management direction on the economic and physical environment of the area.

Our comments are a result of a review in two categories: 1) impacts on user groups and 2) general comments on issues.

I. User Groups

A. Recreation

Our members enjoy both motorized and non-motorized outdoor recreational opportunities on the national forest lands. The opportunities as presented in the proposed forest plan provide that 1,958,460 acres available for motorized recreation. This indicates that 85% of the forest is available for use. Our analysis indicates that only 32% of the acres are available for unrestrictive use by motorized recreation. Another 53% (1,218,400 acres) are available but seasonal constraints primarily due to wildlife concerns will reduce the visitor days available. 1

The historical data indicates that 47,300 recreational visitor days occurred for non-motorized recreation on 2,284,140 acres. This translates to 48.29 acres per recreational visitor day. On the other hand, motorized recreation accounted for 220,300 recreational visitor days or 8.89 acres per recreational visit.

Response to Letter #264 - Western Environmental Assoc., first page

1. The estimated capacity for each recreation category exceeds the projected demand. See the Draft EIS, page II-73.

October 31, 1985
Mr. James R. Rathbun
Forest Supervisor
Kootenai National Forest
Page 2

With restrictions on 53% of the acres available, we can expect the ratio of acres per recreational visitor day to be much lower.

Therefore, while motorized recreation has historically recorded far more recreational visitor days, it would appear that a high level of roadless recreation is being emphasized in the plan. The projected consumption trends indicate that motorized and developed recreational needs far outweigh the demand for non-motorized recreation. 1

With a statewide emphasis on tourism, it is important that maximum opportunities be provided to meet the projected needs. In addition, developed recreational sites are most beneficial to local communities as they create not only permanent and seasonal jobs, but indirect as well as direct jobs that provide the impetus for local growth. 2

B. Minerals (Energy and Non-Energy)
Although mineral development is possible on a number of areas, our analysis indicates that those areas will have excessive restrictions imposed through special stipulations. Our concern is that the stipulations imposed could discourage investments for exploration and development.

While 92% of the forest is available for oil and gas exploration, only 22% (498,110 acres) are available with standard stipulations. Another 70% (1,588,660) are available but with varying degrees of restrictions. With 82% of the forest covered by oil and gas lease applications, we believe there is significant evidence that the forest has the geological potential that requires extensive exploration and evaluation.

The Kootenai Forest has exhibited a high potential for non-energy mineral development. A major silver/copper mine is currently in operation and two other major mine proposals have been received for review. Although the forest plan has identified 91% (2,077,500 acres) available for exploration, the entire acreage has excessive restrictions that could prove deterimental to strategic mineral resources. 3

The Forest Service has long recognized mineral development (energy and non-energy) as a legitimate use of public lands. But the plan (page 11-7) states that "as mineral exploration and development occurs, the protection and possible development of other resources will be considered". This leads us to believe that the overriding rationale for mineral development is to promote resources not related to minerals.

The absence of management accomodations to promote the development of non-energy minerals on the Kootenai National Forest reflects an attitude that could discourage major investments in the area and thus cause undue hardship to the local economics through the creation of long term, good paying jobs.

Response to Letter #264 - Western Environmental Assoc., page 264a

1. See the previous page.

2. We agree.

3. Reasonable stipulations will be applied to mineral operations in order to mitigate or eliminate negative impacts, not for the purpose of discouraging mineral operations. Although there are no mineral designations in the Forest Plan, minerals potential was a consideration in recommending areas for wilderness. Minerals development will be allowed on lands open to mineral entry as provided by law, regardless of the particular designation for the area.

October 31, 1985
Mr. James R. Rathbun
Forest Supervisor
Kootenai National Forest
Page 3

Those areas identified as having high potential should be promoted as the major resource available and the plan should reflect an emphasis as areas for mineral development. 3

C. Timber
The Kootenai has recognized the importance of the timber resources to the forest. It is important to have an adequate supply of timber available to insure that the economics of the local communities remain stable with the opportunity for growth. Historically, when the Forest Service exhibits a positive management program, industry will make capitol investments for more efficient use of the timber. 4

Although the Kootenai has recognized the importance of timber to the forest, the plan reduces the available productive timber lands from 1,837,000 acres to 1,425,000 acres. The incentive to make plant improvements decreases with the removal of 412,000 acres from the available timber base.

WETA congratulates the Kootenai Forest for its recognition and initiative to eliminate the mountain pine beetle. 5

D. Agriculture
While the data indicates that available forage will continue to be in excess of the anticipated demand, our concern is that the agricultural community be assured that their operations will be enhanced by increase forage production. We agree that corrective actions should be taken to improve the range when damage is occurring. However, with the limited amount of acreage of the forest available (28%) without restrictions, we believe that forage needs for wildlife should not be given preference over livestock. 6

Domestic livestock production can be maintained and enhanced on the forest. The Forest Service should increase its efforts to work with other public and private groups on programs that insure the agricultural community is not economically impacted due to federal actions.

II. General Comments

A. Wilderness
WETA has reviewed its position on acres to be included in wilderness. During the RARE II review, WETA recommended that 27,644 acres be added to the wilderness system. We have reaffirmed that action even though the need for additional wilderness on the Kootenai has not been demonstrated or documented in the plan. We believe that existing acres will provide adequate opportunities to satisfy the anticipated demand. Further, an aggressive management program rather than additional set asides will provide the balance for the use of the land. 7

B. Community Values & Visual Quality Objectives
We believe an overemphasis has been placed on this issue and will 8

Response to Letter #264 - Western Environmental Assoc., page 264b

4. The proposed planned sell level is in excess of the traditional levels so the incentive to make facility improvments should continue. The analysis indicates that much of the commercial forest land that was not designated for timber production is economically unsuitable.

5. No response needed.

6. A significant portion of big-game winter range is outside livestock range allotments. Of those allotments which encompass big-game winter range, modifications in the grazing permit allows for adjustment to annual forage production and/or allotment objectives.

7. Most of the land recommended for wilderness in the Final Forest Plan has strong public support and low economic opportunity for development.

E-290

result in compounding the problems of the user groups. Although visual amenities must be given consideration in the management of the forest, excessive restrictions will significantly increase costs to the users. 8

C. Threatened and Endangered Species
Grizzly Bear management as presented restricts the vast majority of activities on the forest. The stipulations imposed will not be conducive to responsible management and development of other resource potentials. Although we recognize that the recovery of the bear is mandated, we believe the Forest Service has over-reacted to this issue and have restricted the overall use of the forest. 9

D. Economy
Our greatest concern is the role the forests can and do play to stabilize and improve the local economies. The Montana economy is heavily dependent upon natural resources, and public lands are a major segment in the development of those resources. It is important that the plan reflects an attitude by the Forest Service to encourage new development that insures long-term jobs to the area. 10

The Kootenai Forest's receipts for 1984 total $14,220,283.65. The vast majority of these funds were received due to timber harvests ($14,139,634.82). The balance includes fees from grazing, minerals, power and land use that totals $80,648.83. Receipts not reflected in the total are those received due to oil development.

Conclusion
The Kootenai draft plan is acceptable to WETA if certain modifications are made in the following areas: 11

1. Recreation - relaxing unreasonable restrictions presently in the plan to assure that motorized recreation has sufficient opportunities to meet the projected demand without causing heavy concentrations of use.

2. Minerals - areas with potential, but not yet identified as to the level of potential, should not be subjected to excessive restrictions that would prevent or discourage exploration and development. 12

3. Economy - a recognition of the contribution that oil and gas makes to the economy of the area, which also increases the level of receipts to the U.S. Treasury. In addition, the importance of motorized recreation must be reflected more clearly to indicate a definable difference and impact on the local economies. 13

Thank you for the opportunity to comment on the Kootenai National Forest Plan. We would request the opportunity to submit additional data as it becomes available.

Sincerely,

Mike Micone
Executive Director

Response to Letter #264 - Western Environmental Assoc., page 264c

8. We agree that excessive restrictions can increase costs to the user. We disagree that there has been an over-emphasis on this issue.

9. The grizzly bear is recognized as a national resource and all efforts have been directed at integrating the bear's recovery with the resource activities occuring on the Kootenai Forest. See the Grizzly Managemnt Guidelines in Appendix 8 of the Final Forest Plan. There may need to be some rescheduling or deferral of some site-specific activities, but that is considered to be more preferable than a complete prohibition or denial of the activities and more in concert with the multiple-use intent of the National Forests.

10. The Kootenai National Forest has an enviable record of supporting the wise use of the resources in the area. Examples are: the Asarco Mine near Troy; the W.R. Grace Zonolite Mine near Libby; the Libby Dam near Libby; the mineral exploration under the Cabinet Mountain Wilderness by Asarco and U.S. Borax near Noxon. In addition to these developments, the Kootenai Forest is the largest timber supplier in northwest Montana and has provided timber sales that supply wood products to mills in a 5-county area. The Final Forest Plan provides the opportunity to continue this enviable record while still providing for other desireable uses such as recreation, visual quality, etc.

11. More opportunities have been provided for motorized recreation in the Final Forest Plan.

12. We believe that the option for mineral exploration has been provided where the potential is known.

13. The opportunity for oil/gas exploration has been provided on most of the Forest. Recreation development is being provided where the demand is being realized such as along Lake Koocanusa.

WESTERN FOREST INDUSTRIES ASSOCIATION
1500 S. W. TAYLOR STREET · PORTLAND, OREGON 97205
TELEPHONE
503-224-5455

October 18, 1985

Forest Supervisor
Kootenai National Forest
R.R. 3, Box 700
Libby, Montana 59923

Dear Sir:

This letter responds to your request for comments on the Kootenai National Forest Plan and Draft Environmental Impact Statement (EIS). Western Forest Industries Association represents small business forest products manufacturers that depend on the national forests for their wood supply.

The Kootenai EIS and Forest Plan are inadequate because the range of alternatives is limited, minimum management requirements have not been subjected to NEPA analysis, the impacts of the preferred alternative are deceptively portrayed as an economic improvement, and the preferred alternative is biased in favor of non-timber resources.

(1) The range of alternatives fails to examine timber sale levels above 262 mmbf/yr.

The maximum long run sustained timber yield on the Kootenai is 455 mmbf/yr. The maximum first decade harvest with all minimum management requirements (MMRs) imposed is 367 mmbf/yr. The previous DEIS (1982-1983) included an alternative that sold 376 mmbf/yr. However, the highest alternative contained in the EIS produces only 262 mmbf/yr. and thus the EIS ignores over 100 mmbf/yr. of decision space. The NFMA regulations require that the EIS include alternatives distributed between the minimum and maximum resource potentials to reflect the full range of major commodity and environmental resource uses (36 CFR 219.12f). However, the Kootenai EIS has chosen to explore only the lower two-thirds of the timber production spectrum while the upper one-third is disregarded completely. 1

Early in the planning process, an analysis of "benchmarks" was supposed to define the decision space for forest plan alternatives. The Kootenai's benchmarks demonstrated that if the biological rotation was shortened twenty years, then timber output could be increased 50 mmbf/yr. Not one of the 15 alternatives included in the DEIS permitted these shorter rotations even though such an alternative would be reasonable and would expand the range.

Response to Letter #62 - Western Forest Industries Assoc., first page

1. The maximum timber benchmark (Alt. L) provided for the highest amount of tentatively suitable land. This benchmark demonstrated the maximum possible long-term contribution to the timber resource and revealed the impact of managing for timber over the largest possible area. Other benchmarks (Maximum PNV - Alt. M) demonstrated different scheduling opportunities and costs for comparative purposes. These and other benchmarks provided for a wide range of timber management opportunities.

Forest Supervisor
Page Two
October 18, 1985

(2) Minimum Management Requirements (MMRs) are accepted as given by the resource specialists without any NEPA analysis

Minimum Management Requirements reduce timber output on the Kootenai at least 150 mmbf (benchmark U01 v. F01-A) and reduce PNV about $560 million or 35%. The appendix of the EIS assures the reader that "these(minimum management) constraints constituted the most cost-efficient method of attaining the desired results". However, these are empty words because the EIS and appendix contain nothing that describes how each MMR constraint was determined to be most efficient. Where are the alternatives developed that permitted the Forest Supervisor to choose the most efficient form of each constraint? The MMR issue is very important because MMRs are double (150 mmbf/yr.) the loss that results from the discretionary constraints (60 mmbf/yr.)

The soil and water MMR constraint is an example of how the Kootenai failed to examine more efficient alternatives. Of the various MMR constraints, the soil and water constraint caused the greatest decline in PNV (about $500 million). The constraint was formulated using a "clearcut equivalents" (CCE) model that limited the amount of clearcut equivalents allowed in each watershed. The EIS does not show that this is the most cost efficient method to protect soil and water quality because no alternative assumptions were considered within the clearcut equivalent model (i.e. the length of time the model considers a recently cut acre to remain barren is debatable). Nor did the EIS include alternatives that completely discarded the CCE model in favor of another means to incorporate soil and water protection into the computer. The EIS only shows the $500 million opportunity cost of the CCE model adopted by the planners. But NEPA requires more. Alternatives must be evaluated for the MMR decisions which have the greatest impact on timber production of any decision in the Kootenai plan. 2

(3) The portrayal of the preferred alternative as a significant (19%) increase in jobs misleads and deceives the public.

The employment increase and economic benefits of the preferred alternative are based on a comparison to the "Current Direction" alternative (EIS p.II-153). The Current Direction alternative produces only 150 mmbf/yr. Thus, the preferred alternative allowable sale quantity (ASQ) of 202 mmbf/yr. appears to be a substantial increase in timber output. However, the EIS says the regulated sell during 1974-1983 was 170 mmbf/yr. (EIS p.III-13). The Current Direction alternative from the 1982 EIS was 247 mmbf/yr. and the existing timber management plan potential yield is about 240 mmbf/yr. Since the forest plan ASQ does not reflect what will actually be cut or sold, it is more relevant to compare the ASQ to the timber management plan 3

Response to Letter #62 - Western Forest Industries Assoc., page 62a

2. The Minimum Management Requirements (MMR's) were developed through the interdisciplinary (ID) process and determined to be the most feasible and practical to quantify in the Forplan modeling process. The identification of the significance of the tradeoff for each MMR was the most important information sought and brought to bear on the analysis of the alternatives. The example given on the Soil and Water MMR is a good example. It was long suspected that soil and water protection was an important constraint on timber production and the MMR development process helped to quantify it's relative significance in comparison to other MMR's such as the Grizzly Bear and Old-Growth Timber management. This quantification, plus the demonstrated public concern for Fisheries and Water Quality protection was important information to the ID team in developing the Proposed Action and the Final Forest Plan, especially the revised Monitoring and Evaluation Plan (See section IV).

3. Your point that the Planned Sale Level (ASQ) declines from the existing Timber Management Plan is a correct statement but we disagree that it is the proper comparison to make. As you stated ..."The potential yield is a paper number subject to budgetary realities as is the ASQ in the Forest Plan." That is why we compared the "paper number" (ASQ) to the actual historic regulated Harvest Level (not Sell Level) over the last ten years. We attempted to demonstrate what could happen to what has actually occured, rather than how the potentials have changed. We feel that there is little economic reality associated with "paper" comparisons. The baseline level for jobs was actual jobs, not potential jobs. There is no adverse economic effect in a loss of "paper" jobs.

   The potential timber yield for the Final Forest Plan has declined from the existing Timber Management Plan because of: (1) a reduced suitable timberland base because of additional wilderness and roadless area recommedations, and old-growth timber management designations, (2) grizzly bear recovery needs, and (4) the 40-acre clearcut-size limitation.

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Forest Supervisor
Page Three
October 18, 1985

potential yield (e.g. see the San Juan appeal decision letter and the enclosed Mississippi national forest decision notice). The potential yield is a paper number subject to budgetary realities as is the ASQ in the forest plan. The timber management plan is the old plan and the forest plan is the new one. The forest plan should display the economic effects of the preferred alternative relative to the potential yield of the timber management plan. The point is that the planned sales level on the Kootenai declines in the preferred alternative. It is no more certain that achieving the sale level of the forest plan will be any more fruitful than accomplishments under the TM plan. 3

(4) The preferred alternative is biased in favor of non-timber resources.

About 60% of all potential roadless areas is allocated to uses that prohibit timber harvest. About 35% of those acres eligible for preservation, retention or partial retention visual allocation is so allocated. The preferred alternative achieves about 81% of the maximum elk population and about 80% of the maximum trout population. However, the preferred alternative attains less than 60% of the maximum first decade timber production (run D04). The Kootenai has re-issued their new EIS and modified their preferred alternative from 248 mmbf/yr. down to 202 mmbf/yr. The bias against timber production is clear and we hope the final EIS will re-evaluate the MMR constraints and the excessive amount of visual and roadless allocations. We believe the Kootenai could easily achieve the 239 mmbf/yr. potential yield in the existing timber management plan or the 248 mmbf/yr. in the 1982 preferred alternative without harmful impacts on non-timber resources. We believe grizzly bear habitat management is excessive and road closures would mitigate impacts of any timber harvest. 4 5 6

Sincerely,

Scott Horngren

Scott Horngren
Timber Supply Specialist

Enclosure

Response to Letter #62 - Western Forest Industries Assoc., page 62b

3. See previous page.

4. The Proposed Action and Final Forest Plan both attempted to resolve all the Forest Issues in a manner that achieved the highest Net Public Benefit. See the disussion on Net Public Benefit in Chapter II of the Draft and Final EIS.

5. The Proposed Action and Final Forest Plan both provide for a programmed timber sell level of 233 mmbf/year. See Appendix 11 in the Final Forest Plan document. The Kootenai National Forest can provide for a higher timber sale level but it would have to be done at the expense of other resources and issues. See the discussion of Net Public Benefit in Chapter II of the Draft EIS and Final EIS.

6 No response needed.

A MESSAGE FROM THE SUPERVISOR

After six years of concerted effort and with lots of helpful input from the public, the Forest Service planning team has completed the final Land Management Plan for Georgia's two National Forests. The Land Management Plan is scheduled for implementation in November, 1985.

I believe that this plan is truly responsive to the public's concerns as they were expressed during the long and often tedious planning process. As you know, many of Georgia's citizens, along with others from outside the state, gave their input during the massive public involvement process which began five years ago.

Although the plan will probably not completely please all interest groups, I sincerely believe it presents a well balanced and reasonable approach for managing these valued National Forest lands and will best serve the majority of citizens over the long run. My hope is that it represents a consensus of acceptance from the interested public.

I would like to emphasize a few key points to help correct some possible misconceptions that may have been generated by critics of the plan.

First, this plan is a 10-15 year plan and will most likely be redone at the end of 10 years. It is not a 50-year plan. The Environmental Impact Statement and the Plan do display projections of what could be expected if the plan were continued over a 50-year period. All planners use projections to test plan results. The next 10-year plan could very well create changes that will result in a different 50-year projection.

Secondly, there will not be a doubling or tripling of the timber harvested on the Chattahoochee-Oconee during the 10-year plan period. If market demands exist there may be a moderate increase in volume of timber sold. The figures displayed in the planning documents for timber removed represent total wood material harvested up to a 4-inch top. Historically the Forest Service has been able to sell about 70% of that material. The remainder is not marketable because of size or form. Therefore, if the plan allowed a harvest of 75 million board feet annually, based on today's market situation that would translate into a sell volume of

Response to Letter #62 - Western Forest Industries Assoc., page 62c

No response needed on this page.

E-295

about 52.5 million board feet. In the past five years, the Chattahoochee-Oconee National Forests have sold about 55-58 million board feet annually.

Another point I would like to emphasize is that during the 10-year plan period, fewer miles of new roads will be constructed than are now built on the National Forests. Currently the Forest Service builds an average of 27 miles of new roads each year. This figure will be reduced to 20 miles per year under the plan.

Currently over 90% of all roads built are left open for constant or near constant use. Under the plan, 75% of all new roads built would be closed after the timber is removed and reforestation work is completed. Many of these roads will be closed and seeded to plants which are valuable as a wildlife food source. These roads will then contribute to improved wildlife habitat until they are needed again for timber sale access 10-20 years later.

As the plan is implemented, I have directed our Forest Service professionals to give priority consideration to the following three values: 1) improved wildlife habitat; 2) retention and enhancement of scenic and recreational opportunities; and 3) protection and enhancement of the soil and water resources. I am confident that this philosophy will result in a management scheme for rendering outputs that will please the majority of people interested in the National Forests.

Finally, I want to thank all of you who contributed to the development of the Land Management Plan, and I want to assure you that we are eager to continue to work closely with you as we implement the plan over the next few years.

W. Pat Thomas

W. PAT THOMAS
Forest Supervisor

Response to Letter #62 - Western Forest Industries Assoc., page 62d

No response needed on this page.

140

Dear Mr. James Rathbun,

The Wildlife Club of Flathead Valley Community College is concerned with the Kootenai National Forest plan.

As an organization we support the following:

1) The conservation as wilderness of these wild areas: 1
   a. Scotchman Peaks, including all of Pellick Ridge
   b. Trout Creek
   c. Cabinet additions
   d. Kootenai side of Tuchuck and Thompson-Seton area

2) The roadless non-motorized management of these wild areas: 2
   a. Roderick Mountain
   b. Cataract Creek
   c. Canyon Peak
   d. Northwest Peak
   e. Robinson Mountain

3) At the minimum, 20% of all old growth forest should be protected permanently. Old growth should be protected along stream beds. 3

4) The timber sale level should be maintained at a lower yield than the planned 217mmBF. 4

5) The planned road building will seriously affect the habitat of elk, mountain lion, and black bear. 5

6) The protection of streamside areas and water quality in the plan is poor. Strict protection is neccessary. 6

Thank you

The Wildlife Club
of F.V.C.C.

Ken Furrow
president

Response to Letter #140 - Wildlife Club, Flthd. Vly. C.C., first page

1. Wilderness has been recommended in the Scotchman Peak area including a significant portion of Pellick Ridge, and additions have been recommended for the Cabinet Mountain Wilderness (See the Final Forest Plan Map). Roadless management has been designated on a significant portion of Trout Creek and all of the Kootenai portion of the Tuchuck roadless area (See the Final Forest Plan Map).

2. Roderick Mountain, Cataract Creek, Canyon Creek, Northwest Peak, and Robinson Mountain all have significant portions designated as roadless management.

3. The Final Forest Plan has identified a total of 185,000 acres of old-growth timber that will be protected for old-growth timber-dependent wildlife species. This is 25% of all the mature timber on the Kootenai Forest (130 years old or older), exclusive of Lodgepole Pine (729,000 acres). All timber along streams are managed with the Riparian Area Guidelines (See the Riparian Area Guidelines in the Final Forest Plan).

4. The recent timber sale program activity has averaged 221 mmbf/year (See Table II-1 in Chapter II in the Final EIS). Because of possible timber supply shortages on adjacent private timberlands, the Final Forest Plan will retain the option to retain this recent sell level (See Appendix 11 in the Final Forest Plan document).

5. The increase in planned roads will not result in an increase in the amount of open roads which have the greatest impact on wildlife habitat.

6 See the Riparian Guidelines and the Monitoring and Evaluation Plan in the Final Forest Plan document.

Wildlife Management Institute
Suite 725, 1101 14th Street, N.W., Washington, D.C. 20005 • 202/371-1808

DANIEL A. POOLE
President
L. R. JAHN
Vice-President
L. L. WILLIAMSON
Secretary
WESLEY M. DIXON, Jr.
Board Chairman

October 2, 1985

Forest Supervisor
Kootenai National Forest
Rt. 3, Box 700
Libby, Montana 59923

Dear Sir:

The Wildlife Management Institute is pleased to comment on KOOTENAI NATIONAL FOREST PROPOSED FOREST PLAN and ENVIRONMENTAL IMPACT STATEMENT, Montana.

The management area prescriptions are well organized and easy to understand. The inclusion of riparian areas as management area No. 1 emphasizes the importance of this essential habitat element. 1

The forestwide standards are too general. Some of the specifics in management area standards could well be transferred to the forestwide standards, because they are the key to public understanding and public monitoring of any forest plan. 2

The inclusion of detailed instructions for snags and old growth in the appendix is good.

Our principal objection is having to sort through 15 alternatives, almost all of which have a featured resource plus a high timber yield or normal timber yield. All proposed timber yields are well above the 10 year timber harvest average (Table S-1). Even Alternative "F", the high elk alternative, has 11 percent more logging than the 10 year average and 9 percent more road construction. It also has 5 percent less migratory fish produced than the 10 year average. 3

There is no high amenity alternative to consider and compare. Even Alternative "H", Maximum Wilderness, proposes 40 percent more timber harvest on a reduced timber acreage. The range of alternatives suggests that the region and forest believe that timber and logs are most important. 4

We will object to the plan and EIS until there is a high amenity alternative to use as a comparison for the preferred alternative. Reduction of fisheries by 5 percent because of excessive road construction needed to harvest timber is not acceptable. There is no measure of the amount of sediment created nor any mitigation of sediment and fisheries loss, other than best construction practices. The plan is written as though the recession, slow timber markets, mill closures and the discernable movement of the timber industry to the southeastern United States were 5

Response to Letter #30 - Wildlife Management Institute, first page

1. Riparian Areas are not a separate Management Area. They exist in all Management Areas on the Forest, but they do have a unique set of prescriptions. The standards for riparian areas have been moved to Chapter II in the Forest Plan to accurately reflect the all-forest importance of the areas.

2. The Forest-wide Standards are applicable to all Management Areas (MA's) on the Forest. The specific ones in the MA's provide for the management direction for that MA which makes it unique.

3. The 15 alternatives were considered important to show the various resource tradeoffs involved in the attempt to resolve all the issues.

4. All of the alternatives are the result of calculated potentials. Only the Current Direction (Alt. I) was constrained to a prescribed timber harvest level. We are not clear on what a "high amenity" alternative would prescribe (a reduction in timber harvest from current levels? If so, how much? 10%?, 20%?, 50%?).

5. The projected timber harvest levels, if sustained, would result in some fish losses as calculated using the fishery model at our disposal. The amount of calculated loss in a given watershed depends on the sensitivity of the watershed in question, its threshold level of sediment, the rate of recovery, and the degree of harvest that is projected. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Standards in the Final Forest Plan document).

not facts of life.

The riparian management prescriptions are much too permissive with regard to logging. The only timber harvest in a riparian area should be to improve the riparian system. 6

What are the wildlife population goals in the Montana State Wildlife comprehensive plan? How do these compare with Forest Service projections? Include a comparative table. 7

Of the alternatives presented, we prefer "F" high elk. It is good for elk and has less roads and less sediment than the others. It is not an amenity alternative, but is generally the best of an unsatisfactory alternative array. 8

Some specific comments follow:

FOREST PLAN

Page II-9. We compute 4.5 miles of road per square mile of the commercial forest area. An official figure should be prepared for each alternative.

Pages III-38 and III-42. Some general forestwide guidelines on winter range management should be included in forestwide standards.

Page IV-5. Monitoring. The state should be an active participant in wildlife monitoring, not just furnish reports. 9

EIS

Page IV-49, 2nd paragraph. Add provision of quality hunting as a reason for seasonal road closures.

Page IV-49, Table IV-23. An example of the above, Alternative "E", high elk, closes 50 percent of the roads. The preferred alternative closes 57 percent of the roads. Why the difference?

These remarks have been coordinated with William B. Morse, the Institute's Western Representative.

Sincerely,

Daniel A. Poole
President

DAP:slh

Response to Letter #30 - Wildlife Management Institute, page 30a

6. We do not agree with your statement that the Riparian Area Management Guidance is too permissive, but we have made several modifications in the Final Forest Plan. We also feel that timber harvest in riparian areas is acceptable for improvement or maintenance.

7. The publication Design for Tomorrow 1985-1990 displays the State of Montana's wildlife objectives. The State's big game objectives are not based on population numbers, but rather harvest levels and hunter recreation opportunity, with desired population trend shown for some species. Using elk as an example, the State's objective through 1990 for Region 1 is for an increasing population trend, an increase in hunting opportunity, and a 22 percent increase in harvest. Comparatively, the Kootenai Forest Plan projects an increase in habitat carrying capacity from the current 5,500 elk to 9,900 by the end of the third decade. Therefore, the Kootenai goals are compatable with those of the State and in fact were developed in cooperation with the State.

8. No response needed.

9. We feel that the calculation of a ratio of total road miles per commercial (suitable) timberland is misleading. In general, the larger the suitable timberland base the smaller the ratio. Alt. F, the maximum elk alternative, with the smallest suitable timberland base has one of the highest ratios. This is because many of the necessary roads would be outside of the suitable timberland base. The actual situation on-the-ground results in similar road miles per square mile depending on whether the land is managed for regulated timber yields or not. If the land area is to be managed for timber, it will require a certain amount of road, depending on the topography. This is the reason for the high emphasis on road closures in the Proposed Action and Final Forest Plan.

We feel that the language in section III in the Management Area prescritions dealing with winter range is adequate and would only be repetitve in the Forestwide Standards.

The State is an active participant in much of the on-going wildlife monitoring. For example, (1) we annually sit down with the local State biolgists and review their harvest figures and jointly develop population trends by species, (2) joint trips are made to the field to monitor fish and wildlife habitat conditions and indicator species, (3) we help finance aerial big-game counts by the State and jointly review their results and establish trends.

Good point!

The Proposed Action and Final Forest Plan close a higher percentage of roads because of their emphasis on wildlife management through site-specific land designations.

20

410 Woodworth
Missoula, Mont 59801
Sept. 24, 1985

Forest Supervisor
Kootenai National Forest
RR #3 Box 700
Libby, MT. 59923

Dear Sir:

Wildlife habitat and potential Wilderness have determined my on-the-ground observations of the Kootenai Forest so I will limit my comments on the proposed plan to those subjects.

Using your 1983 Roadless Area Update and Summary to compare with Wilderness and Roadless management prescribed in the Proposed Forest Plan, I find the following reductions objectionable: 1

Cabinet additions down to 36,000 from 93,800.
Scotchman Peaks down to 24,190 from 52,100.
Galena Creek down to 10,800 from 15,700.
Trout Creek down to 22,500 from 31,800.
Cataract Creek down to 11,100 from 17,200..

The Cabinet Wilderness needs every available acre to provide depth and Grizzly security. Contiguous M2 areas should be added. Stated objectives for these units can be better achieved with more security under Wilderness designation. 1a

Scotchman Peaks should include the contiguous MA2 unit that contain Squaw Peak. The value of the proposed Wilderness would be great increased by closing the old logging roads in the MA2 unit on the east. 1b 2

Management prescriptions in the Galena Creek unit can achieve wildlife and recreation objectives if adequately supervised but many of the acres omitted should be returned to the unit 3

The Trout Creek Wilderness proposal should include all contiguous roadless land to enhance wildlife habitat and quality hunting opportunities. All but a small portion on the north end of the contiguous MA2 should be added.

The proposed Cataract Wilderness unit is small and adequately accessed. The wildlife resource is exceptional. the un-roaded portions of MA2 that are contiguous should be added to realize the full potential of the area. MA18 is surrounded by MA19 and MA29 units which are to remain roadless yet the option to road MA18 is kept open. This stretches credability. 4 4a

E-300

Response to Letter #20 - Donald Aldrich, first page

1. We assume that you are referring to the protection of these roadless areas. The Cabinet Additions had 36,000 acres of recommended wilderness plus 36,300 acres of roadless management for a total of 72,300 acres out of the 93,800 acres total. Scotchman Peak had 24,200 acres of recommended wilderness plus 19,600 acres of roadless management for a total of 43,800 acres out of the 52,100 acres.

1a The acreage remaining in Management Area 2 contains areas with mineral potential and/or private land which would be impacted if a wilderness recommendation was made at this time.

1b. See the Final Forest Plan Map.

2. These roads are now closed to the public. Access is granted to allow for seasonal mineral operations in the Ross Point Ridge area (Asarco).

3. The portion of Galena that faces the Clark Fork River contains some sensitive viewing areas which have been recognized in Mgmt. Area 5. There is some commercial-sized timber in the area classified as Mgmt. Area 11 and Mgmt. Area 14. With the potential of a bark-beetle infestation, this designation could allow some timber harvest. If economics of such a sale do not warrant harvest, these areas will be reanalyzed for reclassification during the next planning period.

The Trout Creek area is not designated for wilderness. Mgmt. Area 29 and Mgmt. Area 2 for this area allows management practices (such as the wildlife burn in April, 1986) which would be precluded under a wilderness designation.

4. The Cataract Area is not designated for wilderness. Mgmt. Area 2 was selected as appropriate in the surrounding area because of the presence of existing roads. With the exception of the existing roads, the management of the remaining area will be Mgmt. Area 29.

4a. We agree that the small inclusion of MA 18 is not appropriate because of its small size and this designation will be changed to MA 19. It should be noted that a significant portion of the MA 19 area is currently under contract for helicopter logging. (Please also note that the above map change was inadvertantly overlooked on the Final Forest Plan Map, small-scale-size, but has been made on the large-scale-size map in the Forest Headquarters in Libby, Montana.)

E-300

Kootenai comments 2 of 2

MA2 designation for Roadless Area units 482, 483 and X172 as identified on your 1983 map is inadequate to protect the spectacular scenery, wildlife habitat and high quality recreation capabilities. These units are important to the Grizzly bear, wildlife and recreation management on the Flathead Forest. 5

MA2 designation in the headwaters of Callahan creek is a good allocation. It should protects the water production of this area. 6

Page III-9, Recreation (2):
Placing 296,180 acres of RARE inventory in M2 is a plus for wildlife, recreation and T&E species. Semiprimitive non motorized management soundsgood but permitting "Some semi-primitive motorized and roaded natural recreation opportunities where there are approved or existing roads" opens an objectionable door to undersirable uses. If "approved" retains the option for new road construction it should be deleted. 7
(3)
What is meant by "are the only motorized use trails available"?

(4)
Permitting cross country use of snowmobiles opens all areas and threatens all other values in many MA2 units. 8

Page III-10 Wildlife and Fish:
There should be an opportunity for public imput on decisions that involve timber harvests to enhance habitat. 9
Timber:
Public imput should be solicited before timber is harvested to control the spread of insects or disease.

Minerals:
Why the doubt about acceptability of extracting common minerals in MA2. The word generally poses a threat. 10

Page III-11 Lands:
There should be an EA or and EIS on proposed special use permits, rights of way and easements. 11

Fire:
Control of insects and disease should be included in the acceptable uses of prescribed fire. 12

Thank you for the opportunity to review and comment on your Proposed Forest Plan.

Sincerely,

Donald Aldrich

Response to Letter #20 - Donald Aldrich, page 20a

5. We disagree. The Flathead Forest has stated that the MA 2 designation is supportive of their land designations.

6. No response needed

7. A list of the existing roads that permit continued historical recreational use has been added to the management prescription for MA 2 in the Final Forest Plan.

8. Snowmobiling is a compatible use in many MA 2 areas. The amount of area that is available for cross-country use is limited, on a practical basis, because of vegetation denseness and steepness of terrain.

9. Opportunities for input into timber sales are available at each Ranger District office.

10. We disagree.

11. There is normally an EA on all activities proposed in this MA.

12. Because of the primary intent of allowing for natural processes in this MA, it is not felt that the control of insects and disease will be a significant need, although it would be an acceptable use as you suggest.

E-301

158

Oct 30, 1985

I'm writing to give input on the Kootenai Forest Plan. I am strongly in favor of as much wilderness as possible including the Cabinet Additions, Scotchman Peaks with the Pellick Ridge area, Ten Lakes, and Trout Creek. I've hiked, hunted, and camped in many of these areas. 1 2/3 4

I am in favor of not building any more roads. Even if the roads are closed to motorized vehicles, they still open up areas to more hikers, hunters, and those that go through illegally with motorcycles, three wheelers, and snow mobiles. The net result is less habitat for game and fewer areas that haven't been disturbed by humans. 5

I am in favor of road closures of many existing roads. 6

I'm against increasing logging on the Kootenai Forests. 7

I am in favor of managing the old growth forests. Increase this from 8% and remove it from the timber base. 8

I've lived in Libby for 8 years and I moved here because of the country and its beauty. I don't want the things I moved here for changed or destroyed 9

Maury Anderson
Rt 2 Box 425
Libby, Mt.

Response to Letter #158 - Maury Anderson

1. See the Forest Plan Map for the recommended wilderness for the Cabinet Additions.

2. See the Forest Plan Map for the recommended wilderness for the Scotchman Peak area.

3. See the Forest Plan Map for the recommended wilderness in the Ten Lakes area.

4. We do not recommend wilderness in the Trout Creek area because of potential mineral and wildlife values, however, the area has a significant portion designated to roadless management which will protect the inherent wilderness qualities.

5. Roads are a necessary facility that are needed for the production of timber. The Final Forest Plan has attempted to produce the least amount of road consistent with the maintenance of historic timber harvest levels.

6. The Final Forest Plan will provide for a significant amount of road closures.

7. The Final Forest Plan provides for the continuation of recent timber sell levels.

8. The old-growth timber component has been increased to 10% of the Forest land area below 5,500 feet elevation and has been removed from the regulated timber base.

9. No response needed.

270

PO Box 8787
Moscow, ID 83843
30 October 1985

Forest Plan
Kootenai Natl. Forest
Route 3 Box 700
Libby, MT 59923

Dear Sirs:

I have looked over the draft forest plan and can find no alternative that is very sound silviculturally or economically. In particular, all build far too many roads on a forest that already has just about been roaded to death. In fact, timber harvest has fast become the single use of what was once a very diverse forest. I thought the law obliged you to practice forestry, not tree farming. In any event, your plans to build a total of almost 11,000 miles of road on this forest are simply appalling as are your short-term plans for 244 miles of new road per year. In no way can the Kootenai sustain this impact without death to a large portion of its once fine fishery. 1

I am also deeply concerned that you plan some form of development on Pellick Ridge, a place with huge wildlife and wilderness values and one that will require huge subsidies for timber harvest. This are absolutely belongs in the Scotchman wilderness. 2
Trout Creek, south of the Clark Fork, is another area that has wildlife values far higher than timber values, and simply deserves to be left alone. 3

The timber harvest levels planned for the forest seem far higher than historic trends and are also much higher than legitimate carrying capacity. A harvest level of about 170 MMBF is probably sustainable and would allow more genuine multiple use on the Kootenai. 4

Lastly, while I recognize the good effort you have made at trying to maintain some old growth timberland on the forest, a somewhat higher percentage, coupled with a *stronger commitment to maintain it, seems in order. In particualr,* riparian zone old growth ought to be permanently retained, and not rotated as you now plan. A figure of 10-15% of the forest would be a more sound target. 5 6

Sincerely,

Dennis Baird

P.O. Box 8787
Moscow ID 83843

P.O. Box 8787
Moscow Id, 83843

E-303

Response to letter #270 - Dennis Baird,

1. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction and the total roads needed are 3,850 as of January 1, 1986.

2. Most of Pellick Ridge has been recommended for wilderness. See the Final Forest Plan Map.

3. Most of the Trout Creek area has been designated for roadless management. See the Final Forest Plan Map.

4. The timber sale program for the Final Forest Plan will be at the same level as recent years (1981-1985). See Chapter II of the Final EIS and Appendix 11 in the Final Forest Plan document.

5. The old-growth timber component of the Final Forest Plan has been removed from the regulated (suitable) timberland base.

6. The Final Forest Plan now provides for a 10% level of old-growth timber management.

E-303

TO: FOREST SUPERVISOR KNF
RT 3 BOX 700
LIBBY, MT 59923

2 OCTOBER 85

ATTN: JIM SHADLE

Dear Jim,

This is in response to our conversation last month about the future of cedar replacement stands on the Kootenai National Forest in the next decades. The "Old Growth" component speaks mainly to the age class of these wildife stands and not to the species which will comprise stands in this MA.

On Kootenai and other Forests with which I have been associated, little or no attention was given to the regeneration of cedar. It is a species which is more difficult to regenerate and culture; therefore it is most often cut and replaced with other species. A few of the inmature cedar stands will be found in MA 13 and other non-development MA's. These will be protected.

The Kootenai Forest has set aside one small area in Ross Creek to protect the existing old growth cedar. This stand of cedar may be one of the best representations of the species on the Forest. What is to become of other climax species stands on the Forest which have not reached maturity and harbor a cedar gene pool. There are many small pockets of climax stands which hold inmature cedar (10 to 20 dbh) that could provide large cedars for future generations to view and provide a diversified gene seed pool. The present Forest Plan and silvicultural practices afford little or no protection for the continuity of these stands. 1

I am concerned about the climax stands that contain inmature cedar and are in developmental MA's. The general silvicultural practices presently being used on the Kotenai would obliterate a number of these stands in the next decade or two. I would like to see language in the KNF Plan that would address species as well as age in those stands selected to be placed in MA 13.

If there are any questions concerning what I have written, let me know and I can discuss them in more detail.

Thanks,
Joe Barcomb
Joe Barcomb
Zone I

Response to letter #278 - Joe Barcomb

1. Management Area 13 was selected to provide diversity. The goal now requires a representation of timber species and habitat types. See the final Forest Plan document, Chapter III, Management Area 13.

Oct. 1985

My family has lived in Libby and in the many years, spanning four generations has used, enjoyed, work in, work for, hunted, fished, logged, mined and survided with the Kootenai N.F.. I write this note in regard to the Kootenai Plan. There are several items involved in the new plan, which I would like to have considered as most important to the continued use of the citizens who live in + use the Forest on a daily Basis, year after year Slow down the roading process. we do not need more access to the Kootenai lands! We need more Elk Habitat like a roadless Trout Creek. 1 2 3
More Wilderness, like additions to the Cabinets + Scotchmans (including pellick ridge!) We need at least 15-17% be left alone as old growth areas + removed from the timber inventory lists. We need to keep our Water-sheds clean so that my children + Grand children can enjoy and use this county in the generations of my family yet to come!! Above all the 4 5 6 7 8

E-305

Response to letter #265 - Ken Beasley, first page

1. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. The actual experience to date indicates that the rate of road construction is decreasing. See Table II-4 in Chapter II in the Final EIS.

2. The majority of the Trout Creek roadless area is designated for roadless management. See the Final Forest Plan Map.

3. See the Final Forest Plan Map.

4. A significant portion of Pellick Ridge has been recommended for wilderness. See the Final Forestb Plan Map.

5. The total inventoried old-growth wildlife habitat is 11% Forestwide and the Final Forest Plan designates a 10% level Forestwide.

6. The Old-Growth Timber Management Areas (MA 13) have been removed from the suitable (regulated) timber base.

7. The Final Forest Plan has been strengthened to insure that State Water Quality Standards are met. See the Forestwide Goals in Chapter II of the Final Forest Plan.

8. *No response needed.*

E-305

Land known as the K.N.F. and administered by the Forest Service needs long term planning for the optimum benefit of itself + the people who use it, not just for its economic benefits, but for its natural & human benefits. Not just Pay checks or stock dividends I guess I want the plan to reflect my desire for More Land, Less Managed — Keep the # people out of it as much as possible. 9

Thanks for your genuine concern!

Ken Beasley
520 Kimball Dr.
Rochester. N.Y. 14623

JOHN WILLIAM HILL
Bird's Nest and Dogroses, 1867
Watercolor on paper, 10¾ x 13⅞ inches
The New-York Historical Society, New York City

Response to letter #265 - Ken Beasley, page 265a

9. The Final Forest Plan has attempted to resolve all the Public Issues in a manner that contributes the highest Net Public Benefit. See the discussion on Net Public Benefit in Chapter II in the Draft and Final EIS.

James Rathbun:

My husband has been an independent logger for nine (9) years.
First of all, he has never seen a grizzly bear on any logging operation he has been on.
We are also opposed to the addition of more wilderness area. I believe there is more wilderness area here than in any other timbered area in the state. We believe there is already too much wilderness area given the amount of people that actually are able to go into the areas. I believe we should preserve areas, but, at what cost? Put more of us on welfare because we can no longer work? 1
Our fish & wildlife resources are wonderful. But, we see a lot of out of State hoply hunters. 2
Mr. Rathbun, we live here. We don't want to be forced out of our home.

Sincerely

Mr. & Mrs. Tyler Boswell
Troy, Mt.

E-307

Response to Letter #161 - Mr. & Mrs. Tyler Boswell

1. The Final Forest Plan has recommended wilderness in areas where the potential for economic development appears low.

2. No response needed.

E-307

P.O. Box 977
Troy, Mt. 59935
October 20, 1985

Jim Rathbun
Forest Supervisor
Kootenai National Forest
RR#3 Box 700
Libby, Mt. 59923

Dear Jim,

Thank you for the opportunity to comment on the Kootenai Forest Plan. For the most part I find the plan to be reasonable and workable. I commend Mr. Shadle and his staff for developing such a balanced plan.

The following comments/concerns deal with some of the assumptions made in developing the plan.

Page II-4 item 1. This assumes that suitable acres are economical. I disagree, just because an acre can grow 20 cu ft of fiber per year does not make it worth while to invest the capital to regenerate it. 1

Page II-4 item 4. Commercial thinning on even mixed con I land is not always practical. What about cable ground and the damage it would do the residual stand? What about the economics or the "state of the art" logging techniques which indicate that the Kootenai is a long way from being able to satisfactorly commercial thin? 2

Page II-4 item 6. The other problems you mention, root rot for example, cannot simply be mentioned in a prescription and taken care of. What about the committment of huge amounts of capital or the market existing for the glut of a patricular type or size of material? 3

There should be mention about the unliklyhood of receiving the budget and workforce needed to meet the plan. How can we supply the recreation or soil protection for example if the budget is reduced? 4

Appendix 2. If the average annual commercial thinning acres is to average 3,020 for the first decade we had better do some large scale training of our loggers. I doubt that the Kootenai has the expertise to log one third of the acres proposed. 5

Response to Letter #65 - Robert G. Bustamente, first page

1. The suitability of the acres have already been determined and the overall economics was a part of that determination. This can result in some acres having a site-specific uneconomic situation, but their total contribution to long-term net present benefit and value is justified.

2. The direction for commercial thinning has been changed because of the situations you have outlined. See the Final Forest Plan document.

3. These are some of the items that will need to be tracked during yhe life of the Plan to see if they are achievable.

4. The Final Forest Plan Standards now give direction as to what will occur when budgets do not meet planned levels.

5. We agree. The Final Forest Plan has removed the targets for commercial thinning.

Appendix 3. The proportion of unsuitable lands to suitable in the 20-49 cu ft/ac/yr is too low. Especially if we are going to look at economics very hard. 6

One other thing, there is no way to double classify a piece of ground. If a stand is classified as MA 14 there is no way to indicate that its timber productivity is low, or even worse, its uneconomical to log. This seems to inflate our productivity. 7

Please use these comments to adjust the plan and make it even more useable.

Sincerely,
Robert G. Bustamente

Response to Letter #65 - Robert G. Bustamente, page 65a

6. The figures shown are our best estimate until updated information is received on a new inventory.

7. The Analysis Area that corresponds to each Mansgemnt Area is the most direct tie to timber productivity. See the Planning Records for the Analysis Area Map.

6

July 22, 1985

VERBAL COMMENTS

He would like to see more road closures for wildlife and less clearcutting (leave more overstory) for wildlife cover in the winter. The wildlife cover needs to be left on gentle to moderate ground and not just on steep ground. 1/1a 2

Bill Chalgren
Box 583
Libby, Mt. 59923

44

10/15/85

Bob Zimmerman -Libby

Called on the phone and said that the head of Bristow Creek has a good elk herd building and he doesn't think MA #15 will do enough for the elk (cover and road closures). I asked him to call Jeff Scussel or Gary Altman on D-6 to let them know of his observations. 1

Paul A. Leimbach
(Discussed with/ Al Christensen)

retyped from original note by e. kaeding

11/1/85 235

Phone call from:

Joe Hiddice
P.O. Box 776
Eureka, Mt

He favors lower timber harvest level and smaller clearcuts. Need smaller clearcuts to keep the water clean. 1/2

He favors wilderness for Ten Lakes MWSA. He personally uses this Area. Wilderness will give it better protection. 3

Also favors Scotchman Wilderness as wildeness. 4

(retyped from original note of phone call recieved by Paul Leimbach by e.kaeding)

Response to Verbal Comment #6 - Bill Chalgren

1. The Proposed Action and the Final Forest Plan have the highest percentage of road closures planned among all the alternatives.

1a. The winter-range prescriptions (Management Area 10 and 11) include direction for wildlife cover needs. See the Final Forest Plan document.

2. The wildlife management prescriptions (MA 10, 11, 12, and 14) apply to all slope classes.

Response to Verbal Comment #44 - Bob Zimmerman

1. Land designations have been changed in the head of Bristow to provide for elk summer range (MA 12). See the Final Forest Plan Map.

Response to Verbal Comment #235 - Joe Hiddice

1. The Final Forest Plan provides for a continuation of historic timber sell levels to insure that adequate supplies are available for local industries.

2. No response needed.

3. Wilderness has been recommended in the Ten Lakes area.

4. Wilderness has been recommended in the Scotchman Peak roadless area. See the Final Forest Plan Map.

Verbal Comments Received at Open House - 7/22/85

Not Enough Wilderness! 1

Sarah Chvilicek
c/o County Extension Office
418 Mineral Avenue
Libby, MT 59923

(Retyped from original note by M. Nuss)

Response to Letter #7 - Sarah Chvilicek, first page

1. See the Final Forest Plan Map.

1518 Louisiana Avenue
Libby, MT 59923
November 3, 1985

7 a

Forest Plan
Kootenai National Forest
Rt. 3 Box 700
Libby, MT 59923

Dear Friends:

I support the Proposed Forest Plan direction for Management Area 2 on the East face of the Cabinet Wilderness. I note that the management direction indicates that existing roads in MA 2 will be closed if they do not access roaded management areas. Since motorized use is not permitted in the Wilderness, I assume that this means that the following roads will be closed in MA 2: 1

Leigh Creek	Snowshoe Creek	Upper Cherry Creek
Upper Bear Creek	Cable Creek	Poorman Creek
Ramsey Creek	Upper Libby Creek	Standard Creek
Upper W. Fisher Creek	Bramlet Creek	

If this interpretation is not correct, please clarify the management direction to insure that these roads will be closed and the area restored to its natural condition.

In addition to the other Proposed Wilderness described as MA 8, I strongly support Wilderness designation for the area shown as MA 2 in Rock Creek (after removal of the road), MA 2 on Pillick Ridge, MA 14 and MA 19 between the Bull River Road and Pillick Ridge and MA 29 in Trout Creek. 2

2 a

I support the proposed designations of MA 2 and MA 10 between Flatiron Mountain and Independence Peak.

I support the removal of the salvage harvest clause in MA's 2 and 10 (pages III-10 and III-39 of the Forest Plan document). I don't believe that such a practice has ever proven effective for the control of insects and diseases in timber. 3

I support limiting access to foot traffic only in all existing and proposed Wilderness areas. This is to exclude horse traffic in these areas. If horse traffic were encouraged, I would expect to eventually see heavy use which would severely degrade the natural resources of these fragile areas. 3 a

1. The prescription for Management Area 2 has been revised to include the roads that have had historical recreation use and will remain open, at least seasonally, to accomodate that use. This list is subject to change if conflicts arise with grizzly bear recovery or public safety. All other roads will be closed to meet the intent of the prescription. See the Final Forest Plan document.

2. Additional wilderness has been recommended on Pellick Ridge in the Scotchman Peak roadless area. The lower north-slope portion of Pellick Ridge was not recommended for wilderness because of the timber values. Additional wilderness has not been recommended in Rock Creek because of the significant mineral discoveries which have occurred in the immediate area (Asarco and U.S. Borax). Wilderness has not been recommended in the Trout Creek area because of the combination of mineral and wildlife potential.

2a. No response needed.

3. We have modified MA 2 to preclude timber salvage. Salvage in MA 10 may help to maintain the habitat while providing other resource benefits.

3a. Horse use is legitimate under the Wilderness Act. We can also expect degradation where human use is heavy. Management action will be necessary to insure that all uses are compatible.

I support your Wilderness proposal for the Ten Lakes area. 4

I suggest that MA 13 be removed from the regulated timber base for 3 reasons:

1. the Forest Service has no experience in managing stands over a 250 year rotation
2. even the Proposed Forest Plan demonstrates a lack of intent to carry out this management by cutting MA 13 in the Clingback, McMillan, Hemlock and Lost Fork timber sales in the next 10 years 5
3. the allowable cut effect generated by keeping MA 13 in the timber base is inappropriate due to the uncertainty of maintaining such management over a 250 year rotation

I support increasing the percent of old growth in areas below 5500 feet from 8% to 10% as a means of allowing for the uncertainty inherent in such management. 6

The conversion of stagnated lodgepole stands is expensive and probably does not significantly increase the allowable cut. I suggest that the policy noted on page II-4 of the Forest Plan be deleted. 7

There are two critical environmental factors that must be carefully monitored, they are grizzly bear habitat and water quality. Monitoring item C-9 does not indicate how we can be assured that management areas such as MA 14 are producing the habitat necessary for endangered species. 8 Attempts to get timber and endangered species from the same area is a risky proposition at best, and must be closely monitored for effectiveness. 9 Likewise the construction of almost 4700 miles of additional roads, while attempting to maintain high water quality for fisheries, is risky and must be monitored. I note that sediment yield is the only monitoring item related to water quality. Direct measurements, on a specific periodic basis, are essential to insure that road construction and logging activities do not cause further loss of high quality water on the Forest. 10

In closing, I basically support your Proposed Plan, but would like to see more designated Wilderness and more care given to water quality, endangered species and old growth habitat. 11

Sincerely,

Sarah Chvilicek

Sarah Chvilicek
293-7781 ext 211 (days)

4. No response needed.

5. The MA 13 has been removed from the regulated base. See the Final Forest Plan document.

6. The percent of old-growth timber has been increased to 10% in the Final Forest Plan.

7. The policy has been removed in the Final Forest Plan.

8. See the Monitoring and Evaluation Plan in the Final Forest Plan document.

9. We will monitor the results.

10. See the Monitoring and Evaluation Plan in the Final Forest Plan.

11. See the Final Forest Plan Map and the Monitoring and Evaluation Plan in the Final Forest Plan document.

To the KNF planners,

Enclosed are my comments on the Forest plan. I have lived and worked in the Kootenai National Forest for some six years, working for the Forest service on a firecrew and independently as a contractor as a tree planter, doing stand exams, slashing, and stocking surveys. Like most other people of this community, I sincerely hope that public opinion will have a definite effect in developing a final plan which is balanced in providing jobs and in protecting our area's diminishing resources. Let us hope that in proposing the final plan, that you with that responsibility take note of the fact that not only must we provide a stable working base for our community, but that we must also preserve a measure of the wildness for our children to experience and to explore. 1

Obviously, the plan as now written has taken many dedicated hours by Forest Service employees to prepare. You will have to excuse the fact that much of what I am to write seems critical of that effort - it is a matter of expediency which makes me direct most of my comments towards aspects which I do not like in the plan, rather than towards things which I agree with. I fully respect the effort made to present a scientific document, but I also beleive that more is involved here than just science, and in many political and policy proposals I find strong disagreement with not only the proposed plan "J", but in some cases with each and every alternative. So here goes...

Introduction and General Overview

One needs to read only a few pages into thebook entitled "Proposed Forest Plan" to find out that the plan will not, in fact, be a proposal based upon scientific study, but rather one designed to meet generalized goals and projected output tables. On page 11-14, the plan lists 13 scientific studies needed to "improve" the data base upon which the plan should be based -- an inventory of concentrated wilderness use (Leigh and Geiger Lakes?) to be completed in 1986, five to be completed in 1988, six in 1990, and one in 1995. So from the beginning we are warned that the major emphasis the plan gives to roadbuilding and increased logging will be well under way long before the studies which might curtail such activity are completed; given the delay brought about by the necessity of letting out contracts in advance of the work being fulfilled, these studies cannot be expected to impact forestry planning until the mid-1990's. On the following page, the plan lists five areas of research that must be included in the plan when they are finished because they haven't been done in the past: hydrology studies, root rot, problem areas for regeneration, grizzly studies, and old growth. But no timetable is given for their completion, nor any indication as to how much capital is earmarked for their study. 2

The plan goes on to begin listing the changes which will occur on the KNF without a single word being given to criticism of past Forest Service work or by listing areas such as hydrology which have had serious impacts on other regional forest planning and which can be expected to impact our plan severely in the future. You get the feeling that the FS has had an infallible past -- but I know full well from having to plant acreage in the Yaak that was left from the 14 year moratorium on tree planting that Sylvanite had from 1964 to 1978 that serious management errors have occurred in the past. By not dealing with the 3

Response to Letter #159 - Charles Clark, first page

1. See the discussion on the Net Public Benefit in the Draft and Final EIS.

2. The studies you mention are those felt to be of high priority to better define the tradeoffs that are most surely going to be needed. They will help to refine the plan and to be able to better define costs and effects. The Monitoring and Evaluation Plan will be the insurance against unknown "fatal flaws" that may require a revision of the Plan.

3. No response needed.

errors committed in the past, my suspicions on the truthfullness and reliability of the current proposed plan were certainly raised. 3

My concern over the plan was cemented by two slight of hand maneuvers made concerning old growth, one of my special concerns. First of all the plan opens by talking about a rotation age of 80-120 years, and thereafter always uses 80 for its rotation statistic. Even John McBride admits to a rotation age of 120 years, and other than lodgepole, I can think of no other tree species that my own stand exams indicate has reached growth maturity at age 80. In fact, a large number of post 1910 fire trees are indicating continued high growth at the present time and it would be economic insanity to cut them in their prime. My second doubt relates to the percentage of old growth necessary to maintain old growth dependent species -- the plan states 8-10% as a minimum (emphasis is the forest service's) and then goes on to allocate 8% as its figure - not 8% of the whole forest but 8% of what is now old growth. In both cases, the FS planners have not begun by presenting the scientific case for maintaining old growth or for optimizing forest production. The intentional willingness to cut logs prematurely and to limit old growth to its minimum survival level for dependent species shows a disregard for the potential whims of man and nature, both of which might well riddle our natural environmental processes in the future. 4 5

The doubts listed above seem enough to question the motives behind the plan, but this doubt grows further when looking at the administrative angles of the plan. No where is there an alternative to indicate what might happen under strong budget constraints, a long-termed slump in the American economy. I simply do not agree that the best method is to plunge ahead with roadbuilding ~~wearing~~ blinders. Building roads requires a lot of money, and many roads are constructed at a loss to the federal government. Congress is already rushing to enact deficit spending controls, long overdue in federal fiscal management. Wasting money on roads "going no where" is not sound management, and justifying roadbuilding and its costs by wild expectations of rapidly increasing timber sales is not sound management either. 6 7

Lastly, the plan does not allocate enough resources to, nor does it describe adequately the monitoring programs that will guarantee the plans success. Who will correct Forest Service policy if the 13 studies indicate errors in the plan assumptions and where will the funds come from if the monitoring programs prove to be underfunded? We need guarantees that monitoring is a functioning part of the planning process, not a weak-kneed add-on listed to keep the environmentalists at bay. All in all, I am not sure that the Forest Service planners have learned anything from the 20 year-old environmental movement other than how to write carefully worded documents. For me, that isn't enough. 8

What follows are some of my more specific objections to the plan.

4. The rotation length for Lodgepole Pine stands is 80-100 years. The Mixed Conifer I and II stands are generally 100-140 years.

5. The Old-Growth Timber management category in the Final Forest Plan represents 10% of the Forest acreage below 5,500 feet elevation, and is not included in the regulated (suitable) timber base. This is a total of 185,000 acres.

6. The Current Direction (Alt. I) represents a constrained budget alternative.

7. Of all the alternatives that plan any roadbuilding in roadless areas, the Proposed Action (Alt. J) and the Final Forest Plan (Alt. JF) have the lowest planned mileages. See Figure II-45 in the Draft EIS and the Final Forest Plan Map to see the inventoried roadless areas that are designated to remain either roadless or in an undeveloped category.

8. The Monitoring and Evaluation Plan has been strengthened and the Forestwide Standards have been revised to insure that the expected results are achieved, or the projects are redesigned or the Forest Plan is revised.

II. Pertainent Issues of Primary Concern

The wood product industry needs to remain stable and operating in Lincoln and Sanders County, of that there is no doubt. How to do that is of some question, however. Champion International continues to implement automation that promises to displace a third of its work force and already this year they decreased the number of loggers working for them. Some rumors are afloat that the Libby mill may operate only ten more years. A major plant closure in either county could greatly affect the need for large scale road building as demand could plummet. I am not suggesting that Forest planners should consider this possibility as a probability, but economic forecasts are certainly less rosy than that pictured in the plan and I believe that the plan should scale down significantly the number of miles of road built in the first ten years. A stable economy would be one that relies on slower growth over a longer period of time, and as written, the plan would lead to a virtual collapse of the road construction industry in 20 years -- hardly planning for a stable economy. 9

The widening of the wood product industry beyond the logging and large mill industry is probably the only thing that can guarantee a stable woods economy in this day and age. We must learn to convert raw wood products into finished products here in Lincoln County -- to widen the base of operations of the wood product industry. Cutting more logs per year will not have this effect. In recent years, the national economy has suffered series after series of small booms and busts, and by encouraging larger and larger harvests during short durations, the Forest Service is encouraging more logging interests to develop during boom times -- leading, of course, to deeper recessions among local workers when the national economy suffers a recession. The greater the number of people employed during the booms, the worse the recessions will be locally and the slower the recovery rates for the counties involved will be. The rationale behind the FS predictions of continued growth in the local logging demand are not found in the plan -- possibly they are based on the knowledge that other Montana National Forests are exhausting their timber base and demand will increase for the KNF; possibly FS planners believe that because the population of this country is going up, so then is demand; maybe they expect to see the KNF join the bandwagon and begin to ship whole logs to the Orient; maybe they believe that if we open up enough old growth to cutters, the big companies will log "like hell" while the profit margin is high. The plan doesn't say. It sounds a bit like the nuclear energy industry that predicted such extreme growth rates only to wind up with extreme growth rates in consumer bills rather than energy usage. Only our costs will be the rapid loss of old growth and a rash of road building but only a few years of jobs for any of us. 10

In stead of developing new economic plans or encouraging other kinds of wood product development, this plan offers the workers of this county the unfounded and unproven promise of the continuation of the status quo (in fact, an increase in the status quo). By taking this route, the FS avoids its duty in protecting and ensuring the viability of the grizzly habitat, fosters the illusion that a stable forest cycle is 80 years (the cost of harvesting 80 year old sticks further and further away from the mills must certainly go up), and offers no leadership in

9. The Final Forest Plan has reduced the projected miles of road to be built in the first decade and in total. In addition, our experience indicates that the road-building rate is declining. See Table II-4 in Chapter II of the Final EIS. When the majority of the road construction work is completed, work will shift to the reconstruction of roads which will provide a reduced level of road work.

10. We agree that diversification of the local wood products industry to include finished products would be an important step toward stabilizing the economy. There is nothing in the Final Plan that would hinder this type of development. Agencies exist at both the State (Department of Commerce) and the Federal (Small Business Administration) level to support this sort of restructuring.

the economic field. For example, the plan asserts the FS dedication to snag replacement and snag development -- yet anywhere logging roads are permitted to go, the snags disappear over night - first to the loads of buckskin larch and thento the picking over by individuals and small firewood cutting operations. I travel hundreds of miles in the back-country of this county, but rare it is to see a snag within reach of a loggers cable. Just how does the FS plan on protecting snags when the road system winds to the far reaches of the county? An environmental[illegible] might answer that we must change our sights on the firew of industr[illegible] logger, and realize that if this county is to maintain its population of cavity nesting animals and birds, that we must begin to take the thousands of cubic feet of wood burnt up in piles and in clearcuts and use them to heat our homes [illegible] pollute our air in the spring and fall, [illegible] sure, this demands a new form of salvage logging that by contract could be incorporated within current logging contracts or within current planting contracts or divided among the two. What matters is that we develop a plan to protect snags and dependent species, to commit ourselves to the long term process of living with, rather than off of, the forest. 11 12

The FS is also actively encouraging the mining of the wilderness even as the reports coming out of Lake Creek indicate largescale kills of micro-organisms and rising levels of toxic metals even downstream from the mine. Furthermore, to actively support the proposed mines in the name of "jobs" at a time when the price of silver is lower than it was in the mid-seventies is [illegible]. If these mines are as rich as is claimed , the mining of them will only drive the price of silver downward even further, leading to cyclical layoffs which prove more damaging to many local economies that the booms are beneficial. The only logic in mining such large amounts of silver (which is 69% recoverable in its industrial usage, anyway) is for those who own the silver to stockpile it for the great profits it may recieve during the next recession. The FS support of the mine is like betting against yourself and the economic management of the federal government. 13

One alternative approach, in my mind, would be to encourage a rock quarry on government land, far away from the center of the grizzly range, to provide rock for labor intensive building of rockwork for the expanding Troy-Libby highway or the like -- something that builds and develops the local community rather that an activity which robs the area of its valuable native resources at a time when there is no real need for that resource, and which endangers the grizzly bear's existence at the very time the federal government and FS claims that it is protecting and rebuilding grizzly populations. 14

As for recreation, for the local economy's sake, it seems appropriate to encourage more hunter and fisher and hiker and skier days, but reality is that these days will grow only if the resources grow, and the current plan offers little hope in that direction. Surely, increased road-building, logging, mining will decrease fish populations, maybe as much as 10-15%. Increased hunters will ultimately cut down on the number of game around-- fish and game estimates indicate one-third of the white tail population was killed last year by hunters. Logging has been producing elk habitat since it began, but stories by old-timers 15

11. We do recognize that snags within reach of roads are lost to wood cutters. The following practices are being used to protect snags out of reach of the roads: (1) Many of the new roads and a lot of the existing roads are closed to use. (2) The emphasis in timber sale contracts has changed from cutting all snags to leaving as many snags as safety allows. Snags are marked to leave during timber sale marking. (3) Markers are also marking live trees for leave, that will be used for future replacement snags.

12. We have explored contractual removal of logging residue but at present it is cost-prohibitive. We will continue to explore and support methods for utilization of this material.

13. Mining is permitted in the Kootenai National Forest under the 1872 Mining Law. Whether a new mine is opened is a decision that rests with the mineral operator, and the anticipated supplies and prices are surely some of the important factors that will probably be considered.

14. Nothing in the Final Forest Plan prohibits the development of a rock quarry, if the need arises.

15. No response needed.

seem to indicate that elk were plentiful before and stories by hunters today indicates the opposite. The growth in thepopulation of all game, elk being the chosen indicator, can only occur if the number of hunting successes is limited somehow. I fully support the FS determination to close 2/3 of all roads on the forest. 15

Environmental Issues

Siltation and soil compaction are two definite problems being faced by logging efforts of the KNF - I see them both as a tree planter. A research program, such as the one proposed by Marcie Gerhart last year, is definitely needed to get accurate data on the various amounts of topsoil being lost from the different forms of logging. Skyline logging should be encouraged and given financial incentives because it has less severe impacts on the soil than does skidder operations. 16

I definitely do NOT support the use of chemicals in reforestation programs. After four years of working among the toxic chemicals in the fruit orchards, I want no part of them here in my work in the national forest. Officials always claim that the chemicals don't harm you, and the workers always get sick and suffer the long term cancer affects from the chemicals. Warning labels are rarely heeded. If units are unsuitable for 5 year regeneration, they should not be cut in the first place, It is unfair to pass on the effects of poor management to poor workers forced to work around chemicals that are never really safe. 17

The plan indicates that a roadless designation is meaningless in any context other than to say that we are not planning to put a road there now. Along Rock Creek are two proposed roadless additions -- a bit of a joke since they are separated by a road that may soon be carrying truckloads of ore from the Borax Mine. Most proposed roadless areas are just too steep or two rocky to put a road in -- and thereby not even valuable to recreation use for the most part other than as visual quality. I fully support giving wilderness category to roadless areas because then I can expect such areas to be protected in the future as well as in the next ten years. 18

FOREST OPERATIONS

Here are some specific recommendations on Forest policy.

1. Old Growth -- incorporate a 15-20% standard where old groth currently exists and begin rebuilding a 8-10% old growth stand per drainage wherever forest fire has destroyed previous stands. Separate Old Growth as a separte management area with its own set of guidelines which strictly protect snag development and maintenance. 19

Response to Letter #159 - Charles Clark, page 159d

16. See the Forestwide objectives for Soil and Water and the Research Needs in the Final Forest Plan.

17. At this time the Forest has no plans to use herbicides for silviculture practices. This does not mean, however, that the use of chemicals will not be incorporated in future timber management. Environmental analysis will precede any use of chemicals as a silvicultural treatment.

18. No response needed.

19. 10% old-growth timber has been designated in the Final Forest Plan and 11% old-growth is the total inventoried on the Forest. A separate Management Area has been designated (MA 13) which is located within the regulated (suitable) timberland, and the remaining old-growth timber is situated within unregulated or non-timber harevst areas.

2. Continue to develop Lodgepole management -- it is true that these stands are stagnating or dying and recovery of this wood is desireable by economic standards 20

3. Encourage more shelterwood cuts rather than less. Almost none of the planes even include shelterwood, yet many species seem to need early shading, and shelterwood obviously provides seed genetically adapted to site and elevation. This also cuts down on planting costs. Do not go back and harvest all seed trees -- use them for snag repalcements. 21 22

4. Spend less money on roads and use some of the funds for rebuilding the trail system throughout the Kootenai NF. Last year we tried to take a trail to connect from near Hawkins Lake to the Northwest Peak trail, only to hike two miles to a point where the trail disappeared in a wall of Mefe. If trails are on the maps, they should be maintained. 23

5. Rethink the prospects of clearcuts in our major corridors, because it is the visual quality of our area that makes it what it is. The current plan will destroy our natural beuaty during the second ten years and this should not be allowed to happen. Visual quality needs to be increased in all plans. 24

6. The grizzly bear should be re-encouraged to live here and should be protected. Areas of known bear activity should be immediately closed to all hunting and general activity. If this had been done, then our two male grizzlies would not have been shot. So far, all man-grizzly encounters have been man hunting bear, and not the other way around. No mine at Rock Lake or Chicago Peak. These areas have been shown to be the very center of the grizzly range in the Cabinets. Follow the law of the land - protect the grizzly not the mine companies. 25

7. I support some land dispositions to the general public instead of all direct land trades with big companies. Let the people have some of the land back. I oppose land trades of areas along Freeman Ridge in Troy near where I live, because those areas will be traded with Champion -St.Regis. Their logging practices in my neighborhood have been unsightly, not slashed, poorly burned, and not replanted. I do not want to see that happen to more highly visual areas near me. Keep those lands under Forest Service management 26 27

8. Berray Mountain above the South Fork of the Bull River deserves wilderness status or at least severe road closure status. I have heard of two black bear poachings there and have seen a hunter take a young cub out of there while I was tree planting. The soil there is prone to siltation. Many species of wildlife, cougars included, inhabit the area, and the mountain is one that can be seen by visitors to Ross Creek. Please manage the area without further cuts. 28

20. The emphasis is now on the sell and harvest of lodgepole pine. We are working with industry and can adjust the level of lodgepole sell as the market allows.

21. Natural regeneration is currently being emphasized on the Forest. Shelterwood harvest acres now account for approximately 10% of the total harvest acres and seed tree harvest accounts for 40%.

22. The Forest Plan guidance provides for snag replacement and the harvesting of seed trees is a project-level decision. At times, the seed trees are marked for future snag replacement.

23. Trails are maintained as funding allows.

24. The visual quality of the area receives high priority in the Final Forest Plan. Sometimes a properly-located clearcut can enhance a landscape.

25. We will follow the Law. The Mining Law and the Threatened and Endangered Species Act both apply. The State of Montana regulates all hunting. We will co-operate with the State.

26. We have no authority to dispose of public lands to indivduals.

27. The federal land in the Freeman Ridge area has been designated as lower priority for managing for National Forest purposes. These lands can be used to obtain higher priority lands in exchange, such as grizzly bear habitat.

28. The South Fork of the Bull River area is currently within an existing timber sale. Following the timber sale, additional road closures are anticipated. Small salvage sales may occur but no large sales are anticipated during the Forest Plan period.

9. The entire inventoried roadless area of Grizzly Peak should be left as a roadless area. The plan admits that it is definitely a grizzly zone and I believe it should be set aside. Natural habitat is critical to maintain. When Silvaculturist Corda told me that a lot of grizzly habitat was being called that, not because it was grizzly range or habitat, but because it was spruce habitat that had grown over with dense menzezia I caught a glimpse of how shallow the FS committment to grizzly sustenance was. I have been to the top of this peak and feel it to be one of the better views around. More clearcuts and roads would definitely hurt its recreational potential. 29

10. Continue to protect the Big Creek drainage as much as possible. Its fishing potential seems great and its beauty is not matched by many other creeks. As a riparian zone it needs special protection. 30

11. McKay Creek should be given wilderness classification because it is one of the critical gateways to the Southern Cabinets and to several lakes such as Wanless. A difficult hike, this is an excellent horse trail. The view should not be disturbed with a growing number of clearcuts, because the uncut quality of McKay Creek adds to the extreme sense of solitude one gets from going up this trail. 31

12. Pellick Ridge should be included in the Scotchman's Wilderness Area. The FS has made enough concessions to the mining interests already, dumping the responsibility to monitor water quality on the resources of a financially strapped state aparatus. There seems to be little justification for logging this area as timber yeild is low. 32

13. End FS support of the Rock Lake and Chicago Peak mining ventures. Neither have been shown to be the least bit necessary in terms of American economics. If it is reasonable to stop the ski area because of economic improbablities of its profitableness, then the same argument is even more applicable to silver which is already in a state of serious over-supply. Don't let the Cabinets be the only Wilderness Area being actively mined. 33

14. Develop some reasonable forest-wide approach to tree planting and reforestation. Last year, the Cabinet District had Kootenai Collusion planting trees four inches longer than their hoes, forced the planters to plant in hot 00 degree temperatures at mid-day on 70 degree black slopes, and complained bitterly about the quality of work even through stocking surveys of Kootenai Collusions work continue to show a 90% survival rate there. Meanwhile, the Libby District was cutting roots to 6-8 inches and getting 81% inspection rates of easy ground from another contractor and they were satisfied. It doesn't make sense. Also, protect small contracts. The emphasis on large contracts is leading to the importation of more Mexican labor -- hardly helping the local economy. 34

15. Tell Al Corda, that in spite of his proclamations to the newspapers to the contrary, that cones from the top of a tree are not genetically superior to thoses from lower limbs. My college degree in molecular biology tells me that he is using media hype to justify the expensive use of heliocopters in cone retrieval. In fact, since the FS has been in the tree raising 35

29. Most of the Grizzly Peak roadless area is designated roadless or non-developmental. See the Final Forest Plan Map.

30. Almost the entire riparian area in Big Creek is in a non-developmental land designation. See the Final Forest Plan Map.

31. Most of the Mckay Creek roadless area is recommended wilderness or designated as roadless or non-developmental. See the Final Forest Plan Map.

32. Most of Pellick Ridge has been recommended for wilderness. See the Final Forest Plan Map.

33. The Forest Service is following the intent of the 1872 Mining Law and its regulations in Rock Creek. Whether or not a mine results will be the product of many factors, including economics, threatened and endangered species, water quality, etc.

34. The development of uniform contracting procedures is handled as a separate item within the existing contracting authority on the Forest, and not within the context of the Forest Plan.

35. There was no intent to portray that cones are superior at the top of tree. The helicopter was tested for cost-effectivness.

business seriously for only 20 years or so, I doubt if they could prove that any of their nursury ~~ix~~ stock is at all "genetically superior" to natural regeneration. Efforts at white pine blister rust resistant species have been a miserable failure. I was disturbed that the man responsible for the silviculture on this forest would resort to supporting Lamarkian genetics in order to gain public support for a questionable fores service practice. Genetic traits, passed on in a cellur process, guarantees that cells throughout a living plant or animal are essentially the same, do not change over the height of a tree. I fear the Mr. Corda, who is actively encourgaing the use of defoliants on this forest, will use further falsehoods to promote ~~ix~~ his spraying programs. I have talked to one cone picker who was not in the least impressed by the quality of the cones droped by the heliocopters, and somehow I suspect that the quality of hand-picked cones must necessarily be higher than that of the random cuttings from a machine flying high over the tree-top level. 35

If the FS wants to justify new programs on the basis of cost cutting or budget restraints, that is fine, though, of course, that might open a can of worms concerning its road-building programs that operate at a loss. It should never ,however, use false scientific claims to gain public support of those policies. To those of us who support scientific management of the forest land, Mr. Corda's statements on cone genetics have raised suspicions not only towards silviculture practices here but to the ~~xhmix xixxixxxifx~~ intent of the forest plan itself.

35. See previous page.

Lastly, I would like to support Alternative H with two reservations. The reason I like this alternative is because the tables in the EIS indicate that it will provide the same number of jobs, cut the same amount of timber, and generally move at the same pace of work as J. On the other hand it will protect wilderness as wilderness, allowing the forest service to take a long range management approach to these areas; whereas the roadless classification is totally meaningless, open to change, and offers no security to the retention of wilderness areas for our children. By making roadless areas official wilderness, we are including not only rocky high, relatively useless land to the wilderness category, but are showing our sicentific intelligence in recognizing the need to protect all types of vegetation, habitat, and elevations in their natural state. 36

My reservations on this support is that Alt. H does not include appropriate lodgepole management within its direction. The reason for this is not given in the plan as far as I could tell, but probably is hidden in the logging statistics somehow. If this plan is meant to mean that mixed conifer stands would be especially hard-hit, I would suggest that substituting a more heavy emphasis on lodgepole as in the other plans is far more logical and reasonable.

If the Forest planners choose to develop a management area to separate the management of old growth from the timber base, I could accept some reduction in the number of acres that H allocates for wilderness, as long as the Yaak is given some wilderness area to live with. 37

Lastly, whatever alternative is chosen, it must be guaranteed that scientific studies now underway and proposed will be fully funded, that monitoring of all questionable aspects of the operation of the plan be fully funded, and that a mechanism to change the operation of the plan, based upon these scientific studies and including some public input be built into the plan's operation. 38

I wish you all good luck in working out a balanced and environmentally sound plan...

Sincerely,
Charles Clark

P.O. Box 553
Troy Mt. 59935

36. See the changes in the Final Forest Plan which puts increased emphasis on lodgepole pine harvest. Alt. H, while protecting more area as wilderness, precludes mineral and oil/gas exploration wheress a roadless designation, such as those recommeneded in the Final Forest Plan, preserves the option for both wilderness and mineral exploration.

37. The Final Forest Plan puts more land area into old-growth timber management while also removing these acres from the regulated timber base. No wilderness was recommended in the Yaak area in the Final Forest Plan although that option is preserved for the future in the Northwest Peaks, Grizzly Peak, Roderick, and Buckhorn Ridge roadless areas. See the Final Forest Plan Map.

38. See the Monitoring and Evaluation Plan and the Forestwide Objectives and Standards in the Final Forest Plan document.

735 Yoeman Hall Rd.
Kalispell, MT 59901
October 30, 1985

Forest Plan
Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear James Rathbun, Forest Supervisor:

At a very young age, I adopted the Conservation Pledge published by Outdoor Life Magazine, as my creed to follow. Being raised on ranches and even when confined to towns, all of my spare time was dedicated to helping study and pursuing fish and wildlife. Solitude was not uncommon, being alone for a few days at a time, up to 30 and in one case from 90 to 100 days without seeing another human in the Flathead National Forest.

I have practiced conservation on my own 160 acres at personal expense as well as on public lands, to the best of my ability for over thirty years. As a fifty year resident of the area, I would hope my comments will be received as those of a person interested in all facets of proper land management, who, as an interested observer and participant, has the value of learning from history and people of the area.

Looking at that pledge "I give my pledge as an American to save and faithfully defend from waste the natural resources of my country, it's soil and minerals, it's forest, waters and wildlife." without including the disciplines, four words stand out in particular at this time. American - My Country - Waste.

Having been a student of history, military - unconventional and physiological warfare in particular, and actively engaged in these endeavors over a decade, I fear for my country above all else. Knowing that if the country can maintain or go back to the fundamentals set forth by our founding fathers and God, my family and posterity will have the opportunity to enjoy life, liberty, and the pursuit of happiness forever.

This country is the greatest, not only because we are one nation under God (aren't all nations?), but because of our privilage to pursue our dreams to the best of our ability. It is called Free Enterprise.

Free Enterprise, without the use of natural resources, can't exist. I feel that in order for the Nation, as Lincoln said, "to endure" capitalism, personal ambition, freedom and natural resources must all be joined together to provide the type of life we have all come to expect.

"And all the trees of the field shall know
that I the Lord have brought down the high
tree, have exalted the low tree..."
Ezekiel 17:24

No response needed for this page.

E-323

Economic Impact

Forest planning is in essence social planning. Social planning takes as it's main objective the fulfillment of the public interest. This concept, public interest, is variously called the social, general, common public, community, or national good, welfare, interest, well-being and other terms - It is embodied in the welfare clause of the constitution and enters into the mores of forestry through such terms as the greatest good to the greatest number in the long run.

The following from Leonard B Netzorg's paper presented to the Second Annual Public Land Law Conference at the Law School, University of Montana, April 25, 1980. "Netzorg".

"The current wave of national forest planning has implications for deepening or ameliorating social problems that are geographically distant from the forest." Every area of the nation has a large portion of it's population engaged in the building trades and associated fields. These people - carpenters, roofers, cement finishers, wholesalers, retailers, plumbers, truckers, electricians, landscapers, excavators etc. depend upon the national forest to provide wood to build on and around. What we are talking about is the largest single economic force in the nation. "Although the national forest contains 51% of our nation's standing softwood timber inventory, they supply less than one-fourth of our annual supply."

"Five years ago Congress set timber cutting goals for the national forest under the Resources Planning Act (RPA) The goals called for the sale of 14 billion board feet of timber in 1980. We have never even approached that target because of under-funding by Congress and foot dragging in the U.S. Forest Service."

During this period of time in the western national forests the Forest Service reduced the acreage assigned to timber production by 12 million acres, 1975 to 1978. The component of the commercial timber base upon which a full sustained yield is obtained shrank by 16 million acres. Of this 6 million acres were transferred to special components with less than full sustained yield harvest will occur. 2 1/3 million acres placed in marginal category. The remaining 16 million acres that had been in sustained yield harvest was removed from the timber base."

Alternatives with a timber reduction in cut is no longer a small local issue. Combined with the national trend it's impact can be staggering to the economy. The forest plan must be directly linked to solving the social problem we face in providing houses and the ability of millions of our population to afford to own a home. As the demand, which is there, surfaces due to lower interest rates and increasing employment; timber shortages will price a portion of the population out of housing. 1

Response to Letter #219 - Glen H. Conklin, page 219a

1. The Final Plan calls for a timber sale level of 233 MMBF per year during its 10-year life (See Appendix 11 in the final Forest Plan and Chapter II of the Final EIS). The 1980 RPA Program goal for this period is 228 MMBF/year.

   The RPA guideline is a recommended goal that is presented to Congress for consideration, it is not legally binding unless Congress makes it so. The goal of recovering the grizzly population is legally binding under the Endangered Species Act.

The environment created by adequate food, SHELTER and clothing on a daily basis is being overshadowed by an environment set aside for weekends and a two week vacation fantasy. You as Government managers must realize the people were promised life, liberty but only the pursuit of happiness. On the other hand happiness may be owning a home. One Forest employee said the plan was written for people and that "we need to maintain that social perspective." I find it hard to believe that the RPA cut guideline is being violated, people's jobs and homes, while the grizzly recovery program is being honored, can meet that criteria. 1

A recent study in Idaho shows that every 20 truckloads of logs results in a $20,000 a year job, $1,600 for public schools and roads and $4,800 to the U.S. Treasury. With a large percent of the county in government ownership we need all the money in lieu of taxes we can obtain. I would suggest that you keep the cut up to your share, allocated of forest ownership acreage basis. An increasing population needs jobs as well as homes as a first priority. 2

Since your neighboring Forest on the east has seen fit to drastically reduce their timber cut the eyes of Flathead timber industry are facing west. The Kootenai National Forest is now the most important supplier of natural resources in Western Montana, don't let us down! 3

Water / Fish

J.D. Helvey comment that "if road building and logging on the experimental watersheds had an effect, it was probably minor compared with the effects on fire and subsequent record precipitation amount" says it all.

Montana Fish Wildlife and Parks when core sampling the bottom of Flathead Lake about five years ago, found three layers of charcoal and ashes. This historic evidence is very significant. The questions it brings to my mind is; can Montana water stand the impact of a major fire and the sewage from the valley's cities or would it be overwhelmed by another layer of ashes. How would local people feel about lowering the quality of Montana water from uncontrolled fires even in the wild areas?

If water quality is lowered by less vegitative cover and that cover can only be removed by logging and fire, the choice is clear. Timber removal by fire causes death and destruction of, among other things, water quality. Timber removal by logging provides homes, jobs and income. Timber harvest provides income which can be used for research to improve water quality and logging practices and be mitigated to prevent lowering water standards. Fire can't be mitigated. Taking land out of production lowers all environmental deciplines, visual, water, air, soil and wildlife when Mother Nature cleans house. It should be clear that water quality is better off when mountain are logged than when they are burned. 4

Response to Letter #219 - Glen H. Conklin, page 219b

1. See previous page.

2. The job and income impact estimates used in the development of the Final Plan are shown in Appendix B of the DEIS (page B-65).

3. The Final Plan for the Flathead National Forest calls for harvesting up to an average of 108 MMBF per year. Over the last 10 years (1976-1985) the cut has averaged 97 MMBF per year. A discussion of the timber supply situation from all sources in the five county area (Lincoln, Sanders and Flathead in Montana and Boundary and Bonner in Idaho) has been added to Appendix B of the EIS.

4. The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards are not violated.

Dave Wedum MFG&P wrote in Montana Outdoors, July/Aug '73 "During high water, huge quantities of silt, mud and debris enter the stream. Because floods don't last very long and the volume and velocity of flows carrying material is high, this type of siltation does not create long term detrimental effects to the stream. This is normal "geologic erosion" and it helps provide the needs of trout-deep pools, riffles and undercut banks. In the long run it is beneficial."

Trout fishing in Northwestern Montana has gone downhill steadily for a number of years. The biggest reason being too many fishermen. 5

Logging contracts requiring loggers to remove blowdown from streams for many years has reduced the development of pools. The plan states that you want money to build pools. Let nature take it's course in this case.

Nature's way of cleaning streams was to use beaver. Beaver dams help in several ways. The ponds slow the water velocity of the stream allowing sediment to settle to the bottom. This build up of sediment is what caused most of our mountain meadows in the past. Beaver dams created a wider riperian zone, more forage for wildlife, and some of the best fish holding areas. Many intermediate streams with beaver dams can support fish the year around. Plant Beaver! 6

As for logging having an impact on fishing, it is primarily caused by making accesses easier. In many of the back areas, wild areas, and high lakes, fishing has gone down hill without any logging having taken place. Don't blame a lack of fish on industry. If you are worried about sedimentation go to a lower standard road, as industry has wanted to for years - wide trail concept. 7

1. Go to lower standard roads and let beaver dams catch the sediment.
2. Don't rely on Idaho studies to show effects in Montana waters.
3. I see no need to exceed Montana's water quality laws. 8

Endangered Species

Of the four endangered species, I will only comment on grizzly bear. The gray wolf will never make it in this area again. Ranchers will see to that. The bald eagle is no threat to logging and the few nesting trees needed are no problem. The peregrine falcon, to my knowledge, isn't even native to this area.

It is hard to take anything but a philosophical position on the grizzly bear. Grizzlys are seen by different people in different ways; from cuddly Teddy Bears to terrible man killers. In reality it is a political animal whose statue is far larger than the beast itself. School kids have state elections on it. Newspapers thrive because of it. Biologists make a living off of it and the State sells permits to kill it. Wilderness buffs use grizzly for justification for wilderness. The Forest Service is faced with providing land to manage it and industry suffers because of that.

5. The Kootenai National Forest is responsible for fish habitat (generally meaning water which meets State Water Quality Standards as well as improvement in habitat components such as pools) while the State is responsible for managing the fish and those who attempt to catch them.

6. The plan states that instream improvement includes building pools with log structures. These structures are designed to "fit" the stream so that spawning gravel can be deposited and pool habitat for fish can be created without damage to the stream. It is correct to say that natural pools are developed by blowdown. However, for every desireable pool created by a naturally falling tree there are many other trees that fall creating undesireable stream braiding, bank erosion, sediment deposition, and fish migration barriers. This is especially true where buffer strips are allowed to remain along stream courses where they can be subjected to windthrow, overloading streams with downed timber. Volume of material, size of trees, location along the stream, and angle of placement are important factors for proper pool development which should be dealt with through stream managment rather than by chance.

   Beaver can provide excellent fish habitat, however, not every stream is suitable for beaver activity. Beaver can block off important fish migration and remove valuable stream-bank cover if their activity is intense enough.

7. Altered road standards and other practices described in the soon-to-be-published "Soil and Water Conservation Practices Handbook" (FSH 2509.22) will be used as necessary to insure that water quality standards are met.

8. Models used to predict sediment and fish populations are not very reliable. For this reason we have focused on meeting State Water Quality Standards in practice rather than in a mathematical model. The combination of Monitoring and Evaluation linked to application of best available soil and water conservation practices should insure that State Water Quality Standards are met.

The grizzly can only remain as long as it has the support of the local population! East of the mountains a poll showed people divided 50/50 on the issue of grizzly versus timber and jobs. On the west side 40 percent were for jobs and timber, 60 percent were for bear. A very small percentage of the people polled wanted to spend any money in the bear's behalf. Since that poll was taken and because of grizzly incidents, the people I have been talking to are starting to oppose bear 100 percent. These comments are unsolicited, but come up when I mention the 4 percent of the Flathead set aside for grizzly in alternative 8. I have heard no one give any support to the bear for the last two months. Kill them all is the most often heard comment at my presentations. Too much wilderness runs about the same.

A year ago I told the grizzly study group I thought this would happen if managers didn't change their ways.

Jeopardy opinions continued. Industrial activities stopped, road improvements cancelled. Chris Servheen now says "recreation may create stress on bears or affect the way they use an area." Stress on unemployed workers and stress on recreationalists, I fear, will do the grizzly in. 9

Newspapers with "The grizzly bear menance in GNP" and "Wisconsin man killed by bear near Yellowstone" as a weekly attraction, will have a serious consequence on the dispersed recreational use of the forest in occupied terrain. Honest people are scared. Mike Aderhold MDFW&P Presentation July 83, at Whale Creek stated if we lose 10 percent of the population support we will lose the bear. I feel we have lost much more support than 10 percent this summer.

Grizzly depend on open and disturbed sites to feed in. They need open ground, unlike the black bear. Logging has produced that. Man made vegitative openings can and have become the vegitative equivalent to burns. This is the biggest reason for the population increase on the forest. Increased canopy cover is detrimental to the grizzly. Logged areas will be the only sites for bear to go to when the west side of the park burns, until it recovers. I feel intensive timber management would have minimal adverse impact in the immediate future and a very positive impact on the bear in the long range. Grizzly are now using old logged areas on Stoltze's ground. 10

In the Yellowstone recovery program zone one, it states mature whitebarked pine should be left until the next entry, if it will live that long. With the Rocky Mountain Pine Beetle killing our WBP why exclude these areas from logging? Log and regenerate them for the benefit of both man and beast. There is no reason for both men and bear to lose the use of this tree and area. Darkness as well as trees equal cover to grizzly in moving from area to area. 11

I know of several good bear being killed while trying to track down a spoiled bear that was moved into their area. Don't allow bad bear to be dumped on the forest. Legal-hunting- illegal kills combined with losses caused by people studying them will lower the population more than logging. See sheet of kills in this region. Selling illegal taken hides and claws at $3500 and $150 on the black market will build up to quite a trade if the bear's image gets any lower and more people enter the business. 12

Response to Letter #219 - Glen H. Conklin, page 219d

9. We believe, and the U.S. Fish and Wildlife Service concurs, that the management practices specified in the Forest Plan will not jeopardize the existance of the grizzly bear. At the same time, the potential exists for increased levels of timber harvest.

10. Management Area 14 was designed to do this.

11. The Final Forest Plan does not include this requirement.

12. Only certain types of bears will be accepted if populations are augmented.

. Recreation and bears won't mix. Recreationalist cover more country than loggers. Bear use riparian zones, recreationalist fish, camp and use trails along streams. Bear use ridge tops, trails run along ridge tops. Bear use meadows, recreationalists camp and graze stock in meadows. The grizzly recovery plan, page 8, states there is minimum distance with which another bear or person cannot enter. The grizzly will be a major factor in the economy of the area if you try change from logging to recreation. Our three month tourist season will not attract people if they are afraid of being killed, mauled or chewed. 13

How many extra people will the Forest need to keep up the early warning system, post trails and restricted area? Where will the people come from when the area becomes investigative, to use park service term. Who will control the killer bears on the forest? Won't you find it embarassing to have to explain the difference between a chewing and a mauling?

I don't think there will be any more bear under one plan than the other. If restraints would be lifted when the population is considered (recovered) I would oppose legal hunting until that time. I don't think politics and the numbers game will ever allow the (recovered)population to be reached. I must therefore back hunting grizzly reluctantly. I see this as the only way to keep grizzly wary of man. Although I backed the industry alternative of no hunting when it was being written, subsequent events have forced me to change my mind. I realized to hunt or not to hunt is not your responsibility. 14

Roads are not the reason bears are killed illegally. People kill the bear not roads. Because people kill bear, because of easier access, road closures must be implemented. Seeding of roads can and have created more bear food. I have talked for several years about selecting plants beneficial to bear for use in erosion control. This should be implemented in order to create better habitat. 15

Wilderness people like to point out we must leave land as Lewis and Clark saw it. A handout they gave out at the grizzly meeting at Whale Creek in 1983 indicated wilderness was needed for grizzly and other wildlife. In reality no land still looks like Lewis and Clark saw it. Vegitation changes naturally. Their encounters with grizzly of which they wrote at great length, took place on the plains of Montana, not the mountains. By the time they got west of present day Missoula they were down to eating horses. So much for game in wilderness. Rick Mace, University of Montana, a grizzly biologist studying grizzly in the Bob Marshall wilderness told me in July 1983 " hadn't seen a grizzly scat or track in the last two years in the Bob Marshall." He went on to say that at least when he worked in the North Fork he "could find sign anytime." These incidents, historic and present should indicate grizzly use of wilderness and logged areas.

Over the years grizzly sightings in logged areas, current logging shows and along roads are common. I had one crew quit in the south fork last year because one grizzly was too interested in what they were doing. Got down to where he would stand on the top of trees while the skidder operator put chokers on the butts. Had to move them to another unit to keep them on the job. 15

13. The Forest Plan is not based on a premise that recreation will supplant timber as the major industry in the area. Huge increases in recreation use of the Forest, on the order of several hundred percent over the next decade, would be necessary for this to occur (we predict about a 10 percent increase over the next decade). With the number of recreationists we expect and the slowly increasing population of grizzly bears, we do not anticipate major problems.

14. As you know, the State controls hunting.

15. We agree that roads themselves are not harmful to bears; it is the human use of roads that may result in displacement or death of bears. Seeding closed roads with prefered forage is a common practice. However, care must be taken to avoid seeding roads that will be intermittently left open. This practice can attract bears to areas where they are vulnerable to illegal shooting.

Logging certainly can be compatable with grizzly bear management as we have displayed in the prescription for Management Area 14.

L. Shaffer PHD Idaho State University, paper on determining minimum viable population sizes, states "Natural catastrophes such as floods, fires, drought etc" can have systematic pressures threatening the species. Logging is the only detriment to fires.

In conclusion, loggers and grizzly have co-existed ever since the shoot, shovel and shut up management days. Because a logging show is in a much more confined location than recreational activities it causes less stress to bear. Log, close roads and plant food is the best management practice for grizzly. Trees grow back for cover. Remember the illegal kills last spring all took place in logged areas. Grizzly use logged areas to a large extent. Your restraints on logging are excessive. With the exception of non-hunting I concur with the industry proposal. 15

The Kootenai National Forest is not proven good grizzly habitate, and the number you produce, I feel, will always be small. I don't think they are worth the bother on the Kootenai National Forest. Its to bad the United States Fish and Wildlife service saw fit to slap your hands on your original plan. 15 a

This endangered species response is the same I made on the Flathead Plan and is only intended as a philosophical approach, which I believe would be common to both Forests.

Big Game Wildlife

Like most Montanan's I have a special interest in wildlife. Having lived over forty years in north west Montana I have noticed game expand into areas in which the forest has been modified from lodgepole thickets and old growth through fires or logging. Les Pengelle has stated "Stability is usually associated with diversity - Monocultures are seldom stable". Both in and out of wilderness old growth and lodgepole pine thickets must be opened up to help big game. This can be accomplished through burning - a waste - or logging. Logging allows us to get away from monocultures and not only change from monaculture of timber types, but age classifications as well, to the benefit of wild life. 16

Barred owls are listed as old growth indicators, why? Is it because they are easy to count because of hooting? Is hooting or lack of it a dependable indicator of environmental health, in a species that the latest audibon bird book still shows as an eastern bird only? They didn't show up in the west until 1971 in Idaho. Or could this be used as an indicator of wildlife's ability to readjust to new areas if the need arises. 17

Jack Ward Thomas, as a guest speaker at a SAF meeting said 30 to 60 acres for elk and 2 to 5 acres for deer was all they needed to feel secure. I have from 30 to 60 head of elk around my place much of the year, with only small tracts of timber for security. I think security cover is being over played in the plan. Many of these cows calve in the valley bottom without the benefit of the area being closed for calving. They can adjust. 18

Logging attracts wildlife during the winter and in many areas is of a great help in getting them through. Areas not used for winter range in the past are often utilized later if they are at the right elevation and slope. I have seen this happen many times. 19

15. See previous page.

15a. We agree with the direction provided by Congress in the Endangered Species Act.

16. The Final Plan retains most of the remaining old-growth (see glossary for definition) for the use of species that are dependent upon it. We have designed several management areas which use timber harvest to improve habitat where big game habitat exists in concert with important timber values (MA's 11, 12, and 14). Where timber values are low, burning is often the most cost effective habitat improvement tool available.

17. The barred owl is believed to have an especially strong preference or possibly a dependence on old-growth habitat, but it was not included as an indicator species in the Proposed Action (DEIS page III-52). The set of indicator species was modified for the Final Plan (see the FEIS, Chapter III). The Pileated Woodpecker serves as the indicator species for old-growth habitats.

18. A distiction must be made between elk security needs and hiding cover needs. Hiding Cover in 30 to 60 acre blocks may be sufficient if it occurs in an area which is secure for elk. Valley bottoms containing scattered timber patches may afford adequate security for elk during non-hunting periods, especially where public access is limited. However, research has repeatedly shown that elk habitat effectiveness is reduced as roads and associated human activities increase. These effects are most dramatic on summer/fall ranges, particularly during the hunting season. Providing secure elk habitat through effective road management and maintaining certain unroaded habitats is necessary to meet the elk population goals stated in the Plan.

19. No response needed

Riparian Areas

Many Riparian Areas have the highest growth rate on the Forest, due to more moisture. They should be left in the forest base. The 66 foot area no machines are allowed into is adequate in most areas for stream protection. I have logged along many streams over the years and no degradation of the area is seen after a short period of time. 20

Tree falling into streams has for years created pools and cover for trout. It is not necessary for you to build pools - let nature take it's course. As a Forester you know old trees fall over, there is no need to pay someone to fall them into the streams. Beaver would do more good in this endeavor, than an active management program. In addition beaver would widen riparian zones, provide more food for game, stop large amounts of sediement and create meadows. 20 a

Bruce McClellan U of BC study up the North Fork on logging riparian zones to benefit grizzly will be very interesting. Please keep track of his findings.

Visual Quality Objectives

Logging is the ugly duckling stage of forest management. This is at least true in the case of clear cuts. However in order to have a vigorous new forest the old one must be removed. The public must be made aware of this. Old trees die just like old people. In my talks of late many people have told me they thought trees lived forever. They must be educated to facts. I have also been informed that they didn't know young trees grew so fast.

The Forest Service and Industry are also blamed for areas that have been burned over. Many people think they were clear cut. Public information is needed here also. Most people think of logging only as clear cuts and are unable to identify areas where other types of cuts are made. Show me trips may help this situation and the management of the forest.

Big Mountain Sports Inc. has made the biggest single visual impact in the Flathead. Some runs are vertical strips with even the stumps and brush removed. There is no intent to reforest this area and the public accepts it. Would it be possible that the public would accept logging if you quit making such a big deal out of it? Concentrate on the positive and get off the negative kick. Show people what nice things can be made of wood, how many jobs it provides, how much money in lieu of taxes it pays and then take them to an area ravished by a (natural fire) and get them to make their own conclusions. You'll be surprised by the results; I was. 21

The best thing you could do for visual quality is to teach the people the reason behind modification through a weekly newspaper column and show me trips.

20. Timber harvest is allowed and scheduled in riparian areas which exist in management areas designated as suitable for timber production. The goals and standards for riparian areas (Chapter II of the Final Plan) are applied in addition to the goals and standards for each management area (Chapter III of the Final Plan).

20a. See response #6 above.

21. Both positive and negative aspects, depending upon one's point-of-view, are presented in the EIS for the Forest Plan.

Insects and Disease

No way can I back wasting of the timber resource to insects or disease or the ensuing fires that follow. All segments of the environment suffer too much from large hot burns.

The beetles are leading us around by the nose now. We should learn from this, and make sure our current knowledge is passed on to future generations. Our current road building should help them in the future if you stop tearing up roads. 22

I can't imagine you allowing 1 Billion board feet of lodgepole pine being killed by beetles and being left for devestation by fire.

Conclusion:

Multiple use of all lands rather than segments set aside for this and that, is a better arrangement. Let us do what we want to do, where we want to and when we want to; within limits.

Keep the cut up to at least to your alternative D. The economy and need for timber demands it. Allow exploration for oil and gas as you have been doing. The nation needs to know what resources we have. It is far better to plan for the future than to react to an emergency. 23 23 a

The Forest Service is one of few government agencies that can earn income. With one third of the nation in government ownership it is imparative you hold up your end of resource production and provide your share of the gross national product. Private land holding forest industries are not only required to provide commodities from their lands, but must also do so at a profit. It is incombent upon them to pay property taxes on their land and they are taxed on any ensuing profits which they must make to exist. Payrolls must be paid directly from their gains from resource use. Part of the taxes they pay on profits go to you to manage your lands; taking these monies from them which could be put to good use in their own management practices.

You must work hard on earning more from the land you are charged to manage; to hold up your end of the economic burden. Manage to show a profit. Our national debt needs it. You can do no less than meet that demand; the gross national product also requires production. 24

Thank you James and your staff or your help during these planning times. Your help was much appreciated!

Long ago I was told to never say never, and never say say always; by a man I considered wise. Times change and plans must change to keep up with the times.

Respectfully,

Glenn H. Conklin

22. The Kootenai National Forest has been emphasizing the sale and harvest of lodgepole pine over the last several years as shown on the following chart:

Fiscal Year	LPP Sold	LPP Cut
1979	36 MMBF	46 MMBF
1980	48 MMBF	34 MMBF
1981	93 MMBF	50 MMBF
1982	91 MMBF	50 MMBF
1983	97 MMBF	72 MMBF
1984	98 MMBF	72 MMBF
1985	97 MMBF	67 MMBF

Even with this emphasis, some of the lodgepole pine will not be sold because it is located in areas where the costs of removal (mostly road construction and yarding) are so high that even repeated harvests over 200 years will not bring a positive return. Most of this sort of land has been removed from the regulated timber base. In addition, the amount of lodgepole pine remaining in the regulated timber base is so great that it is not practical to expect that it will all be harvested before it dies. Notice from the above chart that considerably more volume has been sold than cut.

23. See response #1 above.

23a. The Final Plan retains the same approach as the Proposed Action.

24. In certain years it will cost more to manage this Forest than is returned in receipts to the treasury. Our analysis shows that, over the long term, the Forest will show a "profit" in dollar terms. To do this requires that lands which are too costly to manage for timber be removed from the timber base as mentioned above (Response #22).

Response to Letter #219 - Glen H. Conklin, page 219i

No response needed for this page.

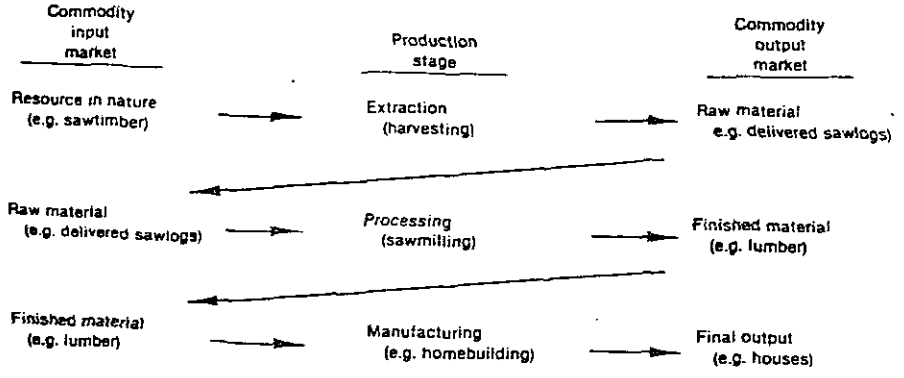
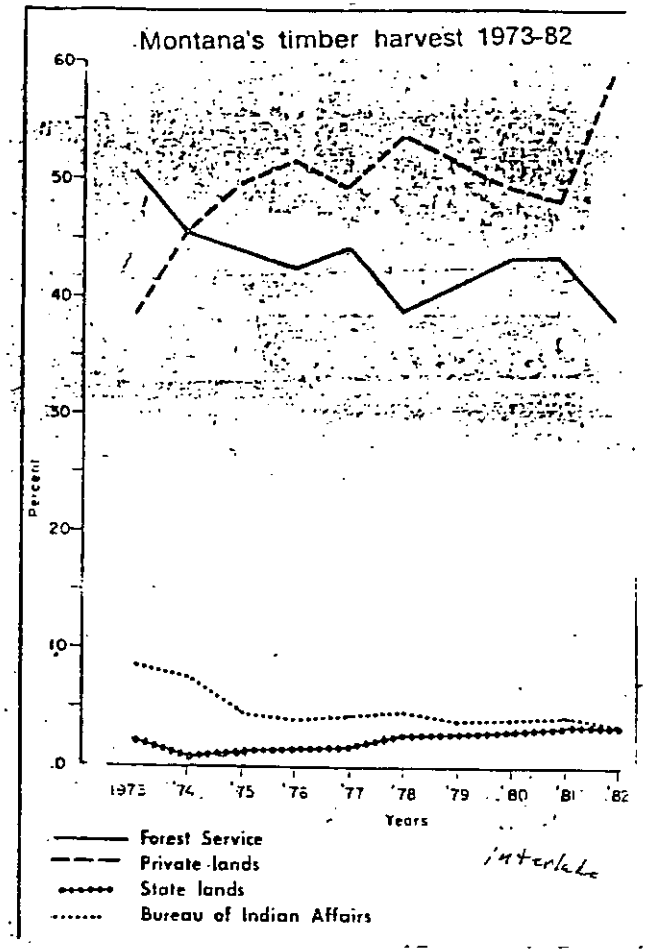


Figure 1.—Generalized marketing sequence for forest products at three levels.

from US Dept Ag Forest Service
2 Resource Bulletin FP 1



Response to Letter #219 - Glen H. Conklin, page 219j

No response needed for this page.

Information From MSF&P

Table 10. Grizzly bear removed from Region One hunting district.

Year	Hunting District 100	101	110	121	122	130	131	140	141	150	151	R1 Total		GNP	FIR
1967		1/0*2/1					2/0	3/3		7/0		15/4	19	4	
1968	0/1					0/1	1/0	0/1		7/0		8/3	11	2	
1969		0/4	1/0	0/1				5/0		12/0		18/5	23	3	3
1970		0/0	2/2	0/3				0/1		5/1		7/7	14	1	
1971				0/1		1/1		4/0		6/1		11/3	14		
1972			1/2			0/3		5/6		6/0		12/11	23		
1973		0/1	1/1					5/0		6/2		12/4	16	1	1
1974		1/0	6/2	1/0		1/0		1/3		6/0		16/5	21	1	6
1975			0/6					3/1		4/0		7/7	14		
1976		1/0	1/1				1/0	2/4		4/1		9/6	15	3	1
1977	0/2	1/1	1/0				0/1	1/1				3/5	8	4	
1978			2/3					0/2	1/0	3/1		6/6	12		
1979		1/0	1/2					2/2		5/0		9/4	13		1
1980			0/1			1/1		3/2	1/0	4/0		9/4	13	1	2
1981			2/0			0/1		2/0		4/1	1/0	9/5	14	1	2
Total	0/3	5/6	20/21	1/5		3/7	4/1	36/26	2/0	79/7	1/0	151/79	230	21	16

*Legal/illegal

65.7 percent legal harvest

IN 15 yr 230 known kills outside GNP

15 kills per yr

Response to Letter #219 - Glen H. Conklin, page 219k

E-334

No response needed for this page.

Box 2202
Columbia Falls, Mt. 59912
October 29, 1985

Forest Plan
Kootenai National Forest
Route 3, Box 700
Libby, Mt. 59923

Gentlemen:

I recently obtained a copy of the Kootenai Forest Plan Overview. The Dalimatas (five families involved) support Alternative N.

The Dalimatas have worked in the timber industry for three generations, and some have been forced to relocate in order to follow the work.

Per population and mill sites, the jobs within the Flathead National Forest have been few; and for the past two years, my husband, Richard, has been hauling logs out of the Kootenai National Forest to mills in the Kalispell/Columbia Falls area. If you, too, start cutting back on productive timber lands, where do we move to? Canada? 1

We all feel that there is already more than enough wilderness. We would rather remove some of what is now under the wilderness status and have it put back into multiple-use management, so that more people could enjoy the benefits derived from a properly managed multi-use forest. 2

I have personally never known a rich logger; just a bunch of guys who enjoy hard, honest work versus a welfare check.

Let's keep the timber industry we do have in western Montana.

Sincerely,

Mary C. Dalimata

Mary C. Dalimata

cc: Sen. John Melcher
Sen. Max Baucus
Rep. Ron Marlenee
Rep. Pat Williams
Sen. James McClure
Sen. Steven Symms
Sen. Alam Simpson

1. The Final Forest Plan retains the ability to provide for the historic timber sell level to provide adequate timber supplies for local industry. See the Final Forest Plan document, Appendix 11 and Chapter II in the Final EIS.

2. Wilderness is one of the recognized multiple-uses of the National Forests.

56

Oct. 21, 1985

Forest Supervisor,
Kootenai Nat. Forest
RR#3, Box 700
Libby, Mt. 59923

Dear Forest Supervisor,

I am writing to comment on the Proposed Forest Plan for the Kootenai National Forest.

Concerning your Forest Wide Goals, (page 11-1), goal #18 states that you intend to meet or exceed state water quality standards. I agree that you should do this. However, it appears that you do not intend to do this, since the state law that applies to sediment loading is ARM 16.20.618 (f) which says in short, there may be no increase in sediment that may prove harmful to fish life, while your EIS (page IV, 56) acknowledges that there will be substantial irredemable loss of fish life due to sediment released by the road building called for in the proposal. Further cause for my belief that you do not intend to meet state requirements is found in your pre-cut analyses methods as described in Appendix 18. The formula cited there appears to be your main tool for deciding how much lumber you can cut in a drainage, limiting yourself to a 20% increase in peak flow. This formula will tell the amount of flow increase caused by road building, while ignoring the 2 key factors: (1) how much sediment will this flow increase create, and (2) what is the potential for impact of this on the biota of the drainage. This is a most inadequate analyses. Methods are needed that will enable you to forcast site specific impacts on various factors such as hatchability of fish eggs, survival of the fry, availability of food organisms for the enitre food chain, in other words, the factors that influence the life of the fish. Also, there are factors which cannot be reduced to a number for a formula. For instance, a fish population that has a special value, such as the unique native strain of cutthroat in Rock Creek, or a spawning ground that gets unusual use or is crucial for the population of a river that it feeds. How do you incorporate site specific values when you use general formules for decision making purposes? Life cannot be plugged into a computor. 1 2

The fact that the EIS produced an estimate of the damage the proposal would have on the fish, leads one to conclude that there are some forecasting tools available. How were the figures given arrived at? Do they take into consideration that nearly 75% of the proposed 4685 miles of new roads (or 3410 miles) are planned to be built in the first 10 years? 3

Further evidence that you do not intend to meet state requirements is found in the monitoring plan. Once a year will perhaps give you enough information in about 5 years to look back and say, 'Yup, we sure did have an impact on the fish'. 4

E-336

Response to Letter # 56 - Jill Davies First page

1. We intend to meet State Water Quality Standards. This will be done by on-the-ground determinations of stream and fishery conditions. See the Monitioring and Evaluation Plan in the Final Forest Plan document. The Forest Plan now states that projects that do not meet State Water Quality Standards will be brought into compliance, modified, or stopped.

2. Site-specific fish habitat parameters are to be measured to insure that fish habitat is not being degraded instead of trying to perfect models that can only approximate conditions as they really occur on-the-ground.

3. The Fishery model used to forecast fish numbers was based on a Sediment model whish has low reliability. It was presented in the Draft EIS to compare alternatives only. The intent stated in the Forest Plan still holds -- we will meet State Water Quality Standards, or the projects will have to be modified or stopped.

4. As stated above in #1, we intend to meet State Water Quality Standards. In addition, we will use the "Soil and Water Conservation Practices" (FSH 2509.22) to provide the state-of-the-art techiques to insure that land stewardship is applied on-the-ground.

E-336

Finally, one can easily arrive at the conclusion that water quality is at the bottom of your list for importance when it is observed that for all of the MA's that have roads, you state that "BMP's will be used". This shows that there has been no thought developed for how to prevent damage. What you are saying is water quality will just have to suffer, but we will use the best practices that are available to date to make it as small a damage as possible. How long will this attitude go on?!? There are so few undamaged bodies of water left in the U.S., Will we eliminate them all? 4

Concerning Forest Wide Goal #11: You state that you plan to encourage development of mineral resources that is environmentally sound. Again, I support the establishment of this goal. And again, I do not believe that you seriously intend to meet this goal. Surely you must agree that a significant reduction of the macroinvertibrate population in a stream would not be 'environmentally sound'. This is what is occurring now in Lake Creek (see WQB reports), while there are levels of metals in Stanley Creek that would kill all forms of life. (see WQB reports) Also, Rock Creek already has levels of metals that exceed EPA criteria for toxicity to aquatic life. Based on the record at the Troy mine, one CAN assume that there will be further stress on Rock Creek if a mine goes in there, let alone two mines. This is environmentally sound? Also, you have classified the timber in the drainage as that which can be harvested further. I have not seen in your documents any thought given to the cumulative effects of toxic metals and sediment on a stream. 5 6

You state (page IV,2 of the Forest Plan) that "projects that will not meet State water quality standards will be redesigned, rescheduled, or dropped." Please take your own advise. 7

Concerning wilderness, I think it is wrong to allow mining interests to rule everywhere. The Pellick Ridge area should definitely be included in the Scotchman's wilderness area. This wilderness area should be made as large as possible, with all possible contiguous areas included in it. Likewise for the Cabinet wilderness area. Little isolated pockets of wilderness are not nearly as valuable as one large wilderness area. Consolodate the wilderness area in the Scotchman-Cabinet ranges and make room for mineral interests elsewhere if you must. 8 9 10 11

Sincerely,

Jill Davies

Jill Davies
Box 65, Hwy.
Noxon, Mt. 59853

4. See previous page.

5. We seriously intend to meet this goal on lands within our jurisdiction. Standards to be used for monitoring will be established in coordination with the State of Montana.

6. The water quality in Rock Creek will be dealt with in a project-level EIS for any mine proposals.

7. We will meet the State Water Quality Standard, as stated, for projects initiated by the Kootenai National Forest.

8. Mining is allowed under the 1872 Mining Law.

9. Pellick Ridge has been recommended for wilderness. See the Final Forest Plan Map.

10. Additions have been recommended for the Cabinet Mountain Wilderness. See the Final Forest Plan Map.

11. We will meet the requirements of the 1872 Mining Law. To specifically direct mineral activity into certain areas based on non-mineral criteria conflicts with our stated goal of accomodating mineral activity.

E-337

I would like to comment on your draft forest plan. I hope the Kootenai Forest will more strongly attempt to conserve their natural beauties, those things that make the Kootenai the wonderful place it is. I support a minimum of five wilderness including Trout Creek, the Cabinet Additions, Ten Lakes, Scotchman Peaks with the Pellick Ridge area and the Kootenai side of Tuchuck and Thompson-Seton. A realistic 170 million board ft. should be maintained while making certain that riparian areas remain intact to protect the water quality. Removing 15 to 20% of the old growth timber from base and building far fewer roads should be the route the Forest Service follows as it attempts to manage our lands. Areas should be managed as roadless and I would support non motorized management for the following areas complete: Rodeick Mtn / Cataract Creek / Canyon Peak / Northwest Peak / Robinson Mountain. Subsistence, Recreation, and Natural Integrity need to be ~~considered~~ prime concerns when planning the future of the Kootenai Forest.

1

2

3

4/5

6

7

Sincerely
Jim Dayton

9490 Cross
Ms/a Mt.
59802

E-338

Response to Letter #155 - Jim Dayton

1. Wilderness has been recommended in Scotchman Peak (including Pellick Ridge), Cabinet Additions and Ten Lakes. Roadless designations have been recommended in Trout Creek, Tuchuck and Thompson-Seton. See the Final Forest Plan Map.

2. The Allowable Sale Quantity for the next 10 years has been determined based on the potential of the Forest, the requirements of the area economy, and the ability to maintain all resources.

3. See the Soil and Water Standards in the Final Forest Plan document.

4&5. Approximately 34% of all existing mature and overmature timber (excluding Lodgepole Pine) has been removed from the timber base.

6. The Final Forest Plan will eventually construct 640 miles fewer roads than proposed in the Draft EIS.

7. Roadless management (non-motorized recreation) has been designated within all of the areas you have recommended.

Attention Kootenai N.F. Planners;

Kootenai National Forest is a unique and very beautiful area. I have spent a good part of four years exploring the Kootenai. I realize the economic importance of the Kootenai Forest resources for Libby and surrounding communities. I also realize how special and rare some of the resources are, ~~especially~~ to people outside of this area. The Kootenai Forest Plan concerns me. Certain resources are being abused ~~and~~ by inadequate planning.

I believe more consideration needs to be given to wilderness allocation. The following areas should be designated as wilderness ~~Scotts~~ Scotchman Peaks and the Pellick Ridge Area, Trout Creek, Ten Lakes Scenic Area, the proposed Cabinet Additions. ~~and~~ True wilderness is difficult to find these days due to encroaching boundaries. The Cabinets are a special concern of mine – the area is heavily used. The additions will reduce overuse in favorite spots in the Cabinets and perhaps lessen the development pressure on the boundaries. 1

Another concern I have is with the Northwest Peak and Robinson Mountain Areas. These areas are beautiful natural areas but current management is detracting from the areas. Roadless, nonmotorized management is the option I believe is best for the areas. We need to preserve a few areas for people to escape to and remember what land was 2 3

Response to Letter #141 - Teri England, first page

1. Wilderness has been recommended in Scotchman Peak (including Pellick Ridge), Ten Lakes, and the Cabinet Additions. Roadless designations have been recommended in the Trout Creek roadless area. See the Final Forest Plan Map.

2. *Northwest Peaks and Robinson Mountain areas are both being managed to perpetuate roadless conditions.*

3. No response needed.

E 339

141 a

like before, people decided to use all the resources.
The Kootenai cuts quite a lot of land, small resources are vulnerable too. 3

Another resource the Kootenai plans to abuse is old growth timber. Old growth timber is easy for us to take for granted. I have aged trees in the Kootenai that were here when Columbus landed in the America, once they are gone our generations will never see habitat like these. Certain species of wildlife need old growth to survive. 4

The Kootenai goal of maintaining 8% of the forest old growth is too limited in my opinion. An increase to 20% of the old growth for permanent conservation protects wildlife species and allows for natural or man caused disasters. The 20% should not be included in the Kootenai Timber Base. 4 a

Increasing the annual cut to from 173mbf seems to me to be unnecessary stress on the soil and water. The current timber market hardly calls for an increased cut. Each ranger district has a backlog of small and large sales that were never sold — Portions of the Kootenai look like a huge clear cut for miles eg. Wolf Creek out Fisher River Rd., Yak — looks like one big clear cut. Levels closer to sustained yield levels are more acceptable. 173mbf is tolerable. I am opposed to increasing the annual cut. 5 6

E-340

Response to Letter #141 - Teri England, page 141a

4. The Final Forest Plan will provide for 10% of the land area below 5.500 feet elevation in an old-growth timber condition. This is 91% of the inventoried old-growth timber and 25% of all the mature timber on tentatively suitable land.

4a. The old-growth timber, mentioned above, has been removed from the regulated timber base.

5. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

6. The Final Forest Plan retains the ability to meet historic timber sell levels. See Chapter II in the Final EIS.

E-340

Water quality on the Kootenai is another concern. The Kootenai Plan slights. Increased logging and road building will complicate current water quality problems like sedimentation which ruins fisheries and water quality. Road cuts throughout the forest are seriously eroded. The Kootenai and Fisher Rivers are muddied due to roads and excess cutting. Streams are abused daily in logging operations. The Kootenai needs to establish and strengthen policies to protect streamside areas and maintain water quality. 7 7a

I realize the need to cut and mine the Kootenai to maintain local economies. In order to sustain the yield, to maintain local economies we need to manage the land properly. Please consider my concerns before drafting the final forest plan. 8

Sincerely,

Teri England

Box 996

Libby Mt

Response to Letter #141 - Teri England, page 141b

7. The Final Forest Plan requires that the State Water Quality Standards be met. See the Final Forest Plan document.

7a. The Final Forest Plan will utilize the techniques outlined in the "Soil and Water Conservation Practices Handbook" (FSM 2509.22) to insure that the State Water Quality Standards are meet. In addition, wording has been added to the Final Forest Plan that states that ..."projects that do not meet the State Water Quality Standards will be brought into compliance, modified or stopped." See the Final Forest Plan document.

8. No response needed.

86

THE PROPOSED PLAN FOR THE KOOTENAI IS SHORT-SIDED, IRRESPONSIBLE AND A DISGRACE TO OUR NATIONAL HERITAGE. WE SUPPORT A MORE RESPONSIBLE MAX. ANNUAL TIMBER HARVEST OF 173 MILLION B.F. TO MAINTAIN LEVELS CLOSER TO SUSTAINED YIELD & HISTORIC CUTTING LEVELS. 1

THERE MUST BE STRICT PROTECTION FOR STREAMSIDE AREAS AND EXISTING WATER QUALITY MUST BE MAINTAINED. THE 2

E.P.A. GIVING THE FOREST PLAN THE WORST WATER QUALITY RATING IN MONTANA IS NOT TOLERABLE. THE ENTIRE PLAN 3

IS UNACCEPTABLE AND NEEDS TO BE REVISED SO THAT PRESENT AND FUTURE GENERATIONS CAN BE ASSURED OF THE SURVIVAL OF THE WILDLIFE, FISH, BIRDS, AND FAUNA OF THE KOOTENAI NATIONAL FOREST. 4

James & Susan Ennenbach

James & Susan Ennenbach
P.O. Box 1227
Eureka Mt. 59917

Response to Letter #86 - James & Susan Ennenbach

1. The Final Plan is linked to a proposed timber sale level of 233 MMBF per year as was the Proposed Action (See Appendix 11 of the proposed Forest Plan in the Draft EIS and also in the final Forest Plan in the Final EIS). The harvest level has averaged about 180 MMBF per year over the last ten years. The harvest levels planned for the next decade can be sustained and increased over the next several decades to a level of about 290 MMBF per year after 200 years of management as described in the Forest Plan. The harvest level proposed for the life of the plan is the highest level that can be achieved with management as described in the plan without a future decline in harvest levels. We have determined that this level will best contribute to economic stability in the area (see Appendix B of the Final EIS and the Record of Decision).

2. Protection for streamside areas is spelled out in the Riparian Area section of Chapter II of the Final Plan. The monitoring and evaluation plan have been modified and the practices described in the soon-to-be-published "Soil and Water Conservation Practices Handbook" (FSH 2509.22) will be adopted to insure that State Water Quality Standards will be met.

3. The EPA *said:*
   "Your DEIS is rated EO-2 (environmental objections - insufficient information). The Agency believes that the potential for adverse water impacts is a significant environmental concern..."
   The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards will be met.

4. No response necessary

108

Oct. 28, 1985

Kootenai National Forest.
Libby, Montana

We would like to make some last minute comments on the proposed plan for the Kootenai. Why is it that the management of this area, probably the most wild, pristine, diversified N.F. in the state of Montana, seem bent on its' destruction? The proposed increase of the annual timber harvest and the large scale increase of roading is assuring future generations of the loss of this rich and abundant national heritage. 1 2

Here in the Kootenai we're blessed with some of the most beautiful scenery and clear waters of the entire nation. We live in an area most people can only dream about. That is evidenced by the annual invasion of out-of-state license plates with people making their way to the 3

Response to Letter #108 - Jim & Susan Ennenbach, first page

1. The timber harvest level in the Final Plan is aimed at providing the best contribution possible to long term stability in the economic and social fabric of the area. The road mileages shown in the Plan and EIS are estimates of the miles needed to carry out the timber program. We will continue to analyze the needs for roads to insure that the minimum road mileage needed will ever be built (this is a Forest goal included in the Final Plan).

2. Due to the ways in which this harvest will be carried out habitat sufficient to maintain or enhance the populations of big game, grizzly bear, old-growth dependent species and all other species will be provided.

3. We agree that scenery and water quality are important. The Final Plan has been modified to insure that the State Water Quality Standards will be met. The guidance for each management area includes a visual quality objective (VQO). These VQO's are applied so that sensitive viewing areas are not unduly disrupted by forest management activities.

NORTHERN ROCKIES TO CAMP, FISH, HIKE,
HUNT OR JUST PLAIN RELAX IN SOME 3
OF THE MOST SPECTACULAR SCENERY ANYWHERE.
GRANTED, MOST PEOPLE WHO LIVE IN THE
KOOTENAI DO NOT MAKE THEIR LIVING
IN THE TOURIST TRADE, MOST MAKE THEIR
LIVING BY WORKING IN SOME PHASE OF
THE LOGGING INDUSTRY. HOWEVER, THAT 4
IS NO EXCUSE TO SACRIFICE THE
KOOTENAI TO SHORT-SIGHTED IRRESPONSIBLE
LOGGING PRACTICES LIKE THOSE IN THE
PROPOSED FOREST SERVICE PLAN. THE
FOREST SERVICE SEEMS TO FORGET THAT
THE NATIONAL FORESTS ARE PUBLIC LANDS,
THEY BELONG TO THE PEOPLE OF THE
UNITED STATES.

WE BELIEVE THAT THE PROPOSED
ANNUAL TIMBER HARVEST IS UNREASONABLE.
A MAXIMUM HARVEST OF 173 MILLION B.F.
IS MORE RESPONSIBLE. THIS WOULD
MAINTAIN LEVELS CLOSER TO SUSTAINED 5
YIELD AND HISTORICAL CUTTING LEVELS.
THE "BOOM AND BUST" LOGIC OF THE
PROPOSED PLAN IS IRRESPONSIBLE AND
THE IMPACT TO THE ENVIRONMENT IS

Response to Letter #108 - Jim & Susan Ennenbach, page 108a

4. The Forest Plan is designed to maximize the net public benefit from the use of the Forest (See Appendix B of the DEIS).

5. The harvest levels can be sustained, with increases in future decades, under the direction provided in the Final Plan.

UNCALLED FOR. WE SUPPORT PERMANENT CONSERVATION OF THE KOOTENAI'S OLD GROWTH FOREST. NOWHERE ELSE IN MONTANA ARE THERE TOWERING VIRGIN FORESTS LIKE THOSE OF THE KOOTENAI. DESTROYING THESE FORESTS IS DESTROYING A NATIONAL TREASURE. STRICT PROTECTION MUST BE GIVEN TO ALL STREAMSIDE AREAS, AND THE EXISTING WATER QUALITY MUST BE MAINTAINED. THE E.P.A. GIVING YOUR PLAN THE WORST WATER QUALITY RATING OF THE 10 MONTANA NATIONAL FORESTS IS NOT TOLERABLE. WE ALSO BELIEVE THE LARGE SCALE ROADING OF THE KOOTENAI TO BE UNPRECEDENTED AND MUST BE REDUCED TO PROTECT AGAINST THE DETRIMENTAL EFFECT OF WATERSHED DESTRUCTION.

BEING FROM THE EUREKA AREA, WE ALSO SUPPORT WILDERNESS DESIGNATION FOR THE TEN LAKES SCENIC AREA, AS WELL AS THE KOOTENAI SIDE OF TUCHUCK, AND THOMPSON-SETON (THE NORTH FORK WILDLANDS AREA). WE ALSO STRONGLY BELIEVE THE ENTIRE GRAVE CREEK

5 6 7 8 9 10/10 a 11

6. Our inventory indicates that about 11% of the forest acreage below 5,500 feet in elevation (an elevation above which old-growth dependent species have difficulty reproducing) is in old-growth habitat. The final plan retains over 90% of this existing old-growth and removes it from the regulated timber base. We have retained about 34% of the existing mature and overmature timber for the future by removing it from the regulated timber base (a significant portion of this is considered old-growth habitat).

7. The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards will not be violated.

8. The EPA said:
   "*Your DEIS is rated EO-2* (environmental objections - insufficient information). The Agency believes that the potential for adverse water impacts is a significant environmental concern..."
   The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards will be met.

9. Road building is an effect of managing land for timber production. If timber is to be harvested then roads are necessary. The needed road miles shown in the various documents are not "targets" or "goals", but estimates of needs given today's technology. *The need for roads will* be continually reassessed as the transportation system is developed so that only those necessary to manage the land base are ever built. For the most part, the roads called for are to be constructed in areas that are not defined as "roadless". This means that while some roads exist, additional roads are needed if timber stands are to be harvested. Helicopters, long span skylines and other yarding techniques which reduce the total miles of needed road are to be used where appropriate and the estimated road mileages take this into account. The most direct way to reduce the needed road miles is to reduce the size of the land base which is managed with timber production as a goal (the regulated base). The Final Plan reduced the estimated need for road construction by about 640 miles by reducing the regulated timber base.

10. We have proposed to include 33,000 acres for Wilderness Designation in and adjacent to the Ten Lakes Montana Wilderness Study Area.

10a. The Tuchuck and Thompson-Seton areas are protected in Management Area 2.

11. See next page

WATERSHED (INCLUDING ALL TRIBUTARIES AND SURROUNDING AREAS) SHOULD BE PROTECTED FROM FURTHER ROADING AND LOGGING, OR ANY OTHER DEVELOPMENT, TO PROTECT THE NATURAL BEAUTY AND ABUNDENT RECREATIONAL USE. THIS AREA IS ALSO HOME OF THE ENDANGERED GRIZZLY, MOUNTAIN LION, AND EVEN A FEW MONTANA GRAY WOLVES HAVE BEEN REPORTED. 11

TO SUM IT ALL UP, I AM REMINDED OF A TEE-SHIRT SEEN AT VARIOUS SHOPS... "MONTANA IS WHAT AMERICA WAS". ALLOWING YOUR PROPOSED PLAN FOR THE KOOTENAI FOREST TO BE A PRECEDENT WILL CERTAINLY CAUSE THAT TO CHANGE TO "MONTANA WAS WHAT AMERICA WAS."

SINCERELY,
James Ennenbach

Susan Ennenbach

JIM & SUSAN ENNENBACH
P.O. BOX 1227
EUREKA, MT 59917

Response to Letter #108 - Jim & Susan Ennenbach, page 108c

11. We have removed additional portions of the Graves Creek area from the regulated timber base (Williams, Kopsi, Blue Sky and Divide Creeks - see the Forest Plan map).

Dear Sir:

In regard to the Kootenai Nat'l Forest I would like my views represented as follows. I support wilderness conservation for these public wildlands:

A. Kootenai side of Tuchuck & Thompson-Seton in the North Fork Wildlands. 1

B. Trout Creek

C. 10 Lakes

D. Cabinet additions

E. Scotchman Peaks, including all of the Pellick Ridge area

I moved to Mt. about 5 yrs. ago just so that I could enjoy hiking & photographing & the out of doors adventures & beauty & solitude & diversity of wildlife & plants that these places offered. There is very little left of America to preserve as wilderness & here in Mt. we can make the difference for the future. Already 75% of the Kootenai forest is roaded & the forest proposes to increase that substantially which is absurd since 6,000 mi. of rd. cover the Kootenai presently. We don't need another 244 mi. of new rd. every yr. for the next 2 decades until the Kootenai has 10,692 mi. of rd. as is proposed. And the plan proposes to increase the annual cut to 217 million board feet which is totally unnecessary. 173 million board feet would be acceptable & responsible yearly. I oppose "boom & bust" increases. I support roadless roadless, non motorized management for these wild areas in their entirety: Roderick Mountain / Ostrander Creek / Canyon Peak / 2 3 4 5

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Response to letter #267 - Diane Ensign, first page

1. Tuchuck and Thompson-Seton areas have been designated roadless rather than wilderness to be compatible with the Flathead Forest Plan. Trout Creek has been designated roadless rather than wilderness because of the mineral and wildlife values. Ten Lakes and the Cabinet Additions have both been recommended for a combination of wilderness and roadless. Scotchman Peaks has been recommended for wilderness but not all of Pellick Ridge was included because of timber values. See the Forest Plan Map for all of the above areas.

2. No response needed.

3. The Final Forest Plan proposes 3,850 additional miles of road to be built in the next two decades which is an average of 192 miles/yr.

4. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The recent harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

5. Most of roadless areas you mention have been designated as roadless but not in their entirety for a variety of reasons. See the Final Forest Plan Map.

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Northwest Peak / Robinson Mountain. 5

The E. P. A. gave the Kootenai Forest Plan the lowest water quality rating of Montana's 10 nat'l forest plans. Wow! 6
Shouldn't this tell us to revise our thinking so that strict protection for streamside areas & existing water quality be supported & enforced. We must look after our natural resources & care for them rather than ruin them. Let's 7 a
not end up being sorry — let's be smart in the 1st place. Accelerated rd. building / logging ~~would~~ will impair water quality by direct erosion. The Forest Plan estimates sediments would increase 50% 8
That's too much obviously & as the Dept of Fish & wildlife predicts a ~~great~~ damaging decline in trout populations would occur.

I & many other are enthusiastic wildlife & bird watchers & thus we are extremely interested in having old growth forests kept in tact for the approximate 60 wild species that find their habitat in Kootenai Old Growth. Big game also finds thermal cover in winter under the canopy of big trees. And Montana is 9
almost the only ~~place~~ state left with natural winter refuge areas. This is incredibly important. We don't have to helicopter drop food for starving herds of elk & deer as the other states do. Our old growth trees forest areas also support

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Response to letter #267 - Diane Ensign, page 267a

6. The EPA stated that we received an "EO-2 Rating". See the EPA letter #49 in Appendix E of the Final EIS.

7. The Final Forest Plan contains direction that State Water Quality Standards will be met.

7a. No response needed.

8. There is no projection for a 50% sediment increase in the Forest Plan and we have received no predictions from the Montana Dept. of Fish, Wildlife and Parks on trout population declines. We will use the best practices available in any projects, specifically, those outlined in the Forest Service Handbook #2509.22, entitled "Soil and Water Conservation Practices Handbook".

9. We have provided for a 10% level, Forestwide, for old-growth timber and this timber has been removed from the regulated base.

rich variety of floral species too as well as wildlife such as the pine martin (too rarely seen already), fisher, white + red + pygmy Nuthatches, goshawk, Screech + pygmy + Saw-Whet + Great Grey owls, Lewis + White-Headed + Pileated (rarely seen) + Northern 3-toed + Black-backed 3-toed Woodpeckers, Northern Flying Squirrel, etc. WE need these fine species in our world + in mt. Under the forest plan is a goal of maintaining 8% of the forest in old growth (MA-13) which won't even be done since they're included (MA-13) in the timber base + thus eventually will be logged. Come on now let's have an intelligent forest plan which at least would support permanent conservation of no less than 15% of the Kootenai's old growth forest. More old growth should be kept along streams. Lets have sensible stewardship of our lands immediately before its too late to repair the damage. 9 10 11

Since it's common knowledge that each new mi. of rd. put into previously undisturbed habitat decreases elk use + other big game I would like to repeat again that I'm opposed to the prospect of 10,672 mi. of additional roads. Please take responsible care of Kootenai Nat'l Forest + use foresight + protect our wildlands. Thank you for your attention to this letter as I don't wish the Kootenai Forest to be managed as a corporate tree farm as it is suggested to be. 12

Diane Ensign
Box 994
Whitefish 59937

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Response to letter #267 - Diane Ensign, page 267b

10. The Final Forest Plan provides for 34% of all mature and overmature stands (excepting Lodgepole Pine) to be in the unregulated timber base.

11. Much of the old-growth timber areas (MA13) have been placed along streamsides. See the Final Forest Plan Map.

12. The Final Forest Plan provides for an additional 3,850 miles of road.

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196

Box 645
Libby, Mt.
Oct. 31, 1985

Jim Rathbun
Supervisor
Kootenai National Forest
Libby, Mont.

Dear Mr. Rathbun:

Re: "the fact that about 75% of our 2.25 million acre forest is already roaded, and only 4% is currently designated "wilderness, with Asarko & Borax claiming much of that; the fact that our average of 173 million board feet (from Kootenai) is 75% higher than from any other forest in Montana; the *fact that the draft* plan is to increase the annual cut to 217 million board feet; and a 78% increase in logging roads-- that to increase until the Kootenai has 10,692 miles of roads, covering 40,000 acres with gravel----"

I had learned, in required science courses (high school and college) that "Diversity" was the key to survival-- diversity in types of trees, in types of flora and fauna? Doesn't the Forest Service practice this theory? Tree farms won't sustain diversity of brush and browse and forest animals. Irreplaceable medicaments that can still be found in the flora are being ripped out of the Amazon; our own incomplete knowledge and wisdom threatens the Kootenai. 1

"The *one process ongoing* in the "80"s that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats." E. O. Wilson
"Resolutions for the '80's"
Harvard Magazine

Fragmentation by roads will kill off the wildlife, if guns, snowmobiles etc. don't. *God(nature) thought* we needed the diversity. Why don't the men who are in the forest service to preserve wildness carry out the aims of the original founders of the Forest Service? (To keep it a place apart from the noises, intrusions, threats from too much "civilization" 2

3) We're for roadless, non-motorized management of Roderick Mt./ Cataract Creek/Canyon Peak/Northwest Peak. Robinson Mtn. 3

Permanent conservation of no less than 15% of Kootenai's Old Growth Forest

Keep old growth along streams--and more of it. 4

Conserve, as wilderness: Scotchman's Peak, Trout Creek, Pellick Ridge, Ten Lakes, Cabinet Additions, Kootenai side of Tuchuk & Thompson- Seton 5

Strict protection of streamside areas & existing water quality 6

Olga J. Erickson

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Response to Letter #196 - Olga J. Erickson.

1. Diversity is a goal of forest management.

2. Wildlife habitat will be protected through the direction found in the Forest Plan prescriptions. See the Final Forest Plan, Chapter III.

3. Roderick Mt., Cataract Creek, Canyon Peak, Nortwest Peak, and Robinson Mt.have been designated roadless or are in an unregulated timber harvest designation. See the Final Forest Plan Map.

4. 34% of all the mature and overmature timber (excluding Lodgepole Pine) has been placed in the unregulated timber base. Much of the old-growth timber management (MA 13) has been placed along streamsides. See the Final Forest Plan Map.

5. Scotchman Peak including much of Pellick Ridge, the Cabinet Additions, and Ten Lakes have been recommended for wilderness. Trout Creek has been recommended for roadless because of the mineral and wildlife values. Tuchuck and Thompson-Seton have been recommended for roadless to be compatible with the Flathead National Forest Plan.

6. See the Final Forest Plan Riparian Area Guidelines and the Monitoring and Evaluation Plan.

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Judy Evans
214 Bull River Road
Noxon, Montana 59853

October 28, 1985

Kootenai National Forest
James Rathbun, Forest Supervisor
RR#3 Box 700
Libby, Montana 59923

Re: Kootenai Forest Plan

Dear Mr. Rathbun,

I would like to offer the following comments for consideration:

Grizzly: Augmentation, effective road management and habitat management must be used to mitigate pressures from mining, timber harvests, recreation and other forest uses. Situation 1 management should be applied to core habitat, buffer zones and movement corridors. Where these areas are being developed, suitable alternative habitats should be designated and protected. The area around the mouth of the Yaak River could serve as an additional corridor. Gradual timber harvests, small clearcuts (less than 40 acres) and maintenance of early successional growth stages could enhance bear habitat while allowing for moderate timber removal. 1 2

Wildlife: All species on the forest should be inventoried and population estimates for all game and indicator species should be present in the EIS as baseline data to measure departures from current populations. 3

Water: Projected water quality losses should be specified as to drainages and percentages of degradation. 4

Wilderness: Pellick Ridge should be designated as wilderness. 5

Old Growth: Allow for 12% old growth and remove old growth stands from the timber base. Riparian stands should receive protection preference. Linking replacement stands should be designated now. 6

Timber: Projected timber prices, demand and forest budgets are based on past boom years. Alternative "J" should be rerun using more realistic projections and budget allocations balanced fairly for all interests. The forest should continue to seek ways to reduce roading and roading impacts. 7

Monitoring:-Subsequent resouce monitoring plans must be substantive and detailed now. The overall acceptability of the Forest Plan really rests on this critical point. 8

Thank you for the opportunity to participate in the planning process.

Judy Evans

Response to Letter #144 - Judy Evans

1. We agree. See the Grizzly Bear Management Guidelines in the Final Forest Plan.

2. See the management direction in Mangement Area 14 in the Final Forest Plan. The land area at the mouth of the Yaak River has been placed in land designations that are compatible with the grizzly bear. See the Final Forest Plan Map.

3. See the *Monitoring and Evaluation Plan in the Final Forest Plan* document.

4. The Final Forest Plan states that the State Water Quality Standards will be met. These Standards will be applied on a project-level basis which will occur in individual drainages.

5. Pellick Ridge has been added to the recommended wilderness on Scotchman Peak. See the Final Forest Plan Map.

6. Old-growth has been provide on 10% of the Forest land below 5,500 feet elevation. 12% is not available on the Forest because the total inventory of old-growth habitat was 11% Forestwide. The old-growth timber designated within Management Area 13 has been removed from the regulated base.

7. An alternative similar to the Final Forest Plan (Run 11415A) was rerun using more up-to-date timber prices and is discussed in Appendix B of the Final EIS. The Final Forest Plan has reduced the total road mileage to be constructed and the rate of construction. See Chapter II of the Final EIS.

8. The Monitoring and Evaluation Plan hes been revised. See the Final Forest Plan document.

Douglass Ferrell
Rt. 2, Box 270
Trout Creek, MT 59874

October 7, 1985

James F. Rathbun, Forest Supervisor
Kootenai National Forest
RR 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun,

I have reviewed with care the Proposed Kootenai National Forest Plan and Draft Environmental Impact Statement, and I wish to comment on both the planning documents, and on the proposed plan itself.

I found the documents to be well organized and readable, and I think the Forest Service deserves praise for the effort it has obviously made to render the mass of information in these plans comprehensible to the public.

I regret to say that I was disappointed with the documents themselves. Three main issues treated in the documents particularly disturbed me. A discussion of them begins below.

Following this discussion are my recommendations for changes in the plan, and in the planning process.

CRITICISMS OF THE PLAN

1. The major failure of this plan, in my mind, concerns the amount of road construction proposed for each alternative.

As shown in Table B-15 on page B-141, and in Figure II-40 on page II-58, total road construction "needed" by the fifth decade of this plan is between 4500 and 5500 miles for virtually all alternatives. The miles of road "needed" in the first decade are notably similar for virtually all alternatives.

It appears that the authors of this document assumed from the beginning that any alternative, no matter what its other emphasis, should build about 2600 miles of road in the first decade, and 5000 miles by the fifth decade, making a total forest mileage of 11,000. 1

This assumption, and the basis for it, is not discussed in the planning document as far as I could find, even though it represents a significant departure from existing policy. This seems to be a critical omission since such a road construction program has an overriding importance to both the economic and environmental impacts of the forest plan.

Response to Letter #46 - Douglas Ferrell, first page

1. Road building is an effect of managing land for timber production. If timber is to be harvested then roads are necessary. The needed road miles shown in the various documents are not "targets" or "goals", but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those necessary to manage the land base are ever built (there is a Forest goal about this). For the most part, the roads called for are to be constructed in areas that are not defined as "roadless". This means that while some roads exist, additional roads are needed if timber stands are to be harvested. Helicopters, long span skylines and other yarding techniques which reduce the total miles of needed road are to be used where appropriate and the estimated road mileages take this into account. The most direct way to reduce the needed road miles is to reduce the size of the land base which is managed with timber production as a goal (the regulated base). The Final Plan has reduced the regulated base and thus total road mileages, mostly by removing MA 13 from the base. This reduced the regulated base by 124,000 acres and the roads by 640 miles.

(2)

The single most important aspect of this forest plan, the intention to instigate a major decade long road building program, and to nearly double total forest road miles in 50 years is assumed to be "needed" virtually without discussion in the otherwise exhaustively detailed planning documents.

The alternatives thus generated by the planning process are simply variations on a theme, centered around the assumed need for this construction program. 1

I don't think either NEPA or intelligent forest planning are well served by the adoption of such an unexamined assumption.

2. The Kootenai Forest has been harvesting timber at a significant loss for years. Although this fact is difficult to discern from the planning documents, the Forest's losses can be expected to rise substantially as the result of implementing Alternative J, the proposed action.

In my opinion, the plan should discuss the advantages and disadvantages of subsidizing timber harvesting in the Forest, it should have estimated the magnitude of such subsidies for the various alternatives, and it should have attempted to justify any subsidies required by proposed action.

The Plan's silence on this subject, which is clearly of the first importance as a public policy issue, seriously limits its value both as a decision making tool, and as a source of public information. 2

3. Part of the reason for the document's silence on the issue of subsidies no doubt follows from the fact that the Forest Service's accounting ~~and~~ and analysis process used here and elsewhere systematically fails to charge timber related expenses against timber income, and also unrealistically overestimates timber related income and underestimates both direct and indirect expenses. The true size of this subsidy is not apparent in the plan, or possibly even to the planners themselves.

A few excerpts from the documents reveal elements of this systematic distortion of the economic facts surrounding timber harvesting.

A. A principle distortion arises from the following statement of Forest Service policy printed on page B-45: "The collector and arterial road work is considered to be a capital investment cost because these are the major access routes for all resource users and can not be entirely linked to timber sales."

Realistically, all or virtually all of this "capital investment cost" is in fact linked to timber sales, a fact admitted a number of times in these documents including the top of page II-137 of the DEIS: "Road construction is directly linked to timber volume harvested".

It would be interesting to compare the road densities of the Kootenai Forest to those of the National Grassland

Response to Letter #46 - Douglas Ferrell, page 46a

1. The alternatives developed in the EIS provide a range of ways of dealing with the public issues in total. The various road programs are concomitant parts of each of the alternatives and not programs designed for some unrelated purpose.

2. A "Timber Program Balance Sheet" was developed for the 1985 fiscal year and is presented in Chapter III of the FEIS. This shows a loss of $2,266,000 in that program for 1985. All other Forest programs (recreation, wildlife, livestock etc.) also would show a loss although balance sheets were not prepared for them. It is expected that real price increases for stumpage and the eventual completion of the road system coupled with added consideration for financial consequences of management (as displayed in the EIS) will reverse this situation in the future.

Changes were made in Alternative JF (the Final Plan), as described in Appendix B of the FEIS, to reduce timber costs. The estimated effects of this are displayed in Chapter II of the FEIS. To summarize, the Final Plan is anticipated to produce a positive net cash flow to the treasury whereas the Proposed Action was estimated to produce a negative cash flow (on the average over the first decade). The net public benefit of each alternative is presented in detail in the EIS. The financial aspects are important components of net public benefits.

It is true that the Forest Service has no accounting and analysis process in place to precisely track timber related expenses. This is a complex problem because of the interrelationships between timber and other resources. For example do all costs associated with wildlife habitat improvement link to wildlife, or should the portion of those costs related to mitigation of timber impacts be linked to timber (and how can the portions be divided)? The Forest Service, the General Accounting Office and Congress are attempting to develop a useful system. The "Timber Program Balance Sheet" for 1985 was developed as part of early tests of one potential system.

The arterial road system is entirely in place on this Forest and has been for many years. As shown in the large table at the end of Chapter II of the EIS, about 6 miles of collector roads construction is expected each year. In addition to the fact that these roads support dispersion of recreationists, fire access and other resource access purposes, the collector costs are estimated to be capital investment costs in the Plan because many timber sales may use them simultaneously and purchaser credit from one sale is not an appropriate way to finance them. In the "Timber Program Balance Sheet" all Forest roads are considered to be timber related. All of the local roads, except a few special purpose roads (campgrounds, administrative sites etc.), are proposed for construction only because access is necessary if timber is to be removed. All costs are compared to all benefits in developing PNV of the Forest.

(3)

system. I would be surprised to find a tenth as many roads in the Grasslands as in the Forest, although all the usual arguments about access for sightseers, hunters, fire suppression and resource management apply to grasslands as well as forests. Can anyone imagine drainage after drainage of grasslands laced with a maze of roads, often side by side, and designed and maintained for heavy trucks?

Given the thousands of miles of forest roads now available to this area's small population of sightseers, woodcutters, hunters, etc., it is very difficult to see how such uses could justify spending millions upon millions of dollars to build expensive new roads, incidentally capable of carrying logging trucks. These uses alone could only justify the construction of a few miles of road a year. And why are roads always built to timber sales and not, say, to a remote productive berry patch? 2

It is a pure fiction to maintain that the forest road construction program is not instigated almost entirely by the needs of the timber harvesting program, and it is certainly misleading both to the public and to the planning process not to charge these major timber related expenses against timber related income in calculating Present Net Value (PNV).

B. An additional distortion is related on page B-49: "Puchaser credits (for road constrution) are included in returns to the Treasury." Does anyone really believe that the existence of yet another forest road in Montana is of comparable value to a typical taxpayer in, say, New Jersey as cash returned to the Federal Treasury? The road is primarily of value to the handful of people who use the road for free. 3

C. The timber PNV analysis is based on atypical data, tending to overestimate timber related income.

1. For example, from page B-36, the timber "prices and costs are expressed in first quarter 1978 dollars". At this time timber prices were at record high levels.
2. Similarly the analysis on page B-65 estimating forest employment is based on the year 1980 when real wagesfor forest related employment were at a peak never reached before or since. Also the number of jobs created per million board feet (MBF) harvested is decreasing significantly, a trend which does not appear in the plan's analysis.
3. Road cost estimates per mile, or per MMBF, appear low for a number of reasons, including the fact that these estimates are based on historic data(pages 44-45), in spite of the fact that generally speaking the easy road work has been done and existing unroaded areas are steeper, less stable and less productive than what came before. 4
4. Fixed costs for all alternatives are identical in this plan's analysis, in spite of the fact that many timber and mineral related costs are included in this fixed overhead. It obviously would cost the agency almost

Response to Letter #46 - Douglas Ferrell, page 46b

3. In the context of Appendix B, purchaser credits were included in returns to the treasury because returns to the states are calculated as a percentage of that figure. In the context of cash flow to the treasury (Chapter II, Table II-20 in the DEIS), purchaser credits are not included.

4. (C1) All costs and prices were expressed in 1978 dollars so that ongoing inflation would not distort the results. Timber prices were based upon timber sales sold between 1974 and 1980 as described on page B-46 of the DEIS. The effects of determining prices from a broader time frame are discussed in Appendix B of the FEIS.

   (C2) The estimates of employment displayed on page B-65 of the DEIS are based upon Forest outputs that actually occured that year. Recreation outputs have been gradually increasing and the 1980 timber harvest was the second lowest in the last 10 years. The effects of decreasing numbers of jobs per mmbf produced are discussed in Appendix B of the FEIS.

   (C3) The real cost of roads has decreased dramatically. The most expensive roads were estimated to cost an average of $84,000 per mile (in 1978 dollars to eliminate the effects of inflation). These roads would cost an estimated $54,000 per mile today, in comparable dollars. The effect of this is addressed in Appendix B of the FEIS. The $24,000 per MMBF shown on page B-45 of the DEIS is an estimate used to determine how much capital investment funding would be needed if sufficient purchaser credits were not available and does not necessarily reflect the total cost of roads per mmbf.

   (C4) The fixed costs are intended to be those that change very little with the level of the program and would not change significantly on a year to year basis. Since they are constant ("fixed") from one alternative to the next, changing them to some other constant cost would not affect the relative comparison of alternatives. The types of costs you mention are included in variable costs and do change with program levels.

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nothing to administer the forest if it were all wilderness and these fixed costs would rise with more development, more activity, more employees, more buildings, etc.

5. The interest rate used for PNV calculations in these documents is 4%. A more realistic real interest rate for the past decade or more, and into the forseeable future, is closer to 6%. This higher rate would further raise the real costs of development projects like road construction. 4

Generally this plan, like most all Forest Service plans I have ever read, includes a great number of subtle errors of analysis, virtually all of which tend to make the operation of building roads and harvesting timber on public lands appear very significantly more desireable to the public than is actually the case.

RECOMMENDATIONS - PLANNING PROCESS

1. Alternatives in this Forest Plan should include realistic scenarios for a meaningful variety of levels of new road construction and development.

2. The planners and economists who prepared these documents should review their data, analysis, and conclusions. The true costs of harvesting timber, both direct and indirect, and including realistic interest costs, should be calculated. The size of the existing subsidy should be identified, and the size of the subsidies required by each alternative should be calculated. 5

3. Based on the above data, the advantages and disadvantages of road construction and timber harvesting should be weighed for the variety of alternatives. A new proposed plan should be developed. If the new plan proposes to continue subsidizing road construction and timber harvesting this decision should be justified in both the Forest Plan and the DEIS.

RECOMMENDATIONS - LAND ALLOCATIONS

1. Based on my familiarity with the Kootenai Forest, and my understanding of forest economics, I have little doubt that as a public venture, the more we develop and log ~~and log~~ on the Kootenai Forest, the more we lose. We lose public resources including irreplaceable roadless areas, wildlife security, topsoil, old growth timber, catchable fish, endangered species habitat, and not least of all money, which in this case means adding to the national debt. 6

This is what it means to squander resources.

I recommend that we abstain from developing the Kootenai's existing roadless areas unless and until the result is a clear

Response to Letter #46 - Douglas Ferrell, page 46c

4. (cont) (C5) The discount rate of 4% is required by the regulations that implement the National Forest Management Act. Discount rates do not affect project costs, only the present value of dollars that are expended or received in the future. The discount rate is a "real" rate thus inflation is not included in either costs or benefits. The results of using a 7-1/8% discount rate are included in the large table at the end of Chapter II of the EIS.

5. (1) The new road construction ranges from 3637 to 6130 miles (6200 miles exist as of January 1986). The Final Plan requires 3850 additional miles to access the area managed for timber production.

(2) The data, analysis and conclusions have been reviewed and modified to arrive at the Final Plan. The sensitivity of the results were tested with regard to different timber related costs and values (see Appendix B of the FEIS). The "subsidy" for each alternative was displayed in the DEIS Table II-20. The calculations were found to be in error so a corrected table is provided in the FEIS.

(3) Our analysis indicates that the Final Plan will result in a positive cash flow to the U.S. Treasury.

6. Of the 404,000 acres of inventoried roadless areas on the Kootenai National Forest, the Final Plan preserves 260,000 acres in roadless and Proposed Wilderness designations. Of the remaining 144,000 acres, we expect about 10,000 acres to be made unsuitable for Wilderness designation during the 10 year life of the Plan.

(5)

net benefit to the public.

2. I believe the great resource the Kootenai Forest has to offer the American public is its wild unspoiled areas. I recommend wilderness designation and management for many of the unroaded areas in the forest only partly because I have no doubt that this action carries the highest true PNV of any possible land use. 7

I specifically support the wilderness designations included in Alternative E.

I would like to add that I live in the Kootenai Forest and have worked here as both a logger and a millhand.

Thank you for the opportunity to comment.

Sincerely,

Douglas Ferrell

Douglass Ferrell

Response to Letter #46 - Douglas Ferrell, page 46d

7. **See response #6 above and the Final Forest Plan.**

Jim Shadle
Reply to 1950
RR3 Box 700
Kootenai National Forest
Libby, Montana 59923

Dear Sir:

I would like to comment on two aspects of the Forest Plan, the grizzly bear management proposals, and the fishery and water quality management.

Our family owns property on the East Fisher River, so we are particularly concerned about that drainage.

We strongly support identification of the Allen Peak-Himes Creek roadless area as a situation 1 grizzly management area. In our personal experience over the past twelve years the area receives very light recreational use and would be well suited to grizzly habitat because of the minimal opportunities for man-bear contacts. The primary existing use of the area is for big game hunting in the fall. Several steps that could be taken to minimize conflicts between hunting and bear management include closing the area to commercial outfitters, closing the trail system to motorized vehicles, or altering the maintainence of the trail system to only accommodate foot traffic. The lower one-half mile of the main access trail into the Himes Creek drainage is within our property and we would be happy to cooperate with you on any changes is trail management. 1

In your plan you indicated that you would be conducting an inventory of streams on the Forest to identify those with pure cutthroat trout strains. Both Himes Creek and Walloven Creek fit into this category. 2

Working as a recreation guard and prevention patrol on the Forest about twelve years ago I noted that very few of the small streams on the Forest still supported a native cutthroat fishery. Because of its sensitivity to fishing pressure, and changes in water quality the native cutthroat is rapidly disappearing from the Kootenai system. It seems hard to believe that before the completion of Libby Dam the Kootenai was one of the best cutthroat streams in Montana. 3

Experiences on Kelly Creek and the Selway River in Idaho have indicated that it is possible to restore a native cutthroat fishery with proper management. In a few short years those streams have gone from mediocre fisheries to nationally recognized blue ribbon trout streams.

It is important to save small spawning and rearing streams in unroaded conditions if the Kootenai cutthroat fishery is ever to recover. There is ample evidence to indicate that the native cutthroat requires these pristine spawning conditions, and protection from fishing pressure in the rearing stage if it is to survive. 4

I appreciate the opportunity to comment on your proposed plan. From our perspective it is a real improvement over past planning efforts.

Sincerely,

Dan Green

Dan Green
106 Juliene Way
Moscow, Idaho 83843

Response to Letter #12 - Dan Green

1. We are pleased to know of your willingness to cooperate in future grizzly bear management needs.

2. The Forest is conducting an inventory of purestrain cutthroat trout streams based on the on-going genotypic evaluation by the process of electrophoresis, which is conducted by the State. At this time, Waloven and Himes Creeks, much of which are on private land, have not been determined through this process to contain purestrain westslope cutthroat trout.

3. Purestrain westslope cutthroat trout is the most sensitive trout species on the Forest. Generally, it does not compete well with other trout; its tolerance to habitat change is limited, it cross-breeds easily with rainbow trout, and it is quite vulnerable to fishing pressure. Timber harvest and roadbuilding adversely affect the cutthroat and these effects must be controlled to preserve this species.

4. The Montana Dept. of Fish, Wildlife and Parks has and will continue to play a major role in the future of purestrain cutthroat. The State is in the process of identifying purestrain enclaves so they can be protected. We agree that it is important to preserve small spawning and rearing streams in unroaded conditions if the cutthroat is to survive.

E-357

38

Norman P. Gregas
512 E. Center St.
Shenandoah, Pa. 17976

October 8, 1985

U.S.D.A.
Forest Plan
Forest Service
Kootenai National Forest
Rt 3, Box 700
Libby, Mt. 59923

Ladies or Gentlemen:

My concern with the Kootenai National Forest is wilderness, endangered wildlife (Grizzly Bear) and timber harvesting.

Habitat loss is a very high factor in the decline of endangered wildlife, while wilderness is a very high factor for there recovery and survival. So I would like to see as much wilderness and roadless areas the alternative (H) has to offer, with less timber sales. 1

The Forest Service as a whole as been losing money on almost every timber sale. This results in major losses to the taxpayers from National Forest timber sales. These losses occure, simply because it would cost the Forest Service millions of dollars to build logging roads, administer the sales, and restore the cutover land than the sale of the timber would bring in. 2

If improvements in the system by which the Forest Service sells timber, do-not change, timber sales on National Forest lands will be counter productive to endangered wildlife, wilderness and the taxpayers.

With the above statements in mind, I would prefer alternative (H) with low level annual road construction and timber sales. 3

Thank you for your time and help in furnishing the desired documents.

Sincerely,

Norman P. Gregas

Norman P. Gregas

nog
cc

Response to Letter #38 - Norman P. Gregas

E-358

1. The Final Forest Plan provides a high percentage of the existing roadless resource on the Forest in a roadless and undeveloped state. See the discussion of Net Public Benefit in Chapter II of the Final EIS.

2. No Response Needed.

3. See the response to #1 above.

David C. Hadden
615 Ford
Missoula, MT 59801

Supervisor
Kootenai National Forest
RR #3, Box 700
Libby, MT 59923

10/24/85

Dear KNF:

I am writing in response to the KNF Plan. It is unfortunate that an area as lovely as the Kootenai is also so productive as timber land, and, at the same time, so distant from a conservation minded public. The Kootenai Forest Plan is, in my opinion, a sell-out to timber interests while providing only token benefits to the other multiple-uses. 1

The Kootenai, so far as I know, is the only Forest to actually endorse Old Growth Forest Management. Yet while this is to be applauded, those areas (MA-13) to be managed in old growth remain in the timber base. My understanding is that some MA-13 areas are already being drawn up for sale of their timber. The goal of 8% of the Forest in MA-13 is a start. However, I would request two changes: 1) That all MA-13 areas be taken from the timber base, and that 2) 15-20% of the KNF be devoted to old growth Management. 2

The increase in the number and miles of roads proposed by the KNF has me concerned. My opinion, as a wildlife biologist, is that roads rarely if ever contribute to wildlife 3 4

E-359

Response to Letter #71 - David C. Hadden, First Page

1. The Final Forest Plan provides for a balanced approach to resource management while providing for economic development and future options.

2. The Final Forest Plan provides for a 10% level of old-growth timber below 5,500 feet elevation, which is 91% of the total inventoried (11%), and removes it from the regulated base.

3. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction.

4. The Final Forest Plan has one of the highest percentage of road closures of all the alternatives.

E-359

security. This is because road closures are not conservative enough (as to duration or season); and too many roads are left accessable on a seasonal basis (i.e. too many roads are not permanently closed). Your road building plans do not benefit the legitimate resource of wildlife. 4

As another matter, the FP predicts a 50% reduction in water quality. This admission further jeopardizes two legitimate FS (public) resources: water quality and fisheries. This is wholly unacceptable to me. In some respects I am a man of the status quo; in this instance I must insist that water quality & the fishery resource be preserved (that is, maintained) in their present conditions or improved. If this means fewer miles of road, I think the Forest Engineers should yield. 5 6

Wilderness, another legitimate trust resource is a concern that the Forest Plan addresses & resolves inadequately. I am particularly concerned that the Southern end of the Scotchman's Peak proposed Wilderness (amounting to 16,000+ acres) has been left out of the FP. It is my understanding that ASARCO has endorsed an 80,000 Scotchman's Wilderness. It is hard to believe that the F.S. would not embrace a proposal endorsed by two usually adversarial groups. I understand that the 80,000 acre proposal includes protection for the Ross Creek cedars. 7 8

Although I have not been to the Trout Creek area, I understand it has outstanding value for elk & other wildlife. As the FP rates this area, I would insist that this Trout Creek area be included in the FP's 9

Response to Letter #71 - David C. Hadden, Page 71a

5. See response to #4 above.

6. The Forest Plan made no mention of any percentage decrease in water quality. The Final Forest Plan mandates that the State Water Quality Standards will be met. It is felt that, by meeting these standards, fisheries will be adequately protected. See the Final Forest Plan document.

7. A significant portion of Pellick Ridge has been recommended for wilderness in the Scotchman Peak roadless area in the Final Forest Plan.

8. Some of the cedars in the Ross Creek area are included within the Scotchman Peak recommended wilderness.

9. The Trout Creek roadless area has been recommended for non-wilderness because of the wildlife and mineral values. A significant amount of the area is designated as roadless which preserves the option for reconsideration for wilderness.

proposed additions to the Wilderness System. 9

I also support the addition of Ten Lakes area, the Kootenai side of the Tuchuck + Thompson-Seton areas, and additions to the Cabinet Mountain wilderness areas as proposed by the Montana Wilderness Association. 10

As the Kootenai NF is only 4% wilderness, it is my belief that the FP fails to adequately preserve the remaining roadless areas. Wilderness is a legislatively mandated, and thereby, legitimate resource, on an equal footing with timber. Yet greater than 75% of the Kootenai is given over to logging (i.e. roaded). It is time for this imbalance to be corrected — if only in part, by the modest additions proposed here, and by others. 11

In conclusion, the Kootenai Forest Plan shows an imbalance in its application of the concept "Multiple-use". As designed in the Draft, the Kootenai is largely a single use forest, (Timber), with a superficial concern for fish, wildlife, water, recreation and wilderness. I would appreciate my suggestions being given every consideration. I would appreciate their being adopted, even more. 12

Sincerely

David C. Hadden 10/24/85

Response to Letter #71 - David C. Hadden, Page 71b

10. The Ten Lakes and Cabinet Additions have significant portions recommended as wilderness. The Tuchuck and Thompson-Seton areas are recommended as roadless to be compatible with the Flathead National Forest Plan.

11. 23% of the Kootenai will be designated as wilderness, roadless, or wilderness study area in the Final Forest Plan. See the Final Forest Plan Map.

12. In our judgement, the Final Forest Plan provides for a balanced use of all the resources while providing for future options. See the discussion of the Net Public Benefit in the Final EIS.

103 Dakota Avenue
Whitefish, MT 59937
October 31, 1985

Forest Plan
Kootanai National Forest
Rt 3 Box 700
Libby, MT 59923

Dear Sir:

Thank you for the opportunity to comment on the Kootanai Forest Plan. My detailed knowledge of the Kootanai Forest is confined to the northern portion of the Whitefish Range, the TenLakes Area and the Elk Mountain and La Beau areas of the Salish Range. I will limit my remarks to these areas.

I support your recommendation of the Ten Lakes area for wilderness designation. I believe the forest could go further to insure the continued integrity of this scenic region, which appears to be instrumental to the recovery of mountain caribou in Montana. The Mount Wam portion of the alternative W proposal for Ten Lakes, should be included in your wilderness recommendation. None of the activities in that area need preclude its inclusion. You could also restrict snowmobile entry into the Wigwam River Valley by a closure to snowmobiles near the Weasel Creek cabin. 1 2

The Kootanai portions of the Thompson-Seton (Deep Creek RARE II) and Tuchuck wilderness proposals should also be recommended as wilderness. Should these areas be excluded from an enacted Montana Omnibus Wilderness Act, they should be provided MA 2 protection. Clearly, the excessive logging of the past in the Williams, Blue Sky and Kopsi Creek drainages should be provided time to heal. Road closures and MA 2 designation will not quickly erase the scars of the poor management decisions made in the past, but will allow use of these lands by wildlife with man's interference kept to minimal levels. 3 4

In this same manner, the grizzly, I believe can manage its own destiny without the expense of MA 14 guidelines. The excessive logging of the past on sites difficult or impossible to regenerate should not be repeated in the Deep Creek valley. Already logging cuts and roads are within a short distance of avalanche shoots found in the valleys of the North and main stems of Deep Creek. These shoots constitute prime grizzly habitat and should be protected from any further logging and by closure of the existing roads well below the present site of closure. 5

The riparian cutting practices allowable by the plan are clearly unacceptable. Cutting to one bank of permenant streams is allowed by the plan. The cutting in section 14 6

Response to Letter #207 - Geoffrey W. Harvey, First Page

1. The wilderness recommendation for the Ten Lakes area has been submitted as requested by the Montana Wilderness Study Act. It now awaits a review by the Administration which will make a recommendation to congress for their consideration.

2. There is no evidence to date that snowmobiling is creating a resouce concern other than in the late spring months. This concern will be reviewed with the U.S. Fish and Wildlife Service to insure that T&E Species are not being jeopardized.

3. Tuchuck and Thompson-Seton areas have been designated roadless to be compatible with the Flathead National Forest Plan.

4. The areas you mentioned in Williams, Blue Sky, and Kopsi Creek have been designated as MA 2 in the Final Forest Plan. See the Final Forest Plan Map.

5. The goal of MA 14 (Situation 1 within the area of concern) is to maintain or enhance grizzly bear habitat and reduce grizzly/human conflicts while realizing a programmed level of timber harvest. Through project planning, appropriate compensation measures are included if and when projects conflict with grizzly bear use.

   In response to Deep Creek specifically, any proposed timber sale would be evaluated through an Environmental Analysis as to potential impacts on grizzly bear or their habitat. If it were determined that potential impacts would result, then appropriate compensation measures such as road closures, timing of logging, and changes in cutting units, would be prescribed to make the sale compatible with the grizzly bear.

   As to the the existing road closure on Deep Creek, there are no significant avalanche chutes below the closure.

6. The Forest Service is leaning away from a complete "hands off" policy concerning streamside vegetation management. It has been found that by keeping a narrow buffer strip along streamcourses without managing the riparian timber promotes excessive blowdown and rapid degeneration of important streamside cover, to include excessive debris accumulation and channel deterioration.

   Current streamside practices involve selected units extending to streamsides. The size and number of these units per reach of stream are carefully selected and controlled for maximum protection and long-term stream benefits. All activities within riparian areas are treated with constraints to protect soils, water quality, and associated aquatic biota.

Kootanai Forest Plan Comments
page 2:

T35N, R25W along Deep Creek is a case in point. Cutting has occurred right up to the north bank of the creek in at least two cutting units. This practice defies the Best Management Practices, which are supposed to have Forest Service wide application. How can this abusive management be prescribed in the Kootanai Plan? 6

The unroaded portion of the LaBeau Roadless Area within the Kootanai Forest should remain unroaded. No new roads should be allowed on the northern fringes of LaBeau or in the MA 13 area near the Fire Lakes. The roadless area on the western flank of Ketowke Mountain should be maintained. If the timber sales Ketowke and/or Ketowke II (see commnent below), are in the roadless area they should be canceled. Since the Flathead Forest has chosen to preserve the LaBeau area as roadless, I believe the Kootanai Forest should follow this precedent, since the Kootanai portion involves so few acres. 7 8

The MA 2 designation for Elk Mountain and the adjacent ridgeline south to Brush Creek Divide and north to Bowen Lake is a good designation. This area like LaBeau is one of the few areas in the Salish Range left roadless. These two areas should be maintained as areas for roadless recreational opportunities. 9

Finally, I found it rather difficult to assess the effects of timber cutting on specific areas on the Kootanai Forest. The location of sales is given only at the resolution of 640 acres. Worse, after 1990, the locations of the sales are omitted entirely, while all the other information concerning the sale is available. This leads me to believe these sales are not fictitious, but are planned. How can the reader evaluate your plan without specific locations? These should be provided on a map of better resolution. Then the public should be permitted the opportunity to comment on this portion of the plan. 10

Thank you for the opportunity to comment on the plan. It is my hope the Forest Planners will better perfect this blueprint for the management of the Kootanai Forest.

Sincerely,

Geoffrey W. Harvey

Geoffrey W. Harvey

6. See previous page.

7&8. The unroaded portion of LeBeau roadless area will remain unroaded except for a small portion on the west side of Ketowke Mountain which is scheduled to harvest insect-infested lodgepole pine timber. This timber sale area will not affect the Flathead Natinal Forest side of the roadless area.

9. No Response Needed.

10. Putting the known data about roads and unit locations for timber sales on maps of sufficient scale to be useful for purposes you describe would be too voluminous to include in a Forest Plan. This type of data cannot be furnished for outyear sales because they are still in the planning phase. To obtain whatever information is available for sales in either situation, one should contact the Ranger of the District where the sale is proposed.

52

Route 3 Box 866H
Libby, Montana 59923
October 10, 1985

Forest Plan
Kootenai National Forest
Route 3 Box 700
Libby, Montana 59923

Dear Sir:

In comparing the Alternatives we have for the KNF, Alternative N looks like the best road. 1

Please don't tie up any more of our forests in wilderness or give to the bears because it doesn't benefit anyone or anything and causes hazards.

We have more than enough wilderness lands already on our Federal Forests. Lands left in multiple-use status, managed properly for their renewable resource value, benefit more of our people than those that are locked up. 2

Please give considerable thought to Alternative N when making final plans for the Kootenai National Forest. 3

Thank you.

Sincerely,

Lucy W. Haugen

Lucy W. Haugen

Response to Letter #52 - Lucy W. Haugen

1. Wilderness is one of the multiple-uses of the National Forests.
2. No response needed.
3. Alternative N was reconsidered and the emphasis on timber management was brought forward to the Proposed Action which resulted in the Final Forest Plan.

10

Dear Sirs:

Please maximize the suitable timber acres on which you practice your forest management. 1

Mrs. Jay Hargrove
Box 156
Gallatin Gateway, Mt. 59738

Response to Letter #10 - Mrs. Jay Hargrove

1. We have attempted to maximize the cost-effective suitable timberland in the Final Forest Plan.

300

CESAR HERNANDEZ
P.O. BOX 37
HERON, MT. 59844
11-6-85

DEAR ASSHOLES,

BETTER LATE THAN NEVER! THE FLIGHT OF FANTASY YOU CALL THE KOOTENAI FOREST PLAN IS AN ABORTION. I CANNOT BELIEVE THAT ITS DESIGNERS ARE OF THE GENUS HOMO SAPIENS HUMANUS. I THINK YOUS CRAWLED OUT OF ONE OF THOSE CUTTY-CLACKING COMPUTER TERMINALS FOR ALL THE SENSITIVITY TO THE LAND THE DOCUMENT ESHOWD. TO ASK YOUS TO RECONSIDER. PELLICK RIDGE, THE GRIZZLY OR JUSTIFY YOUR FIGURES IN TIMBER RELATED EMPLOYMENT OR INCREASED ELK NUMBERS APPEARS USELESS. BUT I CAN TELL YOU WHAT WILL HAPPEN. YOUR PLAN WILL WORK SO WELL IT WILL STINK; THE BEARS WILL DIE, THE WATER WILL REEK & THE MOUNTAINS WILL BE PROSTITUED. THE MONEY WILL BE MADE & A LITTLE PARCELED OUT; BUT FOR THE MOST PART, THE WEALTH & HEALTH OF THE FOREST WILL GO WITHER. BUT REMEMBER BOYS & GIRLS: ITS ONLY YOUR BED THAT YOU'RE MAKING AND WE PLANS TO BE AROUND TO MAKE SURE YOU SLEEP IN IT TOO! 1

Sincerely,
CESAR HERNANDEZ

Response to Letter #300 - Cesar Hernandez

1. No response necessary.

Forest Supervisor

I did not have the time or the finance to fully research the proposed forest plan. Industry has the advantage of using the money they have made from our forest to lobby in congress, pay individuals for time spent expressing company views, and develop letters to persuade the USFS to manage toward maximum exploitation of Earth's resources. The average layperson doesn't have the time or the money necessary to grind through this document. I see this as a basic flaw in the request for views on the plan. 1

I understand the logistics behind developing a plan to manage the forest toward achieving some sort of "sustained yield" & do not understand the feasibility of developing such a plan on a large scale.

The best I can do is comment on my first impressions of specific points.

After reading the plan, the thing that struck me as the biggest loss to man, plant and animal is the naturalness of the woods. The overview of what The Kootenai National Forest will be like in fifty years left me with the vision of midwestern cornfields. The crop being somewhat monoculture; if Today's trends of planting Douglas fir, Larch and Ponderosa Pine continue;

Response to Letter #160 - Rick Hildebrand, first page

1. All responses are considered. The size and complexity of the documents result from the legal requirements under the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA).

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and the fields being flanked by roads spaced a predetermined distance apart.

The old growth, or what little of it there is left, seems particularly vulnerable. In the first place, how can a so called rotation age be placed on anything considered old growth. Two hundred fifty years isn't much compared to the one thousand years plus of the Ross Creek Cedars. 2

Eight per cent of major drainages left in 40 acre blocks isn't enough. What happens if the block designated as future old growth is burned by fire, or consumed by insects or disease.

The Kootenai National Forest is fortunate to still have some old growth stands left. Some areas on the West coast are left without. Old growth is irreplaceable. Save the existing stands for future generations, and designate larger areas as ecosystems to take the place of these stands. 3

Obtain the "sustained yield" by harvesting the low-yield decadent younger stands and by better utilizing cutting units. 3 a

2. The Final Forest Plan designates 10% of all the land area below 5,500 feet elevation for old-growth habitat management. This is 91% of the inventoried old-growth timber habitat on the Forest. In addition, 34% of all mature and overmature timber (excluding lodgepole pine) has been placed in the unregulated timber base, including the old-growth timber mentioned above.

3. Because of past fires and timber harvest, few large old-growth timber stands remain within the regulated portions of the Forest. Most existing old-growth stands in roaded areas are in the 50-100 acre size range; however, a few of these are as large as about 600 acres. Within the unregulated (primarily roadless) areas of the Forest, numerous old-growth timber stands in excess of 1,000 acres exist. Since these are unsuitable for timber management, their old-growth status will be protected and they will contribute significantly to the Forest's goal of maintaining 10% old-growth timber habitat.

3a. Low-yield, decadent, mature stands are a high priority for timber harvest on the Forest, and utilization standards are being increased.

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I am always surprised at how much biomass is left after logging operations are over. As a forestry student we studied about the European forests, West Germany in particular. My idea of intelligent management follows this type of intensive forestry. I would like to see certain areas set aside for intensive management, leaving more ecosystems open for natural ecological processes. 4

These intensive management areas should be maintained by local small independent contractors and administered by a USFS forester. The contractor is responsible for intelligent harvesting, site preparation and reforestation to proper stocking levels. By being local and small, the contractor would have to do the job right to stay in business.

Open grazing should be eliminated. Livestock grazing is very detrimental to wildlife range and benefits only a few. Walking in the woods around Eureka, Fortuna and Trego, the damages are self-evident (compacted soil, over grazing, erosion, and water quality) 5

Water is one of our most precious resources, everything possible should be done to maintain the high quality we enjoy now. These are 6

Response to Letter #160 - Rick Hildebrand, page 160b

4. We are managing as intensively as economics and technology will allow. Under current economic conditions, a more intensive management would be veiwed as being "single-use" management. If you manage intensively for timber on a site, then less consideration can be given to the other resource values such as wildlife, visual quality, etc. This is not in line with our current mandate of multiple-use management.

5. Properly managed grazing is a legitimate use of the National Forests and is consistent with the multiple-use concept. See the Management Area Standards for guidance on grazing in specific areas. Situations where grazing is not in compliance with Management Area Standards should be brought to the attention of the District Ranger or Forest Supervisor.

6. No response needed.

few satisfactions more rewarding than being able to drink out of a stream, something enjoyed by very few in the world. 6

The fee for collecting firewood should be done away with for the local population. If necessary, collect from the off forest commercial gatherers who are so abundant in the Yaak drainage every weekend. Contractors should make residue more readily available. Funds should be spent on wildlife habitat destroyed by removing cavity trees. 7

The policy allowing residents to obtain enough logs to build a house without bidding should be reinstated. It's ridiculous to think that with all the mountain pine beetle killed lodgepole, there isn't enough to allow this. With the current market, it isn't feasible that all the dead lodgepole could be sold before it rots. 8

The last few issues cover my main feeling that this public national forest should benefit the folks who live here, not the conglomerates who operate here, and seem to benefit the most. 9

7. The setting of fees for firewood is outside the scope of this Forest Plan effort.

8. Dead lodgepole does have value as evidenced by current interest and competitive bidding. When this situation exists, non-competitive transactions are not permitted. Dead lodgepole is currently advertized at $0.93/mbf, a price which should not discourage individuals from buying it for whatever purpose.

9. No response needed.

The Scotchman Peaks, Cabinet additions and Ten Lakes Scenic area should be added as wilderness areas. I would add Northwest Peaks to that list. Also parts of the Gold Hill roadless area, west fork of Big Creek in general, should remain roadless. 10 11 12

Habitat areas should be maintained for Woodland caribou and the grey wolf no matter what the status. Both have lost enough habitat nationwide already. 13

The contracting program is going in the right direction Forest wide. However, with my experience on planting, thinning and TSI contracts, the lowest bidder isn't always responsible. Often times the government spends more money administering and reprocessing than the job was worth in the first place. Private industry would never hire some of the organizations awarded contracts on the forest. The move toward negotiated contracts, stewardships and using local contractors would eliminate a lot of the problems. The relationship between the Forest Service and contractor could be greatly improved if the job was 14

10. Scotchman Peaks, Cabinet Additions, and Ten Lakes areas all have wilderness recommendations. Northwest Peaks has been designated to retain the special Scenic Area status. See the Final Forest Plan Map.

11. Parts of the Gold Hill roadless area in Parsnip Creek have been designated as roadless. See the Final Forest Plan Map.

12. The West Branch of the South Fork of Big Creek has been designated as a special Riparian Ecosystem Management Area. See the Final Forest Plan Map and document.

13. Habitat for both these species is being maintained in compatible Management Area prescriptions in the Ten Lakes Area.

14. The establishment of contracting procedures is outside the scope of this Forest Planning effort.

awarded at a fair price to a competent contractor. 14

In closing I would like to see the letters from the average forest dwellers justly weighed against those that industry pays to have written. My concerns include: preserving old growth, and the naturalness of the woods; moving toward more intensive management of some areas while leaving others to experience natural ~~ecological~~ processes; doing away with wood permits for forest residents, praying for the priviledged few, and the policy restricting use of enough logs to construct a home; designating Scotchman Peaks, Cabinet additions, ~~and~~ Ten Lakes Scenic Area, and Northwest Peak as wilderness areas; develop and maintain habitat for grizzly bear, woodland Caribou, ~~and~~ grey wolf, and all other life indigenous to this area. Above all else, I hope my children will be able to experience and know God's earth in part without many drastic effects as I was fortunate enough to do. 15 16 17

(summary)

Sincerely Rick Hildebrand

Rick Hildebrand
Rt. 1
Troy MT. 59935

rcvd 10/31/95

15. All responses are considered.

16. See Responses #2, 3, 4, 5, 7, 8, 10, and 13, above.

17. No response needed.

8

519 Louisiana Ave
Libby Mt 59923

Kootenai National Forest
Libby mt.

Dear Sir;

The prime purpose of the Forest Service and this is important, is to raise 1
and market timber. People's use of timber or lumber is more important than the grizzly. Next use of woods is for peoples subsistance. Residents cut wood for winter, fish and hunt gather many berries, huckle berries service berries and 2
mushrooms etc. These Also should rate higher than the grizzly. Other things such as sight seeing or picture taking or hiking shouldn't be curtailed by the grizzly.

The Forest Service in building roads for logging, should build a minimum necessary for logging. (Now they have cut standards.) When thru logging stop maintaining the road. If a gate has been contemplated for this road don't even build this road. When the publics money is used to build a road, that road is 3
public property and should be open to the public. If it is not open to the public the road should not be built. Those road gates are a typical example of Forest Service waste of public money and used to discriminate against most of the public. Those with gate keys run back and forth thru the gate, while we with out keys do not know if key holders are fishing or hunting or what.

On the grizzly, let those states that vote to tie up Montana's resources for for the grizzly under situation #1 furnish their own reserves. The grizzly is a big tough animal that can live any where that food and protection is. Lewis and Clark found the bear on the prairie. He can live in most any state but it seems 4
no other state would accept transplanted grizzly offered by the state Fish Wild Lif and Parks. Alaska would only accept if we would take pound for pound wolves 7 S grizzly exchange. Other states said they had gotten rid of their grizzlies and didn't want any more. The grizzly and wolf compete with man for food via 5
deer and elk. Protect what we now have but don't import any. Use hunting to control 6
amounts and aggressive bear. Let state Fish Wild life and Parks handle this. 7
We do not need wolves at all. 6

People need snags for winter fuel more so than wild life. Instead of the 8

E-372

Response to Letter #8 - Robert S. Holiday, first page

1. Raising and selling timber is one of the important multiple-uses of the National Forests.
2. We agree that the people's use of the Forest is an important consideration.
3. Some roads may need to be closed for public safety.
4. No response needed.
5. Threatened and Endangered Species consideration is required by law.
6. See #5 above.
7. The Forest Service manages the habitat, and the State manages the animals.
6. See #5 above.
8. See #2 above.

Forest Service saving snags and selleng wood permits. Let the home owners have them. The Forest Service doesn't pay taxes, so give a little break to those local people that do pay for the local government. Also all of the people should have equal rights in the national forests. No special benifits for Kootenai or Salish or Forest Service officials. 8

The roads that are now gated, should be opened to everybody or closed to everybody. A road on private land may be closed by the owner, but the Forest Service is only a caretaker for the public. Caretaker should not assume such authority as to bar owners from their own land. 9

We don't need any more wilderness. Wilderness is resources wasted. Like a wheat field left to rot rather than harvesting it. Let those outside, that vote to tie up Montana's resources in wilderness, create their own wilderness. Most of Montana's wilderness is from the last major forest fire to now, old. Not the eons of years that sounds romantic. Any state can create their own wilderness in fifty years. Montana now has a large amount of resources tied up in such as Glacier Park, Bob Marshall, Cabinets etc. We need what resources we have left. 10

Ten Lakes would be ruined if it were made a wilderness. It is like when they made the grizzly a sacred cow that setting a bounty for grizzly to poachers. 11

In closing the Forest Service should get back to just silvaculture, and get away from such frivilious boondoggles as archeology or animal studies and crews to harass the public with regulations. 12

Yours truly
Robert S Holiday
Robert S Holiday

P.S. On further study of this Forest Service plan I may wish to add more to this testimony

R S H

Response to Letter #8 - Robert S. Holiday, page 8a

9. It seems that a compromise between all of the roads open or all closed is also a reasonable alternative.

10. Wilderness is one of the multiple-uses of the National Forest.

11. The Ten Lakes area has been recommended for a combination of wilderness and roadless area.

12. See response #1.

Recreation comments at Open House from Bob Holiday and Chuck Woods.
(written by Gary Hathaway and given to Paul Leimbach. 7/22/85

1. They believe we need to encourage more tourism. 1

2. They would like to see policing of the heavy Reservoir use. 2

3. Chuck Woods asked why we changed our non-wilderness allocation at Ten Lakes to a Wilderness allocation? We explained public input-He seemed satisfied. 3

4. Why are roads being built that are unsafe? Short radius curves, no ditch.

Feels that freeways are not appropriate but that current designs are not providing adequate curve width and road width in some cases. 4

Bob Holiday and Chuck Woods

5. Closure of roads is depriving handicapped folks from enjoying woods. 5

Chuck Woods

Response to Letter #8 - Robert S. Holiday, page 8b

1. The Kootenai Forest Plan recognizes recreation use, which is linked to tourism, as an expanding use of the Forest.

2. Recreation management of the Reservoir area will be resposive to the use and needs of the recreating public.

3. No response needed.

4. The standards for roads have been redesigned to reduce the amount of impact on soil and water, and to reduce costs, while retaining necessary public safety needs.

5. The Final Forest Plan projects as many miles of road open in the future as there are now open. This is approximately 43% of all the roads which should provide many opportunities to enjoy the out-of-doors.

E-374

519 Louisiana Ave
Libby Mont. 59923

Kootenai National Forest
Supervisor Office Box AS
Libby Mt 59923

Dear sirs

Please add this to my former comments on the proposed forest plan

The proposed forest cut limit seems wrong. Now that figure is probably adequate, but what about the future. In the last depression the sawmill out was down for maybe ten years. Then it doubled or trippled. Now our house building is low, while our high schools and colleges are turning out young men anyway. Those young men and women when the economy improves are going to want homes as soon as affordable. With this reason I beleive the proposed cut should be say three hundred million instead of being so low. If the sale for lumber is there, lets not create high priced lumber by limiting the amount of the cut. I understand from you people that the potential timber growth is about four hundred million. Thus a possible cut of three hundred million would not be larger then growth. It would be much simpler to not cut up to the maximum then to try to stretch the limit. 1

The Forest Service should make an effort to get back to just silvaculture. 2
Abolish departments that pyramid with other bureaus. An example is your wildlife people. Let the State Fish Wild life And Parks handle those. Let department of Int. 3
handle mines. Also quit policing people. You people supervise such as roads for logging as you should but don't feel that you own them. Don't waste money policing 4
the public from roads financed by public money. We need roads every where we have resources, and roads are not a thing to be hid or ashamed of, but roads contemplated 5
on areas to be closedto the public should not use public money to build them. Money spent for gates on public roads is money wasted. 6

During these poor economic times rules for harrasement should be suppressed and may be a helping hand. Be practical On scale requirements. Don't make the logger haul a bunch of junk out of the woods that can't be used. Close the parks that don't pay their own way. (These should be under state Fish Wild Life and Parks.) Use your tool FIRE for more thinning. Push silvaculture. 7

Let some private money do somethings. The Sierra club and Wilderness clubs have big budgets, let them finance grizzly studies and out of state grizzly bear farms or reserves. The Back Country Horsemen now clear back country trails. 8

Yours truly
Bob Holiday
Robert S Holiday

Response to Letter #8 - Robert S. Holiday, page 8c

1. The Final Forest Plan provides for a programmed sell of 233 mmbf/yr. which is the average sell for the 1981-1985 period. This should allow for a 37% increase over the 170 mmbf/yr. average timber harvest during the same time period. See Appendix 11 in the Final Forest Plan document.

2. The National Forests have a multiple-use charter to provide for many resources including timber.

3. The Montana Dept. of Fish, Wildlife and Parks manage the animals in the Kootenai National Forest.

4. If road closures are to be used, they will probably need to be enforced to insure fairness to those people who faithfully comply with the road closures.

5. No response needed.

6. We respectfully disagree.

7. Timber management is one of the many uses of the Forest that will be emphasized under the Final Forest Plan.

8. Currently, U.S. Borax is contibuting toward a study by the State of Montana on the grizzly bear in the Cabinet Mountains.

E-375

225

Dear Kootenai Nat'l Forest, Oct 30, 83

I am concerned about our states' remaining wild lands. We need the genetic diversity in these areas for needs the biological future may put on us. 1

I realize that it takes quite a science background to truly understand the importance of these areas. The common man sees only todays desire, but those of us who have been educated in the sciences and who have been given the responsibility to be part of the decision making — we must follow the path of wisdom.

E-376

Response to Letter #225 - Ivy Howard, first page

1. We believe that the Final Forest Plan will provide for a diverse biological environment.

E-376

I deeply believe that in respect to the Kootenai Forest this means keeping the following areas wilderness: 2

Ten Lakes 2 a
Cabinet Additions 2 b
Trout Cr. 2 c
Scotchman Pk (all Pellick Ridge) 2 d
and the Kootenai side of Tuchuck & Thompson-Seton.

I would like to add that water-quality is of utmost importance. 3 When roads are decided upon please consider the breakdown of the food-chain when we change the characteristics of our streams. 4

In trust you will take great care with our wild lands,
Ivy Howard

107 Railway St.
Whitefish, Mt. 59937

Response to Letter #225 - Ivy Howard, page 225a

2. A significant portion of Ten Lakes, the Cabinet Additions, and Scotchman Peak including Pellick Ridge, has been recommended for wilderness. Trout Cock was recommended for roadless because of wildlife values and mineral potential, and Tuchuck and Thompson-Seton were recommended for roadless to be compatible with the management direction on the Flathead National Forest. See the Final Forest Plan Map.

3. Water Quality will receive increased attention in the Final Forest Plan. See the Monitoring and Evaluation Plan in the Final Forest Plan document.

4. See #3 above.

Star Route 1, Box 18
Libby, Montana 59923
October 22, 1985

Forest Plan
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

Dear Planners:

We wish to express our views and concern about the Forest Plan proposals for the Kootenai National Forest.

After 28 years of living and working in the forests of Lincoln, Flathead and Sanders counties, we feel we have seen as much change, both growth and harvests and changes in land use as most respondees. Of course this area is different today than it was 28 years ago - very few places stay the same.

Our general impressions of the management of all the resourses for the past 28 years is that "they have not worked hard enough", the yields of most of them could have been enhanced by more intensive management. Generally you have been practicing "reaction to the present crisis" management. In timber that meant harvest the White Pine before the blister rust got it, or the spruce after the beetle got it or some of the Lodge Pole before it is gone, in general much has been wasted over the years. 1

Therefore, we feel that alternative D, the R.P.A. goal should be chosen. A departure from non-flow, even decline is necessary to overcome the losses that the current system continually generates.

Thank you for giving us a chance to comment on the plan.

Sincerely yours,

Russell H. Hudson
Karen L. Hudson
Russell H. & Karen L. Hudson

Response to Letter 61 - Russell H. & Karen L. Hudson, first page

1. Alternative D, although a high production alternative, did not put adequate emphasis on the current lodgepole pine insect problems while still requiring a high budget. The Proposed Action and the Final Forest Plan put more emphasis in this critical area while requiring a lower budget.

295

James F. Rathbun
Forest Supervisor
Kootenai National Forest
R.R.3, Box 700
Libby, MT. 59923

November 4, 1985

Dear Mr. Rathbun:

Enclosed please find some comments on your Proposed Forest Plan. The bulk of my comments on Old Growth are attached and are actually the text of the speech made in Noxon at the Public Meeting October 4th. I would appreciate your including this text as part of my written input to be included in the Final EIS. A quick summary of my comments is as follows:

1) OG is a rare and threatened resource on the Kootenai and should be managed as such. The OG component should be removed from the timber base and dedicated as natural areas. MA 13 should be declared unsuitable for timber production. 1

2) 15% of the existing OG on the Kootenai should remain intact, not the proposed 8%, which is dangerously low and allows no cushion for natural or man-made disasters. 2

3) An ecological definition of OG (200-400 years of age for most conifers) should be included in the EIS and Plan, including age, size, and other OG characteristics. 3

4) Riparian stands that meet OG characteristics should be given high priority for inclusion in the OG component on the Forest as well as being designated as replacement stands. 4

Protecting riparian habitat also protects water quality. 5

And as the EPA has given the Kootenai Proposed Plan the worst Water Quality rating of all the Forest Plans in the state, every little bit of protection for these sensitive areas can only help. 6

A vast number of other issues and topics also need to be adressed but because of time and space limitations, I shall limit myself to the following topics:

WILDLIFE

1) The stated Forest Service goal to maintain a "viable" population of wildlife is too low and ambiguous. What is a viable population for each species and how will it be maintained? These questions are not adressed in the plan. Inventories of all major species on the Forest should be present in the EIS as baseline data from which to measure departures from current conditions. All game species should be monitored, not just elk. 7

2) The Plan should display the total budget for wildlife monitoring/evaluation. 8

3) The method by which the elk numbers on the Forest are to be increased by 40% should be clearly specified and described. 8a

GRIZZLY

1) Grizzly habitat manipulation in timber producing areas looks fine on paper and enables the Forest to help reach its proposed, inflated timber cut, but caution is advisable and careful monitoring is needed to reveal if it actually works in practice. 9

2) Augmentation may be critical to the maintenance of our existing grizzly population. Although it is not part of the Plan, the Forest Service should facilitate implementation of an augmentation program as soon as possible. 10

1. The Old-Growth Timber in MA 13 areas are unsuitable for timber production in the Final Forest Plan.

2. 10% of all the Forest land area below 5,500 feet elevation is now managed for old-growth timber wildlife habitat. This is 91% of the existing inventory (11% Forestwide). The Final Forest Plan now provides for 34% of all mature and overmature timber (excluding lodgepole pine) to be in an unsuitable timber managemnt category.

3. See the revised definition in the Glossary in the Final Forest Plan.

4. Many of these stands are now in the old-growth timber management area (MA 13). See the Final Forest Plan Map.

5. We agree. See the Riparian Area Guidelines in the Final Forest Plan document.

6. We have no record of receiving the worst water quality rating of all the Forest Plans in the State. See the EPA letter #49 in Appendix E.

7. The goal is to maintain at least a viable population of all vertebrite species. Many species, such as big game, will be managed well above the minimum viable level, which is defined as 40% of population potential. Viable polulations will be insured by providing diverse habitat conditions for the full range of species found on the Kootenai, and by monitoring indicator species which are most subject to management activities. By insuring the maintenance of indicator species, all other species should remain above the minimum viable level.

8. The total estimated costs for Monitoring and Evaluation are part of the Forest Planning records and are available for review at the Forest Headquarters in Libby, Montana.

8a. The projected increase in the number of elk was calculated by the anticipated increase in the forage produced as a result of vegetation manipulation due to timber harvesting. The forage changes will only produce the potential for the biological increase. The security provided by the increased amount of road closure is critical to the success of the potential increase in the number of elk.

9. The manipulation of grizzly bear habitat will be carefully monitored as you suggest.

10. The consideration of augmentation is part of the Forest Plan. See Appendix 8, Grizzly Bear Guidelines, in the Final Forest Plan document.

2

WATER QUALITY

I was appalled, but not suprised, to hear that the Kootenai Proposed Plan received the worst EPA rating for its water quality in the state. It has been obvious that the Kootenai is being treated as the timber sacrifice forest in the state so it comes as no suprise, but still with a sickening jolt of verification. A few brief comments: 11

1) Best Management Practices (BMPs) and forest standards reflect a bias toward mitigation, rather than prevention of damage in the first place. Rather like closing the barn door after the livestock escaped. Mitigation is not the end-all-cure for bad management practices. 11 a I would rather see better logging practices in sensitive areas, more carefully constructed roads, and full riparian habitat protection. 11 b

2) Given that 80% of stream sedimentation is caused by roads, and the Proposed Plan calls for 4600 more miles of roads in the next ten years, is the predicted 5-12% loss of fisheries even close to realistic? I believe this estimate is terribly low and totally unacceptable. 12

3) This conservative 5-12% fisheries loss is a forest-wide average only. The Plan should specify which drainages would be more heavily logged and degraded, and which ones would remain in a more pristine condition. 13

4) Roading and logging constraints are based on peak flow predictions, rather than by looking at water quality effects. A practice which fails to address the real problems of stream degredation caused by roading and logging. More parameters of water quality should be seriously included in sale layouts and more attention paid to the potential after effects of heavy development activities. BMPs sound good but do not necessarily protect the resource. 14

The Kootenai National Forest is currently blessed with some of the best quality natural waters in the state, and it would be a damned shame and an irreversible loss to everyone to destroy our water quality by short sighted greed for timber. Especially at a time of timber surpluses and poor markets. Good quality water belongs to all of us and should be an inalienable right. Once destroyed, good quality water is not easy to regain, and the sensitive aquatic ecosystems take years to recover, if they ever do.

WILDERNESS

Considering the Kootenai's vast acreage of wildlands, it is disappointing to see such a small fraction designated as potential wilderness. I strongly support the inclusion of the entire Pellick Ridge area in the Proposed Scotchman Peaks Wilderness area. The reasons given for its exclusion are incredibly weak considering the historical public support for the entire area, the agreement with ASARCO about the minerals there, and the general poor quality of timber. If the deletion came about at the bequest of the local ranger, as is currently the local rumor, then he should be taken aside and given a lecture on the importance of public concern in the management of our local public lands. These are our lands, our existence, our mental and fiscal livelihood. We have to live with the management decisions made by your organization for years after your managers have moved on to other regions. We are the ones that have to live with your mistakes and poor management deci- 15

Response to Letter #295 - Judy Hutchins, page 295a

11. See response to #6, above.

11a. See the revised Forest Standards in the Final Forest Plan document.

11b. See the Riparian Habitat Guidelines in the Final Forest Plan document.

12. The projected timber harvest and road construction levels, if sustained would result in some fish losses as calculated using the fishery model at our disposal. The amount of calculated loss in a given watershed depends on the sensitivity of the watershed in question, its threshold level of sediment, the rate of recovery, and the degree of harvest that is projected. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Standards in the Forest Plan document).

13. The predicted fish losses due to sediment were forestwide totals but were arrived at by individual drainage calculations, using criteria such as sensitivity to sediment, present threshold levels, recovery rates, and harvest intensity by alternative. No watersheds were degraded because they all had the protection of minimum management requirements to insure against degradation. See Appendix B in the EIS for the discussion on Minimum Management requirements.

14. The management intent to more fully protect water quality has been clarified in the Final Forest Plan. See section II and III.

15. A significant portion of Pellick Ridge has been recommended for wilderness in the Final Forest Plan. See the Final Forest Plan Map.

3

sions. Your rangers and trainees can move on to other areas and hence do not have to live forever looking at their clearcuts and resultant degraded streams, the mines and tailings ponds. We do not have the luxury of that option. 15

Trout Creek. I support the Montana Wildlands Coalition (MWC) recommendation for 32,640 protected wilderness acres. This area deserves protection on behalf of its elk population and primitive characteristics. The eastern portion already has a sale being laid out before the status of the area has been determined by the Congressional Delegation or by this Proposed Plan. The Cabinet District could at least have the decency not to jump the gun quite so rapidly. Managements decisions are already being made about the future of the Trout Creek Drainage before the proper processes have been followed. 16

Other areas that I support for wilderness designation include all the Cabinet Face Additions, Galena Creek, Ten Lakes, Thompson-Seton area, Tuchuck area, and any other places mentioned in Alternative E as having wilderness potential. 17 17a

Some areas labeled as MA 2 that I would like to see changed to MA 29 include Pellick Ridge, Galena Creek, the Upper Vermillion, the west side of Government Mountain, Dry Bench area on the Bull River, Mt. Vernon, the entire east side of the Cabinets. These areas all have outstanding wildland characteristics and deserve to be managed as roadless rec. with no other management activities allowed. 18

TIMBER AND ECONOMICS

The proposed Plan has a large number of weaknesses in the economics area as pointed out in Randall O'Toole's analysis of the Proposed Plan. Yield tables were manipulated to show more available timber than might actually exist; timber prices used in forecasting revenues are based on unrealistically high historical prices; the budget forcast is probably too high (federal budget defecits could easily preclude any increase what-so-ever). 19

The Plan only asks "how much timber can be produced", not "how much can be sold?". The proposed Plan should include a study of the demand for timber for the next 50 years which would consider the effects of Canadian supplies, changes in the housing market, and inovations in building technology. 20

A statement is needed in the Proposed Plan that forest managment is a holistic process and that cuts in the budget will be spread uniformly across the board. This would be to insure that roading and logging increases would not occur at the expense of recreation and water quality monitoring and mitigation. 21

Taking into consideration the above points, I request that the Kootenai create another Alternative with the following considerations and do a corresponding FORPLAN run: 1) constrain timber harvest to roughly current levels of 170 MM bf/year 2) constrain the budget to current levels of $20 million/year 3) include the Montana Wildlands Coalition's wilderness proposals in full as stated. 4) maintain or improve existing water quality as mandated by the state of Montana's water quality laws and do not allow the proposed 5-12% degredation 5) retain a minimum of 15% Old Growth throughout the Forest in a non-timber base 22

Response to Letter #295 - Judy Hutchins, page 295b

16. A significant portion of Trout Creek has been designated as roadless because of the mineral potential and wildlife values. This roadless designation will preserve the option to reconsider the roadless portion for wilderness in the future. The eastern portion has been designated as suitable for big game and timber which should not detract from the roadless values in the western portion.

17. The Cabinet Additions and Ten Lakes have significant wilderness recommendations. Galena Creek, Tuchuck, Thompson-Seton and the remaining areas shown in Alternative E have been designated roadless or other non-developmental designations because of a variety of reasons such as wildlife values, mineral potential, private land inholdings, and coordination with the Flathead National Forest. All of these roadless designations will be reconsidered for wilderness in the next planning period.

17a. See #17, above.

18. Management Area 2 has been changed to allow no timber salvage similar to Management Area 29. See the Final Forest Plan document.

19. The timber yield tables have been reanalyzed and found to be reasonable, and an analysis was done on more recent timber price information. See the response to CHEC's comments in letter #301 (Montana Wilderness Association). The budgets displayed represent what would be necessary to achieve the potential displayed in each alternative. If budgets are not forthcoming, language has been added to the Monitoring and Evaluation Plan to show the process to be followed. See the Monitoring and Evaluation Plan in the Final Forest Plan document.

20. The Forest Plan process projects the potential that each alternative can produce and compares these potentials against the tradeoffs that are necessary to achieve them, (i.e. budget, fisheries, miles of road construction, etc.). The Draft EIS assumed that the allowable sale quantity (ASQ) would, over each decade, end up being equal to the amount sold and eventually harvested. We agree that offering timber for sale will not necessarily mean that it will be sold and harvested. The Final Forest Plan timber sale program is based on the actual experieced demand of the last five years which the timber industry has indicated is an achievable level.

21. See the Monitoring and Evaluation Plan in the Final Forest Plan document.

22. See next page.

4

MA.

I appreciate the opportunity to comment on the plan. My apologies for the late submission of comments. I am hoping there will be no problems in their acceptance beyond the stated deadline. This fall has been hellish for me and deadlines have been difficult to meet. Especially as we were only granted a two week extension, rather than the 4 week one originally requested. 22

I am looking forward to reviewing the results of the requested FORPLAN run. Would you please be sure to send me any information generated. Thank you.

Sincerely,

Judy Hutchins

Judy Hutchins
P.O. Box 104
Heron, MT 59844
847-2717

Enc. 4 pages.

Response to Letter #295 - Judy Hutchins, page 295c

22. The alternative you propose is well within the range of the alternatives considered. Many of the suggestions you make are incorporated into the Final Forest Plan, although a few were not:

    1. The timber sale level was maximized in the first decade (202 mmbf/yr live green volume plus 25 mmbf/yr of dead lodgepole pine plus 6 mmbf of other salvage) for the purpose of providing as much stability as possible to the social and economic fabric of the area. The timber harvest level of 170 mmbf/yr. represents an historic average from 1979 through 1985, which was an early period of full production and a later period of low production in the wood products industry. The sale level during that same period averaged 221 mmbf/yr. The harvest levels appear to be on the increase and this trend is expected to continue. The flexibility to provide for a higher timber sale level is being retained so that harvest can continue to increase. See Chapter II of the Final EIS for more details.

    2. Several changes were made in management approach, in the Final Forest Plan, to reduce budget needs (See Appendix B of the Final EIS).

    3. The Montana Wildlands Coalition Wilderness Proposal was essentially represented in Alternative G. The Final Forest Plan protects these wilderness areas with the exception of the lower north face of Pellick Ridge, in the Scotchman Peak area, and the eastern portion of the Trout Creek roadless area.

    4. See the Final Forest Plan document for Standards that protect water quality and insure the attainment of the State Water Quality Standards.

    5. The Final Forest Plan retains 10% of all the Forest land base below 5,500 feet elevation in an unregulated (non-timber) old-growth timber management category. This is 91% of the inventoried 11% total available on the Forest. As a further note, the Final Forest Plan retains 34% of all mature and overmature timber (excluding lodgepole pine) in an unregulated (non-timber) land designation.

The topic I chose for tonight is that of Old Growth. As far as I know, the Kootenai is the only National Forest in Montana that manages OG as a separate Management Area. Our remaining OG on this forest is a unique and endangered resource. These pockets of old, mature, climax timber are the sole remnants of the great forests that once covered this part of Montana before the advent of the white explorers. And those great forests will never be seen again. And it is commendable to see the Forest Service managing these small pockets of OG with the intent of perpetuating at least a small fraction of this rare resource for the future.

The classic example of OG stands is one of tall, densely canopied, old trees; of downed logs decaying on the forest floor; of moderating temperature conditions. As stands increase in age, growth rates slow and vegetative conditions stabilize. This is a true climax state. As old trees die and fall over, they provide a particularilly rich habitat for over 20% of the bird and wildlife species on the Forest. The openings created by the downed trees regenerate with forbs, brush, and other sun loving species. These in turn give way to shade tolerant species, and the process continues on in a self perpetuating cycle. As it has done for millenia, and would continue to do so if given half a chance. It is the natural cycle of things. This mosaic of habitats is refered to as a "shifting mosaic steady state" which describes the stable nature of these stands and yet recognizes the constantly evolving variety inherent within the stand. 23

Richness in habitat translates into richness in all other aspects. About 58 species, or over 20% of the wildlife species on the forest find preferred habitats in OG and some may be entirely dependent on such habitat. To date the Kootenai apparently supports a relatively healthy number of OG related species including 10 species of woodpeckers, flying squirrels, barred owls, goshawks, and marten.

Response to Letter #295 - Judy Hutchins, page 295d

23. No response needed.

Floral richness is also high in these areas, especially for arboreal lichens, insects, saprophytes, and various forms of fungi and mushrooms. OG stands act as genetic reservoirs for some of these species, the value of which to medecine, etc, has yet to be determined. 23

Because of the often high volumes of wood per acre and stagnation found in these stands, they have historically been considered high priority for harvest. But once harvested, OG is gone and will never be replaced under normal timber management rotations. The actual timber found on these sites, however, is often of relatively low value for exactly the same reasons that make it valuable as wildlife habitat: rot, high defect, decay, low basal area, catfaces, lightening scars. Some of the richest OG areas are along the streams in riparian zones, also subject to special management in the forest plan. Another important category of wildlife habitat that is closely related to these topics are snags, aslo subject to special management guidelines. 23a. 23

So the Forest Service has been doing some solid ground work and has been devising a management plan for this very important aspect of wildlife habitat on the forest with the ultimate goal of retaining diversity and multiple use. ~~on the forest.~~

It all sounds great on paper. But in studying the proposed plan, a number of discrepancies, inconsistancies, and problems kept surfacing. Which troubles me. In the plan the Kootenai proposes to retain 149,000 acres, or 8% of each drainage in OG stands. Recommendations by researchers range from 8-10% as an absolute minimun for the best wildlife habitat management. The USFS is going for the absolute minimum. Which gives absolutely no leeway for any future changes. And as OG is essentially a nonrenewable resource, at least within our lifetimes, I think that the Forest Service is cutting the OG precentage tragically thin. What if future research determines that 24

E-384

Response to Letter #295 - Judy Hutchins, page 295e

23a. No response needed.

23. No response needed.

24. The Final Forest Plan provides for 34% of all mature and overmature timber (excluding lodgepole pine) to be in a non-timber (unregulated or unsuitable) land designation.

E-384

15-20% OG is required for some species to reproduce and persist? Sorry. Too late. Or if a wildfire wipes out some of the small remaining pockets; or if a Forest Supervisor wants to add a few acres of big trees to a sale? Who can possibly spend their time monotoring each small pocket to assure that it doesn't get nibbled away? It is impossible for anyone but the managing agency to do it. But can we trust this to be done over the long haul? To keep in line with the attitude that we, as the public, have a contract with the Forest Service to manage our lands, there are a few clauses that I would like to see added. For example: Take at least 15% of the OG in each drainage out of the timber base and not manage it at all. For to manage in FS jargon, is to cut. These should be the best quality, most representative stable, patches of OG. Perhaps the remainder of the OG could remain in Management Area 13 and be considered for 250 year plus rotations. But at least 15% would be protected. Dedicated perhaps, and retained forever. If some of the dedicated OG disappears due to natural acts such as fire or insects, some of the other OG acreage could then be added to the 15% in each drainage. In areas of the Kootenai, such as the Cabinet District, where a history of fire and logging has reduced the OG to less than 8% per drainage, suitable land should be immediately set aside to retain and manage for OG characteristics. 24 25

In the proposed plan are some discrepancies between what is promised for OG management and what is happening on the ground. In the MA directives, it is stated that "an existing stand in this MA will not be harvested until a stand of equal or nearly equal effectiveness as OG habitat is available". And yet the FS is proposing two sales for FY 1985, perhaps already done, that would log respectively 69 and 701 acres of OG. That is a lot of acres and it is of some question whether there are replacement stands of that size available. 26

Response to Letter #295 - Judy Hutchins, page 295f

25. See response to #24, above.

26. The old-growth timber Management Area (MA 13) is now in the non-timber base (unsuitable).

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Another discrepancy. In the DEIS, page 11-79 a minimum desired acreage of 149,00 acres is mentioned. And yet the acreage listed in the MA directives is 92490. What happened to the remaining 56,910 acres? 26

The MA directives allow periodic entry into the OG stands to do precommercial thinning and one commercial thin to "produce large trees of suitable spacing in stands destined to become OG." Sounds reasonable and good. But in actuality may merely exist$ as an excuse to get into the stands and remove some timber. Again in the DEIS, is the following Passage : refer to DEIS Vol. 2 III-61 paragraphs 3+5 Which is fine. But stagnation is one charachteristic of OG and management practices used to promote OG conditions should not be used to bolster the annual cut. 27

In a time when already purchased timber is being returned to the seller, the markets are being flooded with imported timber, and prices are way down, I see no need to sacrifice a rare and endangered, nonrenewable resource. By dedicating 15 of the OG and retaining the remainder in the proppsed MA, the survivability of this resource unique to our area could be assured. These stands are not renewable in our lifetimes or that of our children. And I would like to make a recommendation on the side of conservatism, and wait a while until more is known before going in and destroying a priceless habitat. Once gone, for us it is gone forever, and too much is gone already. 28

So I would like to say in conclusion that I am very pleased that the USFS is making an honest attempt to manage the OG, but there are a lot of discrepancies in their proposed plan that are in dire need of straightening out. and some improvement that could be made as well. 29

plan is in Heron library

By: Judy Hutchins
P.O. Box 104
Heron Mt.

Response to Letter #295 - Judy Hutchins, page 295g

27. See reponse to #26 above.

28. See response to #22, item 5., above.

29. See the Final Forest Plan document and Final Forest Plan Map.

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146

LAURA MAE JACKSON ← Jackson
320 LOST HORSE Rd
HAMILTON, MT 59840
OCTOBER 28, 1985

KOOTENAI NATIONAL FOREST
RR #3, BOX 700
LIBBY, MT 59923

SUBJECT: FOREST PLAN

WITH REFERENCE TO THE PROPOSED KOOTENAI FOREST PLAN, I WOULD LIKE TO MAKE THE FOLLOWING COMMENTS.

TO INSURE PROTECTION AND VIABLE COHESIVE UNIT BOUNDARIES, WILDERNESS STATUS SHOULD INCLUDE TROUT CREEK AND PELLICK RIDGE IN ADDITION TO WHAT IS PROPOSED FOR THE SCOTHMAN PEAKS, CABINET ADDITIONS AND TEN LAKES STUDY AREA. 1

IT IS BECOMING INCREASINGLY CLEAR THROUGHOUT REGION ONE AND NATIONALLY, THAT EXPANDED ROAD PROGRAMS ARE BRINGING UNMANAGEABLE PRESSURES OF USE ON WILDERNESS AREAS. IN THIS LIGHT THE PROPOSED EXPANSION OF THE ROAD PROGRAM ON THE KOOTENAI IS NOT ACCEPTABLE — NOR ARE THE CONSEQUENT WATER QUALITY IMPACTS. THE DRAMATIC INCREASE IN THE ANNUAL CUT WHICH THESE PROPOSED ROADS WOULD ACCOMODATE CAN ONLY LEAD TO AN ECONOMIC SITUATION. GIVEN THESE FACTS. IT SEEMS VITAL THAT THE AGENCY ACCEPT ITS LONG TERM SOCIAL AND RESOURCE RESPONSIBILITIES — KEEPING THE ANNUAL CUT AT APPROXIMATELY THE HISTORICAL LEVEL OF 170 TO 175 MBF AND PROPOSING A ROAD BUILDING PROGRAM APPROPRIATE TO THIS LEVEL. THIS WOULD ALSO MAKE POSSIBLE PROPER GUARANTEED PROTECTION OF OLD GROWTH TIMBER AREAS BY REMOVING IT FROM THE TIMBER BASE, SUCH PROTECTION IN RIPARIAN AREAS MUST BE A FIRST 2 3 4 5 6

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Response to Letter #146 - Laura Mae Jackson, first page

1. Due to the combination of Wilderness, wildlife (elk) and mineral values in the Trout Creek Area, it has been designated as Management Area 29. Much of Pellick Ridge has been added to the Scotchman Peaks Wilderness Proposal (see the Final Plan map).

2. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology for moving timber to mills. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. It is estimated that an additional 3,850 miles of road will be needed to access and manage the timber land base. There were about 6,200 miles on the Forest as of January 1, 1986. The Final Plan calls for about 6% fewer total miles of road than the Proposed Action primarily because the suitable timber land base was reduced to provide for old-growth timber dependent species.

   The Monitoring and Evaluation Plan has been modified so that, in conjuction with application of the best available soil and water conservation practices, the State Water Quality Standards will not be violated.

3. An analysis of the timber supply situation in this area over the next ten years is described in Appendix B of the FEIS. The allowable sale quantity during the 10 year life of this plan is maximized (subject to a lot of limitations) so as to provide as much stability as possible to the social and economic fabric of local communities.

4. The historical timber harvest level of about 170 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained.

5. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

6. Many of the acres retained for old-growth habitats (MA 13) are in riparian areas.

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3/ PRIORITY — BOTH FOR WILDLIFE HABITAT AND TO PROTECT WATER QUALITY. STRICT STANDARDS FOR WATER QUALITY — AND RIPARIAN AREAS ARE A NATIONAL INTEREST WHICH THE PLAN MUST TAKE INTO ACCOUNT. 6 a 7

THANK YOU FOR YOUR ATTENTION.

Jy.

Response to Letter #146 - Laura Mae Jackson, page 146a

6a. The riparian area management standards have been reviewed and modified as necessary to insure protection of resources while permitting essential management flexibility.

7. See the last paragraph to response #2 above.

Nov. 7, 1985

Kootenai N. F. Draft Forest Plan

Supervisor
Kootenai National Forest
R. R. #3, Box 700
Libby, Mont. 59923

Dear Supervisor:

I have a few comments on your proposed Kootenai Forest Plan.

I was a little surprised to learn that only 25% of the Kootenai National Forest is still roadless. Most of that 25% should be retained in its undeveloped condition for the protection of ecosystems, watersheds, stream quality, wildlife habitat, and primitive recreational resources.

You should recommend the following roadless areas for wilderness designation: Trout Creek, Cabinet Mt. Additions, Ten Lakes, and Scotchman Peaks.

Scotchman Peaks is a marvelous wild area with high floral and faunal diversity. Conservation groups have supported this obvious wilderness candidate for years, at least since RARE II. Please do likewise, including in your wilderness proposal all 80,000 acres recommended by Montana conservation groups, and including in particular Pellick Ridge. 1

Other roadless areas should left roadless, with ROS I and II (Primitive and Semi-Primitive Nonmotorized) management. 2

You are proposing too much timber harvesting; 217 MMBF/yr, to increase to a staggering 277 MMBF/yr over 50 years. But the average cut for the past 10 years has been 173 MMBF/yr. I think you should lower your proposal to at least that level. 3 This view is reinforced by your incredible timber access road building proposal. You already have about 6000 miles of roads on the Forest. Yet you propose to build another 4600 miles. This is way too much, and will cause significant damage to streams and fisheries, and wildlife habitat, including that of elk and bear. 4

Holding timber harvest levels down to below 173 MMBF/yr and building far fewer miles of new roads will also help protect more of your old growth, which is invaluable for many species. You should remove at least 20% of the existing old growth from the timber base; you cannot maintain an old growth community by logging it. 5 The old, "decadent" trees are an important part of the evolving old growth ecosystem. This 20% should be well distributed across the Forest, with an adequate portion of it in areas along streams. 5a 6

Thank you for your consideration.

Sincerely, Jerry Jayne

Jerry Jayne
1568 Lola St.
Idaho Falls, Id. 83402

1. The Trout Creek Area has been primarily designated as Management Area 29 due to the wildlife (elk) and mineral resources there. MA 29 allows some habitat management so that the health of the elk herd can be retained. Most of the Cabinet Additions except the south half of the Cabinet Face East area (MA 2) and Government Mountain (MA 2) have been proposed for Wilderness designation. A major portion of the Ten Lakes Area is proposed for Wilderness. Most of the Scotchman Peaks area is proposed for Wilderness designation, including most of the Pellick Ridge area.

2. A major portion of the remaining roadless areas have been designated as Management Area 2 as you suggest (see the Forest plan Map).

3. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained.

4. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. As of January 1986 there were about 6,200 miles of road on the Forest. The Final Plan is estimated to require about 3,850 more miles to complete timber access needs. The use of the best soil and water conservation practices coupled with the modified Monitoring and Evaluation Plan should insure that the State Water Quality Standards are met. Much of the timber harvest for which roads are required is designed to manipulate vegetation in ways that will benefit wildlife. Timber harvest can be designed to provide much of the wildlife benefit of wildfire without the devastating impacts.

5. The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

5a. The MA 13 portion of this old-growth habitat is widely distributed across the Forest and often occurs in riparian areas (see the Forest Plan map).

6. See response #5a, above.

Jim,

My comments on the proposed plan fall into 4 groups.

A. general points re: the whole plan;
B. a list of information which should be included, but is not;
C. specific comments re: management area prescriptions;
D. comments re: allocations.

A. general points.

1) I feel the plan is too biased toward development — by the following:
a. all alternatives would increase timber;
b. the "bare minimum" treatment afforded old growth and wildlife other than elk (e.g. "viable" populations) — 1
c. re: minerals — I quote from our following mailing:

"The proposed plan deletes Pellick Ridge from recommended wilderness due to its mineral potential, in spite of strong public support for wilderness designation. — 1a

"The southern part of the proposed Cabinet East Face wilderness additions were not recommended for wilderness to preserve mill and tailings pond siting options for US Borax's proposed mine at Rockhole. — 2

"Perceived interest in minerals in the Trout Creek drainage may be responsible for its deletion from proposed wilderness status and the inclusion of only a fraction of the original area in roadless MA 29. — 2a

"Neither high background levels of heavy metals in Rock Creek, nor the unavoidable and unmitigatable impacts on the grizzly, are seen as deterrents to mineral development in the Cabinet." — 2b

2) Similarly, the plan is too biased toward "management." This bias, even concede, is graphically illustrated by Timber standard #8 for Riparian areas (p. III-6): "Units will be designed to avoid leaving unmanageable strips along stream edges." Why? Management is basically mitigation for the undesirable side effect resulting from development and use of the Forest. The alternative to mitigation/management is to simply curb our appetites for — 3

1. (a) Alternative I was designed to approximate current harvest levels and carry them into the future. The other alternatives were aimed toward resolving the issues in various ways and it was found that higher timber harvests were possible even while maximizing amenity oriented outputs such as Wilderness and elk.

   (b) The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding Lodgepole pine) has been removed from the regulated base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

1a. (c) Recent data has become available which causes us to recharacterize the mineral potential of Pellick Ridge as moderate rather than high. Because of this change we have proposed that most of Pellick Ridge be included in the Scotchman Peaks Proposed Wilderness Area.

2. The high mineral potential and the intermingled private lands in the south portion of Cabinet Face East led us to designate that area as Management Area 2 rather than proposing it for Wilderness Designation.

2a. Options for elk management in the Trout Creek Area have led us to designate most of it as Management Area 29. The high wilderness values fit better with MA 29 than MA 2 while the high elk values fit better with MA 29 or MA 2 rather than Proposed Wilderness.

2b. The State is responsible for enforcing the State Water Quality Standards. Unavoidable and unmitigable impacts on grizzly bear could be a deterent to mineral development in the Cabinets. Conflicts between the Endangered Species Act and the mining laws may need to be resolved through litigation. The Forest Plan designations allow mining plans to be developed and evaluated (through the process provided by the National Environmental Policy Act) to determine whether or not such conflicts are likely to occur.

3. This standard has been modified in the Final Plan (see Chapter II). Management does involve mitigation to prevent undesireable side effects. Management can be more broadly defined as the process needed to maximize the net public benefit from the Forest by supplying an appropriate mix and level of resource outputs of all kinds. One alternative to forest management would be to "curb our appetites" for commodities and amenities. The analysis of the Minimum Level Benchmark clearly shows that this approach fails to maximize the net public benefit. Defining the meaning of life is outside the regulatory framework provided for Forest Planning.

commodities (and amenities – e.g. overuse of wilderness). The decision about whether to mitigate effects or restrict use is essentially a value judgement – and one that should reflect more than just economic factors; e.g. aesthetics, humility, philosophy (is the meaning of life really just to improve our standard of living?). The planning effort should aim more for stewardship, rather than development and management. 3

3) The planning effort is very sophisticated except in one crucial area: demand forecasts. For example, the plan asks only "how much timber can we produce," and completely ignores the question "how much timber can we sell." This lack perhaps in part accounts for its developmental bias – it's better to have too much, than to stifle growth with too little. But I much prefer Bob's management of the Forest over yours – so rather than irretrievably committing roadless resources to meet a possibly non-existent demand, you should expend much more effort forecasting demands for timber, and recreation, water, wilderness, etc. Specifically, your implicit assumption that the Kootenai can sell any quantity of timber which is "cost effective" to produce is unjustified. Canadian imports, changes in the housing market, + changes in wood technology all can significantly affect demand in the short and long term, and should be considered. 4

4) The recreation analysis gives the impression that there's plenty of wilderness and not enough semi-primitive motorized. I think both conclusions are wrong. Re: wilderness, the plan discusses the problem with capacity (RVD/acre) calculations vis-a-vis unevenly distributed use, but in the end simply ignores the fact that virtually every campsite in the Cabinets is badly battered – presumably because the analysis is not sophisticated enough to deal with the distribution problem. The error re: trail-bike use likely arises because you must assume (understandably) that bikers 5 6

4. The timber volumes provided for each alternative are "allowable sale quantites". The actual supply and demand relationships that come to pass will determine whether or not this timber will actually be sold and how much will actually be paid for it. The factors you list and many others play upon the supply and demand relationships that can be expected for timber in the future. There is no available technique for accurately projecting changes in these factors or long or short term supply and demand relationships as they relate to a particular National Forest. For this reason we must wait to determine whether this timber will actually be sold. In order to fairly depict the potential environmental impacts of the Forest Plan, we have used the "allowable sale quantity" to project impacts. The "allowable sale quantity" is based upon a cost efficient level of output given a set of constraints designed to resolve the public issues and management concerns in various ways. The value of timber is based upon projections of national supply and demand relationships. Of the 404,000 acres in inventoried roadless areas, the Forest Plan preserves 260,000 acres in roadless and Proposed Wilderness designations. Of the remaining 144,000 acres, we expect about 10,000 acres to be made unsuitable for wilderness designation during the 10 year life of the plan.

5. Our analysis indicates that there will be sufficient capacity available to satisfy anticipated levels of Wilderness recreation use. We recognize that there are problems with distribution. These problems can not be resolved by simply designating more Wilderness (preferred use locations will probably remain preferred whether or not another area is designated Wilderness). The guidance for Management Area 7 recognizes this and provides for managing users to prevent degradation of the Wilderness (more details will be included in the Cabinet Mountains Wilderness Action Plan when it is completed).

6. Motorized use of closed roads would not be typically considered "semi-primitve motorized recreation", but would rather be essentially the same as motorized use of open roads. The semi-primitive motorized recreation experience involves a more primitive environment through which a road may run. Such use is provided for by Management Area 3 and, for snowmobiles, in portions of Management Area 2.

head road closures, when in fact hikers (+ snowmobs) use closed roads extensively. Additionally, both conclusions rely on demand forecasts that sound like x·c·y projections based on projected population growth in the Spokane SMSA; the question of changes in how people recreate (e.g., has primitive recreation been growing faster than motorized?) is not addressed. 6 7

5) The use of high timber prices (from the boom period in the late '70s) has skewed the plan toward producing timber. Some or all of the alternatives should be re-run with more realistic timber prices — reflecting not just more recent sales/lumber market, but also a closer look at demand + price trends. (Note that price trends for lumber are continually being revised downward.) Also, the plan should document the claim that the costs of building roads are not inflating, and the relative costs of logging are dropping, and perhaps include a run of the preferred alternative assuming that road construction and logging/milling costs follow lumber prices. 8

6) In accord with the emphasis on development and management, all of the alternatives would require significant increases in budget. Given the current political situation, this seems totally irresponsible. At the very least, a statement is needed that the proposed plan is a holistic approach to management, and that reductions of management intensity due to a too-small budget will be spread proportionally across all resources; e.g. no CI roads without the full measure of concomitant monitoring and mitigation. 9 9 a

7) Finally, to sum up in a positive way all the above verbiage, I would like to suggest an additional alternative/Forplan run, characterized by the following constraints: 10

a. timber is constrained to 170 MMBF/yr. programmed, plus 15 MMBF/yr. salvage;

Response to Letter #128 - Cedron Jones, page 128b

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7. Methods for developing use projections can be very complex yet produce results that are no more valid than methods that are simple. The State of Montana suggested a more complex projection method that produced essentially the same results as the approach we used.

8. An analysis of the effects of alternative base timber prices and price trends is provided in Appendix B of the FEIS. Road costs have declined significantly since the base costs were developed for the Draft EIS. Updated road costs are included in the analysis described in Appendix B.

9. The Final Plan calls for a lower budget than the Proposed Action.

9a. Management problems resulting from budgets different from those presented in the Forest Plan are to be handled according to the provisions of the Monitoring and Evaluation Plan.

10. The alternative you propose is well within the range of the alternatives explored in the DEIS. Many of the suggestions you make were incorporated into the Final Plan although some were not:

a. The timber sale level was maximized in the first decade to 233 MMBF/yr (202 mmbf/yr live green, plus 25 mmbf/yr dead lodgepole, plus 6 mmbf/yr of other salvage) for the purpose of providing as much stability as possible to the social and economic fabric of the area. The timber harvest level of about 170 mmbf represents an historic average from 1979 through 1985, which was an early period of full production and a later period of low production. The sale level during that same period averaged 221 MMBF per year. The harvest levels appear to be on the increase and this trend is expected to continue. The flexibility to provide for a higher timber sale level is being retained so that harvest can continue to increase. See Chapter II of the FEIS for more details.

b. Several changes were made in management approach to reduce budget needs (see Appendix B of the FEIS).

c. Pellick Ridge has been proposed for Wilderness designation while the other areas are mostly in Management Area 2 or 29. Management Areas 2 and 29 appear to FORPLAN essentially the same as Management Area 8.

d. The old-growth requirement has been increased from 8 to 10 percent of the land area below 5,500 feet in elevation. Our inventory indicates that there is about 11% existing. The entire 10% has been removed from the regulated timber base. See, also, the response to 1(b) above.

b. The budget is constrained to ≤ $20 million per year;
c. Pollick Ridge, Trout Creek, Tuchuck and Thompson-Seton be additionally recommended for wilderness; 10
d. The old growth requirement is boosted to 15%, with at least half of that removed from the timber base

B. Information I'd like to see in the plan.

1) a line item comparison of present and proposed budget (i.e. expand Appendix 7) 11

2) The full costs dedicated to monitoring and evaluation. 12

3) a transportation network map - showing generally where those 4600 miles of proposed roads would be. 13

4) The 5-year plan for "hard-money" roads.

5). Projections of water quality degradation / fish population decreases for specific drainages - not just a forest wide average. 14

6) a priority listing of planned land adjustment - what will you actually work on? 15

7) Baseline data on Forest fauna - specifically, a total species list, plus population data for indicator, and all game species. 15 a

8) a trail network map/plan - specifying which trails 15 b

Response to Letter #128 - Cedron Jones, page 128c

11. The actual 1985 budget (as actually spent) is compared to the estimated Final Plan budget in the following chart (additional detail is available in the Planning Records - all values are expressed in 1986 dollars):

CATEGORY	1985	Final Plan	Change from '85
Timber	$8,697,000	$10,200,000	+17%
Roads	6,182,000	10,300,000	+67%
Rec/Wildlife	869,000	2,052,000	+136%
Range	70,000	102,000	+46%
Other	5,540,000	7,339,000	+32%
TOTAL	$21,358,000	$29,993,000	+40%

The Final Plan budget estimates assume that the entire program described in the Final Plan will be fully implemented and funded. If, for any reason, programs and funds differ from those projected, the Monitoring and Evaluation Plan will be used to determine appropriate action.

12. The estimated total costs of monitoring and evaluation are part of the Forest Planning records and are available for review at the Forest Headquarters in Libby, Montana.

13. The Forest Plan map shows the areas which will eventually be roaded as indicated by MA's 11, 12, 14, 15, 16 and 17. Transportation development plans have been prepared for some areas and are available for inspection at the Engineering Zone offices. These plans will be prepared or updated to conform to the direction in the Final Forest Plan. A 5-year Capital Investment Plan for Roads and Bridges is available for review in the Forest Supervisor's office.

14. The fish population estimates shown in the EIS were developed for comparative purposes using a model which has low reliability in the absolute sense. The reliability would be further reduced if the results were displayed by drainage. The bottom line is that water quality will meet State Water Quality Standards.

15. Emphasis will be placed, as opportunities become available, on acquiring needed rights within the Clark Fork - Bull River and Upper Fisher - Vermillion - McGinnis areas to assist the Forest's objectives in obtaining additional grizzly habitat and maintaining roadless recreation opportunities.

15a. Population data for most species (excluding big game) does not exist. Monitoring of wildlife will generally be based upon habitat capability rather than population.

15B. A trail inventory is available for review at the Forest Supervisor's office.

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will be maintained, and which abandoned, under the plan. As an ardent biker, I feel trail are badly neglected in, and endangered by, this plan. 15 b

Additionally, since you seem determined to be "managers" rather than custodians of the Forest, I would like to see a Kootenai National Forest Annual Report — roughly 20 bound pages, delivered free on request, summarizing data re: timber sales, roads, recreation, water quality, wildlife populations, and finances. As with any professional organization, such a report would allow us "stakeholders" to assess the performance of your management. The hoped for improvement in accountability, credibility, and public knowledge should in turn facilitate your job as managers. 16

C. Management Area Prescriptions / Standards.
The following comments are keyed to specific standards in Chapter III of the plan.

Riparian: virtually all standards under Recreation and Timber are ridiculously equivocal. "Should" should be replaced with "must."
Wilderness #1. "resolve" sounds so simple — what do you actually plan to do?
Timber #8. What's wrong with "unmanageable" strips? 17

MA 2: Recreation. Too equivocal re: motorized use. Should split into 2A-motorized and 2B-non-motorized.
Minerals #2 + #3. remove the word "generally."
Lands #3. remove the word "normally."
Facilities #1. permit roads only following validation or patenting of claims.
Timber. state that no roads will be constructed 17 a

16. The "Kootenai National Forest Status Report" is updated and published annually. It summarizes some of the information you mention and is available at all Ranger Stations and the Forest Supervisor's Office on request. Your suggestion for a more comprehensive report is well taken.

17. The desirable riparian conditions have been further, and more forcefully, described. Some of the guidelines have been made less equivocal and flexibility has been retained in others.

A Wilderness Action Plan is being developed to deal with site specific problems.

The reference to "unmanageable strips" has been removed.

17a. The Final Plan is more specific about areas of motorized use. For the minerals section, the term "generally" is retained because the exceptions are noted. For the lands section, the term "normally" is retained because the exceptions are noted. We do not have the authority to prohibit road construction for mineral activities if the road is necessary. As noted in the Facilities section roads will not be constructed for surface management (that includes timber harvest).

for timber harvest operations. 17 a

MA7 : Recreation #2. how can there be semi-primitive motorized opportunities in designated wilderness?
" #3. horse use should not be encouraged.
" #4. what does "managed" mean?
Wilderness #5. The only "unnatural" losses of the wilderness resource I can imagine would be those resulting from F.S. management. 17 b

MA 10 : Recreation #2. most of the areas in MA10 I know are not semi-primitive motorized class (e.g. east side of Cut Ft Elk Cr., north side of Pilgrim Cr., Pollick Ridge Hit Mtn., Berray Mtn.)
" #3. many of these areas are very high viewing and should be "retention" (e.g. Berray Mtn, Hit Mtn, Pollick Ridge)
Facilities: are new roads permitted? if so, why?, at what level?, with what restrictions?
Schedule of Management Practices. I am completely incredulous at 4200 acres per year of wildlife habitat enhancement. If not a mistake in writing, it's certainly one in planning. In 20 years you plan to burn or cut (you should state how much of each) 84,000 acres, or over 75% of the total area in MA 10 — and that totally unacceptable. 17 c

MA 11+12 - should break out burning vs. timber harvest for wildlife habitat enhancement.
re: "maximizing edge effect" — I'm suspicious this is paper policy only for 2 reasons: it's clearly less economical to cut long, skinny units than square/rectangular units; and the Rice Paddy clearcut behind our place (MA 12) are almost perfect squares. 17 d

Response to Letter #128 - Cedron Jones, page 128e

17b. The reference to motorized recreation has been deleted. Horse use is acceptable. Specific methods for site and use management will be addressed in the Cabinet Mountains Wilderness Action Plan. The insect and disease standard has been eliminated.

17c. The ROS characterization applies to MA 10 in general, not just the areas you mentioned. A visual quality objective of retention may not be compatible with the goals for winter range management so, in this MA, the winter range management will prevail. New roads are permitted consistent with the goal of the management area and the restrictions described in the facilities standard. The schedule for habitat enhancement is designed to simulate natural fire frequency and to provide forage. Timber harvest will rarely be used for habitat manipulation (see the wildlife and fish standards).

17d. The timber harvest program is spelled out in detail. The habitat enhancement involves other tools such as fire (this holds true for other MA's as well). The standard involving edge effect has been clarified. See response #11 above.

note re: wildlife habitat enhancement, as in MAs 8 thru 12 — the total scheduled for 1st decade is 5180 acres per year.
1. how much is burning, how much is cutting?
2. why is there no increase in wildlife/recreation budget in proposed plan over current direction? This appears to be a major new management program you're planning to undertake. 17 d

MA 13: Wildlife #2. should state "not permitted" - too vague otherwise
Timber #1. should be unsuitable
Minerals #2 what is the "minimum effective acreage?"
Facilities. any roading leads to increased access and loss of habitat (eg. fire wood cutters) 17 e

MA 18 + 19: The W.yr. sale plan shows over 1100 acres in MA 18 scheduled for harvest, and over 600 acres in MA 19. That seems like an excessive acreage on which to "test techniques."

note: The W.yr. sale plan also shows the following planned violations of your plan: 17 f

1985: MA 13 - 770 acres, MA 10 - 37 acres
1987: MA 24 - 50 acres, MA 13 - 238 acres, MA 10 - 223
1989: MA 2 - 30 acres
1993: MA 2 - 20 acres
1994 MA 10 - 800 acres

MA 21: Research Natural Areas should be corridor exclusion areas. 17 g

MA 29: Recreation #2, and #3, #4. How can there be semi-prim. motorized opportunities, if trails are closed to 17 h

17e. MA 13 has been removed from the regulated timber base and the standards and guidelines have been rewritten (generally in conformance with your comments).

17f. The Ten Year Sale Plan has been revised.

17g. This change has been made.

17h. These roads are adjacent to MA 29, but the ROS class overlaps MA 29. "No surface occupancy" has been added. These have been designated corridor exclusion areas. The schedule for habitat enhancement is designed to simulate natural fire frequency and to provide forage.

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motorized vehicles and ORV use not permitted?
"Mineral #2. should add "no surface occupancy."
Facilities #4. should be corridor exclusion area.
Schedule of Management Practices . . . again, 140 acres per year seems like a lot of burning in Trout Creek + Cataract. 17h

D. Allocations.
My only objection is that too much ground has been put in MA 2. I would like to see the following areas moved to MA 29, specifically to protect them from salvage harvest:
1. Canyon Pk.- Sahara G. roadless area
~~[illegible]~~
2. Roderick Mtn. roadless area
3. Northwest Pk Scenic area
4. Robinson Mtn Scenic area
5. Vinal G./Fish Lakes area, with a trail corridor up to Mt. Henry
6. Mt. Fool O'Kelly (Willard-Lake Estelle) roadless area. 17i

Sincerely,
Cedron Jones
1027 N. Jackson
Helena, MT 59601.

P.S. — Two last minute additions to B., "information to include in plan
7) a map showing which lands have been leased for oil/gas exploration, and the lessee.
10) a map showing the location of present and planned hard-rock mineral development and exploration, and the operators 18

17i. The provisions for salvage harvest in MA 2 have been deleted. No harvest will occur.

18. Including a map showing leases and their holders is impractical. The Forest has hundreds of leases. The boundaries, status and holders of these change on a continual basis; it is common for more than 50 such changes to occur in one month. The most meaningful information is the land available for leasing or for surface occupancy as provided in the Plan.

Information on planned mineral exploration and development is too speculative to be of site specific value. A narrative on the general location and nature of future mineral development potential is provided in the EIS.

E-397

106

October 28,1985

KOOTENAI NATIONAL FOREST
Route 3, Box 700
Libby, Montana 59923

Gentlemen,

I am writing in favor of Alternative N for the Kootenai Forest Plan.

The Kootenai is as important to Flathead County and all Montana as it is to Lincoln County. In order to help "Build Montana", we first must have a healthy economy. The forest industry helps provide jobs in NW Montana. It creates a flow of money that helps pay taxes, and taxes are what keeps our system going. Multiple-use management creates that flow of money, wilderness and roadless areas do not. 1 2

Please do not close up any more of our PUBLIC lands by turning it into more wilderness and roadless areas. What land is left must remain open for the benefit of all. This land can be better protected for future generations by proper multiple-use management. 3

Please support Alternative N for the Kootenai Forest Plan.

Sincerely,

Yvonne Kartheiser

Yvonne Kartheiser
1075 Kelley Road
Columbia Falls, MT 59912

copies:

The Honorable:
John Melcher
Max Baucus
Ron Marlenee
Pat Williams
James McClure
Steven Symms
Alan Simpson

1. We have evaluated the timber supply situation in the area (including Flathead County) and have maximized the allowable sale quantity during the life of this Plan to help provide some stability in the local economy (see Appendix B of the FEIS).

2. Wilderness and roadless management are integral parts of the multiple-use philosophy. Some lands can not support timber harvest, some lands cost more to log than the timber will ever be worth and some lands provide more benefits to the general public when designated for other uses. The Final Plan generally designates these lands to purposes other than timber management including Proposed Wilderness.

3. See response #2 above.

238

Richard C. Kerr II
Star Rt. #2 Box 130
Libby, Mt. 59923

October 31, 85
Kootenai River

(2nd letter)

Subject: Forest Plan

In addition to my concern of quality management of forest resources, I would like to include the following comments and recommendations:

(1) I favor an alternative ~~most~~ represented by Alternatives G&H with the following stipulations;

a. Reduction in New Road Construction. This can be accomplished by eliminating road construction within: poor & marginal timber producing areas, fragile soil & watershed areas, and important wildlife habitat. 1

b. Maintain a more responsible cutting level... to all resources. 173 million board feet / year is a more responsible harvest level. 2

c. I favor an increase in old growth retention from 8% to 12%-15%. 8% is the minimum for sustaining old growth dependent species. We should maintain an adequate buffer margin in case research 3

(over)

1. The Final Plan calls for a lower level of timber harvest than Alternatives G and H, proposes less Wilderness, designates more unroaded types of recreation, and requires less roading.

   The required road mileage was reduced in the Final Plan by removing old-growth habitat designations (MA 13) from the regulated timber base.

2. The timber harvest level of 173 mmbf is an average representing an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained.

3. The 8% figure for old-growth retention in the Proposed Action relates to the percentage of acres on the Forest below 5,500 feet in elevation. About 11% of this land base is currently in old-growth habitat so your proposal for 12 to 15% is not possible. The Final Forest Plan retains 10% of this land base in old-growth condition. These areas are dispersed across the Forest and have been removed from the regulated timber base.

trends are wrong, and in case of mismanagement. We need a secured commitment from all levels of management to ensure old growth areas have: good dispersion, exist within all habitat types, and have proper size to ~~ensure~~ sustain old growth dependent species. 3

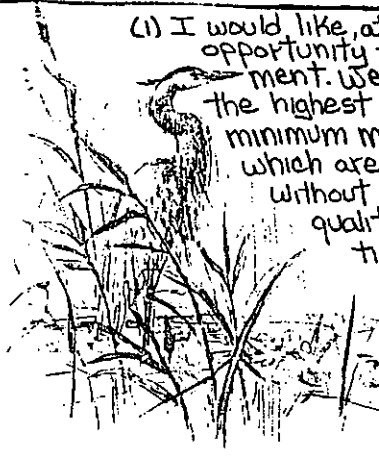
d. I favor for wilderness designation the following: Scotchman Peaks (all of Pellick Ridge area), Trout Creek, Ten Lakes, Cabinet Additions & Kootenai side of Tuchuck & Thompson-Seton 4

Sincerely,
Richard C. Kerr II

43

October 14th, 1985
Kootenai River

Questions & comments concerning DEIS and Proposed Forest Plan:



(1) I would like, at this time, to take the opportunity to stress quality management. We must strive to incorporate the highest level of quality within our minimum management requirements which are to apply to all alternatives. Without maintaining the highest quality of management within timber and wildlife, watershed and fisheries, there can be no alternative which is better than another in my mind. 1

(2) I prefer Alternative G. 2

Sincerely,
Richard C. Kerr II

Response to Letter #238 - Richard C. Kerr II, page 238a

3. SEE PREVIOUS PAGE

4. Most of the Scotchman Peaks area (including Pellick Ridge) has been proposed for Wilderness. Trout Creek has been designated as Management Area 29 due to the elk and mineral values in the area. MA 29 permits some manipulation of vegetation so that the health of the elk herd can be maintained. A major portion of the Ten Lakes area is proposed for Wilderness designation. Most of the Cabinet Additions except the south half of the Cabinet Face East area (MA 2) and Government Mountain (MA 2) have been proposed for Wilderness designation. The Kootenai side of Tuchuck and Thompson-Seton have been designated as MA 2 for consistency with the designations on the Flathead side.

Response to Letter #43 - Richard C. Kerr II, first page

1. No response needed.

2. See response #1 to your other letter.

10-31-85 263

PO BOX 483
GREAT FALLS, MT
59403

SUPERVISOR
KOOTENAI NATIONAL FOREST

I WOULD LIKE TO MAKE SOME COMMENTS ON THE PROPOSALS IN THE DRAFT MANAGEMENT PLAN ON THE KOOTENAI NATIONAL FOREST.

IT SEEMS TO ME, FIRST OF ALL, THAT THE PLAN IS TOO HEAVILY WEIGHTED ON TIMBER AND ITS ASSOCIATED ROADING OVER THE NATURAL, RECREATIONAL AND WILDLIFE VALUES OF THE FOREST. RATHER THAN A LARGE INCREASE IN TIMBER HARVESTING AND ROADING, 1
TIMBER HARVESTS SHOULD BE MAINTAINED AT THE CURRENT 173 MILLION BOARD FEET ANNUALLY. THIS IS A SUSTAINABLE, HISTORICAL AND MORE REASONABLE LEVEL OF TIMBER HARVEST. 2
THE OVER 10,500 MILES OF NEW ROADS IS ALSO FAR MORE THAN WHAT SHOULD BE ALLOWED. 3

STREAMSIDE AREAS SHOULD BE PROTECTED FROM ADDITIONAL ROADING IN ORDER TO PRESERVE THE WATER QUALITY OF AREA STREAMS, AND TO 4
PROTECT STREAMSIDE HABITAT FOR WILDLIFE 5

1. See the Final Plan.

2. The timber harvest level of about 170 MMBF represents an historic average from 1979 through 1985. The sale level during that period was 221 MMBF per year. The harvest levels appear to be on the increase and this is expected to continue. The flexibility for a higher sale level is being retained so that harvest levels can continue this trend. The allowable sale quantity is the projected annual volume that can be sold and sustained over time.

3. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. The amount of land managed to produce continuous supplies of timber has been reduced in the Final Plan. A total of about 3,850 miles of new road will be needed to access this land.

4. The Monitoring and Evaluation Plan have been modified to insure that State Water Qaulity Standards will be met. The Riparian Area Management Standards address your concerns.

5. Much stream side habitat has been included in MA 13 and removed from the timber base (see the Final Plan Map).

IN ADDITION, 15% OF THE FOREST'S OLD GROWTH "TIMBER" SHOULD BE PERMANENTLY PROTECTED, AND ALL 15% OF THE OLD GROWTH SHOULD BE REMOVED FROM THE TIMBER BASE. THIS WOULD BE NECESSARY TO SAVE A REASONABLE AMOUNT OF WILDLIFE THAT REQUIRES OLD GROWTH HABITAT. 6 7

WILDERNESS, I FEEL, SHOULD ALSO RECEIVE MORE EMPHASIS IN THE PLAN. IN THIS REGARD, THE TROUT CREEK AREA IS ESPECIALLY IMPORTANT, AS IT IS A HIGHLY PRODUCTIVE AREA FOR ELK AND OTHER WILDLIFE. THIS AREA NEEDS THE PROTECTION OF WILDERNESS DESIGNATION, AND SHOULD BE RECOMMENDED FOR SUCH DESIGNATION. 8

ALSO, THE SCOTCHMAN PEAKS AREA SHOULD NOT BE FRAGMENTED BY LEAVING OUT THE IMPORTANT PELLICK RIDGE AREA FROM RECOMMENDED WILDERNESS DESIGNATION. THIS RICH WILDLIFE CORRIDOR NEEDS TO BE ADDED TO THE PROPOSED SCOTCHMAN PEAKS WILDERNESS. 9

OTHER AREAS THAT ARE APPROPRIATE FOR WILDERNESS DESIGNATION IN THE FOREST ARE TEN LAKES, THE PROPOSED CABINET ADDITIONS, AND THE TUCHUCK AND THOMPSON SETON AREAS. 10

Response to Letter #263 - Dan Klinger, page 263a

6. The Final Plan provides considerably more protection to old-growth dependent species than does the Proposed Action. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

7. See response #6 above.

8. The Trout Creek area is designated as Management Area 29. This recognizes the Wilderness Values of the area, but permits some habitat improvement to insure continued health of the elk herd in the vicinity.

9. Much of the Pellick Ridge Area has been proposed for inclusion in the Wilderness System (see the Final Plan Map).

10. Much of the Ten Lakes and Cabinet Additions Areas have been proposed for Wilderness designation. The Tuchuck and Thompson Seton Areas have been designated as Management Area 2.

E-402

I SUPPORT WILDERNESS DESIGNATION FOR ALL THESE DESERVING AREAS.

THE ABOVE RECOMMENDATIONS WOULD MAKE FOR A MULH MORE REASONABLE AND BALANCED FOREST PLAN. THIS WOULD BE MUCH SUPERIOR MANAGEMENT THAN THE BOOM BUST CYCLE/S THAT WILL BE EVENTUALLY INEVITABLE WITH THE CURRENT DRAFT PLAN. AT THE SAME TIME, THE RECOMMENDATIONS I'VE OUTLINED WILL HELP PRESERVE THE RICH AND DIVERSE NATURAL RESOURCE OF THE MOOTENAI FOR FUTURE GENERATIONS. 11

THANK YOU FOR YOUR TIME.

SINCERELY,
DAN KLINGER
PO BOX 483
GREAT FALLS, MT 59403.

11. Some of your recommendations have been incorporated in the Final Plan and some have not. See the Final Plan and EIS for further details.

Supervisor - Kootenai National Forest

Dear Sir:

For the last 30 years that I have observed the management plans proposed in the Kootenai N.F. it seems there has been a very lopsided impallance in favor of logging and the concomitant road building activity that accompanies it. The former supervisors of the Kootenai during this period seemingly offered forest plans that either offered very little consideration for wildland or wildlife values as demonstrated by the recommendations for the constricted boundaries of the Cabinet Willderness, as originally proposed, and the former "Unit Plans" that were offered before being summarily rejected as inadeguet and valueless as a holistic forest plan should be. Lately we have seen the rejection of the Mt. Henry area from the S.393 proposal which may be a judgment decision that can be defended but not in consideration of the excessive logging, reading and soil, resulting from the intensive activity loss 1

Response to Letter #233 - Dr. Loren L. Kreck, first page

1. The Kootenai Final Forest Plan attempts to resolve all the issues presented during the planning process, both developmental and non-developmental. The Final Plan maintains the historic level of timber activity while preserving options for future consideration, such as minerals, wilderness, roadless, etc. The strength or weakness of the Forest Plan will be in the implementation of the management prescriptions on-the-ground. If they prove to be unworkable then the Forest Plan will have to be revised.

that has taken place during this before
mentioned period on the rest of the Kootenai.
While the S-373 Ten Lakes Wilderness
proposal would seem to help toward some
kind of balance it really doesn't justify
the thrashing that will be the fate of those 1
areas included in the remaining timber
working circle with the resultant effect
of the incredible road proposals your
forest is recommending that does not
consider the timber oriented managment
of the St. Regis private companies and
the massive cutting on the eastern
borders of the ~~Flathead forest~~ Kootenai
by the Flathead N.F. along Island Lake
and Griffon Creek region. Some body along
the way has to compensate for these excesses
and because we should be so fortunate as
to have national forest protection by way of 2
your office I think the Kootenai Plan should
be modified and greatly reduced in
favor of water quality, sustainence of
soil and protection of indigenous wildlife
populations that are bound to be greatly
impacted by the new plan.

Response to Letter #233 - Dr. Loren L. Kreck, page 233a

2. The Final Plan takes into consideration the timber harvest that has been occuring on adjacent private lands. See Appendix B for more details on the local timber supply situation.

Jim, I hope you will accept this letter in the constructive manner in which it is offered. I realize the Kootenai is one of the largest and most productive of our northern forests. My concern, I think, is justified in consideration of the new plan which is bound to change the face of the forest from a natural succession to intensive, planned, timber recovery. While I respect the need for the wood products that may accrue from this plan I think a more moderate approach should be instituted in the realization that the balance of the present ecosystem has had quite a few thousand years to come about. Our present knowledge and consequent judgment - all professionalism considered - may not allow such a radical effect as may result from present plan. Your consideration of this letter is greatly appreciated. 3

Thank you!

DR. LOREN L. KRECK
BOX 536
COLUMBIA FALLS - MT -
59912

Response to Letter #233 - Dr. Loren L. Kreck, page 233b

3. We believe that the Final Plan represents a balanced approach to the issues and that the final proof will have to be determined on-the-ground. See response #1.

Bozeman October 30, 1985

Dear Sirs,

Before I present my arguements, I have to introduce myself. I was born and raised in Bergen, Norway. Bergen is a large city on the southwest coast and is surrounded by steep mountains to the east and sea to the west. I came to Montana four years ago. After a year I became a resident and U.S. Citizen. Here I'm a student at MSU studying finance. Having experienced what environmental protection policies mean, both in Europe(particularly in Norway and Sweden) and in Montana, I am able to compare and evaluate on it.

It is clear for me to see that compromizing between keepin wilderness wild and the forest industry alive is very difficult for Montana. Cooperation is especially difficult because of the strong polarization of different interests. I believe that in order to avoid too much "clashing" some clear, reasonable, and effective government standards must be set. Maybe some points of emphasis can help.

1. Erosion:
A fine balance must be maintained so that both loggers and recreationists can use new roads after they are already made. This means being able to hike on them. In Montana where the soil usually is very "loose" as compared with solid rock, a direct demand by the government should be to replant along the roads, and to protect streamside areas. It is in everyone's interest to prevent erosion of soil. 1 2

2. Wild lands:
It is clear in my mind that present legislation gives more room for development than for protection. Examples are areas such as the Kootenai National Forest and the Mission National Forest. I have personally witnessed logging doing great damage to prime Grizzly& Black bear habitat in the Missions. They are about to loose their last hideouts and huckle-beery feeding areas. Another example is the Kootenai area.

The proportions seem to be way off when only 4% or less of this unique area has wilderness status. When arguing for wilderness specific scientific factors such as watershed boundaries, habitat boundaries, and migration routes with summer- and winter ranges must be known. This favors larger unified area(s) rather than smaller pieced up lands for protection. Why could we not compromize by giving up smaller areas in return for better protection of a few 3

Response to Letter #229 - Jan Kuhnle, first page

E-407

1. We agree. These are Soil and Water Conservation Practices that are currently being used.

2. We agree. See the Monitoring and Evaluation Plan and the Forestwide Standards in the Final Forest Plan document.

3. No response needed.

E-407

Marshall, Pintlar, Gallatin/Yellowstone Lee Metcalf, Kootenai, and Lolo/Bitterroot/Beaverhead should, in the interest of the nation, be set aside with full wilderness protection. 3
That would bring benefits for all while at the same time ending unneccessary use of resources spent in a continuous, never ending, fight on a low level. It would mean taking a strong government stand, but it would save the most spectacular and valuable wilderness areas left in the U.S. from slowly deteriorating. Deterioration comes with: Logging, U.S. forest service campgrounds and the use of any vehicle with wheels, as well as with mining and oil& gas exploration. Why should marginal profitability from small industries like forestry and mining be set before the fait of nature? The balancing or compromizing must be done on fair and factual grounds, and not according to marginal profit motives. In the very near future american citizens may experience a cut in the amount of workdays per week and per year so that more time could be spent on recreation, hobbies, and a well deserved yearly four week summer vacation. This is today a fact in most european countries. Factors such as automated factories and high speed global information and service industries will likely dominate the economic expansion ahead. Let the future have some room for decisions and options. Interests such as hiking, hunting, fishing, and skiing must get a higher priority, a priority for the future. 4

3. Old-growth forest:
A very unique and protective worthy forest grows in the Kootenai. Maybe some day it can become a new national park based on new principles: Let people use the park, but only by foot and horse! It surprises me how lazy americans are. Experiencing nature is done by living in it, not traveling through it.
Historically wilderness has been a place to share& experience untouched and unspoiled nature. Does history still mean anything?

I support a priority for wilderness because I know that in Europe people seek to find what's left of it in increasing numbers. In Norway we have Europe's largest "national park", Hardangervidda. It can only be used by hikers. This is the only way to self-regulate the number of people using it. The size of this area also makes it good for small wood cabins to be built 5

2

Response to Letter #229 - Jan Kuhnle, page 229a

4. See the Final Forest Plan and Map.

for those who like to use them. A system of trails and good maps with boundaries are all you need. The cabins are also used on a self-service basis with keyes given only to one or two persons at a time. Food can be bought in these cabins by leaving money in a deposit box. 5
Misuses are few. If you think that the quality of wilderness has been decreasing you are wrong. Hunting, fishing, hiking, and camping is just as good as it was 10000 years ago when people first came here to live. Many areas inside this "park" is private and is therefore closed to hunting and fishing, but camping and hiking is free for all. By including private lands in the "park", both the rights of landowners and recreationists are protected. The landowners can hunt and fish with nets on their properties as they have always done, but cannot hinder hikers from crossing their land. Most hikers use the established trails from older days anyway. I call it open for all land management. At least it does away with dangerous barbwire fences! Again this system favors wilderness areas of real size, but also cooperation and understanding from the farmers/ranchers. That is after all what it is all about: Unified large areas of untouched lands for humans and animals to explore side by side.

Sincerely,

Jan Kuhnle

JAN KUHNLE
506 W. Babcock
Ap. 4
Bzm. mt. 59715

3

Response to Letter #229 - Jan Kuhnle, page 229b

5. No response needed.

157

223 E. DeSmet
Hamilton, Montana 59840

Oct. 28, 1985

Kootenai National Forest
Libby, Montana 59923

Ref: Your latest public forest plan

Gentleman:

I read recently of your newest forest plan and your request for public input. We recently had a similar procedure for the Bitterroot Forest in Ravalli County, and I gather that your plan is similar in that you are trying to decide priorities for the future use of our public forest lands, and are asking Montana citizens their wishes.

I am a senior citizen and do not work myself, but I do understand how important it is for jobs to be available for the younger people. And I am concerned about taxes, and a healthy tax base so that my own property taxes will not get too high. We have had a lot of trouble here with our lumber mills, which are our biggest employersin our valley. They do not employ near as many people as before and many have had to leave to seek jobs elsewhere. Your area also has a lot of timber and logging activity and I'm sure you need jobs in the woods there too. Please do not take any more productive lands out of circulations and lock them up in wilderness or roadless. Let them be managed under multiple use, so they can be available for timber when the need exists. 1

After all, trees are just like any agriculture crop—they are renewable. Put aside in wilderness, they will eventually just grow old, becomed eseased or die from fire, and thats a terrible waste. 2

I appreciate being able to comment on your plan.

Frances R. Maeutz

E-410

Response to Letter #157 - Frences R. Maeutz, first page

1. The Final Forest Plan designates the productive and economically-suited lands for timber production. The lands designated for wilderness and roadless are generally those lands where productivity is low and the economic opportunities are limited.

2. Wilderness is one of the multiple-uses that provides many values for both people and wildlife.

E-410

James F. Rathbun
Supervisor, Kootenai National Forest
RR 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun,

These are my comments on the proposed forest plan. I have been advised to keep them site specific and referenced to the documents pertaining to the plan if I wish them to be effective. I will attempt to do so -- but though they may be unenterable into your computer, and therefore not considered, I feel compelled to make some general observations as well.

I manage my land with the intention of leaving it to my children with its productivity undiminished and, hopefully, enhanced. This means keeping its soil fertile and uneroded, its water clean, and its plant and animal populations diverse and healthy.

I consider what consequences my actions will have long after I am gone; I forego some monetary benefits I could derive from the land in my lifetime so that posterity might enjoy greater benefits, monetary as well as otherwise, for ages to come. I believe that as a nation, we are morally obligated to adopt such an attitude toward the management of our public lands.

I suppose that many people involved in managing our forests feel that this is the attitude of the Forest Service. The proposed plan is, after all, the culmination of years of planning, and best management practices, it is assured, will be followed. Yet, as the cliche goes, I don't think the Forest Service can see the forest for the trees.

The bias toward timber production is so pervasive that it largely goes unrecognized -- "forest" and "timber" are virtually synonymous. The forest, however, is far more than just trees. It is a living entity, with its component parts -- trees, plants, water, soils, wildlife -- analogous to the organs of a body. When one element is stressed or destroyed, the rest are affected, and eventually, we are affected. The goal of a forest plan should be to ensure the integrity of all aspects of the forest. Unfortunately, it seems evident to me that the goal of this plan is to meet a predetermined quota of timber production in the least objectionable manner. 1

I want to make it clear that I have no objection to cutting trees. Wood is a wonderful substance for building and making things with -- renewable, beautiful, strong, and durable. My house is built with wood and heated with wood, and the killing of trees helps feed and clothe my family, as most of the money we spend is made at jobs that are part of the cutting cycle. I view it as I do picking berries, or gathering eggs, or pruning fruit trees. I have no quarrel with killing trees, but I loathe the disregard for and damaging of the health of the forest. 2

The impact statement projects a 4% to 7% decline in total fish population on the forest, with an 8% to 12% decline in migratory fish. 3

1. The alternatives were designed to resolve the issues in various ways and it was found that higher timber harvest levels were possible even while maximizing amenity oriented outputs like Wilderness and elk. There was no pre-determined timber quota which we were attempting to reach except in Alternative D which was designed to come as close to the RPA goals as possible and in Alternative I which was designed to approximate the current direction.

2. The timber program levels described in the Final Plan are projected to be indefinitely sustainable.

3. No one, including the Forest Service or the Montana Department of Fish, Wildlife and Parks, has the ability to accurately predict the volume of sediment moving into streams or the numerical effect upon fish populations resulting from timber harvesting activities on the Kootenai National Forest. The mathematical models we used are based upon the best data available and serve well when developing comparisons of alternatives. The bottom line is that State Water Quality Standards must not be violated. We have addressed this problem by modifying the Monitoring and Evaluation Plan to insure that these standards are met.

The Montana Department of Fish, Wildlife, and Parks, generally considered to have more expertise than the Forest Service regarding the local fish populations, puts the parameters significantly higher. This plan could easily result in a 10% decrease of fish on the forest -- and that's average, which means far more drastic reductions in some drainages. 3

Why? The plan says it would be because of a 50% increase in stream sediments, caused primarily by the construction of over 4,000 miles of new roads to be built over the next 20 years, in order to access enough timber to increase sales by nearly 30% -- but that only begs the question. Why muddy the waters (against state law) and so significantly diminish the fishery, in order to offer for sale 30% more timber than has ever been sold, even though the plan assumes that demand will remain static? How can this be of benefit to the people of this nation, to those of us who live here, and to succeeding generations? 4

I can see how this might be of benefit to the timber companies -- more sales could mean less competition, which could reduce stumpage costs. The rationale, I suppose, is that this will keep the mills open and the revenues flowing and the locals employed and the economy rosy and we'll all live happily ever after. Yet the hand-writing is on the wall -- jobs are rapidly disappearing in the timber industry here, and everyone knows it, and it is not because of lack of trees to cut -- not yet.

It is amazing to me that this study of how best to manage the forest for the next 50 years makes no inquiry into what is happening or is likely to happen in the timber industry. Even in my provincial ignorance, I am aware that the use of aluminum studs and chip board, the government-subsidized cutting of virgin timber in Canada, high interest rates, declining housing starts, historic lows in personal savings etc., have, at the very least, significant potential for altering the status quo. Yet the only prognosis I can find is the unsubstantiated statement that demand will stay the same; and then, in apparent contradiction to that assumption, plans are set forth to greatly increase the cut, to build thousands of miles of new roads, with seemingly little or no effort expended to determine whether the market for Kootenai timber will expand, or decline, or even exist. Incredible. 5

The values assumed for timber are of central importance to the proposed plan, since they inform the computer as to which areas are economically suitable for cutting, and which are not. It is crucial to try to arrive at realistic values, and it would be prudent to leave some cushion for error on the side of cautious conservatism. Instead, you have used the high values of the late '70's, values that have not been approached since then, and are not likely to be seen again soon. Much of the timber that was bid so high then is being returned. A recent Forest Service bulletin informs me that purchasers will return 740 mmb f in Montana and Northern Idaho, and that nationally the amount will be 9 billion b f. 6

By using what seem to be the highest possible values, while at the same time, according to my reading of appendix B, using minimum cost 7

Response to Letter #287 - Bill Martin, page 287a

4. There was no estimate of sediments entering streams included in the DEIS. In an earlier DEIS issued in 1982 we showed a figure for soil movement that was wrongly interpreted as being soil moving into streams. There is no available technique for reliably estimating either the absolute volume of human-caused erosion on the Kootenai NF or sedimentation into the streams of the Kootenai NF. Thus we have keyed our management to insuring that damaging sedimentation does not in actuality occur; an approach that focuses on reality rather than mathematical modeling.

5. The timber volumes provided for each alternative are "allowable sale quantities". The actual supply and demand relationships that come to pass will determine whether or not this timber will actually be sold and at what price. The results of an analysis of timber supply in the area over the next decade has been added to Appendix B of the FEIS. Included is consideration of declining jobs per MMBF processed. If we assume that the volume of timber processed remains constant, our analysis indicates that public lands will need to contribute more volume because private lands do not appear to be managed on a non-declining basis. The amount of timber offered by the Kootenai National Forest is maximized for the 10 year life of this plan (assuming appropriate funding levels) to offset this decrease from private lands, as much as possible, and thus contribute to stability in the economic and social fabric of the area.

   The factors you list and many others play upon the supply and demand relationships that can be expected for timber in the future. There is no available technique for accurately projecting changes in these factors or long or short term supply and demand relationships as they relate to a particular National Forest. For this reason we will have to wait to see what will happen. In order to fairly predict the potential environmental impacts of the Forest Plan, we have used the allowable sale quantity (ASQ) to project impacts. The ASQ is a cost efficient level of output given a set of constraints designed to resolve the public issues and management concerns in some way. The future value of timber is based upon projections of national supply and demand relationships.

6. The values used for timber are indeed important in identifying the areas that are economically suitable for cutting. If only the dollar values associated with outputs and the dollar costs of producing them were considered in development of the Final Plan, the timber values would be more important in the Final Plan. As described in Appendix B of the DEIS, a whole series of factors without identifiable dollar values were considered subjectively in developing the Forest Plan (the net subjective value portion of the net public benefit equation). Consideration of these items makes the Final Plan less sensitive to changing timber values. This is displayed in Appendix B of the FEIS where a new set of timber values were tested and compared to the original set.

figures, I feel you have fatally flawed this plan. I suggest you rework the whole thing, using realistic numbers.

The use of the lowest, or highest, of a range of numbers (depending on what conclusion is desired) is manipulation, rather than objective appraisal, of data that is not precisely quantifiable. When parameters are widely spaced, the reasonable thing to do is pick a median number. Two disturbing examples of this not being done are the acreage required per grizzly, and the percent of old-growth to be maintained. In both cases, the amounts are cut to the bone, and the bone is well notched. 7

I am not a grizzly bear expert, but I am acquainted with enough of the people who study bears to realize that there are no grizzly experts. No one has yet succeeded in talking with one, but if anyone ever does, I'm sure they will find that the bears, much like humans, vary greatly in their likes and dislikes, and what they feel they need. Because some bear in Glacier Park does not mind people watching it fish does not mean that a bear in the Cabinets appreciates that logging on its turf is supposed to be for its benefit, or that it is not stressed by helicopters and drilling rigs. I will venture to opine, as a non-grizzly expert, that there is at least one bear that gets downright distraught at the prospect of a couple of large mines in its backyard. I urge you to be more assiduous in your efforts to see that it is left in peace. 8

The use of an 8% guideline for retained old-growth is an outrageous example of the timber bias, and the indifference to, if not contempt for, the concept of the forest being anything other than a tree farm. Appendix 17 of the proposed plan is emphatic in stating that 8-10% old-growth is the absolute minimum required to maintain approximately 20-25% of the wildlife species on the forest. You have left no margin to allow for loss due to fire, freak winds, etc. In addition, it appears that what is retained may be logged as soon as replacement stands meet minimum requirements, so that much of the 8% could end up being marginal, rather than prime, old-growth. 9

Your management guidelines say that a 1000-acre unit would <u>probably</u> (emphasis added) meet the needs of all old-growth related species. However, that figure is dismissed as being "unrealistic", and 50-100 acre units are discussed, with the reassuringly firm statement that "<u>50 acres should be the exception rather than the rule</u>." But I am not reassured. Frankly, I am appalled and angered. 10

I see no reason why any still existing old-growth stands of 1000 acres couldn't or shouldn't be preserved. I doubt there are many, if any, of that size left, but the bigger the better, as can be seen in figure 1, appendix 17. According to it, even 100-acre stands cannot support approximately 17% of old-growth related species.

The National Forest Management Act clearly states that <u>all</u> forest resources are to be managed under sustained yield principles. The elimination of most of the old-growth forest that is left, and the attendant reduction of plant and animal populations that are dependent on it, is certainly a violation of the *spirit, if not the letter,* 11

7. A broader base period for timber value, coupled with lower estimates of real price increases over time and lower road costs (as actually experienced), was used to test the sensitivity of the Final Plan (see Appendix B of the FEIS). There is no "acreage required per grizzly" used in development of the DEIS or Plan although an approach like that was used in the 1982 DEIS. All habitat identified as grizzly situations 1 and 2 is managed to be compatible with grizzly. The percent of old-growth retained has been increased.

8. Impacts on grizzly bear are evaluated before such projects are implemented.

9. The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

10. Because of past fires and timber harvest, few large old growth stands remain within the regulated portions of the Proposed Action. Most existing old-growth stands in roaded areas are in the 50 to 100 acre size range; however a few of these are as large as 600 acres. Within the unregulated portions of the Proposed Action, numerous old-growth stands in excess of 1000 acres exist. Those stands in the unregulated portion of the Forest will be protected from timber harvest. Over 90% of the existing old-growth (on lands below 5,500 feet in elevation) will be retained and protected from timber harvest in the Final Plan. This is 10% of the land base below 5,500 feet in elevation. Management Area 13, which was managed under long rotations in the Proposed Action, has been enlarged and removed from the regulated timber base so that no harvest will occur.

11. Your proposal for 15% old-growth is not practical. Our inventory indicates that, at most, 11% of the land area below 5,500 feet in elevation currently supplies habitat for old-growth dependent species. Research suggests an 8 to 10 percent minimum acreage and the Final Plan retains 10%. See Response #9, above.

of the law. The 8% guideline may be legally defensible, but it is not right. 15% old-growth retention would leave room for natural or man-caused loss, as well as for the possibility that wildlife biologists have underestimated some species' needs. Existing 50-acre stands should certainly be retained, but any future cutting in old growth stands should leave several hundred acres. There should be at least one more or less contiguous 1000-acre area managed for old growth in each of the 3 habitat groups identified, to insure (hopefully) survival on the forest of all old-growth related species. 11 12

Since old-growth stands are self-sustaining, and since there are optimum areas for them to be, particularly -- according to your own guidelines -- in riparian zones, protecting watershed quality, they should not be moved about like pieces on a chess board. Old-growth stands to be retained should be removed from the timber base. 13

The guidelines for riparian zone management are too vague. Stating that it is "desirable" to keep sedimentation associated with human related activities within "acceptable" limits does not provide any real information; nor does it demonstrate a firm commitment to riparian zone protection. Many statements are qualified, leaving lots of room for interpretation. For instance (emphasis added): "The juxtaposition of openings...will be controlled to minimize simultaneous change on both sides of a riparian zone...", "Skid trails and landings...will be restored to nearly natural conditions...", and "...intervening spaces between openings will be sufficient to provide cover and viable habitat...." In view of what the plan deems "sufficient to provide" for old-growth related species, this language does not convince me that the needs of riparian species will be sufficiently accomodated. 14

The plan says it will "maintain fish habitat capable of supporting sport fisheries to at least 90% of current levels on a decadal basis." The emphasis is on the habitat, not the fish population. Does this mean you can virtually wipe out a fish population, as long as 90% of the habitat is restored and some fish are stocked within 10 years? Current populations in many streams are unknown. According to table IV-1, you're not willing to allocate the money to really learn what they are, certainly not before further logging. In fact, table IV-1 doesn't show enough money allocated for serious monitoring of anything. 15

I've seen too much soil washed off of clear cuts and into streams on this forest to believe a whole lot in your guidelines. The sensible thing to do is leave an undisturbed buffer zone along waterways; it is basically problem- and cost-free. Yet here again is the bias toward timber production, rather than total forest management, which rules out even considering this option. 16

If the primary objectives were to insure that watershed is protected and healthy populations of flora and fauna maintained, and then, within the constraints imposed by those objectives, every effort was made to maximize timber production, I would not be so opposed to the tree farm approach, provided that sound agricultural practices were followed. The priorities are reversed, however, and too often "best

Response to Letter #287 - Bill Martin, page 287c

12. Old-Growth habitats are retained where they exist. MA 13 is widely distributed across the Forest as can be seen on the Forest Plan map.

13. Old-growth stands to be retained have been removed from the timber base.

14. The riparian area management standards have been reviewed and modified as necessary to insure protection of resources while permitting essential management flexibility. Much of the old-growth of Management Area 13 is located in or adjacent to riparian areas.

15. The Forest Service has the responsibility to manage the fish habitat whereas the State of Montana is responsible for managing the fish. In addition the M&E Plan has been modified to insure that State Water Quality Standards will be met.

16. We have modified the standards to require use of the forthcoming "Soil and Water Conservation Practices Handbook" (FSH 2509.22) in determining approaches to preventing stream sedimentation. This coupled with the Monitoring and Evaluation Plan, which will identify potential problems and solutions, is designed to insure that State Water Quality Standards will be met.

practices" means what will maximize the cut on the next rotation, rather than what is necessary to guarantee that there can be a third, or a tenth, or a twentieth rotation. In spite of looking ahead 80 or more years to the next cut, I think we are being short-sighted.

Three or four springs ago I was planting trees on a 177-acre clear-cut on the Rexford district when it was deluged by a thundershower of epic proportions. The slopes were greater than 60%. Judging by the distance that root collars were sticking out of the ground, it appeared that ½ to 1 inch of soil was eroded from the slopes in the space of a few hours. This was not a unique occurrence. The trees that succumbed either were or will be replaced by a subsequent planting, and I imagine that there will be a nice looking stand of trees there in a decade or two; but that soil will still be gone. 17

Perhaps a geologist can make a good guess as to how long it has taken the soils to form on these mountains -- I can't -- but I have little doubt that in instances like this it is disappearing faster than it is forming. Thin soils becoming thinner will one day be unable to support a vigorous stand of timber. If I seem to be unduly alarmist, consider that the history of forests since recorded history began is essentially a chronicle of their disappearance.

Among the earliest writings known, on Sumerian clay tablets, is the Epic of Gilgamesh, who with his friend Enkidu went to the Land of the Cedars, where the forest stretched ten thousand leagues in every direction. There they killed the giant who was guardian of the forest, and felled the trees, and cleared their roots, as far as the Euphrates. The Land of the Cedars is now a desert.

Since then, in fact rather than myth, the tale has been repeated many times. It is happening today -- the tropical rain forests, home of the majority of the world's life forms and source of perhaps 40% of its oxygen, are shrinking in area rapidly. Across this country there are places that within living memory were booming logging centers and mill towns, where now there are boarded up buildings and slim pickings.

True, we have improved our knowledge of forestry in recent decades; but basically we still are practicing primitive slash and burn agriculture, and doing it on steep, rocky slopes with thin soils, in a region of heavy rainfall. I went to a Forest Service open house during the last forest planning process, and asked why protection of watershed was not listed as an area of concern. I was patiently told that watershed was not an area of concern because there is plenty of water here. 18

In seven years of working in various aspects of forestry I have asked a lot of questions, and been surprised at how often the answers are unknown. Much of what is known is not widely disseminated. This past summer I was told by a long time Forest Service employee that big Ponderosas such as were blackened in the Houghton Creek fire will be full of bugs in a few years, and should be cut. I was told by his approximate counterpart at Champion that the fire didn't hurt them a bit -- they will be left for seed trees. I will observe them a few 19

17. We share your concern for accelerated soil loss and have redesignated several areas that have that potential.

18. Watershed protection is a critical component in the development of the Forest Plan. For example, see Appendix B of the DEIS (page B-109) where a diagram shows that the opportunity cost (in terms of PNV forgone) of just the minimum management requirements for soil and water protection was $566,000,000. This level of protection was provided in all alternatives. The Final Plan provides even more protection as described above.

19. Depending upon how badly an individual tree was stressed by the fire and how intense the infestation of pine beetles in the vicinity, the tree may die or may not. In the case of a major fire, the lodgepole is often destroyed leaving little opportunity for beetle infestation to develop, but Ponderosas could die eventually as a result of damage caused by the fire. In locations where beetle infestations are heavy, big Ponderosas may die even without the stress of fire. You will undoubtably get different answers to your question depending upon the context in which you ask it. While it may appear that these answers should be "cut and dried"; they often are not because more variables are involved than may be immediately obvious.

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years before I venture an opinion one way or the other, but I observe now that even the answer to a question that should be cut and dried is not agreed upon by people who supposedly know, and make decisions based on that supposed knowledge. 19

I have yet to talk with a forestry school graduate who had more than a cursory introduction to how trees should be planted. To most, the subject was not even mentioned. On this forest, there is no standardized procedure for how to care for seedlings prior to planting them. From one district to another, instructions to contractors for tree care differ, and are sometimes contradictory. I have had conflicting directions from one season to another on the same district. Proper care of unplanted seedlings should be basic knowledge, unvarying, no matter where on this forest, or in this country, they happen to be. 20

At the next stage, planting the trees, conditions vary from site to site, judgements become more subjective, and opinions as to how it should be done in any particular instance become more disparate. And so it goes, to a greater or lesser extent, at each stage of the cycle.

I have seen silvicultural prescriptions on units on this forest that defy common sense. I have heard far too many first person accounts of Forest Service personnel being sent out to gather data or make decisions when they were totally unqualified to do so. The points I wish to make are that "best management practices" is a fine concept, but in practice, they seldom exist; and that if I appear to be overly concerned for the future of this forest, it is because the Forest Service does not appear to be concerned enough. I would be far less apprehensive if those of you in the Forest Service seemed less certain that you know what you are doing. If the qualities and quantities of soil, water, wildlife, and timber on this forest are not degraded beyond present conditions, it will be, to my knowledge, the first time in the history of civilization that such has been the case. 21

Looking at specific sites, I will start close to home. Approximately 4 miles south of Troy, between Iron Creek and Lake Creek roads, just NE of Copper Mountain, you have about a half section labeled MA 17. It corners on my land. This land is not viewed from any major travel corridor. It is flat, productive land, the sort suited for intensive timber management. It is mostly surrounded by Champion land. There is a healthy population of whitetails in the area, and occasional elk. I'd suggest changing to MA 16. 22

The first area I looked at when I got the plan was the Scotchman's Peak proposed wilderness. I hope you have received many outraged protests about not including Pellick Ridge -- this is another one. You have labeled the lower N slopes as MA 14. Almost all of that area is highly visible from the Bull Lake Road, definitely a major travel corridor. A great deal of it is too steep to road or to reforest. Even if it were not an integral part of the wilderness, this would clearly be the wrong allocation. 23

Yet it is integral to the wilderness -- all of Pellick Ridge is -- and absolutely must be included in the wilderness recommendation. Scotchman's (including Pellick Ridge) received the second highest

20. Your point about differing and apparently contraditory responses is *addressed in response #19 above. The Forest Plan is not designed to* address points as specific as how seedlings are cared for or planted. Questions at this level of specificity should be addressed to personnel at the Ranger Districts.

21. In as much as Forest management decisions are made and carried out by mortal humans, errors can be expected.

22. See the Final plan Map.

23. Much of Pellick Ridge has been added to the Wilderness Proposal, see the Final Plan Map.

number of positive responses in the nation during RARE II. Even ASARCO supports Pellick Ridge for wilderness. Certainly the Northwest Citizens for Wilderness Mining Co., which holds the major claim block in Star Gulch, supports it for wilderness. Yet because of "mineral potential" (and also because there is some desirable timber in Napoleon Gulch) the Forest Service does not recommend it. I am unaware of any law that requires you to delete an area from wilderness consideration because of mineral potential. By deleting Pellick Ridge, special interests would be accomodated in defiance of the majority will, as expressed in the RARE II process. That's not the way it's supposed to work in this country. 23

I notice high mineral potential in the Trout Creek drainage, which is grizzly range, and home of a large elk herd. I would like to see it protected by wilderness designation. 24

Mining has brought jobs to the forest, but it has brought even more unemployment. If this sounds strange, you need only check the unemployment figures for Lincoln County to see that unemployment has gone up, not down, since the ASARCO mine opened. When the mine first went into production, unemployment jumped 50% in the county. There was no corresponding increase in statewide unemployment; it was a local phenomenon. This also happened when construction of Libby Dam started It was due to more job seekers coming to the area in hopes of employment than there were jobs to be had. Some of the unhired, finding this a congenial and relatively inexpensive place to live, and having no prospects elsewhere, decided to stay. In the 1980 census, every community in the county had lost population, except Troy -- it gained 600 people. 25

When Libby Dam was completed, unemployment jumped again, and though it dipped again over the next few years, it never made it down to pre-completion levels before the opening of the Troy Project kicked it up another 50%. It has trended back down again, but not to pre-mine levels. In less than 2 decades, we can expect to see about 300 jobs disappear when the Mt. Vernon deposit is mined out. Though there will in all probability be at least one other large mine in operation, it will of course already employ all the miners it needs, and be unable to absorb the newly unemployed, experienced though they may be. This process will continue until the final mine shuts down in thirty, fourty, or however many years. This is not conjecture on my part. It is an historic inevitability. 26

As more people move in with more mines, there will be more hunting pressure. As more people become unemployed, there will be more poaching. It does not appear that the plan's elk projections took any of this into account. To soften the blows on this forest of the mining boom and bust, to whatever extent possible, is surely within the purview of this plan. The best management practice, it would seem to me, is to try to preclude the possible development of a large mine in the heart of one of the major elk producing areas on the forest, if not the state, by recommending Trout Creek for wilderness. 27

More diverse and stable opportunities for employment is our best hope to cushion the hard times that are here, and to come. The Forest Service can help facilitate this by modifying its developing 28

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24. The combination of Wilderness, mineral and elk values has led us to designate most of this area as MA 29. This recognizes the Wilderness values better than MA 2 while still allowing some vegetative management to help maintain the health of the elk herd. The option for mineral development is not forclosed.

25. No response needed.

26. While this situation is not ideal, it is a better prospect for many people than no mining at all.

27. The intent of the Final Plan is to provide habitat capable of supporting the potential elk numbers provided. Regulation of hunting pressure, poaching and so on is the responsibility of the State of Montana (which has recommended non-Wilderness for Trout Creek).

28. Your concern is well taken, but decisions as to the size of contracts are outside the scope of the Forest Plan.

policy of putting up only very large service contracts and sales. The company I am associated with keeps over 20 local people in as much work as they care to do on this forest (other than during the winter months) and the majority of it is Forest Service contracts. Given the increasing size of these contracts, it would not be possible today for us to get into the business if we were just starting up again. Some entry level sized contracts should be made available. 28

Automation in the mills and more efficient equipment in the woods will continue to reduce the number of jobs in timber, even assuming that the actual cut does increase. The only real hope for expanding employment in the wood products industry is to make finished products here, rather than just boards. People trying to start up such enterprizes may require only relatively small sales of timber, at least initially. They should be able to get them. 29

I realize that small contracts and sales are not administratively efficient. They require just as much paperwork as large areas, and in terms of dollar volume they are inconsequential. But in terms of how many seasonal jobs are available to locals, vs. large out-of-state contractors, smaller units of work can make a significant difference. The people who live here are also part of the forest, and I see no reason why their economic well-being should not be managed for, just as you manage for improved growth in a stand of timber, or the security of moose. There are guidelines for preserving artifacts of cultures now gone; it would not hurt to give a little thought to preserving cultures that presently exist. 30

A management practice not mentioned in the plan, but planned on last spring, is the spraying of herbicides on this forest. It was difficult to find out anything about it. Before any such program proceeds beyond the conceptual stage, it should be well publicized, and public comment should be actively solicited. I, for one, would like to be notified, and I know that all my co-workers and many of my neighbors would like to discuss it with you as well. 31

I would like to see more restrictions on, or even the elimination of, grazing on this forest. It's very unpleasant to work in the Eureka area and not be able to drink the water because of cattle. The soil on some units I have planted on there was compacted because of so many cattle, and overgrazed areas are common. At the very least, grazing fees should be significantly raised, so that taxpayers get something more than a lot of cow-flops to step in. 32

I mentioned roads before, but I wish to add a few comments. All the studies I've ever heard about, every wildlife biologist I've ever talked to, and most serious elk hunters all say that elk and roads don't mix. The plan calls for over 4,000 more miles of roads, and yet it projects a huge increase in elk. Granted, there will be more road closures, but the total number of miles of unclosed roads will still be somewhat greater than it is now. I don't see how more roads can mean more elk, or more anything, other than asphalt and erosion. I think there's plenty of roads and plenty of sediment in creeks because of them already. I'd rather see more roads closed, and less built. None should be built that aren't paid for by sales. 33 34 35

29. We agree with your assessment regarding processing efficiency and have addressed this in Appendix B of the FEIS. We agree that producing finished products would provide additional employment if such products could be competitively marketed. The Forest has a continuing small sale program that can supply these enterprises.

30. We have generally been moving toward large contracts for the reasons you mentioned (many commentors are concerned about the net cost of managing the timber program). Small sales will, however, continue because certain types of stand treatment are accommodated better by small sales than by large sales.

31. At this time the Forest has no plans to use herbicides for silviculture purposes. This does not mean that the use of chemicals will not be incorporated in future timber management.

    Before any herbicide can be used an analysis in compliance with the National Environmental Policy Act would be required. Such an analysis includes opportunities for public review and comment.

32. Cattle grazing is a legitimate use of the National Forest. Grazing fees are established by the President. Open water is generally not safe to drink anywhere on the Forest because of the potential for Giardia sickness.

33. Projected increases in elk habitat potential will result from providing a proper balance of cover, forage and security, not from additional road construction. Cover and forage will be provided through scheduled timber harvest (for which road construction is often necessary) and direct habitat improvements such as burning and seeding. Security will be abundant in unroaded areas and will be provided in roaded habitats through an agressive road management program. Even though the total amount of roads on the Forest will increase, the amount of open roads will stay about the same as now.

34. Additional roads will be necessary to support the timber program identified in the Final Plan. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. The application of best available soil and water conservation practices coupled with application of the Monitoring and Evaluation Plan should insure that State Water Quality Standards are met.

35. In order to maximize the present net value of an area managed for timber over the long term, it may be necessary to build roads that cost more than can be covered by the first sale in the area.

There is one particular area on the forest that I would like to see left unroaded -- the east and west branches of the south fork of Big Creek. The plan has already recognized the uniqueness of part of this area, and designated the creek bottoms as MA 21. Bottom land like this, without a road in it, is a rare thing indeed. I would like to see the upper slopes remain unroaded as well. The entire area, not just the bottom, is unusual. I think of it as the Lost Soul wilderness -- the mountain is aptly named. There is a loneliness to it, a wildness, that I have not experienced in the officially designated "wilderness" on this forest.

It is not a place that every hiker would enjoy being in. There are no vistas, no great outcroppings of rocks -- it is not dramatic. It is instead, a place of subtleness, of mystery. There are no big trees. The entire area is an almost pure stand of even age lodgepole, laced with wet meadows at many elevations, and in places having an understory of thick brush. Much of it is a maze of small hills and mini-drainages that lead nowhere. Without a compass, disorientation is unavoidable, away from the creeks. Even compass readings are sometimes suspect; it seems to be an area of magnetic anomalies. It is a place much bigger than it appears on the map, a place where it is possible to sense how vast and awesome was the unbroken forest in the millennia before section lines and road grids existed.

Not far below the ridge to the east of Gold Hill, as the moon pierced above the horizon into the sharp clarity of an early autumn evening, I once heard the howl of a wolf. It was close, very close-- and somewhere out along the ridge, southeast, toward Banefield Mountain, there was an answer. 36

There are many stands of 75 year old lodgepole on this forest. If it is truly economically sound policy to convert them to mixed stands of seedlings, there are other areas more suitable than this one. MA 12 emphasizes natural regeneration. Since virtually all the seed trees are lodgepole, and since the bulk of the area is far from existing roads, and because of the relatively high and widely distributed percentage of riparian habitat in the area, I feel it should be far down on the priority list of convertible lodgepole stands.

There are seedlings and saplings of other species beginning to appear. The habitat types are beginning to make themselves visible. Because the area contains essentially every aspect at every altitude within its range, on both wet and not so wet sights, it is a uniquely ideal laboratory in which to study plant succession and interaction, as the various habitats reemerge from the now declining lodgepole stand generated by the fire. It is an excellent place to observe at what stages of development a particular type of stand becomes desirable habitat for various species of wildlife. More information about more different types of habitats, and how they progress from fire to old growth, could be learned in a smaller area here than anywhere else I am aware of.

As the area begins to mature into steady state old growth, it could be roaded and logged, gradually working in from the edges, but leaving a textbook perfect core of over a thousand acres to provide maximum habitat for <u>all</u> old growth related species. Because of the varied

Response to Letter #287 - Bill Martin, page 287h

36. We agree that the Lost Soul area has some desireable aspects, like other areas on the Kootenai; but when you are trying to balance a timber issue with a roadless issue, the Lost Soul area contributed more to the "timber" side of the solution. Conversely, other areas, similar to the Lost Soul area, contributed more to the "roadless" side of the solution.

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nature of the terrain, and the many natural riparian openings, it could provide unexcelled security and refuge for big game species, from which they could move out and replenish surrounding areas. 36

The comment deadline is here; I have no time to go on and describe what I would like to see happen on every part of the forest with which I am familiar. I suspect this effort on my part is futile, but I believe it is my duty to try to convey to you, managers of the public lands, now I, one of the nominal owners, envision that these lands should be treated. I can only hope that you feel it is your duty to listen.

Sincerely,

Bill Martin

RT. 3
Troy, Mont. 59935

Response to Letter #287 - Bill Martin, page 2871

We appreciate your thoughtful comments.

P.O. Box 7192
Missoula, MT 59807
October 23, 1985

Forest Supervisor
Kootenai National Forest
Libby, MT

Dear Forest Supervisor:

Thank you for the opportunity to comment on your draft Forest Plan. I commend your recommendation for wilderness for the Cabinet Mountain additions, the Ten Lakes Wilderness Study Area and some of the Scotchman Peaks. However, you have neglected two crucial areas deserving of equal wilderness protection. These are Trout Creek — the elk factory of the Kootenai—, and Pellick Ridge—valuable bighorn sheep and elk winter range. 1

Your prescription for old growth management is admirable. However, eight percent is hardly an acceptable portion of the old forest to maintain! With any natural or man-caused disaster such as fire, violent storm or mineral development, these areas could be lost forever. Keep at minimum, twenty percent of the old growth. 2

Despite the web of roads that crosses much of the Kootenai, it is still beautiful for what remains. Please keep roadless, and free from the whine of motorized traffic, the following areas: Roderick Mountain, Cataract Creek, Canyon Peak, Northwest Peak, Robinson Mountain. 3

As an alternative to your proposed goal of 217 million board feet per year, I suggestthat you leave your production at its present rate of 173 million. This would maintain levels closer to sustained yield capabilities. 4

Leave some of the Kootenai as it is, that we may continue to enjoy on into the future, the quiet complexity, the richness and diversity of an old-growth forest. I know that these things are of as great an importance to you as they are to me and many other Americans. 5

Sincerely,

Mollie Y. Matteson

Mollie Y. Matteson

Response to Letter #64 - Mollie Y. Matteson, first page

1. A significant portion of Pellick Ridge has been added to the Scotchman Peak wilderness recommendation (See the Final Forest Plan Map). Trout Creek was not recommended for wilderness because of the mineral potential and the key wildlife values that can be enhanced through vegetative manipulation such as prescribed burning.

2. The Final Plan provides considerable more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

3. Significant potions of all the roadless areas you mentioned have been designated as roadless or in some other designation that precludes development. See the Final Forest Plan Map.

4. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

5. 23% of the Kootenai Forest will be retained in its natural state in the Final Forest Plan. See the Final Forest Plan Map.

Comments on the Kootenai National Forest Proposed Forest Plan:

MA 2 - Under "Facilities," it states "roads will not be constructed for surface land management purposes."

Maybe roads should not be built for wildlife management either. 1

This MA is unsuitable for timber production but harvest is allowed for insect or disease control and wildlife management. This would seem to require roads, and contradicts the earlier mentioned "Facilities" statement.

MA 3 - Would prefer any timber harvest be done using selective cutting with slash cleanup where feasible, in order to maintain natural appearing environment. 2

MA 7 - Would like to see more work planned to build and maintain trails. 3

MA 8 & 9 - Would like to see a higher percentage of old growth maintained, approximately 15%. 4

MA 10 - Would like to insert statement preventing road building primarily for wildlife management. 5

MA 13 - Any replacement stands should be as close as possible to previous stands and a corridor provided when possible to connect the two stands. 6

Old growth designated stands should not be classified as suitable for timber harvest. Prefer an "unmanaged" designation. 6 a

Would like to see a higher percentage of old growth preserved to allow a little cushion - approximately 15% of each major drainage stand. 7

Monitoring - All MA's:

Budget seems inadequate for meaningful levels. 8

Management and Budget:

Would like to see a proportional increase or decrease in all management classifications as budget is increased or decreased. 9

Response to Letter #198 - Douglas L. and Shanon L. Miller, first page

1. Timber salvage has been eliminated in MA 2. Roads will not be permitted unless a verified mineral development appears evident.

2. Selective cutting would be a strong consideration in this MA.

3. Plans are in existence for trails but they are dependent on funding.

4. The Final Forest Plan will manage for 10% of the land base in an old-growth timber condition which is 91% of the inventoried old-growth timber.

5. The intent of this Management Area (MA) is clearly for wildlife man agement. Roads may be needed to cross this MA to gain access to an adjacent MA.

6. Old-growth timber has been removed from the regulated base.

6a. See response #6, above.

7. The total inventory of old-growth timber on the Forest is 11%, therefore a 15% level is not feasible. See response #4, above.

8. The budget levels have been revised. See the Monitoring and Evaluation Plan.

9. Management will flucuate with the rise and fall of the budget level.

E-422

Wilderness:

Would like to see Pillick Ridge included in the Scotchman Peak Wilderness. 10

MA 12 - Specific site: *T26N R34W Sections 14, 22, 23*

In this area, small clear cuts have been used as the timber harvest and wildlife management techniques.

In contrast, section 15 of adjoining land belonging to W.I. (previously Pack River) was logged probably 10-12 years ago using selective *cutting*. 11

It seems from my point of view that the selective cutting provided a far superior result as far as wildlife (deer and elk) benefits go, and it appears that the timber left standing has done well too. The bonus was both the visual impact reduction and also the immediate use of the area by big game.

It would seem that selective cutting with slash removal or selective cutting using "whole tree" skidding (tree length) is a far superior management technique when both wildlife and timber harvest must be considered, than block clearcutting as utilized in the Rice Draw sale. 12

Douglas L. and Shanon L. Miller
SR1, Box 10
Heron, MT 59844

(Retyped from original letter due to length of page size by M. Nuss)

Response to Letter #198 - Douglas L. and Shanon L. Miller, page 198a

10. A significant portion of Pellick Ridge has been added to the Scotchman Peak Wilderness recommendation. See the Final Forest Plan Map.

11. The small clearcuts were designed to provide for wildlife forage. Logging of this sale is currently underway. When the clearcuts have 10 to 12 years of recovery, we can expect these areas will equal or exceed the forage provided on the private land mentioned.

12. Selective cutting has advantages in many areas and is considered in the silvicultural prescription for an area.

Response to Letter #112 - Blaine Mooers, first page

No response needed for this page

Forest Supervisor
Kootenai National Forest
RR #3, Box 700
Libby, MT 59923

October 26, 1985

Dear Forest Supervisor,

You don't know how lucky you are to live in a land of tall trees, lush undergrowth, rushing streams, and steep mountains. I live out on the drought-stricken plains of southeastern Montana where few streams flow, and where there is more bare ground than plant cover, and where trees are rare, and the wildlife isn't diverse.

I really enjoyed the week that I spent inside and outside of your Cabinet Mountain Wilderness. Most Montanan's probably don't know how lush and unique your part of the state is.

Since I was so taken by the beauty of your forest, I obtained a copy of your draft forest plan in order to learn about its fate. I was glad to learn that you are 1

recommending additions to the Cabinet Wilderness Area and that you are recommending wilderness designation of the Ten Lakes Wilderness Study Area and some of Scotchman Peak. However, I would like to see better protection of the wild Scotchman. You could do so by including Pellick Ridge in your wilderness recommendation. I would like to see you back the 60,000 acre Scotchman Wilderness proposal by ASARCO and the conservationists. I would also like to see wilderness designation of Trout Creek and the Kootenai side of Tuchuck and Thompson-Seton.

I would also like to see roadless, non-motorized management of the following areas in their entirety in order to preserve their "wildness" resources: Roderick Mountain, Cataract Creek, Canyon Peak, Northwest Peak, and Robinson Mountain.

I was really suprised to figure out your double-talk concerning old growth management. You included oldgrowth in your timber base. You can't do that because you destroy old growth's integrity by applying any type of silvicultural practice.

1

1 a

1 b

1 c

1 d

2

2 a

2 b

Response to Letter #112 - Blaine Mooers, page 112a

1. A significant portion of the roadless area surrounding the Cabinet Mountain Wilderness have been recommended for addition to the existing wilderness. See the Final Forest Plan Map.

1a. A significant portion of the Ten lakes Montana Wilderness Study Area has been recommended for wilderness.

1b. A significant portion of Pellick Ridge has been recommended for wilderness in the Scotchman Peak roadless area. See the Final Forest Plan Map.

1c. Scotchman Peak will total 58,700 acres in Montana and Idaho, if Congress concurs with the recommendation of the Kootenai and Idaho Panhandle National Forests. See Appendix C of the Final EIS and the Final Forest Plan Map.

1d. Trout Creek has been recommended for roadless management because of the mineral potential and wildlife values. Tuchuck and Thompson-Seton have been recommended for roadless management to coincide with the management on the adjacent Flathead National Forest. See the Final Forest Plan Map.

2. Significant portions of Roderick Mountain, Cataract Creek, Canyon Peak, Northwest Peak and Robinson Mountain have been designated as roadless or some other non-developmental management category. See the Final Forest Plan Map.

2a. See response #2, above.

2b. See response #2, above.

3

Also, your goal of 8% old-growth retention seems too radical to ensure the the continued existence of old-growth dependent wildlife and plant species. A more conservative approach would be to retain 15% of your old growth and to remove it from your timber base. 3

I would also like to see you keep your cut down to 173 million board feet. Your plans for an annual cut of 217 million seems short-sighted and more likely to cause instability in communities like Libby by creating a boom and bust economic cycle. Out here in Baker, our town is sliding into a bust. Busts aren't fun!! 4 5

Your plans to cover 1.7% of the total land area of your forest with new roads is interesting. Apparently, your 10,692 miles of new roads will remove 40,000 acres from your timber base, but researchers have shown that roads in themselves don't cause a decrease in timber production. Unfortunately, timber production is the only forest attribute that isn't harmed by road building. Roads themselves are the major source of non-point water pollution from commercial forest lands. Your plan 6 7

Response to Letter #112 - Blaine Mooers, page 112b

3. 34% of all the mature and overmature timber (excluding lodgepole pine) has been placed in the unregulated timber category.

4. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

5. No response needed.

6. The Final Forest Plan proposes 3,850 miles of new road construction. See Chapter II of the Final EIS.

7. We are not aware of any sediment predictions in the Forest Plan or EIS.

predicts an increase of 50% in sedimentation. 7
What a crime!
I also noticed that your plan doesn't
do anything to protect streamside 8
vegetation. Why not? Most forest
plans do so.
I hope my comments have been
useful, and I hope that your
final plan will be an improvement
over your draft plan. I guess that
the whole idea behind the laws which
require public participation in forest planning
is to come up with the best possible
plan for the land and the people
who enjoy its attributes

Sincerely,

Blaine Mooers
P.O. Box 814
Baker, MT 59313

Response to Letter #112 - Blaine Mooers, page 112c

8. See the Riparian Area Guidelines in the Final Forest Plan document.

23

Chris G. Moritz

Route 1, Box 1150 E
Libby, MT 59923
September 29, 1985

Kootenai National Forest
RR # 3, Box 700
Libby, MT 59923

Gentlemen:

After visiting here annually for the past 13 years, we recently moved to Lincoln County. Since we own property that is virtually surrounded by the Kootenai National Forest, we are quite interested in the long range plans for the Forest.

As landscape architect I have been involved in land use planning throughout my professional life and can appreciate the tremendous effort put into the various alternatives of the plan. In my opinion, Alternative J, the recommended alternative, represents a well balanced program and should be adopted.

There are just a few comments I would like to make:

1. The suggested land ownership exchange, especially in areas with checkerboard ownership patterns, should be promoted and conducted as rapidly as possible. Otherwise the best management efforts of the Forest could be counteracted in those areas by private land owners. It should be in the interest of all parties concerned to eliminate the management problems brought on by outdated ownership patterns. 1

2. Tourism will be gaining in economic importance in northwestern Montana as time goes on. We definitely were attracted to this area by the landscape, still relatively undisturbed by the actions of man. The timber industry has it's ups and downs and may decrease in importance over the years. Tourism may gain and should be promoted as a clean and relatively stable industry. If tourism will become as important, as I anticipate it will, it is mandatory that the visual quality of the Forest that covers 70% of Lincoln County not be degraded by timber harvesting operations. Reducing timber harvest openings to 40 acres or less, as required by KNF policy, should help maintain that visual quality. Eliminating straight edges of clearcuts, giving them maximum perimeter with a natural appearing outline, emphasizing the horizontal dimension of clearcuts along contour lines, will make the openings less noticable from a distance and will help in erosion control. 2 3 4

Response to Letter #23 - Chris Moritz, first page

1. We agree and will be pursuing these opportunities.

2. We expect recreation activities to gradually increase in the future, but it is unlikely that recreation will significantly displace wood products and mining as the foundation of the local economy (see Appendix B of the FEIS for a more discussion on this point).

3. Each management area on the Forest will be managed in accordance with a visual quality objective which is linked to the visual importance of the area and the goals the management area is intended to achieve.

4. All of these techniques are being used currently and will continue to be used where appropriate.

Page 2
Kootenai National Forest
Sept. 29, 1985

3. The Kootenai National Forest is to be commended for it's effort to preserve Old Growth Habitat at a minimum of 8% of the area, well distributed throughout the drainage basins of the Forest. This should help maintain the diversity not only of wildlife, but also the diversity of vegetation. 5

4. It is difficult to plan 50 years into the future. Could we have predicted in 1935 how we are using our resources today? There is one set of figures that I question, without having the trend information that benefit your forcasting. I suspect that the recreation demand figures, especially for developed recreation, are grossly under-estimated. I cannot believe that the present campgrounds, picnic areas, boating facilities, etc. still will be adequate in 50 years. As campgrounds in other forests in the Western States are filled, and as National Parks resort to a reservation system for camping sites, demand will increase here and pressure for additional facilities will build. And then, more and better facilities will attract additional visitors, a trend which this area should promote to diversify it's economy. 6 7

Sincerely,

Chris G. Moritz

Response to Letter #23 - Chris Moritz, page 23a

5. We have gone further in this effort by increasing the percentage of old-growth habitat maintained to 10% of the area below 5,500 feet in elevation. All of this old-growth habitat has been removed from the regulated timber base so it will not be harvested during the life of this plan.

6. We reevaluated our recreation projections based upon a suggestion by the State of Montana (see letter #305) and found our estimates to agree very well with those the State would have us use. There should be sufficient developed recreation sites available in the Forest as a whole, however, the pattern of use indicates that more sites may be needed in the vicinity of Lake Koocanusa. The plan allows the flexibility to provide such sites and we are currently exploring some possibilities.

7. See responses #2 and #6 above.

David Ohler
Box 1343
Thompson Falls, Mt.
59873

Kootenai National Forest
Re: Proposed Kootenai National Forest Plan

Sirs,

Over the past several weeks I have been reviewing the proposed forest plan and would like to offer the following comments:

Wilderness and Roadless Areas

I feel that in order to maintain the integrity of wilderness and associated usage by wilderness-dependent wildlife, it is important to provide the largest chunk of wilderness land possible. This approach hopefully will include all or most of the components of the ecosystem needed for the use of wildlife. I feel it is of secondary importance at this time because of the number of wilderness areas we presently have, to try and obtain such things as availablity to population, scenic considerations i.e. visual quality, etc. The main focus at this point in the wilderness system should be the consolidation of wilderness ecosystem. With this in mind, I would urge the following roadless areas be considered and recommended for wilderness designation.

1. Scotchman Peaks
2. Cabinet Face West
3. Cabinet Face East
4. Government Mountain
5. McKay Creek
6. Chippewa Creek
7. Rock Creek
8. Galena
9. Cataract
10. Berray Mt.
11. Willard/Lake Estelle
12. Cube Iron
13. Ten Lakes

1

I would urge that Trout Creek roadless area be maintained roadless with the emphasis in this area on wildlife concerns and water quality.

2

Timber

In reading over the proposed plan, I note that probably the biggest area of management to be impacted is water quality/fisheries. The principal reason being the large increase of roads in all of the alternatives. It is also noted that all of the alternatives in varying degrees propose timber harvest levels which exceed the current mill capacity for utilization.

3

Response to Letter #227 - David Ohler First page

1. We have considered all of these areas and recommended major portions of several of them for Wilderness designation (see the Final Plan Map).

2. Most of the Trout Creek area has been designated MA 29 in recognition of the combination of wildlife, wilderness and mineral values that exist there.

3. An analysis of the timber supply in the area from all ownerships is outlined in Appendix B of the FEIS. The overall supply of timber is expected to be at or below historic levels of harvest.

Firstly, it seems that any increase in timber yields on the forest which exceed mill capacity are management efforts wasted and detrimental to other National Forest concerns. Secondly, the historic timber purchases off the Kootenai have been well below mill capacity and even below timber offerings. I would therefore recommend that timber management levels not exceed local mill capacity. It is unlikely in the next several decades that timber is going to be as desirable a product as during the past several decades, and harvest levels at mill capacity are likely going to remain unsold and underutilized. 4

Maintaing timber management and harvest levels at mill capacity will allow enhancement of other forest concerns such as wildlife, water quality, fisheries maintenace, and wilderness/recreation.

Within this framework of sites utilized for timber management, emphasis should be placed on timber production. These sites will generally be the most productive for timber growth, and also most responsive to management practices such as thinning.

Old Growth

I urge an 8% retention of Kootenai forest lands be old growth. 5 These stands need not be removed from the timber base so long as the 8% old growth retention is maintained. This would require all old growth stands, existing or anticipated, to be placed on a 250 year 6 rotation.

Lodgepole

Lodgepole stands which are determined to be desirable for timber production, which are either from the 1910 burn or mountain pine beetle threatend, should be harvested if harvesting is a commercially viable proposition. Timber harvest in excess of the allowable cut for a 7 given year or decade should be done in circumstances such as exist on the Kootenai. Allowable cut is an ideal which does not always work in the real world. Sustained yield should be a product of the long term. I feel it is important that forest managers be given as much room as needed to accomplish timber management concerns. This includes restricting timber management to sites which are productive 8 timber sites, and not to many of the marginal sites on which management practices have been attempted in the past.

Sincerely,

David L. Ohler

David L. Ohler

4. As noted in response #3 above, there should be sufficient mill capacity to handle volumes at the maximum levels possible under the Forest Plan. Historically all the volume offered on the Kootenai has been sold (see Chapter II of the FEIS).

5. This was the approach taken in the Proposed Action.

6. The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

7. The lodgepole pine portion of the planned timber sell level is estimated to be 98 MMBF/yr and is similar to recent sell levels experienced on the Kootenai Forest (See Chapter II in the Final EIS for more details). Actual sale of regulated timber in any year may exceed the Allowable Sale Quantity (ASQ) so long as the 10-year average sale level is at or below the ASQ. As discussed in the Final EIS, a departure from non-declining yield was not determined to best maximize the net public benefit.

8. Regulated timber management occurs only on sites that are productive. Management of the regulated timber base is expected to generate a positive present net value over the 200 year analysis time frame.

Oct 27, 1985

James Rathbun, et al.,

We are writing in response to the current proposed Management Plan for the Kootenai Nat. Forest. While we recognize the efforts to put this plan together, we found some very serious flaws in the proposal.

Your plans to increase the annual cut from 175 mmbf totally ignore the current state of the timber industry and the notion of "sustained yield." The annual cut should be held at 175 mmbf or lower. The budget forecast is too lopsided. More should be budgeted for reforestation + recreation. 1 2 3

Since the majority of the old growth timber is located in tiny isolated stands in draws + drainages, all the old growth should be removed from the timber base. The plan for road building is too rapid. The 4600 miles of new roads should be built over at least 40 years or more. This would greatly ease the damage inflicted on water quality. In fact all proposed logging within 100 yds. of streams should be deleted. Not only is the proposed increase in sedimentation intolerable, it is illegal in Montana. 4 5 6

The plan's budget forecast for wildlife monitoring and evaluation is much too low. 6a

Pellick Ridge, Trout Creek, additions to the Cabinets, Ten Lakes, Tuchuck + Thompson-Seton should all in their entireties be included in Wilderness. Quit showing collusive favoritism to the mining industry. 7

Since most of you 'managers' will move on following your individual careers and those of us who choose to live here will have to 8

Response to Letter #109 - Michael Ranger & Susie Sudentop First page

1. The timber harvest level of 175 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the chart below.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

The "state of the industry" is discussed in Appendix B of the Final EIS and indicates that adequate demand will be present for the potential timber volume offerings of the Kootenai Final Forest Plan, plus the offerings from the three adjacent National Forests. The Final Forest Plan will provide for the continuation of the historic level of timber volume offerings which will be within the calculated sustained yield production level based on the productive capability of the land. See Chapter II of the Final EIS for more detail on historic timber sale offerings.

2. See response to #1, above.

3. The budget estimates are expected to be sufficient to carry out the programs described in the Forest Plan.

4. The Final Forest Plan designates 91% of the inventoried old-growth timber habitat and removes it from the regulated base.

See the following page for response to items #5, 6 and 7.

- LIVE WITH YOUR MISTAKES, WE ASK THAT YOU DESIGN THIS MANAGEMENT PLAN WITH THE BEST INTERESTS OF THE LAND, WATER + WILDLIFE IN MIND AND NOT SOME DIRECTIVE FROM WASHINGTON D.C. 8

I'M A THIRD GENERATION MONTANAN + I CHOOSE TO LIVE IN MONTANA BECAUSE MONTANA IS WHAT AMERICA USED TO BE.

THANK YOU,

MICHAEL RANGER.
+ Susie Sudentop

P.S. YOU SHOULD INCLUDE MA 20 IN THE TIMBER BASE IF YOU'RE SO HARD UP FOR MERCHANTABLE TREES.

P.O. BOX 51
HERON MT. 59844

Response to Letter #109 - Michael Ranger & Susie Sudentop Page 109a

5. The road construction in the plan is an estimated effect of the timber program rather than a target or goal. As timber sales are developed, only the roads that are actually needed for management of the Forest will ever be built. The Final Forest Plan projects 3,850 miles of new road construction. See Chapter II of the Final EIS.

6. Much of the area adjacent to streams has been designated as old-growth timber which will provide for streamside protection. In addition, the Riparian Area Guidelines and Forestwide Standards have been strengthened to insure the protection of water quality. See the Final Forest Plan document for more detail.

6A. The estimated budget for monitoring and evaluation has been re-evaluated and is available for review at the Forest Headquarters.

7. Significant portions of Pellick Ridge (Scotchman Peak area), Cabinet Additions, and Ten Lakes have been recommended for wilderness. Trout Creek has been designated for roadless because of mineral potential and wildlife values. Tuchuck and Thompson-Seton have been designated for roadless to coincide with the Forest Plan on the adjacent Flathead National Forest.

The Kootenai Forest Plan, in our judgement, does not show favoritism to mining interests. The charter of the National Forests is to provide for multiple-use of the land which includes wilderness as well as mineral exploration.

8. No response needed.

E-433

SCOTT W. REED, Attorney at Law/P. O. Box A/Coeur d'Alene, Idaho/(208) 664-2161

October 31, 1985

Kootenai National Forest
Route 3 Box 700
Libby, Montana 59923

Re: Kootenai Timber Plan

Dear Sirs:

This letter is written in support of the Montana Wilderness Association comment on the Kootenai Plan. I am personally familiar with a fair portion of your forest and the endorsement is not without knowledge. 1

Planning for an additional 11,000 miles of roads is ridiculous. 2 I would hope you would adopt what will eventually become the Congressional directive to build roads only where the cost can be fully recovered at the time of construction. 2 a

I support including the Pellick Ridge area and the Scotchman Peak proposed wilderness. Scotchman Peak has been on our list for too many years to lose part of it. 3

Trout Creek should be left wild. The percentage of old growth which you propose to retain is not nearly enough. 4 Old growth forests in our general area are few and far between. 4 a

As a member of the board of directors of National Audubon Society, I have been made aware by some of the members from the State of Washington of the importance of protecting old growth forests and I would hope that concern would spread eastward, particularly given the list of birds and wildlife identified by the Wilderness Association as inhabiting the old growth forest upon the Kootenai. 5

Yours truly,

Scott W. Reed

SWR:gs

cc: Montana Wilderness Association

1. See the response to Letters #237 and #301.

2. The Final Forest Plan proposes to construct 3,850 miles of new road.

2a. The Final Forest Plan has designated those timber lands that appear to be the most cost efficient for producing timber which includes the cost of road construction. See Appendix B in the Final EIS for more discussion on road costs and timber price sensitivity.

3. The Final Forest Plan recommends a significant portion of Pellick Ridge for wilderness. See the Final Forest Plan Map.

4. A significant portion of Trout Creek will remain in a roadless condition.

4a. The old-growth timber habitat has been increased in the Final Forest Plan. In addition, 34% of all mature and overmature timber (excluding Lodgepole Pine) has been removed from the regulated timber base.

5. See response #4a, above.

Joe Regan & Kathleen McLaughlin
2105½ River Road
Missoula, MT 59801

Kootenai National Forest
R.R. 3, Box 700
Libby, MT 59923

Thursday, October 31, 1985

To the Kootenai managers,

As taxpayers, forest users and Montana residents, we want to comment on the proposed Kootenai management plan. We believe the Kootenai region is a priceless resource needing preservation for its inherent value, for the wildlife it supports, and for we humans who have so few wildlands left in our country. We also realize the necessity of balance between pristine beauty and the primary income from these natural resources that supports our communities. 1 1a

Basically, we want clean water. Accelerated logging and road building will erode topsoil, increase sediment in streams and adversely affect fish populations. We expect a responsible management plan to protect streamside areas, streambeds, water and the diversity of life dependent on these fragile areas. You seem unconcerned; the Kootenai Forest Plan has received EPA's dubious honor of the worst water quality rating of Montana's ten national forest plans. We believe water quality is a priority. 2 3 3a 4 5 5

This relates directly to the projected annual timber sale level of 217 million board feet. This increase from 173 m.b.f. each year is unacceptable. We support the current level of timber cutting; maintaining the current level is more responsible land management than your proposed 6

Response to Letter #260 - Joe Regan & Kathleen McLaughlin First Page

1. No reponse needed.

1a. We appreciate your recognition of the need for balance. The Record of Decision explains how the Final Plan meets this need.

2. The Final Forest Plan will meet the State Water Quality Standards. See the Final Forest Plan document.

3. The Final Forest Plan does not propose to accelerate timber harvest or road construction, and will meet the State Water Quality Standards as stated in #2, above. The timber sale program will provide for historic sale levels. See Chapter II in the Final EIS.

3a. The Riparian Area Guides have been clarified. See the Final Forest Plan document.

4. The Final Forest Plan will protect streamside areas and meet the State Water Quality Standards. See the Final Forest Plan document.

5. See the EPA letter #49 in Appendix E.

5a. We agree.

6. The timber harvest level of 173 mmbf represents an early period of full prodution and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See the Timber section in Chapter II in the Final EIS for more detailed figures.

E-435

booming increase. 6

Also, this is unacceptable because of the added 10,692 miles of logging roads over the next two decades. Roads degrade wildlife habitat. 7

Elk and big game are monetary resources. Undisturbed habitat is crucial to maintain their populations. 8

For this reason, we support roadless, non-motorized management for these wild areas in their entirety: Cataract Creek, Canyon Peak, Robinson and Roderick Mountains and Northwest Peak. 9

We are encouraged that the draft plan includes wilderness designation for the Cabinets, Ten Lakes and Scotchman Peaks areas. However, two very important wild areas - Trout Creek and Pellick Ridge - are not included. Pellick contains important bighorn and elk winter range, land that is crucial to their population levels. Trout Creek's wildlife value is visible; it is an island of wilderness surrounded by clearcuts and roads. Let's include these areas. 10

Finally, Kootenai forest needs a more conservative goal for old growth forest. We support permanent conservation of no less than 15% of the Kootenai's old growth forest. This habitat, virtually irreplaceable, supports many wildlife species that are habitat-specific to old growth forest. 11 More old growth needs to remain on streams. This 15% should remain separate from the timber base. 12 Again, we support permanent conservation of this critical habitat and valuable natural resource. 12 a

Thank you for your consideration. We certainly hope our concerns will be reflected in the Kootenai forest management plan, and look forward to your final decisions.

Sincerely,

Joe Regan
Kathleen McLaughlin

Joe Regan & Kathleen McLaughlin

Response to Letter #260 - Joe Regan & Kathleen McLaughlin, page 260a

7. The Final Forest Plan proposes to construct 3,850 miles of new road. and are an estimate of the effects of managing a part of the Forest for timber production. This estimate of roads needed to support timber production has been reduced by over 640 miles from the Proposed Plan because of a reduction in the acreage managed for timber. Road needs will be analyzed repeatedly as the Plan is implemented so that only the minimum mileage actually needed will ever be built.

8. Roads can degrade wildlife habitat if they are not managed. The Final Forest Plan will have an aggressive road closure program which will retain approximately the existing mileage of open roads. Most new roads constructed will be closed.

9. Significant portions of all the roadless areas you have recommended have been designated as roadless or some other non-developmental category. See the Final Forest Plan Map.

10. A significant portion of Pellick Ridge has been recommended for wilderness. Trout Creek has been designated for roadless management because of the desire to enhance the wildlife values you have mentioned. See the Final Forest Plan Map.

11. The Final Plan has included provisions for protecting old growth stands comprising 10% of the Forest acreage below 5,500 feet in elevation (areas suitable for reproduction of old-growth associated wildlife species). This is an increase from the 8% displayed in the Draft Forest Plan. Due primarily to fire history on the Forest, and particularly the 1910 burn, certain areas do not have this much existing old growth. About 11% of the Forest below 5,500 feet currently meets the definition of old growth, thus over 90% of the Kootenai's old growth forest will be retained. See the Old Growth Appendix to the Forest Plan for definitions and further details.

12. Management Area 13, which focuses on maintenance of old growth characteristics, has been removed from the regulated base.

12a. No response needed.

Box 114
Noxon, Mt. 59853
October 13, 1985

Forest Supervisor
Kootenai National Forest
RR#3, Box 700
Libby, Mt. 59923

Dear Mr. Rathbun:

One of my greatest concerns of the proposed Kootenai National Forest plan is the excess of newly planned roads. First of all, these roads are built almost solely for timber harvest. The figure of 217 mmbf/yr. in the next decade seems to be an unrealistic projection as the timber industry is in economical trouble and the demand for U.S. timber has decreased greatly. The F.S. already has big backlogs of timber sales that have not been sold due to these problems. When the timber sale projections for the next 50 years were made, it seems that they must have been based on 1974-1980 sales figures. These figures have changed along with the changing lumber useage. Condominiums and apartments are becoming increasingly popular and Americans are not building as many big homes. Wood technology is changing. I recommend that the forest planners completely reproject timber sales based on current figures in the timber industry. Timber harvest should be constrained to 170 mmbf/yr., and the budget should be held in accordance with this figure. 1 2 3

Roads cause 80-90% of sediment problems in our waterways. The F.S. has stated in the plan that three-fourths of the new roads will be built in the next decade and that catchable trout will decrease 5%. Jim Vashro of the Fish and Game claims that there will probably be an even larger decrease than 5%. With the limited amount of good fishing in the Noxon area, this is a drastic reduction. The runnoff from roads causes sediment build up of spawning grounds thus producing a loss of hatching success. Removing spawning barriers and building pools have not been proven to offset the sediment problem. It seems that 4600 extra miles of roads in our forest would be detrimental to our fisheries. It is my understanding that degrading our fish population in this way is against the state law. There is no specific law on this matter; however, the state law does read, "No increase in sediment that may prove harmful to fish life." (ARM 16.20.618 (f) B1 classif.). Why are you planning to degrade our fisheries more than they already have been in order to build roads to harvest unprofitable timber? 4 5

Not only does the sediment from roads cause problems for fish and the whole aquatic eco-system, it also causes problems for human water useage. Both municipalities and irrigators are plagued with sediment problems when they occur. I recommend that a tool to gauge sediment problems be devised and a monitoring plan be explained in the forest plan. And, of course, the most important thing to do is to eliminate much of the problem by greatly decreasing the amount of newly built roads. 6 7

Response to Letter #54 - Bonnie Reishus - First page

1. The most direct way to reduce the needed road miles is to reduce the size of the land base which is managed with timber production as a goal (the regulated base). The Final Plan has reduced the regulated base from that shown in the Draft EIS. Reducing the regulated base directly reduces the quantity of timber that may be harvested over time under a non-declining yield schedule.

2. The timber sale projections shown in the Draft and Final EIS are based on land productivity potentials that can be achieved, depending on demand and bedgets.

3. The timber harvest level of 170 mmbf represents an early period of full production and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for the historic timber sale level is being retained. See Chapter II in the Final EIS for more detail on timber harvest, sale levels and sale offerings, and Appendix B for more detail on timber supply and potential demand.

4. The projected timber harvest and roadbuilding levels in the Draft EIS, if sustained, would result in some fish losses as calculated using the fishery model at our disposal. The amount of calculated loss in a given watershed depends on the sensitivity of the watershed in question, its threshold level of sediment, the rate of recovery, and the degree of harvest that is projected. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Standards in the Final Forest Plan document).

   The Final Forest Plan projects 3,850 miles of new road construction which is a reduction from the Draft EIS and recent experience has shown that the rate of roadbuilding is declining from the projections displayed in the Draft EIS. See Chapter II in the Final EIS.

5. The Final Forest Plan mandates that the State Water Quality Standards will be met. This will be accomplished by on-the-ground monitoring and the use of the management practices outlined in the "Soil and Water Conservation Practices Handbook" (Forest Service Handbook #2509.22).

6. See the Monitoring and Evaluation Plan in the Final Forest Plan document and response #4, above.

E-437

I am pleased with the plan's definition of riparian areas. The fact that riparian areas may include greater distances than 100 feet from aquatic features depending on certain characteristics, helps to protect this important part of our forests. One problem with the management of these areas is that there is no specific amount of old growth to be maintained in riparian designations. Since old growth stands are a threatened and rare resource, I feel that a specific guideline should be set for it. I suggest riparian old growth be given preference as old growth areas which are to be preserved forest-wide. Old growth stands throughout the forest should be protected *more than the plans states. The plan calls for 8% of old* growth to remain. This is a bare minimum and is dangerously low. We need at least 15% of old growth in the forest to remain. Old growth should be removed from the timber base and should be dedicated. MA 13 should be unsuitable for timber production. 8 9

Under riparian management area (Minerals, Oil, and Gas) #3, it states, "Generally, disposal of common minerals will not be permitted." "Generally" leaves a giant loophole. I suggest "generally" be left out of this statement. I cannot see any justifiable reason why any disposal of common minerals should occur in riparian areas. 10

Wildlife is another extremely important part of our forest. First of all, the F.S.'s goal is to maintain a "viable" population. This is a bare minimum and it is too ambiguous. The plan needs to state in more exact terms *what minimum populations would be maintained, and these figures* should be safe figures that would not endanger any species. I cannot understand how elk can be a satisfactory big game indicator species when habitat is so different for much of the big game population. All game species should be monitored. Special effort should be taken on grizzly monitoring and the F.S. should facilitate implementation of augmentation program as soon as possible. A total budget for wildlife monitoring and evaluation should be displayed in the plan. 11 11a 11b

I would like to see more acreage protected for wilderness. Pellick Ridge should be included in the Scotchman Wilderness. There are many supporters for this proposal. Last spring a petition which had over 200 signatures, was sent to our Congressmen in Washington D.C. The petition stated that Pellick Ridge should be included in the Scotch*man Wilderness. Also, I would like to see the Trout Creek* area included as wilderness. 12 12a

Telegraph Creek drainage, near my home, is an elk winter range. (MA 10) Under "Recreation" in MA 10, it states, "Motorized access, including snowmobiles is generally not permitted during important wintering periods." There is that word "generally" again which leads to loopholes. I have been cross-country skiing in the Telegraph drainage 13

Response to Letter #54 - Bonnie Reishus - Page 54a

8. There is old-growth timber designated in riparian areas and all designated old-growth (MA 13) has been removed from the regulated timber base. To maintain diversity in old-growth timber, it occurs from the ridge-top to the valley bottom, not just in riparian areas. See the Final Forest Plan Map and the Forest Planning Records.

9. The Final Forest Plan provides for a minimum of 10% of all the land area below 5,500 feet elevation to be managed for old-growth timber habitat, and this habitat will not be suitable for timber production. The Final Forest Plan will also result in 34% of all the mature and over-mature timber on the Forest (excluding lodgepole pine) being in an unregulated (unsuitable) timber base.

10. The term "disposal" refers to the use of sand, gravel, etc., found in riparian areas, not the placement of unwanted or waste material in riparian areas.

11. The goal is to maintain at least a viable population of all vertebrate species. Many species, such as big game, will be managed well above the minimum viable level, which is defined as 40% of population potential. Viable populations will be insured by providing diverse habitat conditions for the full range of species found on the Kootenai, and by monitoring indicator species which are most subject to management activities. By insuring the maintenance of indicator species, all other species should remain above the minimum viable level. See the revised list of Indicator Species in Chapter III of the Final EIS.

11a. More specific information has been added to Monitoring and Evaluation Plan describing grizzly bear monitoring. Augmentation will be a tool that will be considered in the recovery of the Grizzly bear.

11b. The total estimated budget has been re-evaluated and is available for review at the Forest Headquarters in Libby, Montana.

12. Additional area on Pellick Ridge, in the Scotchman Peak roadless area, has been recommended for wilderness in the Final Forest Plan. See the Final Forest Plan Map.

12a. Trout Creek has been recommended for non-wilderness because of the wildlife and potential mineral values, and will be primarily managed as a roadless area with some land on the eastern edge designated for timber and wildlife management. This will preserve the option to reconsider much of the Trout Creek area for wilderness in the next round of Forest Planning. See the Final Forest Plan Map.

during some of these important wintering periods when I have seen snowmobilers use this area. The results may have been disasterous to elk. I do not know if this is a trail to snowmobile routes at higher elevations (one of the exceptions to non-motorized use of the area); however, regardless of whether it is or not, no snowmobiles should be allowed in this winter range during this critical time. It should be more specifically stated in the plan as far as prohibiting use of vehicles. As it stands now, snowmobilers are quite free to use these areas. 13

Finally, the F.S. plan is requesting a 20% increase in budget. We all know that Congress is trying to cut the budget and a 20% increase will not be a reality. If this plan is based on this increase and then does not receive it, there will have to be reductions in the plan. Where will they be cut? I have a feeling that timber sale preparation and road building will be hurt the least and other areas will suffer. If one area is reduced more than another, the whole forest plan could be upset. I would like to see exact wording in the plan to the effect that if the budget is not met or is reduced, all parts of the forest plan will be cut equally. 14

In conclusion, my main concern lies with the natural environment of the forest. I understand the need for timber and mineral production; however, I would like for future generations to be able to also use our natural resources as well as see the natural beauty of the forest. 15

Sincerely,

Bonnie Reishus

Bonnie Reishus

Response to Letter #54 - Bonnie Reishus - Page 54b

13. The road up Pilgrim Creek that goes through the area allocated to MA 10 is largely on private land. Use of area by smowmobiles is restricted to the road or adjacent private land by the steep topography and therefore the affect to wintering game should not be significant. Should a restriction be found to be necessary in the future it will be complicated by the fact that the road is largely under the jurisdiction of Sanders County.

14. See the Final Forest Plan document for direction in the event of inadequate budgets. The Final Forest Plan has a lower proposed budget than that displayed in the Draft EIS. See the Final EIS.

15. No response needed.

To: the Kootenai Nat'l. Forest — Comment on Kootenai Forest Plan

Hi. A lot of hard work and time went into the Kootenai Forest Plan, and there are things I like about it and some things I don't like about it. I'm going to talk about the things I don't like.

The U. S. doesn't need all the roads called for in the Plan. 1
We have lots of roads. What we need is for our money to be used 2
to maintain the roads we have. Like the Jacks' Gulch road off of Elk Creek road out of Heron, Mt. It is a major vein to the heart of the Coeur D'Alene River country via the divide road which connects all the back country from Pend Oreille Lake to Trout Creek. I have notified the Trout Creek ranger station by letter, phone or in person for the past 3 years to dump some gravel in the hellish holes made by the Forest Services' own water pumper truck and drill rig.(These holes are now greatly enlarged by hunter traffic and are very vexing) The F. S. tells me they'll be right out to look at it. And look is all they do. "We don't have the money", they say. Well, the deeded 3
right of way thru my land on that road says that the road shall be maintained. This year the F.S. put a sign up on the road. "This road not maintained for public use". I think you should put a bit of money to the care of the roads we do have. (And not grade the thing leaving it raw to the erosion that gutted it after the last time the F.S. graded it. It needs some rock spread in strategic places, some drainage placed here and there, a few hundred dollars work, not a few million.)

The U. S. doesn't need 40,000 more acres of roads in the Kootenai it needs the highest water quality it can achieve and the erosion that will definitely occur from road building is too much for what remains of our fisheries. The Clark Fork is dead. All it can support in the way of fish is Squaw fish and a few Perch. We fished it intensely 4
last summer, we know. It needs all the help it can get. We need to monitor the wastes in the tributary streams, many of which are still alive, and in the river itsself and stop all manmade infractions of purity. Montana needs its fisheries put back into pristine condition.

Montana is best at being just wild in many special areas and I would like to see these special areas preserved for just that-- wildness. 5
As much of Montana as warrants this wilderness designation, I would like to see so labeled. I think the Trout Creek and Pellick Ridge areas justify such protection along with the Cabinet, 10 Lakes, and Scotchman proposed additions.

Bird watchers over the world would die in ecstasy to see or even hear a Pileated woodpecker. Black-backed and Northern 3-toeds are beyond their ken, and here I am sitting at home swathed every day in their primeval cries. I am this lucky because Montana is still wild enough to have some old growth timber stands sufficiently large 6
to support their needs. Old growth protection in the Kootenai Plan is not definite or complete enough for my peace of mind. The o.G. 7
desgnations should be definitely removed from the timber base and should be given specific definition in the EIS and Plan as to age(200- 8
400yr.), size of area, etc. and we need to have enough % OG (15%) designated to ensure survival in case of fire, disease and other pre- 9
dictable mishaps. We need large tract areas of OG and need them all thruout the Forest and if we designate OG along creek bottoms, then 10
we're helping to protect the fisheries from siltation, too.

And when the budget gets cut, that cut should be spread to all areas of management and monitoring equally. New roads and new logging 11
always seem to get funds while recreation and monitoring are shot down helpless. (SO is maintenance on existing roads!)

Response to letter #107 - Sue Ritter & Rodd Gallaway - First page

1. The Final Forest Plan has reduced the amount of new road construction. See Chapter II in the Final EIS.

2. We agree with the description of the Jack's Gulch road. However, the Jack's Gulch road is scheduled for reconstruction and partial relocation within the next few years to provide a facility that will be more easily maintained.

3. See response #2, above.

4. The Final Forest Plan does not project 40,000 acres of new roads and it will be required to meet the State Water Quality Standards which should provide for the maintenance of fish habitat. See Chapter II of the Final EIS and the Final Forest Plan document.

5. Scotchman Peak, including a significant portion of the Pellick Ridge area has been recommended for wilderness, as well as significant portions of Ten Lakes, and the Cabinet Additions. Trout Creek, although not recommended for wilderness, has a significant portion designated for roadless management which will protect its wild character. See the Final Forest Plan Map.

6. See response #7, below.

7. The Old-Growth Timber in the Final Forest Plan has been removed from the regulated timber base and the definition of old-growth timber has been changed. See the Final Forest Plan document.

8. The Final Plan provides considerable more protection to old-growth timber-dependent wildlife species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

9. Because of past fires and timber harvest, few large old-growth stands remain within the regulated portions of the Forest. Most existing old-growth stands in roaded areas are in the 50-100 acre size range; however, a few of these are as large as about 600 acres. Within the unregulated (primarily unroaded) areas of the Forest, numerous old-growth stands in excess of 1,000 acres exist. Since these are unsuitable for timber management, their old-growth status will be protected and they will contribute to the Forest's goal of maintaining 10% old-growth timber habitat.

10. Many of the old-growth timber stands have been designated along stream bottoms, as you suggest. See the Final Forest Plan Map.

11. See the next page.

We need to do some protecting and improving of what we've already got. Keep Montana special.

What the U.S. needs most is for Montana to remain Montana- the last stronghold of beauty and wildness and diversity in the lower 48 states- special. I believe that condition will yield more value in the long run than the logging roads and mining could ever yield. People who come here will experience excitement, relaxation, and renewed mental health. Please keep Montana special. 12

Sue Ritter
Rodd Gallaway

SR2 Bx 33
Heron, Mto
59844

Response to letter #107 - Sue Ritter & Rodd Gallaway - Page 107a

11. See the Final Forest Plan for direction in the event of budget reductions.

12. No response needed.

Oct. 30, 1985

Forest Supervisor
Kootenai National Forest
RR#3, Box 700
Libby, Mt 59923

Dear Mr. Rathbun:

As a 10 year resident of the area directly affected by the Kootenai Forest 50 year plan, and a traveling teacher who observes the area from Heron to Trout Creek on a daily basis, I wish to express my concern over the purposals that have been presented in the afore-mentioned plan.

The economics of the K.F. plan as presented arouse questions in my mind as to how "far thinking" and "economically sound" your plan is. 1

In relation to the Forest Service View (as per the K.F.P.) of long term timber harvest, it would appear that the current and recent past of the local timber industries economic slump have not recieved consideration. Currently, the Clark Fork Valley area from Trout Creek, MT. to Clark Fork, Idaho has noticed a forceful economic decline locally. This has been demonstrated by mill moremente 2 The prospects for long-term local employment seem very bleak. Who would benefit

Response to letter #261 - Mary C. Rocco - First page B-442

1. No response needed.

2. The Clark Fork Valley has experienced a decline in sawmill employment because of the decline in available private timber supplies. Because of this ongoing and anticipated future decline in private timber supplies, it appears that Sanders County, as well as Flathead, Boundary and Bonner Counties, will experience a continued decline in available timber supplies while Lincoln County will not be as adversely affected. See Appendix B for a description of the actual timber demand for the 5-county area included within the Kootenai National Forest (Lincoln, Sanders, Flathead, Bonner and Boundary) for the last ten years and the potential timber supply that will be available during the next ten years.

from this long-term heavy timber harvest plan, if, as economists predict, the logging and lumber industries continue on their present decline? 2

The concerns about Old Growth timber seem relevant to the visual quality of the area as well as the maintenence of an equitiable balance in wildlife, water, and forest management.

To, at least, maintain what we now have, a 15% (minimum) of O.G. should remain. An ecological definition of O.G. should be included in an E.I.S., as should studies relevant to showing the relationship between O.G. timber stands, and maintaining a desireable wildlife, water quality and visual quality in any forest management proposal. 3 3a

Mining an area has not historically been conducive to maintenance of high water quality, nor wildlife management. Mines do not, under usual circumstances, blend well with an area of such high visual quality. The visual quality, as well as quantity wildlife, and quality water are here now, I am concerned over where they will be 50 years from now under the current 50 year plan. 4

3. The Final Plan provides considerable more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

3a. An ecological definition of old-growth timber habitat has been included in the Glossary in the Final EIS and Forest Plan. Studies showing the value of old-growth timber in maintaining ecosystem integrity are cited in Appendix 17 of the Final Forest Plan.

4. Any mineral development proposal will be addressed in a separate Environmental Impact Statement to insure that State Water Quality Standards are met, as well as visual quality and wildlife.

E-443

Arguments against the harvesting of large amounts of timber and the mining industry development (as well as the 42,000 miles of road necessary to accomadate these types of industrial growth) are not based, in this writer's view, on negative feeling about these industries for this area. If it were, and I believe it is, possible to develop these industries and keep in mind a purpose for maintaining wildlife, water quality and visual quality at a minimum of their current standard. To do this wildlife, wilderness, and roadless areas must be developed in accordance with industrial growth. 5

The purpose for reorganization of the KF plan would appear to be the long-term development of the area as a scenic tourist wilderness area. The Scotchmans, Pellick Ridge and Cabinet Mountains to Trout Creek & follow highway 200 from Sandpoint to the Clark Fork Valley. This provides the most scenic part of the trip as many tourists are discovering. To consider this area for only it's timber and mineral potential is short-sighted, in my opinion. 6

This area is becoming a favored retreat for hikers, back-country horsemen, bicyclers, tourists and sight-seers from across the nation. 7

5. The Draft EIS did not mention 42,000 miles of road necessary to accomodate the Forest Plan. The Final Forest Plan projects a maximum of 3,850 miles of new roads. See Chapter II in the Final EIS.

6. The Scotchman Peak Area, including Pellick Ridge, Trout Creek and the Cabinet Mountains will all have significant portions preserved as wild and undeveloped areas for future generations. See the Final Forest Plan Map.

7. The Final Forest Plan designates that 23% of the Kootenai National Forest will be maintained in a roadless and undeveloped state to provide for recreation opportunities. This is 88% of the total existing undeveloped area on the Forest. See Chapter II of the Draft EIS.

This is now happening without the aid of advertising or promotion. Hunting, and the guide and outfitting industries are on a yearly increasing growth pattern. Services to these area visitors are just beginning to appear. The evidence is in the appearance of new outfitter businesses, lodging facilities, and various commerical service establishments. 7 These types of service industries are seasonal and much slower to develop than mines and logging growth, however they leave much of the area, and stay - longer than 7 years. Tourism will grow as the area achieves notority for its wilderness, wildlife, air & water quality. Mining & timber are bonuses to the area, but they are certainly not all there is. Industry that booms often leaves devastation and economic decline in its wake. Short-sightedness has been fatal to many western areas exemplified for us as close to home as Anaconda, 8 Butte, and the Silver Valley area of Idaho.

The Kootenai Forest has more than 50 years of life to prepare for. Residents who look to the long term hope that a review of the management

8. The Final Forest Plan, in our judgement, provides for a balanced use of the Forest and allows for the continuation of existing industrial use as well as the growth and expansion of emerging uses as you have suggested. If unforeseen conflicts occur, the Forest Plan can be reviewed and revised, if needed, to accomodate the new use.

directions and land allocations in the present 50-year plan might show the F.S. that the needs of the people could be better served than their present purposal directs.

Wilderness-wildlife, air & water quality, tourism, timber, and mining-growth need to be balanced, without the preferences that have historically plagued the Kootenai. 8

The term "land of many uses" needs to apply for all uses - for all needs - and for all time.

Thank you,
Mary C. Rocco

Sorry my input was so late in arriving. MCR

R.3 Box 13
Heron mt.
59844

Response to letter #261 - Mary C. Rocco - Page 261d

8. See the previous page.

Star Route 2. Box 37-A
Heron, Montana 59844
November 1, 1985

Forest Supervisor
Kootenai National Forest
RR 3, Box 700
Libby, MT 59923

Dear Sir:

The following comments are in response to the wildlife management aspects of the Proposed Forest Plan.

I would appreciate your consideration of these comments before finalizing the plan.

1. In view of the fact that monitoring item C-3 is to be applied to so many management areas, the $300 budgeted for additional costs seems insignificant. Although normal operating costs are not given for the various wildlife monitoring items, it is unclear as to why they are not and the plan is unsatisfactory in the absence of this information. If MDFW & P reports provide data of only low reliability the Forest should provide sufficient funds to *permit at least moderately reliable* estimates. Otherwise, the detection of significant population changes is left to chance and/or subjective judgements. This does not constitute acceptable management. 1 1a

2. The maintenance of wildlife species at "a viable level" is too low and ambiguous as a management goal. I believe it reveals a lack of concern or serious commitment to wildlife management. The Forest should conduct adequate surveys on enough species to be reasonably certain of detecting at least major changes, especially reductions, and should avoid management practices that directly cause major reductions in any wildlife species now extant on the Forest. 2

3. All big game species likely to be affected by a given management practice should be monitored directly, *not through use of elk* as an indicator species. 3

4. The plan should include a list of all wildlife species known or believed to exist on the Forest, with estimates of numbers for all major species and confidence limits on the estimates. If data sufficient for the calculation of confidence limits is not available, steps should be taken immediately to remedy ~~the~~ the situation and the plan should include a description of proposed survey activities. Meanwhile, the source of any non-objective estimates should be given. The Forest should not rely upon MDFW & P estimates, especially those known to be unreliable. 4

Response to letter #273 - Roughton, Robert D. First page

1. The estimated budget for Monitoring and Evaluation has been re-evaluated and is available for review at the Forest headquarters in Libby, Montana.

1a. We will continue to use the most reliable data obtainable. The Montana State Department of Fish, Wildlife and Parks has a keen interest in obtaining population estimates and we have the need to co-operate with them. Census of a secretive species, such as elk, in a densely forested environment results in estimates of low reliability. Our primary obligation is still to insure that the habitat is provided to allow the animal populations to thrive. This includes the provision of adequate security which can be provided through road closures.

2. The goal is to maintain at least a viable population of all vertebrate species. Many species, such as big game, will be managed well above the minimum viable level, which is defined as 40% of population potential. Viable populations will be insured by providing diverse habitat conditions for the full range of species found on the Kootenai, and by monitoring indicator species which are most subject to management activities. By insuring the maintenance of indicator species, all other species should remain above the minimum viable level.

3. See response to #2, above.

4. About 280 different species of wildlife occupy the Kootenai National Forest. Addressing the management of each species individually would be a monumental task and is unnecessary when managing by the indicator species concept. Indicator species management is tailored to those "weak link" species most sensitive to forest management activities and which are representative of other species. By providing for the habitat needs of these species, the needs of all species are met.

Forest Supervisor, KNF, p.2

5. The means by which the projected 40% increase in elk numbers is to be achieved by the 5th decade under the Proposed Forest Plan should be specified and the calculations and evidence of their validity for this Forest should also be provided. 5

As I mentioned in my note a few days ago, these comments may arrive after the deadline. However, considering the short period of time available for public comment on the Plan, I would appreciate inclusion of these comments in the EIS even if received after the deadline.

Sincerely,

Robert D. Roughton

Robert D. Roughton

Response to letter #273 - Roughton, Robert D. Page 273a

5. The projected increase in elk population is based on the amount of forage that will be provided, much of it through vegetative manipulation as a result of timber harvest and prescribed burning. The details of the calculations are available in the Forest Planning records in the Supervisor's Headquarters.

whomever,

I would like to make a few general comments on the Kootenai Forest Plan and then follow up with some specific recommendations. I worked for the Forest Service for 9 seasons and have been a self employed forest contractor for 6 years. Hopefully this will lend some credence to my comments. 1st your timber harvesting goals for the preferred alternative are ridiculous. You're planning to harvest 20% more volume than you've harvested the last decade. You can't do it no one wants the timber, it's too expensive to log and you don't have the personnel to prepare the sales. 2nd we don't need 10,690 miles of road on the Kootenai. The Kootenai is a national forest not a farmlot. If you are truly managing for multiple-uses; road building should be decreased or all other uses ~~are going~~ except timber are going to be effected adversely. More specifically I want to see the Glen Mt. area (Cabinet R.D.) being classified Management Area #8 rather than #~~10~~, 14, 15, 12 and 18. This is a unique & critical area which I did stand exams this summer. The area contains grizzly, mt. goats, elk, cougar and many more species of animal, which depend on the areas seclusion for their perpetuation. ~~This a~~ The protection of this area is doubly important because of intense

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2 a

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Response to Letter #205 - Keith Rush - First Page

1. The timber harvest level over the last ten years (173 mmbf/yr average) represents an early period of full production and a later period of low production in the wood products industry. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. We agree that if no one wants the timber, if it's too expensive to log or if we don't have the personnel to prepare the sales, they will not be sold. Our analysis and past experience indicates that the first two points should not be a problem. Congress retains the authority over Forest Service budgets so the last point will be dependent upon National priorities.

2. The road miles shown in the EIS are neither targets nor goals, but estimates of needs given today's technology. The need for roads to support the timber program will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan has a smaller regulated timber base acreage so the estimate of needed road miles is about 640 miles fewer than shown in the Proposed Action.

2a. The Final Plan includes a goal to minimize the amount of road construction. In addition, the guidance for each management area includes details on road use restrictions that are designed to provide secure habitat and minimize the impact of roads on elk habitat. The impacts of roads are disscussed in the EIS.

3. The timber of commercial size currently has some indications of beginning bark beetle activity. Combining timber harvest with road management will provide vegetative diversity, thus enhancing the game habitat over extended periods. Wilderness designation does not allow for intentional vegetative manipulation.

mining activities occurring in the adjacent Rock Cr. drainage. Pellick Ridge is another area I have worked in while cruising timber for the Cabinet R.D. This area should be under Management Area 8 instead of # 2, 10, 11, 14 & 19. People in the Kootenai Forest need to have what unroaded country such as Pellick Ridge protected from future development. There is not enough timber there to ever warrant road building. You've already allowed mining activities in the Cabinet Wilderness, so why do the mining interests a favor on Pellick. They could get it any time they wanted. I would also want to see more protection for the Trout Cr. Area. All management areas #29, 18, 12, 13, 16, 19 and 11 should all be classified #8. Its roadlessness, security & uniqueness are need much more than a few scrubby Douglas Fir and Lodgepole pine timber sales. Please consider my comments while preparing the final draft of the Forest Plan.

Sincerely,
Keith Rush
Star Rt. 154
Noxon, Mt.
59853

P.S. Please keep me informed the progress of the plan.

4. Much of Pellick Ridge has been recommended for Wilderness designation in the Fianl Plan.

5. Most of the Trout Creek roadless area will remain roadless. The combination of values (wildlife, Wilderness, timber, minerals, etc.) in the area leads us to the designations shown on the Final Plan map.

160 Reservoir Road
Whitefish, Montana 59937
October 29, 1985

Supervisor
Kootenai National Forest
Libby, Montana 59923

Dear Sir,

I am writing to comment on the proposed Forest Plan.

I would support alternative N in this proposed plan as I feel it best supports the needs of the public. Alternative N will create more jobs, return more dollars to the treasury, increase the big game population, increase 25% funds to the counties and still leave 390,000 acres for roadless recreation. 1

The western states have contributed more than their share of wilderness and roadless recreation lands to the residents of the country and I feel the whole wilderness concept has gotten out of line. I urge that the Kootenai Forest not committ any land to wilderness but rather leave it in a multiple use category where it can be managed as the foresters and specialists on the Kootenai Forest feel it best meets the needs of the public. 2

I am disturbed that all of the Forest Plans I have seen in Region I seem to be pulling away from the multiple use concept and designating certain areas to designated uses. I feel this is a mistake as it forcloses future management options which a prudent manager might need to make in the future. These designations are usually political in nature and do not take into consideration the economic and biological considerations which a prudent manager would consider if the land is left in full multiple use status. 3

I strongly urge that the timber sell program be kept as high as possible as it is the economic lifeblood of Western Montana and Northern Idaho. 4

I also urge that other economic uses of the forest not be foreclosed through designated restrictions.

The plan seems to be unduly concerned with visual quality protection. I would urge that these concerns be taken care of by careful layout and good logging practices on all timber sales. 5

The alternative to adequate and well designed timber sales is likely to be either forest fires or bug epidemics.

Response to Letter #148 - Royce Satterlee - First page

1. No response needed.

2. Wilderness is one of the multiple-uses of the National Forests.

3. No response needed.

4. We agree that the timber program is an important aspect of economic life in Western Montana and Northern Idaho. We also feel that the Final Forest Plan has a reasonable balance among all the resources and uses desired by the many competing users of the Forest.

5. The intent is to insure that a consistent approach is taken on all the districts, over time, because of the subjective nature of an intangible value such as visual quality.

I am not concerned about the miles of road to be built on the Forest other than I suspect there has been a real lack of planning at to what specification these roads need to be in relation to the proposed uses and the fact that a high percentage of these roads will probably be closed in the future to eliminate harassment pressures on big game animals. 6

I am aware that Congress in their infinite wisdom have designated wolves and Grizzly Bears as endangered species and that you are limited as to what you can do in some areas because of this designation. I would urge that you do everything possible to keep this from affecting other uses of the forest. 7

Thank you for the opportunity to comment on these proposed actions.

Sincerely,

Royce Satterlee

Royce Satterlee

6. The roads to be constructed in the Final Forest Plan are to be designed to the lowest standard possible, while providing for safety and environmental protection. The amount of open road mileage that now exists will probably remain static over the life of the Plan. See Chapter IV in the Draft EIS.

7. The Final Forest Plan has received a non-jeopardy opinion from the U.S. Fish and Wildlife Service, which indicates that the Plan is compatible with the recovery goals for the grizzly bear and that the planned uses of the Kootenai National Forest can proceed without conflict.

47

MR. JAMES RATHBUN
FOREST SUPERVISOR
KOOTENAI NATIONAL FOREST
ROUTE 3, BOX 700
LIBBY, MT 59923

8588 GLENCOE DR
RIVERSIDE, CA 92504

10 OCT 85

DEAR SIR:

THE PURPOSE OF THIS LETTER IS TO COMMENT ON THE PROPOSED FOREST PLAN FOR THE KOOTENAI NATIONAL FOREST.

I DO NOT FAVOR THE PROPOSED PLAN AND FEEL SEVERAL CHANGES MUST BE MADE IN THE PLAN SO AS TO BETTER PRESERVE THE WILDLIFE AND SCENIC VALUES OF THIS FOREST WHILE ALLOWING FOR RESOURCE EXTRACTION. I FEEL THE PLAN SHOULD BE MODIFIED IN THE FOLLOWING WAYS:

1. THE AMOUNT OF LAND MAINTAINED IN A ROADLESS STATE MUST BE MASSIVELY INCREASED. THE AMOUNT CALLED FOR IN THE PLAN IS MUCH TO LITTLE CONSIDERING THE SIZE OF THE FOREST, EXISTING ROADLESS VALUES, AND CRITICAL WILDLIFE POPULATIONS. 270,000 ROADLESS OUT OF 2,245,000 ACRES TOTAL IS UNACCEPTABLE. 1

2. THE AMOUNT OF NEW ROADS MUST BE SCALED BACK CONSIDERABLY. PROPOSED AMOUNT OF NEW ROADS IS WAY TOO HIGH. NO MATTER HOW CAREFULLY THEY ARE DESIGNED AND CONSTRUCTED THEY WILL CAUSE NEGATIVE IMPACTS. THE LARGE AMOUNT PLANNED WILL CAUSE HUGE NEGATIVE IMPACTS. 2

1. The Final Forest Plan provides for 520,000 acres of roadless protection which is 88% of all the existing undeveloped land on the Forest. This will result in 23% of the entire Forest being maintained in a roadless state. See Chapter II of the Draft EIS.

2. The Final Forest Plan has reduced the amount of planned roads by 640 miles. See Chapter II of the Final EIS.

3 THE PROPOSED SCOTCHMAN PEAK WILDERNESS (INCLUDING LAND ON THE IDAHO PANHANDLE NATIONAL FOREST) IS TOO SMALL. A MINIMUM OF 75,000 ACRES SHOULD BE PROPOSED FOR WILDERNESS DESIGNATION RATHER THAN THE 45,000 OR SO PROPOSED IN THE DRAFT PLAN. 3

I REALIZE DEVELOPING A FOREST PLAN IS VERY DIFFICULT. HOWEVER, I ALSO FEEL THE DRAFT KOOTENAI PLAN MUST BE SIGNIFICANTLY CHANGED TO PROVIDE AN ACCEPTABLE ENVIRONMENT OVER THE LONG TERM.

THANK YOU.

Joseph C. Schott

JOSEPH C. SCHOTT

3. The Scotchman Peak recommended wilderness has been increased to 58,700 acres in the Final Forest Plan. See the Final Forest Plan Map.

NOVEMBER 8, 1985

LINZA SHELDON
1220 LESLIE AVENUE
HELENA, MT 59601

KOOTENAI NATIONAL FOREST
P O BOX AS
LIBBY, MT 59923

DEAR FOREST SUPERVISOR:

PLEASE ACCEPT THESE COMMENTS ON THE KOOTENAI FOREST PLAN EVEN THOUGH I REALIZE THE DEADLINE WAS NOVEMBER 1, 1985.

I LIVED IN THE NOXON AREA FOR MORE THAN FIVE YEARS AND HAVE HIKED MOST OF THE RIDGES IN THAT AREA. I STILL WOULD LIKE TO SEE WILDERNESS DESIGNATION FOR SCOTCHMAN'S OF ABOUT 88,000 ACRES. THE TROY PROJECT BY ASARCO WAS VERY DAMAGING TO THE WATER QUALITY AND WILDLIFE INTEGRITY OF THE AREA AND OF COURSE, IT DIDNT HELP THE ECONOMY OF THE AREA ONE IOTA. IT PROBABLY BROUGHT MORE PROBLEMS THAN BENEFITS, HOWEVER, FOR THE SAKE OF COMPROMISE, AN 80,000 ACRE SCOTCHMAN WILDERNESS WOULD BE ACCEPTABLE. I THINK PELLICK RIDGE AND THE TROUT CREEK DRAINAGES SHOULD DEFINITELY BE INCLUDED IN A SCOTCHMAN WILDERNESS PROPOSAL. 1
I SHOULD CERTAINLY HOPE THAT OLD GROWTH FORESTS AND WILDLIFE WINTER RANGE CAN BE PART OF THIS WILDERNESS AREA, NOT JUST THE USUAL "WILDERNESS ON THE ROCKS". 2
THE GIANT WESTERN RED CEDARS IN AND ABOVE ROCK CREEK ARE MAGNIFICENT AND CERTAINLY WORTH PRESERVING. THE ELK IN SCOTCHMANS, NOT TO MENTION A FEW GRIZZLY BEARS AND BIGHORN SHEEP, ARE MAGNIFICENT. 3

AS FAR AS YOUR LOGGING PLANS FOR THE REST OF THE KOOTENAI FOREST - THEY ARE OUTRAGEOUS AND COMPLETELY UNACCEPTABLE TO ME. JUST BECAUSE THE IDAHO PANHANDLE AND THE FLATHEAD FORESTS ARE FINALLY SEEING SOME COMMON SENSE, IT DOESN'T MEAN THAT THE KOOTENAI HAS TO MAKE UP FOR THE LACK OF TIMBER BEING CUT ON THESE OTHER FORESTS WITH A "LET'S CUT IT ALL AND GET IT OVER WITH" APPROACH. 4

THE LOGGING INDUSTRY IN MONTANA IS NOT EXPECTED TO RECOVER FOR QUITE SOME TIME, WHAT WITH CANADIAN COMPETITION AND OTHER ECONOMIC FACTORS. THE ROADS PLANNED FOR THE NEXT TWO DECADES ARE "MILES TOO MANY" (excuse the pun). PLEASE DECREASE THIS PLAN BY ABOUT 75% AND YOU MAY GET IT RIGHT. NEW LOGGING ROADS ARE A VERY LAST RESORT BECAUSE THE MAINTENANCE COSTS FAR OUTWEIGH THE BENEFITS ON PUBLIC LANDS. IN THE NEXT TWO DECADES WATER QUALITY WILL BE A MUCH HIGHER PRIORITY THAN CUTTING TIMBER. 5 6 7

SINCERELY,

Linza Sheldon

LINZA SHELDON

cc: Senator Max Baucus
Senator John Melcher

Response to Letter #297 - Linza Sheldon First page

1. Of the 51,900 acres in the Kootenai portion of the Scotchman Peaks area we have recommended 36,200 acres for Wilderness designation. The Idaho Panhandle National Forest has recommended an additional 22,500 acres for Wilderness designation (a total of 58,700 acres on both Forests). Much of the Pellick Ridge area has been recommended for Wilderness designation. The Trout Creek area is more than twenty miles away from Scotchman Peaks and is separated from Scotchman Peaks by roads, a railroad, the town of Heron, Cabinet Gorge Reservoir and several developed drainages. Much of the Trout Creek roadless area will remain roadless, but it is not recommended for Wilderness designation because there are potentially high mineral values and important elk habitat in the area. Maintenance of high quality elk habitat will require planned manipulation (usually burning) from time to time and such practices are not permitted in Wilderness.

2. Much of the important winter range on the south side of Pellick Ridge as well as some old-growth has been included in the Scotchman Wilderness recommendation.

3. With regard to the cedars, we assume you mean Ross Creek rather than Rock Creek. The Ross Creek Cedars are preserved in Management Area 21 and recommended Wilderness.

4. The Idaho Panhandle NF (in its Proposed Action) and the Flathead NF (in its Final Plan) both included programmed sale levels that were larger than their average cut of the last ten years. The projected allowable sale quantities for all the Forests in this area are based upon non-declining yield. Thus the "cut it all..." approach is not used.

5. We expect to see some some additional restructuring in the local timber industry as the location of available timber supplies shift (see Appendix B of the FEIS), but in terms of harvested volume (which bottomed out in 1982), recovery is already under way (see Chapter II in the Final EIS).

6. Road building is an effect of managing land for timber production. If timber is to be harvested then roads are necessary. The needed road miles shown in the various documents are not "targets" or "goals", but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those necessary to manage the land base are ever built. The land base managed for timber in the Final Plan is estimated to require about 640 fewer miles of road than the Proposed Action. Our analysis indicates that over the long term (200 years) the value of timber hauled over these roads will more than offset both the construction and the long term maintenance costs.

7. The Final Plan has been modified to insure that State Water Quality Standards will be met.

111

520 N. Benton; Helena, MT 59601
10/27/85

To Kootenai National Forest Planners:

Thank you for sending me the Kootenai N.F. Draft Plan & EIS. I have spent quite a bit of time studying it – though not nearly as much as you have! Here are my comments and suggestions:

1. Old Growth: Should be removed from the timber base entirely, and at least 15% of the forest placed in this category – mostly in riparian zones. 1, 1a, 1b
2. I can support an annual timber sale level of no more than 175 mbf. 2
3. Roads. Cut down the headlong rush to build roads into roadless areas. 3
4. Increase protection for streams by having bands of old growth, or at least some intact forest, for a distance of 300' on each side for wildlife corridors & water quality. 4
5. Set aside far more protected wilderness, including Trout Creek, Ten Lakes, Cabinet Mtns. additions, & Scotchmans Peaks (including Pellick Ridge area). 5

I am a landowner & homeowner in the Kootenai, although I am temporarily in Helena. The forest is very important to me.

Thank you,
Nancy E. Slocum

Response to Letter #111 - Nancy E. Slocum

E-456

1. The Final Plan provides considerably more protection to old-growth dependent species, especially along stream bottoms. See the Final Forest Plan Map. About 34% of the mature and overmature timber acreage on the Forest (excluding lodgepole pine) has been removed from the regulated timber base.

1a. See response #1, above.

1b. See response #1, above.

2. The timber harvest level of 175 mmbf represents an early period of full production and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained.

3. The Final Forest Plan has reduced the total amount of new road construction, and will retain the majority of all inventoried roadless areas in a roadless condition. See Chapter II of the Draft and Final EIS.

4. The Final Forest Plan increases the protection for water quality. See the Riparian Area Guidelines, the Monitoring and Evaluation Plan, and the Forestwide Standards in the Final Forest Plan document.

5. Significant portions of Scotchman Peak (including Pellick Ridge), Ten Lakes, and the Cabinet Additions have been recommended for wilderness. Significant portions of Trout Creek have been designated as roadless because of the mineral potential and the big-game values.

E-456

Robert Jantzen
US Fish and Wildlife Service
Dept. of the Interior Washington D.C.

Dear Robert Jantzen,

I feel compelled to write you regarding the fate of Montana's roadless areas not now classified as Federal Wilderness. It is my feeling that Montanas roadless area is facing a fight for life. A fight that will be carried to the U.S. Congress this year and which will seek to retain the status Quo of these lands through Federal Wilderness designation. The attention of every Montanan to the disposition of this roadless area is crucial. 1

This fate is brought about, in great part, by pressure on our Montana Congressional Delegation from the lumber, mining and oil industries that fund their campaigns, for it is their desire to open every roadless area within the state to exploitation of its natural state for single use monetary gain. 2

Perhaps you are already aware that within the confines of the Montana state boundary some 6.5 million roadless acres exist. In 1984 our Congressional Delegation submitted a bill that would preserve only 747,178 acres as wilderness (plus 507,23- acres which would have special management restrictions), while the remaining 5,245,590 acres would be opened to road building for logging, mineral and oil development.

To digress a moment, let me state that I am a staunch, grass roots supporter of the Earth First! movement in this nation as well as throughout the world. This movement seeks only to preserve what wildlands and roadless areas now exist. As a result of my association with that movement, I have been called a radical, a lefti a protester, and my very being as well as belongings have been threatened. I advocate no violence toward anyone, nor any belongings of anyones and I wish to seek the preservation of Montanas roadless areas by any non-violent means available. If anything, I am associated with what one could consider a far right wing, conservative movement seeking conservation and preservation. 3

As a result of my attempts to make our Congressional Delegation aware of my feelings, that is, Federal Wilderness designation for the remaining roadless areas in Montana, I have learned some startling facts I wish to bring to your attention.

First is the fact, admitted by a Montana Fish and Wildlife Biologist, that, if the so called "1984 Wilderness Bill" passed, only within a few short years would we see elk hunting in Montana, reduced some 60-80% of what we've experienced in the past. This would have been brought about by reduction of habitat and subsequent unavoidable herd reduction, resulting in the necessity of very limited "permit only" hunting of elk in Montana. 4

Secondly I have learned that most Montanans approached on the subject of wilderness are exceedingly apathetic, brought about in part by a lack of knowledge of what is going on in the battle for wilderness; but more I think, by the fact that Montanans have always had a big "back door" wild and roadless area available and 5

Response to Letter #14 - R. E. Smith - First page E-457

1. No response needed.

2. No response needed.

3. No response needed.

4. We disagree. The roadless areas that were considered, but not recommended, for wilderness were primarily designated for roadless management, which would have precluded any development and provided for the security that is needed for elk management.

5. No response needed.

many just cannot conceive that this status quo will ever change or be changed.

Thirdly, I am a native Montanan and a saddle maker by trade. Through my association with people in the wilderness movement I have learned that the real concern for Montanas roadless area, on a broad scale, comes not from the native Montanan, but from the individual who, within the past several years, has moved to Montana from another state where there is little if any roadless area as we know it and very little wilderness if any. Those areas in other states were despoiled by roads, oil and mineral exploration and lumbering long ago. The very reason many of these people moved to Montana is to enjoy roadless wildlands. From their ranks come those who are most concerned and ready to fight for the preservation of these wildlands, for they have already experienced the loss of them in other states.

Lastly, I have learned that, in violation of the law, the U.S. Forest Service has channeled every possible cent into building roads into the heart of these roadless areas only to log a small area within. This activity precludes inclusion of these roadless areas into the "RARE II" holding pattern and subsequently into wilderness designation.

From these observations, I hope that together we can draw some conclusions. First, that we must educate every elk hunter in every state of the Union as to what is at stake and encourage them to inform their own Congressional Delegation that the few wildlands and roadless areas available to us in this country must be designated as Wilderness by the Federal Government; for that is the highest form of preservation of these areas available.

Secondly, we must make every effort to educate every Montanan we can possibly reach to voice their strongest possible appeal to our Congressional Delegation to keep Montanas wildlands wild through Wilderness Designation.

Lastly, we must remain aware that our Congressmen cannot become aware of our desire to have Montana roadless areas remain as Wilderness through the process of telepathy or osmosis. We must tell them often and forcefully of these desires.

May I also state that neither the Earth First! movement nor myself is asking for anything new, or any change in Montanas lands, only that they remain as they are now and have been for hundreds of years; free of mans encroachment and despoilage. Only in the fulfillment of this action can we expect to prosper from Wilderness by attracting tourism, hunting, fishing, and wildlife as well as wilderness observation, a combination most states are at a deficit to offer. This fact makes Montana Wilderness, on a long term basis, invaluable, compared to the short term profits derived by those who wish to exploit our roadless lands.

We have promptly reached an inevitable deadline, one that will not be put off nor will it disappear of its own accord. We must take action or rest with whatever result is handed to us. For all of modern science, nay the entire resource of man is unable to make a wilderness of land despoiled, nor can we bring back even a living likeness of one extinct animal or bird. All the resources of mind and money this great nation could muster from now through millenia could not begin to create an old growth stand of virgin timber or even one square inch of wilderness as our God created it. Once gone we become the irrecoverable losers for ever and ever.

Respectfully submitted for your consideration and subsequent action.

R.E. Smith

R.E. Smith
P.O. Box 120
Shelby Lake, Mt. 59868

6. No response needed.

7. No response needed.

8. See the designated roadless areas in the Final Forest Plan compared to the Roadless Inventory displayed in the Draft EIS.

9. No response needed.

10. No response needed.

BUCKSKIN CLOTHIER
Elaine Snyder
P.O. Box 112, Kila, MT 59920
Ph. (406) 257-8451

10-30-85

Dear Sirs:

I am a former resident of the McGregor Lake area for four years. During those years I hiked and enjoyed the Kootenai woods. At one time I did trails maintainous and cleaned up campgrounds.

I endorse maintaining the Kootenai forest for its wild resources. The timber plan for this Forest is outrageous. This isn't timber producing country, wildlife and watershed will greatly suffer by the cut and roading projected. 10,692 miles of road is unnecessary and detrimental to other resources on the forest. 1 2

I support wilderness for these areas: Ten Lakes (33,000), the Scotchman Peaks including all of Pellick Ridge, Trout Creek, the Cabinet Additions, and the Kootenai side of Tuchuck and Thompson - Seton North Fork Wildlands. 3

Other areas on the Forest should be maintained wild, roadless, and managed for non-motorized recreation. They include: Roderick Mountain, Cataract Canyon, Canyon Peak, Northwest Peak, and 4

Response to letter #228 - Elaine Snyder First page

E-459

1. This Forest has produced large volumes of timber for many years and can continue to do so under the Final Plan. Much of the timber producing land is managed to maintain and enhance wildlife habitat (see the standards for Management Areas 11, 12 and 14 in the Final Plan). The impacts of timber harvest, both negative and positive, are discussed in the EIS.

2. The road miles shown in the EIS are neither targets or goals, but estimates of the miles needed to log the regulated timber base given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. In addition, the guidance for each management area includes details on road use restrictions that are designed to provide secure habitat and minimize the impact of roads on elk habitat. The impacts of road construction are discussed in the EIS.

3. Most of the areas you mention are either recommended for Wilderness or included in some other roadless designation (see the Final Plan map).

4. Most of the areas you mention will be maintained in their roadless condition (see the Final Plan map).

E-459

Robinson Mountain.

It is quite important to maintain old growth. It supports a wealth of habitat for various species. No less than 15% of old growth should be permanently preserved. Especially preserve it along streams and remove the 15% from the timber base. 4 5 5 a

Water quality is ~~the~~ heart root resource of man and this land. Every effort is needed to preserve and maintain it's quality. Protecting streamside areas is essential to a health land and forest and community. It's a local resource that generates health, economy and a quality of life for which we all live. The current Kootenai Forest Plan will erode that essential resource. 6

Take care of the Kootenai and the Kootenai will take care of Montana.

Sincerly,
Elaine Snyder

Response to letter #228 - Elaine Snyder Page 228a

5. The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics. Much of this area is along streams (see the Final Plan map).

5a. See response #5 above.

6. The Final Forest Plan increases the level of water quality protection. See the Riparian Area Guidelines, the Monitoring and Evaluation Plan, and the Forestwide Standards in the Final Plan document.

Box 507
Libby, MT
10/31/85

Kootenai National Forest
Forest Plan
Rt. 3, Box 700
Libby, MT 59923

Gentlemen:

The least threatening alternative proposed in the Forest Plan is Alternative N. I say "least threatening" because even it will withdraw close to 200,000 additional acres from possible mining ventures which could help the National economy. These withdrawn acres would be in addition to the 95,000 acres withdrawn in the Cabinet Mountain Wilderness. 1

One factor which I highly favor in alternative N is that it will add no more wilderness to our area. We already have more wilderness acreage in Montana than total area of some eastern states. Enough is enough. 1a

Plus, I do not favor closing roads. As a native Montanan and living in Libby, I earn about 1/2 as much as automobile workers in eastern factories and about 1/3 as much as city workers in New York City. Part of the reason I can subsist on lower wages is because I can get my own wood for winter heat, I can hunt and fish to help supply food for the family and possibly do a little prospecting on week ends. When you close roads, it becomes more difficult to get wood because there is more competition on the few remaining open roads for the wood. The same holds true for hunting. I am not interested in your so called "quality hunts" (meaning hiking for days) nor can I afford to hire a guide like the out-of-staters do and pack in. I am interested in obtaining meat for the table and open roads provide more option to hunt with much less hunter pressure in any one area. 2

One last item, I do not favor transplanting grizzly bears into the Cabinets. To do that just adds one more reason to close roads and put our lives in jeopardy when we are on any outing on the fringes of Libby itself. 3

Sincerely,

Lance Spooner

1. The Final Forest Plan will preserve the option for mineral exploration where the mineral potential appears to be promising.

1a. Wilderness is one of the multiple-uses of the National Forests.

2. Road closures for big-game species are supported by the State Department of Fish, Wildlife and Parks, and are felt necessary to maintain the big-game hunting seasons we have today. Many roads are closed only on a seasonal basis and are open for public use, such as woodcutting, at other times of the year. The Final Forest Plan will provide for the same amount of open roads as currently exists. See Chapter IV in the Draft EIS.

3. Grizzly bear recovery will be one of the many uses that the Kootenai National Forest Plan will be providing for. How that is done will depend on the needs of the bear and the public support for the method.

Rt. 1, Box 929-C
Libby, Mt 59923
October 29, 1985

Forest Supervisor
Forest Planner
Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear Sir:

Regarding the Kootenai Forest Draft Plan. I am in favor of a final plan that will allow for the most timber harvest, more mining, less road closures in conjunction with so-called wildlife habitat and no more grizzly bears. 1 1a

Wood is our only renewable resource (excluding water, but you can't build a house out of water). Oil, coal, gas are finite resources; once utilized, forever gone. But not so with wood. Trees will grow repeatedly on the same land whether they're sawed down, clearcut, burned or killed by disease--they grow back within a couple of generations. Therefore I do not favor setting aside additional acres for wilderness, at least not in Montana which has huge areas in wilderness already. Harvest the mature timber, clearcut and plant again. Environmentalists speak of wilderness for future generations. Plant the trees now and future generations can make their own wildernesses using areas that have regrown from our harvests. 2 2a

As for roading on the Kootenai, the more roads the better. (Even roads become overgrown in time for future wilderness). Open roads allow more people to use the forest and isn't that why the National Forests were created and later mandated for people uses? Roads should remain open so that people are dispersed in the woods, rather than crowded onto a few valley bottom roads with no side roads open. If maintaining roads is a problem, then don't maintain side roads--eventually they will close themselves, but in the meantime people will have been able to use them for wood cutting, berry picking, bird watching, prospecting, hunting, picnicking, motorcycling and just driving on to see wildlife. 3 4

The national economy, as well as the local economy, needs industries to keep this country going. Lumbering and mining are two good industries that the Kootenai Forest can support. They should be supported to the fullest extent in the final Forest Plan, and, certainly not be traded off for grizzly bears or additional wilderness. 5

Thank you for this opportunity to comment and my compliments to you for your wise decision on the Great Northern Ski proposal. 6

Yours truly,

Robert J. Spooner

Robert J. Spooner

Response to letter #199 - Robert Spooner

1. The Final Plan provides the same allowable sale quantity for timber as the Proposed Action. This volume is larger than the average harvest over the last ten years and will allow for increased harvest in the future. The opportunity for mineral exploration and development is retained in areas where potential mineral values are considered to be promising.

1a. Road closures for big game species are supported by the Montana Department of Fish, Wildlife and Parks and are felt to be necessary to maintain the big game hunting seasons we now enjoy. Many of these roads are closed only seasonally and are open for public use the rest of the year. Preserving the grizzly bear is required by the Endangered Species Act. Any Forest Plan that would jeopardize the existence of the bear is not viable.

2. The Final Plan recommends that 78,500 additional acres on the Forest be included in the Wilderness system. For the most part these proposals involve lands that can not be economically accessed or logged.

2a. About 1,263,000 acres of the Forest will be managed for timber production. These acres will be gradually accessed, usually clearcut and then regenerated with trees, as you suggest.

3. Road construction impacts both the U.S. taxpayer and the natural resources in this area. For these reasons a goal of minimizing the miles of road construction has been incorporated in the Final Plan. In this way only those roads needed to manage the Forest will ever be built.

4. We estimate that there will eventually be over 4,300 miles of road available for year around use on the Forest and many more miles available for seasonal use. This amount of roading will provide extensive access for the uses you note.

5. See response #1 above.

6. No response needed.

Bob Springer
Box 35 # Rt 2
Heron, Mont
59844

Old growth:

The proposed 8% OG allocation is far to small. It just doesn't allow any cushion for decease, pests or wild fire that could have a significant impact on proposed or future stands of this resource. A 10 to 15% allocation could easily be met if riparian zones and present trail systems were given preference as OG and OG replacement areas 1

Wilderness:

I would like to see the Pellick Ridge part of the Scotsmans included in proposed plan as wilderness for the following reasons. This area has a high esthetic, recreational, visual and grizzly habitat potential. The cost of building roads for logging in this extremely steep terrain would be prohibitive not to mention the visual and erosion impacts. If this area truly had prime mineral potential Asarco would not have put its stamp of approval for wilderness. 2

P.S.:
(He had more to say, but ran out of time to meet your Nov. 1 deadline.)

Bob Springer
(bgsls)

Response to Letter #232 - Bob Springer

E-463

1. The Final Plan provides considerable more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

2. A significant portion of the Pellick Ridge area has been included within the final recommendation for wilderness in the Final Forest Plan. See the Final Forest Plan Map.

E-463

231

SARA Lou Springer
Box 35 ★ Rt 2
Heron, Mont 59844
Oct 30, 1985

I have three main problems with your proposed Forest Plan:

(1) Wilderness

You seem to be cutting primitive areas away from wilderness and lumping into the ambiguous management area #2 that actually states "motorized vehicle use must be compatible with the roadless management goal". (How exactly do have vehicle use in a roadless area?) 1

Why has Pellick ridge & Squaw Peak been delected from the Scotchman proposed wilderness? This is a needed corridor between the Cabinets & Scotchman. Asarco doesn't want it. There is valuable big game habitat up there. Squaw Peak/Pellick ridge is special to people in Heron. We look at it every day and many of us go there often. 2

You're doing the same thing with the southern portion of the Trout Creek roadless area, calling it m.a. #2, & leaving it unprotected. 3

Wilderness is a vanishing resource that your new plan fails to protect as fully as it could.

E-464

Response to letter #231 - Sara Lou Springer, First page

1. The motorized use that may be allowed within Management Area 2 will be the exception and is displayed in Chapter III of the Final Forest Plan.

2. A significant portion of Pellick Ridge has been added to the recommended wilderness area of Scotchman Peak. See the Final Forest Plan Map.

3. Management Area 2 maintains the roadless character of the Trout Creek area and the wilderness values can be reassesed when the Final Forest Plan is revised.

E-464

(2) Water Quality.
Since your proposed plan received such a poor E.P.A. rating, would you please consider protecting stream side areas by limiting skid trails, landings, roads, and clearcutting in riparian zones. 4
What does 5-12% loss of fisheries mean? Will the creeks that we have water rights on & that flow through our property be affected and how much? 5
Will the West fork of Elk Creek have a 2% loss and the East fork of Elk Creek (that for 13 years we have been creating fish habitat in) suffer 15% loss?
I want to know exactly which creeks are affected and then proven to me that any loss of water quality is a rational and acceptable protection of the resource. 6

(3) Old growth timber. The fact that you included O.G. in the timber base is surprising since the remenants of our giant forests provide unique habitat. 7
Your plan of maintaining only 8%, the absolute minimum needed to maintain minimum population of birds & wildlife indicates your minimal concern for this resource 7a
As a bird watcher, I ask that you set higher goals & protect at least 15%.

Sincerely Sara Lou Springer

4. See the revised Riparian Area Guides in the Final Forest Plan document.

5. The projected timber harvest and road construction levels, if sustained, would result in some fish losses as calculated using the fishery model at our disposal. The amount of calculated loss in a given watershed depends on the sensitivity of the watershed in question, its threshold level of sediment, the rate of recovery, and the degree of harvest that is projected. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Stan dards in the Final Forest Plan document).

6. No streams will be degraded under the Final Forest Plan because the Plan requires that the State Water Quality Standards will be met or the project or activity will be modified or stopped. See the Final Forest Plan document.

7. Old-growth timber has been removed from the regulated timber base in the Final Forest Plan.

7a. The Final Plan provides considerable more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

Oct. 21, 1985
Star Rt. 2, Box 270
Trout Creek, Montana
59874

57

Forest Supervisor
Kootenai National Forest
R.R. #3, Box 700
Libby, Montana 59923

Dear Sir:

I have several concerns regarding the Forest Plan. My two major points surround the validity of a plan that is not based on realistic dollar figures.

The current plan projects targets and goals that the Forest Service is not currently funded for and isn't likely to be budgeted for in the Republican administration. Why base a plan stating objectives that aren't obtainable? Why not plan according to realistic budget constraints? 1

Projections for timber sale profits are based on questionable data. Analysis was based on timber sales in 1974 through 1980, not taking into account low dollar years the timber industry suffers now. Current timber sales are forfeited or not bid on due to economic restraints. Is it realistic to project an increase in sales in a low demand product that is not selling at current levels? I would like another Forplan run which would place timber sales at 170 million board feet per year and constrain the budget to $ 20 million / year, the current budget and sale levels. 2

Another major concern is the projected 4600 miles of roads to ge built in the next ten years. What's the hurry? Is the 5-12% loss of fisheries an accurate figure? I would like to see more research on the effects of roads in relation to watershed in each particular drainage. Perhaps riparian stands could be given preference for Old Growth management, thus providing watershed protection and a good ecosystem for Old Growth. 3 4 5

I am very concerned about the lack of monitoring of wildlife in this area. Why only monitor elk as a game species? Does anyone have counts on the mountain lion, moose, and bear populations? Big game outfitters have multiplied in our area at an alarming rate. The Cabinet Ranger District has no limit on "day-use" outfitters and has an alarming number of licensed outfitters for overnight use. How much longer can we maintain a viable population of big game with this boom in hunting, especially if no one has accurate counts and little if any monitoring system? I would like to see more money allotted towards monitoring big game and a reduction of outfitter licenses if those species are in fact decreasing beyond a preestablished baseline rate. 6 7 8

My final concern is about the credibility of the plan. Who is going to monitor local districts to ensure the plan is being followed? It seems the management area plans are written with such ambiguousness that allow divergent and perhaps conflicting courses of action. 9

One of the strongest assets of the plan is the professional you've designated to present it tothe public, Jim Shadle. He's articulate, knowledgeable, and personable. It's reassuring to encounter such a competent individual in the ranks ofthe Forest Service bureaucracy. Thanks for considering my input into the Forest Plan.

Sincerely:

Jeanette Stangl

Jeanette Stangl

Response to Letter #57 - Jeanette Stangl

1. *The Final Forest Plan is based on the productive potential of the* Kootenai National Forest and is dependent on a certain budget level to achieve these potentials. If the budgets are not forthcoming, the Final Forest Plan will be adjusted or revised in accordance with the guidelines stated in the Monitoring and Evaluation Plan.

   A sensitivity analysis was done on more recent timber prices and is displayed in Appendix B of the Final EIS.

2. The Current Direction (Alternative I) and Alternative F come very close to your request. See The Final EIS and Table II-24 at the end of Chapter II.

3. The Final Forest Plan projects a maximum of 2,370 miles in the first decade. See Chapter II of the Final EIS.

4. The Fisheries loss calculations are of low reliabilty and were presented in the Draft EIS only for comparative purposes. Because of the low reliability, the Final Forest Plan will require that the State Water Quality Standards be met for all activities and projects.

5. Many riparian stands are now located within old-growth timber designations (MA-13). See the Final Forest Plan Map.

6. Viable populations will be insured by providing diverse habitat conditions for the full range of species found on the Kootenai, and by monitoring the indicator species which are most subject to management activities. By insuring the maintenance of indicator species, all other species should remain well above the minimum viable level. See Chapter III in the Final EIS for the full list of indicator species to be monitored.

7. We agree that the number of outfitters have increased significantly in recent years. This is why the Cabinet Ranger District has decided to stop issuing new day-use permits until they can determine how many outfitters are needed to adequately serve the public. The District has already established a limit on the number of Outfitter camps.

8. The estimated budget for the Monitoring and Evaluation Plan has been re-evaluated and is available for review at the Forest Headquarters.

9. Monitoring will be done on a Forestwide level to insure consistency with the intention of the Management Area prescriptions in the Forest Plan document. Wording, in many cases, was intentionally general to allow the flexibilty to adapt to new techniques and unforeseen potential conflicts. The intent is to meet the goal and purpose of the individual Management Area prescription.

Oct. 28, 85 154

Our Bitterroot Forest is in the process of finalizing a new Forest Plan, and I gather that you folks are doing the same thing. Since our areas are similar, both depending on a healthy forest industry for their economic security, then I also feel that the management of the two forests should also be the same. Mainly that they be left open, to be managed under multiple=use , which serves the needs of both recreationalist and local employment in woods related jobs. I hope you will leave the boundaries as they presently are now, on the Kootenai National Forest, and not add any additional wilderness or roadless areas, to what exists already. 1

I support Alternative N of your plan.

MRS. B. STEINER
118 NICOLS DRIVE
HAMILTON, MONT.
59840

Beverly Steiner

143

Suggestions regarding Kootenai National forest plan.

My suggestion would be to Maximize the comercial forest acreage upon which they practice Intensive forest management. 1

Sincerly
Walter C Morkert
R.R. I Box 1163
Libby Mt. 59923
morkert

E-467

Response to Letter #154 - Beverly Steiner

1. The Final Forest Plan recommends a moderate amount of additional wilderness where the potential for wood-related jobs are low or non-existent. See the Final Forest Plan Map.

Response to Letter #143 - Walter C. Morkert

1. The Final Forest Plan attempts to maximize the amount of timber harvest that can be obtained in a cost effecient manner. See the Final Forest Plan Map.

E-467

13

August 1, 1985

Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Dear Sirs:

Please accept my comments, as follows, concerning Draft Environmental Impact Statement - Proposed Forest Plan - Kootenai National Forest.

I have been acquainted with this National Forest for several decades; and continue to retain the firm opinion that this Kootenai National Forest contains outstanding Wilderness, wildlife, fish, botanic, scenic and cultural resources of certain National significance.

An area that provides a vital and, as all Americans hope, a lasting refuge for man, and for all life, on this endangered planet. An area, then, that fully benefits man, and fully benefits all life on this damaged Earth.

I wish to advise of my substantial ***opposition*** *to this National Forest's* proposed action - Proposed Forest Plan - as such will decimate surface and sub-surface resources and will, thus, destroy this very fragile Kootenai National Forest. 1

I, then, fully recommend that as concerned American citizens we save this Kootenai National Forest by establishing this National Forest as a permanent dedicated preserve. With all such National Forest System areas established as permanent dedicated preserves. As the purpose of the Forest Service, United States Department of Agriculture, is to preserve all of the Wilderness, wildlife, fish, botanic - all biological resources - scenic and cultural resources located on the National Forest System. 2

With each such preserve to protect ecosystems, preserve watersheds, save and enhance all wildlife, fish and botanic habitat areas, protect and promote all Biological Resources and their diversity, preserve rivers, streams and creeks, restore and recover all used and damaged areas to their natural environmental condition, and to preserve, protect, strengthen and expand wilderness. As wilderness is the foundation of all land and water resources. 3

With the purpose of all land and water resources planning and management to preserve, protect, strengthen and expand wilderness, I then fully urge that each of the following areas and acres located on this Kootenai National Forest be fully classified and permanently protected as Wilderness; as each such unit features superb wilderness attributes, and to be included in our National Wilderness Preservation System at this time: 4

Cabinet Mountains		Robinson Mountain	7,143
(Wilderness Additions, only)	84,231	Mount Henry	27,302
Tuchuck	2,632	Warex	22,117
Thompson-Seton	24,112	Gold Hill	24,593
Marston Face	6,673	Zulu Creek	6,881
Le Beau	849	Roderick	27,354
Ten Lakes	43,892	Grizzly Peak	6,897

1. No response needed.

2. The purpose of the National Forests is to provide for multiple-uses, some of which do maintain and preserve the existing scenic, cultural, biologic, etc., resources.

3. No response needed.

4. Appendix C and Alternative H in the Draft EIS discussed the wilderness option for most of these areas. The Final Forest Plan has proposed a moderate amount of wilderness and a significant amount of roadless designation for most of the areas that you have outlined.

13 a

Buckhorn Ridge	24,934		
Northwest Peak	16,021	Cube Iron	1,322
Boundary Mountain	6,809	Maple Peak	1,517
Richards Mountain	17,933	Trout Creek	34,781
Wolf Mountain	2,998	McNeeley	8,478
Satire Mountain	12,683	Lone Cliff-Smeads	7,833
Kenelty Mountain	8,779	East Fork Elk Creek	5,697
Barnum Creek	10,252	West Fork Elk Creek	5,702
Mc Gregor Thompson	7,166	Government Mountain	9,323
Owl Peak	9,581	Chippewa	2,824
Allen Peak	27,316	Berray Mountain	9,502
Barren Peak	16,451	Scotchman	56,174
McKay Creek	14,536	Willard-Lake Estelle	19,873
Rock Creek	437	Roberts Mountain	8,219
Galena	18,951	Flagstaff	10,389
Cataract	19,312	Saddle Mountain	5,437

4

Plus, an additional 158,000 acres; including restored, recovered acres.

To secure a total of some 939,481 acres of Wilderness to be located on this Kootenai National Forest - only - and to be included in our National Wilderness Preservation System at this time.

To ban all mining activities in the Cabinet Mountain Wilderness so as to save this impressive and fragile area. 5

To include rivers, streams and creeks in the National Wild and Scenic Rivers Stystem. 6

To classify this National Forest as a National Wildlife Biological Preserve and National Critical Habitat Area to save all life, including grizzly bear, peregrine falcon, gray wolf, caribou, and bald eagle and to establish this forest area as a segment of the Grizzly Bear National Sanctuary System from Canada to Mexico. 7 7a

With this Kootenai National Forest to be established as a permanent dedicated National Wilderness Wildlife Biological Preserve and to select the following alternative as this National Forest's permanent planning and management alternative: Alternative Preservation Wilderness Wildlife Biological Scenic Resources.

To end clear cutting, and to restore this forest area to a necessary natural environment. 8

To remove, obliterate roads as such are decimating this forest area. 9

With no oil, gas development as this activity will cause profound land, water and air pollution problems. 10

To ban all hydro activities so as to save this general areas' water resources. 11

5. All mining activities have been prohibited by Congress except for valid existing rights.

6. The Final Forest Plan recommends no additions to the Wild and Scenic Rivers System, but this option is maintained for the future.

7. See response to #2, above.

8. Evenaged management, including clearcutting, is a legitimate silvicultural system.

9. Roads are a legitimate tool for the management of a National Forest.

10. Oil and Gas exploration and development is a legitimate use of a National Forest.

11. The management of water, including storage facilities, is a legitimate use of the National Forests.

To permanently ban all forms of surface and sub-surface activities, development on all current, proposed and potential wilderness. 12

No release of any Roadless Areas. 13

To acquire all inholdings on all Federal lands.

With no disposal of any Federal lands. 14

For when we save our natural lands and waters, we save America!

Sincerely,

John R. Swanson

(Typed from original letter due to difficulty in reading handwriting by M. Nuss).

12. Current wilderness has a Congressional ban on all mining, except where valid rights exist. Recommended and potential wilderness are subject to the rights outlined in the 1872 Mining Law.

13. Roadless areas that are not eventually placed into wilderness by Congress will probably be released.

14. See the Landownership Adjustment Plan in Appendix 9 of the Final Forest Plan document.

66

October 24, 1985

Mr. James F. Rathbun
Forest Supervisor
Kootenai National Forest
Rt. 3 Box 700
Libby, Montana 59923

Dear Mr. Rathbun:

The Forest Plan is deficient in many areas. I will outline the areas of disagreement.

(1) The economics of the Forest Plan are very unsound for the communities within the Kootenai National Forest and also the surrounding communities, 1

(a) The Forest Plan does not provide a good balance between recreational and industrial use of the land. In short, it does not provide for economic diversity which is a basic economic principle. The plan does not provide a good balance of dispersed recreation, developed recreation and logging. This plan allocates 90±% of the land base to logging. This is poor economic planning considering the condition of the logging industry and its future. This plan will perpetuate one industry towns and will eventually be the demise for towns like Libby, Montana. 2

(b) The Forest Plan exaggerates the returns to the government and jobs it will create and is especially speculative when considering the future of the timber industry in the Northwest. 3

(c) This plan perpetuates costly road building and the selling of timber below cost. In short, adds to the deficit of the national budget. 4

In summary this plan should allocate more funds for dispersed recreation and developed recreation. 5

1. No response needed.

2. We respectfully disagree. As discussed in Chapter III of the DEIS, the Kootenai is expected to be able to provide all types of recreation in excess of anticipated demand for at least the next 50 years. In terms of land base, the Final Forest Plan designates lands for multiple uses as follows:

DESIGNATION	ACRES	% OF LAND BASE
Wilderness	206,000	9
Roadless Rec	315,000	14
Motorized Rec	17,000	1
Timber Base	1,263,000	56
Big-Game Wtr.Rg.	112,000	5
Other Non-Timber	331,000	15
TOTAL:	2,244,000	100

3. We have explored the effect of using timber price data from 1975 to 1984 as well as lower estimates of increases in the future and lower road costs (as experienced in the last several years). The effect upon returns to the treasury is displayed in Appendix B of the Final EIS.

The IMPLAN model, described in the DEIS Appendix B, is a "snapshot" of the inter-industry relationships and efficiencies that existed in 1977. Since that time sawmills have improved their efficiency so that fewer jobs are needed to process a given amount of timber. The prime utility in these projections is in their relative comparability between alternatives rather than in the absolute number, thus no further analysis is considered necessary.

4. Certain timber sales developed in accordance with the Forest Plan will cost more to prepare and administer than they return to the U.S. Treasury. This occurs because (1) the Plan uses a long-term perspective wherein a below-cost sale now will allow numerous sales in the future which will result in a positive cash flow to the treasury; (2) a below-cost sale may be the most cost-effective way of accomplishing another objective (such as fire hazard reduction through elimination of high-risk lodgepole pine); and (3) a certain harvest level will be needed to maintain the social fabric of local communities.

5. The Final Forest Plan projects budget needs to provide for the anticipated demand. See the Final EIS, Chapter II.

Page 2
October 24, 1985

There should be an unbiased economic study by an economist that has no one pulling strings. 6

*2) The specific areas of disagreement are hunting and fishing.

*(a) Lack of additional wilderness to the Cabinets as recommended by the Rod and Gun Club, as well as the Chamber of Commerce. 7

*(b) The Forest Plan completely destroys the integrity of the Scotchmans Peak proposed wilderness.

Scotchmans Peak has received more support than any other wilderness in Montana, still the United States Forest Service chooses to ignore this input.

The Scotchmans Peak should be restored to its original 95,000 acres. 8

(3) Protection for the 30,000± acres in the Trout Creek area. It's one of the last areas left in Western Montana where there is quality elk hunting. This area provides for a quality hunt as well because there are no roads. 9

(4) There should be provisions for a major ski area on Great Northern Mountain. Four (4) years of study by professional consultants and experienced skiers, as well as market studies, have shown this area has the potential to be one of the finest ski areas in the Northwest, if not the best. However, the Kootenai Forest chooses to ignore these studies and use their own people who have no experience as skiers or business people. In addition, the data they are using is inaccurate, cannot be substantiated and in some cases out right falsehoods. 10

(5) The plan does not provide for quality cross country areas layed out by experts and knowledgeable people. 11

(6) The plan should provide for improving the trout fishery. I have spent 38 years in Lincoln County and the Kootenai National Forest. The trout fishery has declined to the point where it is nonexistent compared to years past. 12

6. *No response needed.*

7. Significant amounts of wilderness has been recommended for addition to the Cabinet Mountain Wilderness Area, and much of the remaining adjacent inventoried roadless area was designated for roadless management which will preserve the option to reconsider wilderness in the future. See the Final Forest Plan Map.

   Additional wilderness area has been recommended for the Scotchman Peak roadless area on Pellick Ridge. See the Final Forest Plan Map.

8. Our records indicate 83,760 acres of National Forest Land in the Scotchman Peak Roadless Area. See Appendix C in the Final EIS.

9. The Final Forest Plan designates 22,500 acres of roadless management on the Kootenai side, in addition to the 4,800 acres of roadless management on the Idaho Panhandle side, for a total of 27,300 acres of roadless management to provide for quality roadless recreation including roadless hunting. See Appendix C in the Draft EIS and the Final Forest Plan Map.

10. The Great Northern Mountain Ski Area Proposal is a separate issue which was handled outside of the Forest Plan process. See the Forest Case File on Great Northern Mountain for further details.

11. To the best of our knowledge, there is no lack of quality cross-country skiing on the Kootenai National Forest.

12. Some species, particularly the westslope cutthroat trout, do not compete well with other trout; its tolerance to habitat change is limited, it cross-breeds easily with rainbow trout, and it is quite vulnerable to fishing pressure. The Final Forest Plan provides for the maintenance and improvement of the fisheries resource, primarily through the provision of acceptable water quality by requiring that the State Water Quality Standards be met on all projects and activities. See the Final Forest Plan document.

Page 3
October 24, 1985

I believe the Forest Plan violates the National Forest Policy Management Act. It does not address the economic and social impact upon the communities within the Kootenai National Forest. 13

This plan will be the demise for one industry towns like Libby. It will cost millions of dollars in welfare and unemployment. It will and has lowered property values and hurt business in general. 14

Very truly yours,

Stuart W. Swenson

*The positions to increase wilderness in the Cabinets and Scotchmans have been proposed by both the Libby Chamber of Commerce and the Libby Rod & Gun Club.

2410 Pontderosa Dr.
Coeur D'Alene, ID 83814

Response to letter #66 - STUART W. SWENSON Page 66b

13. Refer to Chapter II and III, and Appendix B in the Final EIS.

14. We respectfully disagree. In our judgement, the Final Forest Plan provides a balance that should provide the opportunity for traditional resource-based industries to continue at their historic levels, while providing for new opportunities and options for the future, such as tourism, and recreation-based economies, etc. See Response #2, above.

156

Betty Swift
SE 206 Rose Ln.
Hamilton, Mt. 59840

Oct. 28, 1985

Forest Plan
Kootenai National Forest
Route 3, Box 700
Libby, Montana 59923

Another forest plan up for consideration to the public. And I'll bet yours will cost as much as the one now under way on the Bitterroot Forest---something over $1,000,000. It would be appreciated if you would sent me your dollar costs on your plan to date. I wonder if the public,whos taxes pay for these plans, is aware of the tremendous expense?

I do realize,that because of Congressional actions, that you folks have no choice in your -planning process, but to request comments from the public. But I think the process is a shame and a disgrace to your professional backgrounds to have to ask us--laymen--what is right or wrong for forest management. YOU are the professional Foresters and YOU should be making thedecisions on how best to manage our public lands under the MULTIPLE-USE concept, not the roadless or Wilderness concept. To consider any more areas in this latter statis is unthinkable for me. Its my understanding that every wilderness visitor has 20 square miles of pure solitude all to himself, and I think thats enough for any one individual, don't you? I think that wilderness is a selfish waste of our resourses. 1

Unfortunately, too few of us get to visit our vast wilderness areas, being restricted by health, age, finances or time. But we do get to enjoy and use the public forests and its road system in many other ways--fishing, hunting, winter sports, hiking, woodgathering and most important of all---for Woods related jobs to support our local Western Montana counties and communities. In our area, the woods industry supplies over 40% of our Ravalli County economic base, and I'm sure its even higher in your area. 2 3

Times have been tough for our lumber industry here in the west. Many negative things (the recession, U.S. dollar value and Canadian compitition) have all contributed to the problems of the past few years. Hopefully the worse is behind us and there are better days ahead. I hope you (the Forest Service) will not further complicate things by limited the future timber base that will be available for timber harvesting operations. The lumber companies have a huge dollar investment in both woods and mill operations, and they deserve at least a quarantee of enough timber base available to keep up their operations for the next 20 years. Our economy can not afford any more mill closures and the accompanying loss of local jobs. 4 5

I ask that you do not lock up any more lands on theKootenai Forest in either roadless or wilderness classification. I support Alternative N of your new Kootenai Forest Plan. 6

Betty Swift

E-474

Response to letter #156 - Betty Swift

1. Wilderness is one of the Multiple-Uses of the National Forests.

2. The Final Forest Plan will provide for approximately 4,000 miles of open roads for the enjoyment of the public, which is about the same amount as exists on-the-ground now. The Final Forest Plan will also provide for the continuation of forest-related job opportunities at the historic level.

3. Wood-related jobs account for over 70% of the economy in Lincoln County. See Chapter III of the Draft EIS.

4. The Final Forest Plan provides for the continuation of the timber sale program at the historic level. See Chapter II of the Final EIS.

5. Local jobs will continue to decline in several of the surrounding counties because of the diminishing supply of private timber and continued mill modernization. See the Section on "Timber Supply Situation for the 5-County Impact Area" in Appendix B of the Final EIS.

6. Alternatine N, in our judgement, does not resolve many of the other issues as well as the Final Forest Plan. See the section on Net Public Benefit in Chapter II of the Draft and Final EIS.

E-474

15

8-16-85

Kootenai National Forest Management Plan

Reaction - After a two year examination of the initial draft, revised draft, and the current documents I think that management areas #13, 14, 15 are counter-productive objectives.

Major Points

- Many of MA #15 ie, timber optimizations areas are located near or next to semi-primitive area. 1

- MA #14, Grizzly / Timber, its just not practical to manage an endangered species around timber harvest. 2

- MA #13, Old growth management, this MA has to much commercial involvement, ie logging within prescribed areas. 3

Purposal -

Management area #15 should be completely eliminated as a management objective, 4

Response to letter #15 - Terry L. Thompson First page

1. That is correct. Our intent is to designate areas for roadless recreation that provide the desired experience along with the transition to more developed uses.

2. Researchers and experts from this agency and the U.S. Fish and Wildlife Service support the use of timber management as a tool for grizzly habitat maintenance and enhancement. The Monitoring and Evaluation Plan is designed to insure that our efforts work in actual practice.

3. The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

4. Management Area 15 was reduced from 315,000 acres in the Proposed Action to 268,000 acres in the Final Plan.

E-475

MA #14 should only be managed as and for Grizzly bear. 5

MA #13 should be managed as old growth and wild life. 6

What you guys are doing is not only irresponsible but your trying to stick as much timber production into every area that you can. How much did the timber Companies pay you extra for that? Well you won't get away with it. If there isn't any changes then we'll see what the courts have to say about this. 7 8

Remember that every one is on to your road building obsessions and your days are numbered.

If there aren't going to be major changes in these MA's then the courts will decide.

Thank You

Terry L. Thompson

TERRY L. THOMPSON
W. 2223½ college
Spokane Wash. 99201

5. See response #2 above.
6. See response #3 above.
7. No response needed.
8. No response needed.

Oct. 29, 1985 149

Dear Mr. Rathlen,

As an observer/listener at the November 4th meeting in Noyon, I would like to preface my comments with an initial complaint. The Forest Service asks the public for site-specific comments. I realize such comments must be helpful, but they mean that the person is thus accepting the overall vision and thrust of the plan. My main concern is with the overall vision of the plan, not with the handling of specific acreage. 1

Mainly, the plan is oriented totally toward timber harvesting and road building to the detriment of all other values. Timber harvesting provides the greatest cost/benefit ratio because inflated timber prices were used in preparing the plan. I would suggest that the Forest Service rework their plan using current timber prices to see if such a timber bias is justified economically. 2

Secondly, the budget to cover the increased timber harvesting and road building is a wishful 28% increase over the present budget!! To base a 50 year plan on such an unrealistic budget seems irresponsible to me. I would suggest that the Forest Service rework their plan using a more realistic budget, e.g. perhaps using the present budget or a 3% increase over the present budget. Also, when and if the plan is reworked, all items should be deleted proportionally, i.e. everything should be cut 25%, including the timber and road building budget. 3

E-477

E-477

Response to letter #149 - Sara Toubman First page

1. While site specific comments are very helpful, the comments you offer are also quite helpful.

2. The Final Plan was tested using a different set of timber values and roading costs to bring them closer to current experience. The results are described in Appendix B of the FEIS.

   The Final Plan represents an approach that maximizes the overall net public benefit (including things with dollar costs and values and things that are subjectively valued). The budget that is displayed is our best estimate of the budget that is needed to achieve that overall net benefit. The Monitoring and Evaluation Plan has been modified to lead to appropriate changes (which could include an ammendment to the Plan) if funds are not available. Alternative I represents a situation with close to the current budget.

3. As noted in response #2, above, the Monitoring and Evaluation includes provisions to deal with reduced budgets.

Thirdly, the 4600 miles of roads to be constructed would greatly damage the streams and fisheries due to the increased sedimentation. Water quality would be impacted, which is against the law in Montana, and ~~trout~~ fish populations would decline, by an estimated 5-12%. I think such a decrease is unacceptable. Also the plan does not protect streamside areas. An adequate buffer zone must be prescribed to protect fragile stream banks. 4 5 5 a 5 b

Fourthly, I would like to commend the Kootenai for prescribing old growth management. However, the goal of maintaining 8% old growth is too small. This is the absolute minimum recommended by wildlife managers and allows for no margin of error. I would suggest a minimum of 15%. I would further suggest that all suitable riparian habitat be included in old growth. Also either old growth should be removed entirely from the timber base, or the definition of old growth should be increased to 250 years or greater so that it cannot be logged at 160 years. If it does remain in the timber base, new areas of old growth should be set aside adjacent to the old areas so that species migration will be facilitated. 6 7 8

Fifthly, Scotchman Peaks, including all of Pellick Ridge and all the Cabinet additions and Trout Creek should be designated wilderness. Roadless non-motorized management should be designated for all of Roderick Mt., Cataract Ck., Canyon Pk., Northwest Pk., Robinson Mt. 9 10

4. The Final Plan estimates that about 3,850 miles of additional road will eventually be needed to access the managed timber land base.

5. The Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards will not be violated. This approach forces attention to actual performance rather than estimates developed by mathematical models.

5a. The guidelines for riparian areas have been modified to prevent stream damage.

5b. The forthcoming "Soil and Water Conservation Practices Handbook" will be used. It is expected to include items such as you suggest.

6. The Final Plan provides considerably more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

7. See response #6 above.

8. See response #7 above.

9. Most of the areas you suggest have been recommended for Wilderness designation (see the Final Plan map). The Management Area 29 designation is retained in the Trout Creek Area because of the combination of Wilderness, wildlife and mineral values that exist there. From the wildlife perspective, MA 29 permits some habitat manipulation, primarily through controlled burning, so that the existing elk herd can remain healthy.

10. Most of the areas you mention will remain unroaded (see the Final Plan map).

The Forest Service was originally established to be a steward of all aspects of forest life and land, not just to be a manager and harvester of trees. I would suggest that the Kootenai be more realistic in its appraisal of the economics of timber harvesting, more concerned about the effects of 4600 miles of roads, and more careful in considering other goals of multiple use. Thank you. 11

Sincerely,
Sara Toubman
Sara Toubman
1027 N. Jackson
Helena, MT 59601

Response to letter #149- Sara Toubman Page 149b

11. See responses to your specific comments, above.

204

Rt. 1, Box 1333 C
Libby, MT 59923
October 31, 1985

Kootenai National Forest
Rt. 3, Box 700
Libby, MT 59923

Re: Forest Plan

Gentlemen:

From the point of Multiple Use of our National Forests, I believe that Alternative N is the most logical choice in the Forest Plan. 1

Creating more wilderness in Lincoln County is certainly not a multiple use aspect of the land you hold in stewardship for the nation. Wilderness can only by used by an elitist group of people--mainly young adults in excellent physical condition, a few horseback riders and some middle-aged people, usually men (hunters). I have been in the wilderness several times, saw only a couple people each time and none could have been over 30 years old. Perhaps the Kootenai Forest should compare the number of recreationists who used the campgrounds and the ones who visited Lake Koocanusa this summer with the number of people who used the wilderness and then see the true value of wilderness to the overall forest use. 2

In addition to multiple use recreation, I believe multiple use also means harvesting trees, allowing the minerals to be extracted from the fabulous lode that underlies the Cabinets, open forest roads for people to travel on whether they are getting fuel wood, Christmas trees or just out for a Sunday afternoon drive. 3

I resent the number of gated roads I see on the Forest. This year the Hexford District had 156 closed roads and I'm sure other Districts equalled this number; still the Kootenai Forest Plan proposes more closures even in Alternative N. Why do you want to keep people out of the National Forests? When you are making the final decisions on the plan, please remember what Congress decreed: multiple USE. 4

In varying amounts in the alternatives for the plan, you spoke to roadless areas. I do not believe any area, other than already created wilderness, should be designated as roadless. If it happens to be roadless, so be it. But to "designate" roadless areas, only creates another round of wilderness issues in the future. Also I do not believe in buffer zones. It should be spelled out and imprinted in black and white--either wilderness or not--and what's not wilderness should be available for multiple USE. 5

Grizzlies should not be transplanted anywhere on the Kootenai. The ones that are here, leave alone; the others, leave somewhere else. 6

Sincerely,

Lana Walen

Lana Walen

Response to Letter #204 - Lana Walen

1. Wilderness is one of the Multiple-Uses and Alternative N does not recommend any additional wilderness.

2. One of the purposes of wilderness is to provide solitude.

3. The Final Forest Plan does not recommend any wilderness where the timber and mineral values are significant. See the Final Forest Plan Map.

4. Wildlife is one of the Multiple-Uses and big-game animals need security during certain times of the year. The Final Forest Plan projects the same amount of open roads as now exist on the Forest. See Chapter IV of the Draft EIS.

5. Any area that is actually "roadless and undeveloped" in the next round of Forest Planning will be re-evaluated for wilderness designation. It makes no difference whether it is designated as "timber" or "roadless". The Final Forest Plan does not designate any "buffer zones".

6. The law requires that everything possible should be done to help meet the recovery goal for the Grizzly Bear. This may require the need to transplant some bears. This will be determined with public involvement to insure public acceptance.

E-480

27

Daniel weinstein
PO Box 429
Thomson Fall MT
59873

Dear Sir.

I am in favor of alternative H. I feel that merely designating a area gives the roadless area protection from pressure to build road in it.

I feel there is to much proposed road building in the preferred forest service plan. 1

I do not wish the timber harvest to increase when much of the timber offered for sale was not sold. 2

Response to Letter #27 - Daniel Weinstein, First page

1. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan estimates the need for an additional 3,850 miles of road as opposed to the 4,490 miles that would be needed under the Proposed Action. Most of the areas recommended for Wilderness in Alternative H will remain roadless in the Final Plan (see the Final Plan Map).

2. Over the last seven years the volume of timber offered has been essentially equal to the volume sold (see Chapter II of the EIS). The volume harvested has been trending upward so the Final Plan retains the option to supply the same timber volume as the Proposed Action.

E-481

27 a

I do not feel roads should be built if the Timber sale profit will not cover the cost of the roads. I would much prefer Timber sales in areas where existing roads are and where the value of the sale is greater than the cost of managing the sale and regrowing the crop. 3

I feel that roads in the Trout Creek drainage would ruin that area. 3a

I feel that the 35,500 acres in the cabinet addition should be given wilderness protection and the Scotchman's peak area be given wilderness protection. 4 5

Response to letter #27 - Daniel Weinstein - Page 27a

3. Our analysis indicates that, over the long run, the areas that are roaded will generate a positive return. The Final Plan has been modified so that it will produce a positive net return to the treasury in the first decade. The Proposed Action was estimated to be a net drain on the treasury (see Chapter II of the EIS).

3a. The Forest is very concerned with below cost timber sales. We are currently focusing on ways to minimize them and to maximize the returns to the treasury. When looking at management of a Forest over the long term (up to 200 years), it becomes apparent that certain investments now will more than pay for themselves in the future. Those initial investments may cause some current sales to be below cost.

4. Most of the Trout Creek area will remain roadless (see the Final Plan Map).

5. Much of the Cabinet Additions area and the Scotchman Peaks area has been recommended for Wilderness Designation (see the Final Plan Map).

In general I would like to see longer rotation age. 6

I would also hope that forest would provide more cross country ski trails and areas to pull out of the roads. as well as the possibility of ski and snow mobile shelters or huts. 7

Sincerely yours

Daniel Weinstein.

6. We carefully reviewed the minimum rotation ages used in developing the Forest Plan and found them to be in accordance with direction provided in the National Forest Management Act and its implementing regulations. Once the minimum ages were established, the economics of timber management coupled with a variety of environmental limitations on harvest (e.g. minimum management requirements) led to longer rotations as appropriate (generally between 80 and 160 years).

7. The Forest Plan does not get into the details of cross country ski trails and shelters. Your suggestions have been forwarded to our recreation Staff Officer.

230

24 Oct. 1985

Gentlemen:

I am writing you in the hopes that this will reach you before the November first deadline. Working in Africa,as I am (I might add, soley to pay for the privilage of living in northwestern Montana..), I find it quite difficult to remain as informed on certain issues as I would like to. One of those issues that has just come up, for me, is your proposed Forest Service Plan for the Kootenai National Forest.

I must inform you that my views do not agree with yours on quite a few points. I am against logging when it is done on a "production first" basis. 1
I am against constructing any more roads than are absolutely necessary in our forests. 2
I am against the use of clear-cut logging and would prefer to see logging turned to the seleective logging that I have seen practiced in Europe. 3/4

I feel that our OLD GROWTH timber is a more valuable resource than you apparently do. I think your proposal to retain only 8% of our old growth is absurd, and though I am realist enough to know that even 50% is an unrealistic number. I would like you to preserve AS MUCH OF OUR OLD GROWTH AS IS POSSIBLE. To recognize riparian stands as old growth or as old growth replacement areas. 5

Why don't you folks cut your budget? Keep it at current levels, preferably $20 million or less, and you won't have to cut so many trees. 6

At this point in time, Montana has some of the cleanest groundwater in the U.S. I would like to think that before you took precipitate action where logging and road construction are concerned, that you had completed adequate studies, not adequate in manpower spent, but in years spent, that would reveal the effects of said construction. I do not believe that your studies adequately illustrate the problems and trends that face not only our ground water resource, but effects all of our game resources, as well. 7

For these same reasons, I am totally against opening any of our wild areas to mining or drilling concerns. Gentlemen, I work in the oil industry. I can think of nothing more detrimental to our wilderness environment. I would much rather see you add MORE acerage to our wilderness areas, instead of opening them up to concerns that are exactly opposed to the meaning of Wilderness. 8

One thing that I noticed when reading your overview, was the fact that, in several areas you refused to actually state exact goals. I have no urge to read where you will "try" to avoid logging in an area. That is a cop-out. I would like to see a new Forplan run in which timber harvest is constrained to a maximum of 170MM bf/yr. I would like to see the budget constrained to, as I said, $20million/year, and to see your budget more accurately specified so that I know you will be spending as much on consertively maintaining the resources I care about; our wilderness, our game, and our water; as you will be spending on timber management and mining. 9

I worked to long for the Oregon State Forest Service, and walked to many miles in Oregons mountains to want that for Montana.

Please help us preserve what we have

William A Welles

Response to letter #230 - William A. Welles

1. No response needed.

2. Only the roads needed for management of the Forest are constructed.

3&4. Unevenaged management is generally not practical for the reasons outlined in the Draft EIS (Chapter IV). There is a paucity of research indicating unevenaged management is more beneficial than evenaged management even if such management could be accomplished. The management guidance in the Plan allows unevenaged management even though the assumption is that evenaged management will generally be the practical approach.

5. The Final Plan provides considerable more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

6. The 1985 actual budget was $20,870,000 and represents the Current Direction (Alternative I) in the Draft EIS. The Final Forest Plan projects a higher budget, but if Congress does not concur, a lower level will be realized which is the case illustrated for 1985.

7. There are no facts or data that tie timber harvesting and road construction to groundwater pollution. The Final Forest Plan mandates that the State Water Quality Standards will be met. See the Final Forest Plan document.

8. Mineral development on mining claims with valid existing rights in the Cabinet Mountain Wilderness is a right granted by the Wilderness Act of 1964 and the Mining Law of 1872. There are areas on the Forest where oil and gas leasing will not be allowed because of potential conflicts with other resources. In areas where oil and gas leasing is allowed, resource protection measures will be incorporated into the lease.

9. You have described the Current Direction (Alternative I) which is illustrated above in response #6, and displayed in the Draft EIS.

262

November 1, 1985
P.O. Box 9146
Missoula, MT 59807

James Rathbun, Supervisor
Kootenai National Forest
R.R. 3, Box 700
Libby, MT 59923

Dear Mr. Rathbun:

The proposed Kootenai National Forest Plan, which has been appropriately labeled "Timber Tyranny", contains several alarming propositions and deficiencies. Therefore, in the interest of prudent and conservative management of public forests, I strongly support:

1. wilderness designation for:

   a. Scotchman Peaks, including the 16,000 acres surrounding Pellick Ridge, for its floral diversity and important wildlife habitat; — 1

   b. Trout Creek, which contains crucial elk habitat susceptible to disruption by motorized development; — 1 a

   c. Ten Lakes WSA, as a buffer of wilderness against development; — 1 b

   d. Cabinet Mountains Additions, which are all essential to the integrity of the designated wilderness and grizzly bear habitat; — 1 c

   and,

   e. Kootenai side of the Tuchuck and Thompson-Seton areas (North Fork Wildlands), as complements to the Flathead side. — 1 d

2. complete roadless (non-motorized) management of the following areas:

   Roderick Mountain, Cataract Creek, Canyon Peak, Northwest Peak, and Robinson Mountain. — 2

3. permanent protection and conservation of at least 15% of old growth forests to maintain the richness of old growth-dependent wildlife, especially in riparian zones; and removal of old growth forests from the timber base. — 3, 3 a

4. more responsible timber management with harvests held at current annual levels of 173 mbf; annual timber sales at or less than sustained yield; and elimination of "Boom and Bust" management (eg. proposed harvest levels of 217 to 277 mbf) which borders on timber mining. — 4

1. A significant portion of Pellick Ridge has been recommended for wilderness in the Final Forest Plan. See the Final Forest Plan Map.

1a. A significant portion of Trout Creek has been designated as primitive recreation because of the important wildlife and mineral potential values. See the Final Forest Plan map.

1b. A significant portion of Ten Lakes has been recommended for wilderness.

1c. A significant portion of the Cabinet Additions has been recommended for wilderness. See the Final Forest Plan Map.

1d. The Kootenai side of Tuchuck and Thompson-Seton has been recommended for roadless management to be compatible with the Flathead National Forest Plan. See the Final Forest Plan Map.

2. Significant portion of these roadless area have been designated for roadless management. See the Final Forest Plan Map.

3. The Final Plan provides considerable more protection to old-growth dependent species. About 34% of the mature and overmature timber acreage (excluding lodgepole pine) has been removed from the regulated timber base. Included in this is over 90% of the land base inventoried as providing old-growth habitat characteristics.

3a. See Response #3, above.

4. The timber harvest level of 173 mmbf represents an early period of full production and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained. See Chapter II in the Final EIS.

5. opposition to the proposed construction of 4600 miles of new roads (241 miles per year). Elk-logging studies consistently show a strong correlation between increased road construction and decreased elk use. In addition to the loss of 136,000 acres of roadless wildlands, increased roaded access may cause a decline in other wildlife like black bear and mountain lion by encroachment and greater hunting pressure. 5

6. improvement of existing water quality and protection of fragile riparian zones. With the worst water quality rating of ten Montana national forest plans, the Kootenai National Forest Plan is obviously headed in the wrong direction by estimating a 50% increase in sedimentation. The Montana Department of Fish, Wildlife and Parks predicts that any increase in sediment will likely reduce fish populations by eliminating spawning areas. The Plan also offers no protection of riparian zones by failing to exclude roads and other timber management activities from these sensitive areas. 6 6 a 6 b

and,

7. emphasizing/enhancing the Forest's contribution to the local economy from recreation. 7

I look forward to the inclusion of the above in the Final Plan.

Sincerely,

Al Wells

Al Wells

5. Projected increases in elk habitat potential will result from providing a proper balance of cover, forage, and security; not from reduced road construction. Cover and forage will be provided through scheduled timber harvest and direct habitat improvements, such as prescribed burning and seeding. Security habitat will be abundant in unroaded areas (25% of the Forest), and will be provided in roaded habitats through an aggressive road management program. Even though the total amount of roads will increase in the future, the amount of open roads will not change much from the present.

6. We are not aware of any 50% increases in projected sediment in the Draft EIS or the Forest Plan. The Final Forest Plan is mandated to meet the State Water Quality Standards. See the Final Forest Plan document.

6a. The projected timber harvest levels, if sustained, would result in some fish losses as calculated using the fishery model at our disposal. The amount of calculated loss in a given watershed depends on the sensitivity of the watershed in question, its threshold level of sediment, the rate of recovery, and the degree of harvest that is projected. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Standards in the Final Forest Plan document).

6b. The Riparian Area Guidance has been clarified to show the intent to modify activities to minimize the impact within riparian areas.

7. The Kootenai Forest Plan recognizes recreation as an expanding use of the Forest and the opportunity for expanding Forest-related recreation use exists if the communuty desires to promote it. The Forest Service will continue to provide information to the public about opportunities on the Forest.

COMMENT ON THE KOOTENAI NATIONAL FOREST
MANAGEMENT PLAN

By
Winton Weydemeyer

Fortine, Montana

.....

First, lest you consider this letter to be the views of an extreme environmentalist or wilderness supporter, let me identify myself as a Tree Farmer, life member of the American Forestry Association, and for several years a member of the Kootenai Forest Advisory Council. To balance that, I am a member of the Montana Wilderness Association, the Montana Wildlife Federation, and a lifelong conservationist.

Why do we have to decide today how every acre of national forest land shall be managed during the next two, three, or five decades? Resource use and society's priorities change constantly. As a conservationist concerned with the needs of future generations, I feel that we should leave to them some decisions regarding resource use. To do this, we should leave undeveloped, land and other resources that we do not urgently need to provide reasonable living standards today. If we apply this concept to national forest land, it means that we should leave undeveloped, in wilderness and roadless areas, lands on which use decisions can be made in the future. 1

Having lived practically all my long life in Lincoln County, I recognize the important contribution made by the timber industry to the economy of the area. I have been a part of it. I am also aware that timber harvesting has long been given high priority in uses of the Kootenai National Forest. But I do not think that this forest should be assigned an unreasonably high "quota" to offset diminishing supplies elsewhere. 2

~~But~~ Times are changing. It may be difficult for people involved in 3

Response to letter #145 - Winton Weydemeyer First page

1. The Forest Plan is designed to be revised after ten to fifteen years. The revision process will occur regularly in the future so that any new issues, viewpoints, or other information can be used to adjust the direction of Forest Management.

   As discussed in Appendix B of the DEIS, the Proposed Action was designed to preserve future options as well as provide economic and social stability. Toward this end, much of the existing roadless area was retained in roadless condition, but not recommended for Wilderness designation. The Final Plan enhances the theme of "preservation of future options" by retaining over 90% of existing old-growth wildlife habitats for the future and removing those stands from the suitable timber base. In the Pellick Ridge area, additional acreage was recommended for Wilderness (thus removing some mineral options), but this was determined to be acceptable because recent data indicates that the mineral values there are not as high as once believed.

   The timber sale program of 202 MMBF/yr (live green volume) and the total planned sell of up to 233 MMBF/yr (including salvage volumes) that was provided in the Proposed Action is retained in the Final Plan. This is seen as the best way to provide a stable economic base for the local area over the next few years without causing problems in future decades. (see Chapter II in the Final EIS for Allowable Sale Quantities.)

2. No "quota" has been assigned in development of the Forest Plan. Rather, the allowable sale quantity which maximizes the net public benefit has been determined as described in detail in the EIS and the Record of Decision. Year-to-year harvest levels will fluctuate around the levels shown in the Final Plan.

3. Increased emphasis on non-timber resources (e.g. grizzly bear habitat management, elk habitat management, retention of old-growth habitats, retention of large unroaded areas) in the Final Plan from the emphasis provided in the Unit Plans is evidence that times are indeed changing.

the timber industry to realize that "in the long run" management of the Kootenai National Forest for "the greatest good for the greatest number" will require greatly increased emphasis on forest uses other than timber harvesting. 3

With this conviction in mind, I have examined the list of alternative plans in the "Overview" brochure.

It appears to me that the "tradeoff" policy has been carried to an extreme, with major emphasis being placed on timber. Thus when an alternative calls for an increase in wilderness, planned timber harvest on remaining lands is maximized by reduced protection for wildlife, recreation, and visual quality. 4

Because of their major emphasis on timber to the exclusion of any wilderness designation, I could not support alternatives "A", "F", "L", "M", or "N". My recommendation must also rule out "D" because of its high figure for road construction. "K" would cheat coming generations. Though arguing for more wilderness, I do not support "H" because values other than timber production on remaining lands would be greatly reduced.

If necessary to choose unchanged one of the alternatives, it would be "G". Preferable would be a combination of the wilderness recommendation of "G" and the high rating for visual quality protection and total roadless recreation opportunity of "O", without the less favorable features of each! 5

The proposal for an eventual 10,690 miles of roads in the Forest alarms me. This could only result in continuation or even intensification of the excessive emphasis on timber production-- a conclusion supported by the projected substantial increase in timber sales. 6 7

3. See previous page.

4. In general we estimate that as the acreage recommended for Wilderness designation increases, the live green timber sale program declines and the elk population increases. The following table displays key outputs for the six alternatives that we designed to explore the tradeoffs of increasing Wilderness recommendations:

ALT	Recommended Wilderness (acres)	Live Green Timber MMBF/year	Elk Forage Potential (Elk population by decade 3)
A	0	226	8,300
B	63,900	223	8,400
C	81,300	225	8,400
E	186,600	218	8,400
G	304,900	213	8,400
H	403,700	208	8,600

Alternative O stressed visual quality while retaining the recommended Wilderness of Alternative C and has a timber sale program of 215 MMBF/yr (live green volume) and about 8,500 elk by the third decade. In contrast the Final Plan with it's approach to retaining options, has a slightly smaller Wilderness recommendation than Alternative C (78,500 acres), a timber sale program of 202 MMBF/yr (live green volume) and about 8,000 elk by the third decade. Note that in terms of total unroaded management, the Final Plan falls between Alternatives E and G.

5. From your perspective, the Final Plan would be the next most desireable alternative in terms of visual quality (to Alternative O) and in terms of total unroaded recreation opportunity (to Alternative G). The Final Plan stresses visual quality more than most alternatives and retains much of the roadless acreage in a roadless condition.

6. The Final Plan estimates that a total system mileage of 10,050 miles will eventually be needed (6,200 miles existed as of January 1986). This estimate is linked to the type of land that is included in the regulated timber base.

7. The road miles shown in the EIS are neither targets or goals, but estimates of the miles needed to fully access the land base that will be managed for timber production given today's technology. Thus, the road construction program is a consequence of the timber management program rather than vice versa.

The Management Area Map illustrates the tremendous amount of study that has been involved in development of the Proposed Forest Plan. I wonder if study has been excessive. Where a single section of 640 acres is carved into as many as six management areas, it would seem that the past time involved in the process of determining uses, and the future time that will be involved in applying management to such detailed division, have been, and will be, needlessly time consuming. But on the positive side, the maps indicate that the planners are aware of the need to consider all uses of national forest land. 8

The opportunity to express personal views on the Plan is greatly appreciated.

Winton Weydemeyer

Winton Weydemeyer
Box 77
Fortine, MT 59918

8. No response needed.

200

P.O. Box 364
Libby, MT 59923
October 31, 1985

TO: Forest Plan Participants

RE: Public comment on Kootenai National Forest Plan (Proposed)

Having been one of very few who attended the Open House on the KNF Management Plan in Libby, and having read the Overview of the Draft Environmental Impact Statement and Proposed Forest Plan, I will make my comments.

Initially, I found it interesting that in the 16-page Overview with approximately a dozen photos, only one photo indicated use of the Forest for timber production (photo of logging truck). The majority of the others were photos of the scenery, wildlife, and recreation the Forest provides. Was this an implementation of the Visual Resource (a twist to the "pictures speak louder than words" concept)? The "fine print", in contrast, has alot to do with timber harvest; road building; minerals, gas and oil exploration; etc. It seems to me that the photos should have been more representative of the Proposed Forest Plan. Because of this misrepresentation, it adds to my uneasiness of the authenticity and sincerity of Forest proposals to the public. 1

CURRENT RESOURCE SITUATION (page 2 of Overview)
It was a shock to me to see that soil and water were not listed under this subheading. It must be realized that soil and water are the primary resources of the Kootenai National Forest. Without these two primary resources, other resources such as wildlife and timber could not exist. It was of some consolation to find a subheading of RIPARIAN AREAS (p.16 of Overview), but because harvest activities and roads and road building have such an impact on soil and water quality, I believe that soil and water as resources should be given greater attention. "In its simplest sense, soil conservation, therefore, involves saving the soil from erosion and improving its fertility and productivity while at the same time using it to grow needed products. In addition to protecting and improving the land, soil conservation yields many side benefits. It reduces siltation of streams, reservoirs, and harbors, thus helping to insure a cleaner water supply for cities and towns, improve navigation, and provide a better habitat for fish and other forms of wildlife. Soil and water conservation go hand in hand, for soil conservation is dependent on good water management. Conservation methods do away with the ugly scars of erosion, thus providing a more beautiful countryside in which to work or play."[1] Although it is stated that in all alternatives considered in the DEIS, that certain minimum management requirements, including " a. Conserve soil and water resouces and d. Protect riparian zones" apply, I still have my doubts that they are adequate. 2

[1]Encyclopedia Britannica, 1971, Vol. 20, p. 846

Response to letter #200 - Don & Lena Whitson, First page

1. No response needed.

2. See the Final Forest Plan for added emphasis on soil and water protection.

It has not held true in the past, as I have seen excessive soil loss in the Quartz Creek drainage, and have seen many roads in the Forest scarred by erosion. In the Western News, July 3, 1985, it is stated in the Forest Plan article that "The DEIS states the catchable trout population will decline five percent in the next 40 years because of additional road building." Why will the trout population decline if you are also going to accomplish your Forest Management Goal to "19. Maintain or enhance fisheries habitat."? Timber harvesting on slopes which are too steep, roading in unstable soil condition areas, excessive use of heavy equipment, logging (primarily clearcutting) areas too large in a single drainage and poor or slow regrowth in harvested areas are all concerns of mine in relation to watershed management and soil conservation. 3

RESEARCH
In the magazine Forest Industries, February, 1985, is an article about the work of Dr. Awatif Hassan, a forest engineer. Her efforts now are aimed at young minds and new machinery concepts. She states, "People in agriculture have lots of data on soil compaction and the effect of machine traffic, but we don't in forestry. We need it badly!" Her work is not done in a laboratory, but with skidders, fellerbunchers, site prep implements or any of the broad range of machines used in logging or reforestation. Her research in trying to answer questions such as: What influence do the big tires of various skidders have on rolling resistance? How do they affect the pull capability of skidders? Is it feasible to equip these machines with a central tire inflation system? Could an all-terrain vehicle be a cost efficient alternative to some present machinery? This kind of research can lead to both silvicultural and economic benefits. The Proposed Forest Plan has very little to do with research and how to improve forestry techniques. I think each forest should do their part in this important area. 4

ROADS
Another controversial issue upon which I would like to comment is roadbuilding. A criteria for timber harvest seems to be more roads. In my opinion, in its present state, the Kootenai National Forest now has miles of needless roads. Present logging methods seem to demand roads, but I do hope this present logging method will not prevail. Are we logging today as we did fifty years ago? No, and I would like to see advancements in logging techniques which will eliminate some of the present problems of soil disturbance and loss, stream siltation, habitat disturbance and visual resource degradation due to effects of road construction. I would like to quote from an article entitled "'High-tech' logging: just around the corner" by Stanley O. Bean Jr. One paragraph reads: "Equipment will be needed to haul wood efficiently without a road for distances of up to 10 miles. This equipment will have to operate with a minimum amount of damage to the root system or compaction of the soil for a number or reasons, including the increased concerns that roads cause environmental damage, take land out of production and are expensive to build and maintain."[1] 5 6

[1]Forest INdustries, February, 1985, p. 36

3. The projected timber harvest levels, if sustained, would result in some fish losses as calculated using the fishery model at our disposal. The amount of calculated loss in a given watershed depends on the sensitivity of the watershed in question, its threshold level of sediment, the rate of recovery, and the degree of harvest that is projected. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Stanndards in the Final Forest Plan document). In addition, the Final Forest Plan mandates that the State Water Quality Standards will be met. See the Final Forest Plan document for the Soil and Water Standards.

4. We agree.

5. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction.

6. Through our project planning process we are attempting to design logging systems which will minimize the numbers of miles of roads to be constructed. Economics and local conditions generally dictate the type of logging equiptment available.

Time and again, I read about the loss from timber harvesting due to cost of building roads to reach timber. "Five out of nine Forest Service units consistently incur net losses on their timber sales," concluded a recent study of federal forest timber sales conducted by The Wilderness Society..."[1] "In Alaska's Chugach National Forest, the government received [illegible] for every [illegible] spent; in Medicine Bow National Forest in Wyoming, it received 2¢."[1] All of us know that private timber companies would not survive if they made such uneconomical decisions. Yet the Forest Service continues to do this while the American taxpayer pays the bill, and the timber companies reap the benefits. I agree with a statement made by Gaylord Nelson who is Counselor for the Wilderness Society, when he says, "The Wilderness Society does not oppose timber cutting, but we are firmly against timber sales [illegible] so [illegible] and inaccessible that the cost of building roads to reach the timber far exceed the timber's value."[1] Restricting use of many roads already in existence is of some value to wildlife protection and lessening soil compaction, but certainly doesn't enhance the landscape. I think some of the roads could have simply been dozer trails in the first place, if they were necessary for getting the timber out at all. I would like to see fewer roads and better upkeep of main access roads. 7 8

WASTE

Another complaint of mine has been the extreme waste of wood products during timber harvest. I recently read that "Several Forest Service studies have focused on developing efficient integrated systems to utilize more fully the available wood, as have several mechanized harvesting systems studies."[2] I do hope this will not simply remain in the study state, but will soon be implemented. the article continues, "Of the combinations studied, the most profitable one for integrating the harvest operation is concurrent harvest of both sawlogs and chips, where a truck located at the landing handles sorted sawlogs. The truck loader transfers sawtimber tops to the chipper for immediate chipping."[3] A computer would be of tremendous help also in evaluating each situation. "The residue left on the ground will be based upon the optimum consideration for site preparation and regeneration."[3] This is a considerably better option in my estimation than the dozer piling and burning or large broadcast burning I see on the Kootenai National Forest. We may not be running out of timber yet, but we're running out of big timber. "...there are not very many of the large trees left that have characterized the western U.S. for the past 100 years. This means that we are going to be dealing with smaller, second-growth trees on small parcels."[3] I think this will demand change in harvesting methods in order to do it more efficiently. 9

I also believe there must be a way to feasibly utilize or market the firewood on the Forest, much of which is now wasted. I also

[1] Wilderness, Winter 1984, Volume 48, Number 167, p. 45
[2] Forest Industries, February 1985, p.36
[3] Forest Industries, February 1985, p. 37

7. The Forest is very concerned about below-cost timber sales. We are currently focusing on ways to minimize them and to increase the returns to the U.S. Treasury. When looking at management of a Forest over the long-term (the life of the trees), it becomes apparent that certain investments now will more than pay for themselves in the future; but some of those initial investments may cause some current sales to be below-cost or "deficit".

8. The land designation drives the road access needs. The larger the suitable timberland base, the more miles of road needed and vice versa. The Final Forest Plan has a smaller sitable timberland base and therefore requires fewer miles of new road construction than the Proposed Action. See Chapter II in the Final EIS. Emphasis will continue to be placed on the main access routes, collectors and arterials.

9. We have been directly involved with utilization studies for residues in the last two years. The result has been that current economics, lack of markets, and alternative sources of supply have been the deciding factors preventing much progress in this area. Unless a purchaser can make a reasonable profit, the material will probably not be sold.

oppose the charge for firewood now imposed seemingly because "the other forests are doing it". So, we've had a good deal long enough? What's a good deal? The American taxpayers own the National Forests; should we be charged for what the Forest Service fails to utilize in timber harvest and which may be otherwise wasted? 10

RECREATION

Forest Management Goal #5: "Provide developed recreation facilities to meet demand." I foresee this area becoming one of greater demand when I read such headlines in The Western News as: "250 million bf of timber turned back" (July 10, 1985); "Confusing forecasts: Logging plan to bring job gains (losses)" (July 31, 1985) "45 jobs eliminated at Champion sawmill" (August 7, 1985); very frequently. The Chamber of Commerce is proposing a great push for tourism to boost Lincoln County's sagging economy. Though you give yourself a pat on the back for the 23% allocated for wilderness and roadless recreation, I doubt that funds are proportionately designated. You rely on volunteers for trail crews, wilderness guards and lookouts. You charge for a wilderness stay in a lookout tower or campground and tell people to "pack it in" and "pack it out". In essence, I feel you are really saying , "We've given you recreationists a fair share of the land, but we don't have time or money to accomodate you further." I was distressed to find the picnic table, toilet and trash can removed from the end of Upper Bear Creek Road. If this road were maintained it would allow an "almost wilderness" experience for the elderly and handicapped. The view is spectacular, and the altitude and valley seclusion tingle the senses of sight, hearing, and smell as in a wilderness experience. It is not so far from town that the less robust of our population could not endure the ride. 11 12

More nature trails, such as the one at Ross Creek Cedars, could reduce the pressure at that particular one. I can see guided hikes by qualified FS personnel as a possibility. Old scenic trails have been so crisscrossed with logging operations that updating of maps to designate trails which really do exist would be helpful. Although I have no definite positive feelings for the Great Northern Ski Area, I think the Forest Service should be paying closer attention to the recreational possibilities of our area. Generally speaking, the recreational potential of the KNF, may surpass the economic base the timber industry has held in the past. You , perhaps unintentionally, advertise the terrific recreational aspect in your photos in the Overview, but don't carry through with their importance. 13 14 15

Although it is your desire to have specific comments on specific management areas in the Proposed Forest Plan, I fail to feel qualified to comment thusly. I can say, in general, Management Areas 13 receive a big plus from me, and that I don' like to see the Quartz Creek drainage given a 15 designation, but of what value are all my comments, really? I don't have a degree in forest management; I haven't researched or spent the time with others in specialized areas proposing a management plan. To support my views, I can only quote from sources deemed more qualified 16 17

10. The fees for firewood will be decided separately from the Forest Plan.

11. Budgets are determined by Congress. The Forest Plan projects increased budget needs to provide for the recreation goal as outlined in Chapter II. We may not achieve our goal every year because of other national priorities but it is still our goal; and when the priorities change, hopefully the budgets will be forthcoming.

12. We agree that the view from the end of the Upper Bear Creek Road is spectacular but disagree that the road needs increased maintenance. Maintaining the Upper Bear Creek Road to a higher standard that would attract increased motorized recreation use would be in contradiction to the management prescription for the area (Management Area 2). At the present time, the road is opened on a seasonal basis to provide the recreation values that you have outlined, because of the public's desire to continue a historical recreation use. An increased use of the Upper Bear Creek Road could possibly result in grizzly/human encounters which would require the closing of the road to reduce the conflict. The existing road standard is a compromise to allow the historical use pattern while monitoring the grizzly bear activity.

13. Trails are developed as funds are available.

14. The Trail Map is updated about every five years.

15. The Final Forest Plan recognizes recreation use, which is linked to tourism, as an expanding use of the Forest. Projections of recreation demand are difficult to verify, but we estimate that sufficient opportunity for all types of recreation will be available on the Forest during the foreseeable future. We feel that the opportunity for expanding Forest-related recreation use exists if the community desires to promote it. The Forest will continue to provide information to the public about recreational opportunities on the Forest.

16. No response needed.

17. A significant portion of the Quartz Creek drainage is designated to Management Area 15 because of it's productive capability for timber, but this does not mean that other values are not also considered. See the Final Forest Plan document and the prescription for Management Area 15, specifically. Other values have been recognized in Quartz Creek, such as roadless recreation and big-game summer range for elk (Management Area 2 and 12, respectively.

than I, and then it is for general commenting and not for specific small land areas. I've seen many changes in the Kootenai National Fores in the past eighteen years I've lived here and can only comment on the trends and proposals in general with which I agree or disagree. I have neither time, energy, or incentive to comment any further.

Dutifully submitted,

Lena J. Whitson
Don W. Whitson

Lena J. Whitson
Don W. Whitson

Response to letter #200 - Don & Lena Whitson, Page 200d

No response needed on this page.

152

P.O. Box 625
Libby, MT 59923
Oct. 31, 1985

Mr. James Rathbun, Forest Supervisor
Kootenai National Forest
Libby, MT 59923

Dear Jim:

Having reviewed your Draft Forest Plan, I would like to share some concerns and comments with you.

First, I am quite concerned with the handling of the "OLD GROWTH" allocation, MA-13. Since the objective is to manage about 8% of the forest in a state that provides old-growth characteristics (100+ to 250 years old) and since only about 8+% has been allocated to this MA, I do not see how ANY of it could be programed for timber harvest--even a 250 yr rotation. You will either fall far short of the 8% retained with "old-growth characteristics" or your timber productivity will fall short of projections since you would have to pull land out of regular productivity classes to be replacement stands when you harvest the MA-13 stands. 1

I recomment that you pull all MA-13 out of the regulated timber base since this is preferable to the alternative of allocating about 2.5 times the acres needed to retain old-growth characteristics into MA-13.

My second concern is that I found no reference to reducing harvest to compensate for cutting on private lands to mitigate for CRITICAL resources such as Water Yield. With the checkerboard ownership on the Kootenai, you must take into account what your neighbors likely will do to their lands in your planning. To ignore this in determining the allowable cut but consider it in the specific IDT planning for drainages means short-falls in timber targets. 2

A third area for comment is Closures: I support your road closure program but I notice that in MA-15 & 16 you say that a more restrictive use will be applied to these MA's if accessed through more restrictive allocations. I support this for recreational use, but I do not support it for commodity removal. In other words, do not put undue restrictions on timber sales on timber emphasis lands even if they haul through Wildlife lands. 3

I also believe you need to make area closures to off-road vehicles in order to be able to enforce your road closures. 4

My last comments are directed at your Wilderness proposals: I support them and I would like to see more allocation to Wilderness in the Pilchuck Ridge area 5 and the south end of the East Cabinet Front. I do not think that the existing roads and private lands from Leigh Creek down to Lake Creek should preclude the Wilderness option. 6

Sincerely yours,

James D. Wilson

Response to letter #152 - James Wilson

1. MA 13 has been removed from the regulated timber base.

2. Procedures for dealing with activities in areas of intermingled ownership are described under the soil and water standards in Chapter II of the Final Plan. Mathematical modeling procedures were used to develop estimates of the allowable sale quantity. In as much as mathematical models are abstractions of reality, the actual situation as determined in area specific planning must prevail. The key here is that the management standards and guidelines, for each Management Area and for the Forest as a whole, control Forest Service activities. If some annual sale goal can not be reached without violating those standards, the Monitoring and Evaluation Plan should be used to determine the approach to resolution. In certain situations, the M & E plan leads to revision of the Forest Plan.

3. Where haul may be necessary through wildlife areas, it can usually be scheduled to minimize impacts.

4. The Forest Plan does not specify the manner in which motorized vehicles will be excluded from specified Management Areas. The annual Travel Plan will provide this specificity. Both road and area closures can be used to manage off-road vehicles.

5. Significant acreage in the Pellick Ridge area has been recommended for Wilderness designation. See the Final Plan Map.

6. The combination of roads, intermingled private property and high mineral potential have led us to designate the southern portion of the east face of the Cabinet Mountains as Management Area 2 rather than recommended Wilderness.

162

Dear Mr. Rathbun,

I'm a small independent logger, dependent on small U.S.F.S timber sales. On behalf of countless others like me, & myself, I'm asking you to reconsider the proposed management plan for the Kootenai National Forest. The competition for these small timber sales is already fierce & I'm afraid this proposed management plan will put a lot of us out of work. 1

As for more wilderness areas - our little corner of Montana doesn't need any more. Millions of tax revenue dollars are already lost because these areas can't be utilized. How much tax revenue does the state collect from the few people who use these areas? How much does it cost the taxpayer for the upkeep of these areas? When I talk about wilderness, I don't mean our National Parks, just wilderness areas. They are 2

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Response to letter #162 - Harold Winslow First page

1. The Final Plan is designed to help maintain economic stability in the area by making as much timber as 233 MMBF per year available. This compares to an average of about 198 MMBF per year that was sold from 1974 through 1983. Our intent is to maintain emphasis on the small sale program where it is economical to do so.

   For the most part, the areas recommended for Wilderness designation in the Final Plan are areas which can not be economically managed for timber.

2. It has been estimated that about 8% of Wilderness users are between the ages of one and fifteen and about 6% are over age 56 (Handee, John C. George H. Stankey, and Robert C. Lucas, Wilderness Management, Misc. Pub 1365, U.S.D.A. Forest Service, October 1978.). Thus, the distribution of users is weighted more heavily to the middle age groups than the general population, but it is clear that individuals of all ages can and do use Wilderness areas. Handee et al reports on only one study related to physical condition of users. That study (Wiesner, Robert R. and Brian J. Sharkey, "Some Characteristics of Wilderness Backpackers" in Perception and Motor Skills 36(3), 1973) concluded that, among the study group, interest was more critical than lack of physical ability in determining who used Wilderness areas. Obviously the type and extent of a handicap along with the desire of the individual will affect the activities that person enjoys, whether it be using a Wilderness or any other area of the Forest.

   As alluded to in response #1 above, roading the areas which are recommended for Wilderness designation in the Final Plan would be more expensive than Wilderness management.

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accessible to a very small % of the
population. The very young, the elderly,
& the handicapped can't use them. They
are reserved for the hard packers. A big
expense, for a very small % of the
population, wouldn't you say. 2

I hear of a lot of talk about logging
& the grizzly bear. Well, I've been a logger
for 25 years & I've never seen a grizzly bear
in all those years. If a grizzly bear
wasted the territory where I was logging,
he moved here if. I've never heard of
a logger being killed by a grizzly bear.
I've heard several reports of grizzly bears
killing people in our National parks. The
last 2 reports of grizzly bears being killed,
were killed by hunters, NOT LOGGERS. If
hunters are killing our grizzlies, why
~~don't~~ not restrict hunting licenses? Don't
take it out on us. 3

The controls the U.S.F.S. puts on
adverse logging procedures that endanger 4

2. See previous page.

3. It is not unusual that you have never seen a grizzly bear. The population is so small in this area that it is in danger of extinction. Just like people, grizzly bears need food and shelter. If they are deprived of these, they will eventually die. A major thrust of the Final Forest Plan is to avoid jeopardizing the population of bears by providing secure areas as well as improved food sources. Timber management is used extensively to help provide the best combination of these critical habitat components.

   Hunting licenses are restricted and penalties for illegal killing of grizzly bears are in effect.

4. See next page

fish + wildlife are good. Our streams + wildlife habitat need to be protected + we, as most loggers, are extremely carefull in these areas. Logging in these areas are important to deer, elk, ect. We know that in severe winter conditions, these field trees + tops are the only food for these animals. Logging benefits these animals. 4

We know that the U.S.F.S. gets a lot of mail from people against logging. These people have never had to make a living logging, + don't understand our commitment to this proud, + mostly frustrating occupation. Our area is beautiful, + we who live + work here have kept it that way. We resent these few, but powerfull, people who have made their living (+ still are) elsewhere, coming in here + trying to take our way of life + our livlihood from us. 5

All we want is the chance to work, + I hope you'll support us. Thank you,

Harold W. Winslow
P.O. Box 258
Troy Mt. 59935

4. We appreciate your attitude with regard to logging practices in areas that are important to wildlife. We agree that logging can benefit wildlife and much of the Forest (Management Areas 11, 12 and 14) will be managed to take advantage of that fact.

5. No response needed.

3807 Gold Street #6
Los Alamos, New Mexico 87544
August 14, 1985

James F. Rathbun, Forest Supervisor
Kootenai National Forest
Rt. 3 Box 700
Libby, Montana 59923

Dear Sir:

Thank you for sending me the Proposed Forest Plan overview for Kootenai National Forest. The document clearly summarizes the alternatives as you have determined them.

In reviewing the alternatives I was disappointed to find that none allowed for the maximizing of both wilderness and fish and wildlife protection. I cannot help but be concerned that these two important resource uses are played off against each other in an either-or manner. As such, I cannot give support to any of the proposed alternatives. 1

In commenting specifically about the Proposed Plan, Alternative J, I must take exception specifically in four areas, the plan to increase timber harvest by 35%, insufficient wilderness, failure to protect old growth adequately and subordination of the interests of fish and wildlife to timber harvesting.

The increase of harvest quotas by 35% is unacceptable. While I realize that wildlife does benefit in part from the diversity of habitat resulting from timber harvest, it is also harmed in other ways. Devoting 62% of the forest primarily to timber harvesting can hardly be called a balance of resource uses. During years of planting trees in the Troy, Yaak and Libby Ranger Districts I've seen enough sites that were destroyed by overzealous clearcutting and subsequent erosion down to bedrock to make me leary of these ever increasing harvest schedules. I would also like to hear about more of the sales requiring selective cutting to preserve soil and encourage self regeneration. I am strongly in favor of encouraging owners of private forests to manage and utilize those resources. This will not occur until government subsidy of timber harvesting comes to an end on national forest lands. In short, I would prefer a [illegible] change in direction away from the tree farm emphasis. 2

In reviewing the map of management areas I see numerous areas designated as roadless-primitive (29) and roadless-semiprimitive (2) that I feel would be better protected as wilderness. Their designation in the Proposed Plan preserves them for the option of timber alone, or they may as well be made wilderness now. Enough land is already being designated for timber. 3

1. Fish habitat was not "traded off" as might have appeared. The apparent results were displayed to portray differences between alternatives. The projected timber harvest levels, if sustained, would result in some fish losses as calculated using the fishery model at our disposal which relies heavily on sediment calculations. Because of the low reliability of the sediment figures which are used, the fishery loss calculations become very suspect. For this reason, the Final Forest Plan has put the emphasis on the on-the-ground determination of water quality and fish habitat parameters to insure that fish habitat and the fishery resource is not degraded (See the Monitoring and Evaluation Plan and the Forestwide Standards in the Final Forest Plan document).

2. The Final Forest Plan preserves the option to maintain the historic timber sale level to provide for community stability while also providing for increased wilderness, old-growth timber habitat and water quality protection for fisheries. See the Final EIS and the discussion on Net Public Benefit.

   We disagree that the Kootenai National Forest is emphasizing a tree farm. The Final Forest Plan has designated 56% of the Forest to the regulated management of timber along with other resources such as wildlife and visual quality. The remaining 44% of the Kootenai is designated to various non-developmental uses such as wilderness, roadless management, special area management, and other wildlife needs (such as old-growth timber-dependent species). See the Final Forest Plan Map.

3. Some of the areas designated as MA 29 and MA 2 have other values which at this time appear to make a wilderness recommendation premature. For example: intermingled private ownership, mineral potential, and wildlife values (which requires periodic burning which is precluded by present wilderness legislation). All of these MA 29 and MA 2 areas will be re-evaluated for wilderness in the next Forest Plan revision which is required within 10-15 years.

The issue of old growth forest is important because there is so little of it left and because its importance to several species of wildlife is well established. I would like to see all old growth saved. After planting larch, fir and spruce in between the trunks of cedar eight plus feet in diameter that were cut and burnt to make way for commercially profitable timber I feel we should be making every effort to save what is left in favor of intrinsic values. I have never heard of anyone reforesting with cedar, incidentally. 4

In closing I would like to wish you good luck in continuing to work on the Forest Plan. I know there are many interests to take into consideration, and the local ones must be balanced with those of all Americans nationwide to whom the forests belong. I hope you will be able to address some of my concerns. 5

Please note that my address has changed since the draft document was mailed. Thank you.

Yours truly,

Colleen Loeven Woloshun

Colleen Loeven Woloshun

4. The Final Forest Plan designates 91% of all the inventoried Old-Growth timber habitat for old-growth timber-dependent species. This will provide for 186,000 acres or 10% of all the Forest land below 5,500 feet elevation. As a further note, 34% of all the mature and over-mature timber (which includes the 186,000 acres mentioned above but excludes lodgepole pine) has been removed from the timber base. This should provide for a significant amount of old-growth for future generations.

5. See the Final EIS and Forest Plan document including the Final Forest Plan Map.

150

Oct 28, 1985

Jim Lathum, Supervisor
Kootenai Nat. Forest
Route 3 Box 100
Libby, Mt. 59923

Dear Sir

I am responding to the Kootenai National Forest - Forest Plan in addition to earlier comments on July 22nd 1985.

Alternative N is my preference of the choices offered - including the 245 MBdft of allowable cut (ave. for the decade). One point comes to mind. A million bd. ft. of these trees are occasional far more costly than the M.B.F. of previous years even though the allowed cut appears to be attractive to the casual observer. When it takes 100 poles to make a load as compared to 20 logs, the cost of gathering the 100 has to cost more to achieve the same volume & weight. 1 million bd. ft. is not a million B.F. because the whole picture is camaflauged. 1

To assist the contractor & to reduce the increased cost (deficit spending) road building standards can be greatly reduced to a standard which will allow expedient logging operations. Private industry could not tolerate the financial drain of your road building standards. After the logging operation is completed either leave the road open or close by (Kelly hump) placing obstacle or ditching. Decrease the use 2 3 4

Response to letter #150 - Charles Woods First page E-501

1. The Final Forest Plan permits an average sale level of 233 MMBF per year compared to a past level averaging about 198 MMBF (1974-1983) per year.

2. One MMBF is still one MMBF even though the trees that make up that volume may be smaller and more numerous. The cost per MMBF for logging does vary by tree size.

3. Your suggestions have been implemented over the last several years. As a consequence of more appropriate road standards and the changing economy, road costs have declined dramatically.

4. Gates are used in many cases where the road can be available for public use during part of the year. Repeated installation and removal of humps or other semi-permanent barriers is quite expensive. Many of the gates used here are manufactured locally and create jobs exactly like logging.

of gates as this is an added extra expense & unnecessary. Gate building does create jobs (in New Mexico) but are not primary jobs like logging. 4

Unrecorded impediments are an expense to a contractor when he can log at F. Serv. comenience & not his comenience. Closing an area for grizzly bear is an example. To allow a contractor to log an area later in the fall or winter & requiring same stumps cut increases time for sawyer, as well as, hazard to hauling on winter roads. Access is greatly reduced.

Under alternative N, present net value is shown as $1,150,000,000 but does not show the operating cost now as compared to years earlier based mainly on reduced size of available timber (handling). 5

It is further important to maintain or increase the M.B.F allowed since the Flathead N.F. has a reduced allowed cut & we have Flathead loggers in the Kootenai. There are also loggers & logging operations from Idaho. 6

I would urge no increase in additional wilderness or "buffer zones" to restrict access to any area that has renewable resources in mismanagement. Our renewable resources should be "cultivated" in a sensible manner to utilize mature trees & to reduce under growth that eventually becomes to great fire hazard. 7 8

Response to letter #150 - Charles Woods Page 150a E-502

4. See previous page.

5. See response #2 above.

6. Both the Flathead and the Idaho Panhandle National Forests are proposing to cut more timber in the future than they have in the past. For more details on the total timber supply situation in the area see Appendix B of the FEIS.

7. For the most part the recommended Wilderness and adjacent roadless areas in the Final Plan can not be managed to economically produce timber.

8. In areas managed for timber production mature trees will be harvested and other silvicultural practices will be used as appropriate.

I would urge that restrictions & considerations for grizzly bear management be reduced. The grizzly bear count appears to be greater than is acknowledged & if the grizzly would not be harassed the numbers would perhaps stabalize to what the Kootenai Forest can handle. The grizzly bear has been studied intensely for over 20 yrs & still few solid answers with biologists yet disagreeing. This is also negative spending. Increase penalties for proven poaching & reduce the restrictions. 9

I as an individual resident of Montana for almost 50 yrs have seen more grizzly than most & have no animosity, the the grizzly & consider him a most magnificent animal. Biologists should reduce their constant harassment of this animal (handling is excessive, unnecessary tranquilizer shots, tooth removal). I am referring to F & Game & not Forest Service. 10

Reduce Situation I designations & acreage so designated. It should be very difficult to change designations to a more severe designation. Designation determinations should be done only with public input & not at the whim or recommendation of an individual biologist. 11

Thank you for this opportunity

Charles F. Woods
Route 2 Box 759
Libby, Mont. 59923

9. The Forest Plan can not, by law, jeopardize the existance of the grizzly bear population. The lack of consideration for the bears has led to the current low population. Continuing that lack of consideration can not be expected to improve the situation. We have seen nothing to indicate that the current population is very large. Since 1982 when the trapping program began, five bears have been identified and one of those is now known to have died.

10. Studies of grizzly bear behavior in this area are very important because these studies help us develop management approaches that are the most effective for the bear and the least restrictive for the human population.

11. The grizzly situations are based upon bear populations and habitat conditions, which research has shown are important to grizzly bears, not the whim of a single biologist.

July 22, 1985

Jim Pakkhum, Supervisor
Kootenai National Forest
Libby, Mt 59923

Dear Sir:

At this time there has not been sufficient time to any more than glance at the overview section & alternatives considered. The volumes of material are so great as to be prohibitive for the working man to digest well enough to be objective in discussion. Therefore I will be responding in greater depth prior to Oct 18th.

Several points which I will merely itemize for purpose of expediency & weight

1

*Ten Lakes should still not be considered as wilderness designation

2

- Forest Service had taken earlier stand to not consider 10 Lakes so perhaps political trade-offs have entered the scene
- Wilderness designation will bring extra traffic due to the designation
- Ten Lakes does not carry wilderness designation in much of the area due to more industrial activities to present (mining & logging)

*Road standards used by the Forest Service are part of the reason for deficit sales

3

- Road standards to exceed needs for normal

Response to letter #9 - Charles Woods First page

E-504

1. We apologize for the volume of materials. The process of developing a future course of management for a National Forest is complex and of *critical importance to many people thus it is important that all this* information be made available to the public.

2. The Ten Lakes Wilderness Study area was originally excluded from the Forest Planning process because it was being addressed separately under the terms of the Montana Wilderness Study Act. The Forest *Service recommendation, as a result of that process, was that a* significant portion of the study area be made a part of the National Wilderness Preservation System.

3. We have been closely examining road standards. Over the last several years road costs have dropped significantly due to a combination of changes in the economy and the application of more appropriate road standards. Our intent is to build only the roads that are necessary, build them in a way that minimizes impacts upon the land and water, and build them so that they are safe for their intended use. Any time we can build a road at a lower cost while meeting these objectives, we will certainly do so.

E-504

logging operations.
— F.S. road standards are many times (locations) unsafe for logging truck traffic. 3
— Road closures are an additional unnecessary expense as well as being discriminatory to those have not a key. 4

* Grizzly bear considerations appear to have priority considerations over man.
— For those who have looked in job security, the various impacts imposed & pending, due to restrictions, effecting industrial efforts carry very little meaning or concern. 5
— The tighter the restrictions become on human activities (logging, mining, berry picking etc.) the greater the threat becomes to a threatened species. This is a point often ignored but it is real. Legislation & threats will not remove this aspect.
— The Kootenai should not be locked up in a situation I designation or even a situation II. The language for these designations, if exercised, would be met with strong opposition. The vast majority of the public know not one thing of these designations, nor the impact possibilities.
— Reduce the restrictions & reduce the threat to the bear. 6

3. See previous page.

4. Road closures are critical in permitting several uses, such as logging and wildlife security, to occur on the same piece of ground at different times. Much of the habitat improvement associated with logging in Management Areas 11, 12 and 14 would be lost without a well defined road management program which includes road closures. Closed roads are closed only to motorized vehicles. Anyone on foot, horseback or bicycle can use these roads. Anyone using a motorized vehicle on a closed road must have authorization from the District Ranger.

5. Under the Endangered Species Act, Forest activities may not jeopardize the existance of the grizzly bear. With this in mind, the Final Plan includes a set of management area designations that do not conflict with grizzly bear and in some cases, such as MA 14, enhance grizzly habitat. At the same time we recognize that human needs are important particularly in terms of stability in the local economy. Toward this end the Final Plan provides for timber sales up to 233 MMBF per year compared to the average of 198 MMBF per year over the 1974 thru 1983 period.

   As in other aspects of life, it is often necessary to balance individual rights so that one person's rights do not conflict with those of others. People have a right to prevent the grizzly from becoming extinct or there would be no Endangered Species Act. People also have a right to expect continuing supplies of timber from the National Forests or those provisions would not be included in the Multiple Use Sustained Yield Act or the National Forest Management Act. The Final Plan maximizes the net public benefit by providing a balance of Forest outputs and a balance in user "rights" to the Forest. This requires certain use restrictions such as the road closures discussed above so that one person doesn't have to forgo all rights in order to protect another's conflicting rights. Those who choose to ignore these balances face the penalties provided by law.

6. Grizzly situations I and II do not "lock up" the Forest. In fact the Forest plan includes provisions for logging, recreation and mining in Situations I and II and defines how it can be done without jeopardizing the grizzly bear population.

   The use restrictions that are intended to prevent the loss of the grizzly population are only being applied after the lack of such restrictions has threatened the population with extinction.

There are additional concerns which can be responded to prior to the end of the comment period.

Timber harvest & allocations need to receive strong consideration & emphasis for industrial needs.

Forest management should receive sharper attention instead of mismanagement by looking into unknowns & roadless areas. Timber should be cultivated much as the prudent farmer manages his crops. Logging & timber harvest can be achieved by various means, some more expensive than others.

7

Thank you for this opportunity.

(Charles) F. Woods
Route #2 Box 759
Libby, Mont 59923

7. As mentioned in response #5, above, potential timber harvest is at a level designed to maximize the Forest contribution to local economic stability. A more detailed discussion on timber supply from all sources in the area is provided in Appendix B of the FEIS.

In our focus toward better forest management, we have found that many areas of the Forest can not be roaded (even at low standards), logged, regenerated and managed over a rotation without losing money for the U.S. taxpayer. Most of these areas have been assigned to management areas which will remain roadless and will not be managed for timber production. The large portion of this area which is not recommended for Wilderness designation can be reassessed in the future if economic conditions change.

Intensive timber management, such as you suggest, may require a pre-commercial thin, fertilization, several commercial thins and so on. Because the final harvest is so far in the future the benefits derived by that harvest often do not cover the costs that occur earlier. Recently we have found that in a commercial thin the value of the trees removed does not often cover the cost of removing them. For this reason commercial thinning is not expected to be a common practice in the future. We expect people to be paying more for trees in the future, but not enough more to justify the intensive management you suggest. Where practices which enhance growth can be shown to be cost effective, we expect to use them.

To: Forest Supervisor 10/31/85
Re: Kootenai National Forest Plan
From: Edward J. Woods
Rt 2 Box 759
Libby, Mt. 59923

As a taxpayer and a user of Kootenai National Forest lands, I would like to voice my thoughts for the ~~cop~~ new forest plan.

Gates: New roads are needed to tap into new timberlands for the lumber industry. I support the road closure of all new roads. The roads should be permanently blocked by means of washout or shelly hump. A gate tells me that people better than I are allowed into the closed off area. Keep everyone out and very few people will be upset. 1

Grizzly Bear: The grizzly bear is a wonderful animal. I do believe that there is too much emphasis put on it (the Bear). With the years of study already performed and the numbers of animals trapped, collared and released I assume much is already known. How much 2

Response to Letter #151 - Edward J. Woods, First page

E-507

1. When roads are no longer needed for management purposes, they are usually closed permanently with earthen barriers. However, many of our roads are only closed on a seasonal basis and are open to the public at certain times of the year. For example: a road closed to protect wildlife spring range may be open for public wood cutting in the fall season. Gates make this seasonal road use possible while also being more convenient and inexpensive; rather than having to seasonally place and remove earthen barriers.

2. The intent of the Final Forest Plan is to meet the goal of the Grizzly Bear Recovery Plan which is to remove the bear from the threat of extinction. The Threatened and Endangered Species Act requires that all Federal Agencies co-operate in this effort to the fullest extent of their ability.

E-507

longer will all of this spending of taxpayer's dollars go on? I also believe that more than enough land has been closed off and set aside for the bears. 2

Wilderness: Enough wilderness land is set aside on the Kootenai National Forest. The timber industry is very important to our county's economy. Lands left in multiple-use status, managed properly for their renewable resource value, benefit more of our people than those lands locked up. 3 4 5

I do favor alternative "N" of the Kootenai National Forest Plan for 1985. We should use our renewable resources and not closing it off for Wilderness. 6

I thank you for your time

Edward J Woods

Response to Letter #151 - Edward J. Woods, Page 151a

3. Congress will determine if any wilderness will be added to the Kootenai National Forest.

4. We agree.

5. Wilderness is one of the Multiple-Uses.

6. In our judgement, Alternative N does not resolve all the issues as well as the Final Forest Plan. See the discussion on Net Public Benefit in Chapter II of the Draft and Final EIS.

58

George Wuerthner
Box 7192
Missoula, Mt. 59807

Supervisor
Kootenai N.F.
Libby, Montana

Oct. 22, 1985

Daar Kootenai:

I was dismayed to learn about your proposed forest plan. The Kootenai Forest is the only one in Montana with a substantional amount of wet, maritime forest habitat. The Forest Plan only calls for preservation of 8% of the old growth. This is unacceptable. I support a plan which would require preservation of 25% of this unique forest growth..Too many wildlife species depend on old growth for a mere 8% to be set aside. 1

In addition, there is to be too many roads. 244 miles a year is too much. The present road system is too much. I support no more additions to your road system. The draft forest plan estimates that sediments would increase in Kootenai Forest waters by 50%. How can you allow this? Isn't water one of the natural resources you're to protect? 2 3

I support wilderness designation for the following areas: Scotchman"s peak including the Pellick Ridge area. Trout C reek which is excellent elk habitat. I've hunted there myself. Also the Northwest Peaks area, Ten Lakes Wilderness Study Area, Roderick Mountain. 4

I would like to see the timber harvest cut from the present levels which are too high to truely sustain timber yeilds as well as yeilds of other resources. The Kootenai Forest is supposed to protect all resources not just timber resources. 5

Protect water quality. Protect old growth habitat. Protect roadless qualities of presently roadless areas. Keep roading to present levels and decrease timber harvest. 6

Sincerely:

George Wuerthner

Response to letter #58 - George Wuerthner

E-509

1. The Final Forest Plan designates 91% of all the inventoried Old-Growth timber habitat for old-growth timber-dependent species. This will provide for 186,000 acres or 10% of all the Forest land below 5,500 feet elevation. As a further note, 34% of all the mature and over-mature timber (which includes the 186,000 acres mentioned above but excludes lodgepole pine) has been removed from the timber base. This should provide for a significant amount of old-growth for future generations.

2. The road miles shown in the EIS are neither targets or goals, but estimates of needs given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those roads necessary to manage the Forest are ever built. The Final Plan includes a goal to minimize the amount of road construction. The Final Forest Plan has reduced the rate and the total amount of road construction. As a further note, recent experience has indicated that the amount of road construction is diminishing in proportion to the amount of timber harvested. See Chapter II in the Final EIS.

3. We are not aware of any discussion in the Draft EIS of a 50% increase in sediment levels. The Final Forest Plan mandates that the State Water Quality Standards will be met. See the Final Forest Plan document.

4. Significant amounts of the Scotchman Peak area (including Pellick Ridge) and the Ten Lakes area have been recommended for wilderness. Trout Creek, Northwest Peaks, and Roderick Mountain have been recommended for roadless management, primarily, because of other values such as wildlife and the need to do prescribed burning which is precluded by wilderness legislation.

5. All Alternatives displayed timber yields that were calculated as sustainable, based on productivity, and result from land designations selected to meet multiple-use goals and objectives. The Final Forest Plan retains the option to provide for the historic timber sale level to insure community stabilty as well as provide for other resource uses such as wilderness, roadless areas, visual quality, recreation, old-growth timber-dependent wildlife species, water quality and fisheries, grizzly bear recovery, and mineral exploration.

6. See all of the above responses.

E-509

COMMENTS THAT WERE SIMILAR IN NATURE AND COMBINED FOR PURPOSES OF BREVITY

A. Comments primarily concerned with the position presented by the Montana Wilderness Association

In addition to the letters to which individual responses were provided, we received many postcards which provided comments similar to those of the Montana Wilderness Association (See Letters #237 and #301). Some of those commentors specifically supported the entire MWA position. Because of their close similarity, these comments are grouped below and answered once rather than repeatedly, in the interest of brevity.

In Section B, following this section, are a group of comments which presented similar philosphical positions which are answered in a similar manner in the interest of brevity.

Section C presents similar views which are representative of those stated by the Montana Women in Timber organization. They are also responded to in a group response in the interest of brevity.

All of the original postcards are available for review at the Forest Supervisor's Office in Libby, Montana.

1. **COMMENT:**

Where there are roads there is no recreation. There's no timber shortage to justify logging these areas. The Forest plan needs to include more Wilderness and/or roadless management (items a. through f. generally received support for Wilderness designation while items g. through k. were generally proposed for roadless types of recreation and not Wilderness):

a. Scotchman Peaks including the Pellick Ridge portion.
b. Ten Lakes including the Mt. Wam portion.
c. Trout Creek
d. Cabinet Additions
e. Tuchuck (part of the North Fork Wildlands).
f. Thompson-Seton (also part of the North Fork Wildlands).
g. Northwest Peaks
h. Roderick Mountain
i. Robinson Mountain
j. Canyon Peak
k. Cataract Creek

1. RESPONSE

The Final Plan designated the above-mentioned roadless areas as follows:

ACREAGE BY DESIGNATION /1/

Roadless Area Name	KNF Total Roadless Area Acres	Recommended Wilderness	Roadless Recreation (MA 2 & 29)	Other Without Harvest	Other With Harvest
Scotchman Peaks (Total)	51,900	36,200	9,600	2,000	4,300
- Pellick Ridge Portion	17,400	12,000	0	2,400	2,900
Ten Lakes (Total), which includes the Contiguous Area outside the MWSA.	41,300	33,000	5,300	700	2,300
- Mt. Wam Portion	5,500	0	5,300	0	200
Trout Creek	31,400	0	22,500	2,000	6,900
Cabinet Additions	84,800	35,500	36,400	1,800	10,800
Tuchuck	2,300	0	2,300	0	0
Thompson-Seton	19,100	0	17,000	600	1,500
Northwest Peaks	13,400	0	8,800	4,600	0
Roderick Mountain	24,800	0	10,700	11,000	3,100
Robinson Mountain	3,000	0	3,000	0	0
Canyon Peak (Galena)	15,500	0	12,200	1,600	1,600
Cataract Creek	17,700	0	13.800	2,100	1,800
Totals	305,200	104,700	141,600	26,400	32,300
Percent of Totals	100%	34%	46%	9%	11%

/1/ Totals do not always agree exactly because of rounding.

1a. Scotchman Peak: This roadless area will have 88% of the total area designated as wilderness or roadless. The lower slope on the north side of Pellick Ridge is designated for the management of grizzly habitat and timber and represents 8% of the total roadless area and 17% of the Pellick Ridge portion. See the Final Forest Plan Map.

1b. Ten Lakes: This complex roadless area consists of the 34,200 acre Montana Wilderness Study Area (MWSA), which is being addressed in a separate Report, and the adjacent Ten Lakes Contiguous Roadless Area portions which totals 7,100 acres. 93% of the entire combined acreage will be designated as wilderness or roadless. The 6% that is designated for the management of grizzly habitat and timber is located adjacent to existing roads along the edge of the roadless area boundary. See the Final Ten Lakes Map.

1c. Trout Creek: This roadless area includes a combination of wilderness, wildlife (particularly elk) and mineral values. 72% of the area is designated as roadless because of the desire to provide vegetative management for elk through the use of prescribed burning techniques which would be precluded by a formal wilderness classification. 22% of the area would be mananged to provide elk summer range and timber and is located on the eastern portion of the roadless area. See the Final Forest Plan Map.

1d. Cabinet Additions: This complex roadless area is a combination of six separate roadless areas surrounding the existing 94,300 acre Cabinet Mountain Wilderness. (The six areas are: Cabinet Face West, Cabinet Face East, McKay, Rock Creek, Chippewa, and Government Mountain.) 85% of this combined acreage will be designated for wilderness and roadless. 13% percent will be designated for the management of grizzly and elk habitat and timber management. The southeastern side of the Cabinet Wilderness contains intermingled private property and important mineral potential. Because of these values, it was considered to be premature to recommend wilderness at this time. See the Final Forest Plan Map.

1e. Tuchuck: This roadless area is a continuation of a larger portion that is located on the adjacent Flathead National Forest. The Kootenai portion is designated as roadless to be in conformance with the management direction that has been prescribed for the Flathead Forest Plan. See the Final Forest Plan Map.

1f. Thompson-Seton: This roadless area is also part of a larger portion that is adjacent to the Flathead National Forest. 89% of the Kootenai portion is designated as roadless to be in conformance with the management direction that has been prescribed for the Flathead Forest Plan. 8% of the Kootenai portion has been designated for grizzly habitat and timber management. See the Final Forest Plan Map.

1g. Northwest Peaks: This roadless area has been designated as a combination of Scenic Area and roadless management. The Scenic Area managment will be the same as the roadless area management which will result in 100% roadless management for the area. See the Final Forest Plan Map.

1h. Roderick Mountain: 87% of this roadless area has been designated as a combination of roadless (43%) and big-game winter range (44%). This combination will provide benefits for big-game management similar to that mentioned for the Trout Creek area in 1c., above. 13% of the area has been designated for elk summer range and grizzly habitat and timber management. See the Final Forest Plan Map.

1i. Robinson Mountain: The entire area has been designated as roadless. See the Final Forest Plan Map.

1j. Canyon Peak: 79% of this roadless area has been designated as roadless, while 10% has been designated for grizzly habitat and timber management. See the Final Forest Plan Map.

1k. Cataract Creek: 78% of the Kootenai portion of this roadless area has been designated as roadless with 10% designated for grizzly habitat and timber management. See the Final Forest Plan Map.

In summary, as can be seen from the preceding Chart, about 80% of the roadless area acreage of concern has been designated as either wilderness or roadless, with about 11% designated to some form of timber management. As a further note, of the 583,000 acres of roadless area on the Kootenai, 521,000 acres will be retained as either wilderness, roadless, or wilderness study. This is 89% of the roadless acreage available and 23% of the Kootenai National Forest.

2. **COMMENT:**
At least 10 or 15 or 60% of old-growth should be permanently conserved. Reduce old-growth cutting. Preserve old-growth along streams. Remove old-growth from the regulated timber base. This should help the screech owl, lewis woodpecker and pine martin.

2. **RESPONSE:**
The Kootenai National Forest has inventoried 210,000 acres of old-growth timber habitat that meets the criteria for old-growth timber-dependent wildlife species. This is 11% of the total Forest land area below 5,500 feet elevation. (The 5,500 feet elevation level and below is considered to be the area most useful for the reproduction of these wildlife species.) The Final Forest Plan will manage 185,000 acres, or 91%, of all the inventoried old-growth timber habitat, for the benefit of these old-growth timber-dependent species. This will be 10% of all the Forest land area below 5,500 feet elevation. All of this 185,000 acres will be removed from the regulated (suitable) timber base and timber harvest and salvage will not be permitted within these areas.

Because only 11% of all the Forest land below 5,500 feet elevation is in an old-growth-timber condition that meets the criteria for the timber-dependent wildlife species, a higher level or percentage cannot be supplied today. Many of the old-growth timber areas that have been designated are along streams. See the Final Forest Plan Map.

As a further note, 34% of all the mature and over-mature timber (which includes the 185,000 acres mentioned above but excludes lodgepole pine) has been removed from the regulated timber base. This should provide the opportunity for a significantly higher amount of old-growth timber in the future.

3. **COMMENT:**
Build fewer roads. No more hard-packed gravel permanent logging roads. I support logging roads only if the Forest Service makes a profit on the timber sales. No more roads in critical elk habitat. Roads would destroy critical wildlife habitat and erode streams. Reduce mileage of existing roads by 25% by putting them to bed or obliteration, then use only temporary roads. No more roads.

3. **RESPONSE:**
Road building is an effect of managing the land for timber production. If timber is to be harvested then roads are necessary. The total road miles shown in the various documents are not "targets" or "goals", but estimates of the final results given today's technology. The need for roads will be continually reassessed as the transportation system is developed so that only those necessary to manage the timberland base are ever built.

For the most part, the roads called for in the Final Forest Plan are to be constructed in areas that are not defined as "roadless". This means that while some roads exist in most of the timber-producing areas, additional roads are still needed if all the existing timber stands are to be harvested.

The most direct way to reduce the total road miles is to reduce the size of the regulated timberland base. The Final Forest Plan has reduced the regulated timber base by 124,000 acres, from that shown in the Draft EIS. This was done by removing the old-growth timber management areas (Management Area 13) from the regulated base. This reduced the amount of required roads by 640 miles.

Reducing the regulated timber base directly reduces the quantity of timber that may be harvested over time under a non-declining yield schedule. In the extreme, as depicted in the minimum management benchmark in the Draft EIS, elimination of the regulated base will end all timber harvest. This, in turn, will have severe effects on the economy and lifestyles of the region. Alternative F, as displayed in the Draft EIS, had a regulated base 255,000 acres smaller than the Proposed Action and 900 fewer miles of road. This alternative describes a realistic low end of the timber harvest spectrum when all impacts are considered.

Recent experience has indicated that the rate of new road construction is declining. This appears to be the result of the concern to reduce the total miles of new road construction to protect water quality, as well as the increased concern for "deficit" timber sales (timber sales where the road costs have not been "paid" by the value of the timber in the sale). The following chart indicates this recent trend.

Kootenai National Forest

New Road Construction by Calendar Year (miles)

Calendar Year	Road Construction
1980	257
1981	223
1982	168
1983	187
1984	230
1985	165

As can be seen from the above table, the road construction rate has declined since 1980. If this rate continues, fewer roads would be built during the life of the Forest Plan than what is displayed in the Final EIS.

4. **COMMENT:**

Protect streamside areas. Do not fill streams with mud and debris. No roads or logging along streamside areas. The plan admits that stream sediments will increase 50%, this is not acceptable. The EPA gave the KNF plan the worst rating out of Montana's ten Forest Plans. I heard the KNF has the worst water quality of all Montana's Forests. Excessive logging and roading contributes to deterioration of water quality. Logging in sensitive sales is akin to setting off an ecological time bomb.

4. **RESPONSE:**

The EPA said:

> "Your DEIS is rated EO-2 (environmental objections - insufficient information). The Agency believes that the potential for adverse water impacts is a significant environmental concern..."
> (See Letter #49 in Appendix E in the Final EIS.)

Because of their concern, the Monitoring and Evaluation Plan has been modified to insure that State Water Quality Standards will be met.

Nowhere in the Draft EIS or Proposed Plan is there any mention of a 50% increase in sediment levels.

The Final Forest Plan increases the level of water quality protection. See the Riparian Area Guidelines, the Monitoring and Evaluation Plan, and the Forestwide Standards in the Final Plan document.

Many of the streamside areas are now designated for old-growth timber management which precludes timber harvesting. See the Final Forest Plan Map.

State-of-the-art methods for predicting sediment delivery to streams are not very good so we have reduced our reliance on those models and focused on insuring that problems do not occur in the field. We have added items to the Monitoring and Evaluation plan and the Forestwide Standards to insure that State Water Quality Standards will be attained.

See Response #3, above, on the amount of road construction anticipated and the recent trend in the amount of road construction.

5. **COMMENT**

Favor sustained timber harvest at the 173 (or 200) MMBF level. Retain current annual cut. I oppose "boom and bust". The annual cut should decrease rather than increase. With your continued accelerated logging programs and road building there isn't going to be any Forest to manage. Reduce timber sales. Too much emphasis on timber. Contracts are being canceled. Stop all logging.

5. **RESPONSE:**

The timber harvest level of 173 mmbf, as stated in the Draft EIS, represents an early period of full production and a later period of low production in the wood products industry for the last 10 years. The harvest levels appear to be on the increase and this trend is expected to continue. Because of this anticipated increase, the flexibility to provide for a higher timber sale level is being retained in the Final Forest Plan. See the chart below for more detail on actual timber cut and sold.

KNF TIMBER CUT and SOLD (mmbf)

Fiscal Year	Cut	Sold
1976*	216	200
1977	236	197
1978	191	154
1979	185	206
1980	156	176
1981	162	264
1982	131	221
1983	181	245
1984	198	212
1985	180	224
Average	179	205

* Includes the Transition Quarter

Reducing the Timber Sale level significantly below the historical sell level of 205 mmbf per year could eventually diminish the amount of timber that is currently under contract, which is about three years sell (605 mmbf in October, 1985, net of Timber Buyback). A three-year level of timber sales is considered desireable to allow the industry the flexibilty to respond to changing market conditions.

7. **COMMENT:**

Emphasize protection for big-horn sheep and mountain goats.

7. **RESPONSE:**

The Final Forest Plan provides this protection. See the Final Forest Plan and Map.

B. Comments that were general and more philosophical in nature, but were primarily of a maintain and preserve position.

Many of the respondents who sent in postcards stated general positions or desires on "How" the Kootenai should be managed. Comments such as; "Preserve the Kootenai for future generations", "Keep the Kootenai as wilderness", "Don't exploit the Kootenai", "Appalled at the Proposed Plan's shortsightedness", "The Forest Service is supposed to protect, not degrade", are a few examples of some of these positions. Most of these statements can be summarized as a "GO SLOW" advice.

8. **COMMENT:**

Please protect and preserve the Kootenai for future generations.

8. **RESPONSE:**

The Final Forest Plan has attempted to balance out society's expressed needs for today while maintaining as many options as possible for the future. Strong consideration has been given to the protection of the "basic building blocks" of water quality and soil protection, and wildlife habitat. Examples of this can be found in the Final Forest Plan's Monitoring and Evaluation Plan and the Forestwide Standards and Guidelines.

Along with these "basics", the consideration for local economic stability was a strong influence on the final outcome. Specifically, this resulted in the maintenance of the historic timber sale levels on lands that appear to be economically suited, and the opportunity to explore for minerals where the potential appears to be the greatest. This will provide for local job opportunuities while still providing for as many amenities as possible, such as visual quality, wilderness and roadless areas. Every attempt was made to reduce the amount of land needed for timber production to reduce the potential impact on water quality and fisheries habitat, and to provide the largest amount of undisturbed land for the recovery of the grizzly bear. Almost 90% of all the existing roadless lands will be retained in some form of roadless condition, such as wilderness, wilderness study area, or roadless recreation. This will result in 23% of the Kootenai National Forest being in a "preserved" status for future generations.

C. Comments primarily concerned with the position presented by the Montana Women in Timber organization.

A number of comments were received on response forms provided by Women In Timber. Since these respondents expressed essentially the same views, a composite of their comments is provided below with our response. All of the original response forms are available for review at the Forest Supervisor's Office in Libby.

COMMENT:

We need jobs, taxes and schools provided by timber. No more Wilderness or roadless areas. Remove land from Wilderness. Lands managed for multiple-use benefit more people than lands that are locked up. Support our timber industry. Alternative N is the best because it has more timber harvest and a higher present net value. Keep timber harvest levels up to support the local economy. Don't take any more land out of the resource base (timber). A bigger timber base is necessary to sustain this county and to insure a timber base for the future.

RESPONSE:

We agree that timber management provides many benefits to the local economy. Based upon many comments that we have received, we also see that many people are concerned about the options that future generations will have. The Proposed Action was originally intended to preserve options for future generations to decide between amenity and commodity uses. Toward this end most of the roadless area that could someday be economical to manage for timber was retained in a roadless, but not Wilderness, designation. Most of this area will cost more to road and log than the timber is currently worth. The only additional Wilderness recommendation in the Final Plan is the Pellick Ridge portion of Scotchman Peaks, an area which has very few options for timber management.

We are also concerned about making the size of the land area managed for timber any smaller, but many people pointed out that retaining sufficient habitat for old-growth dependent species is critical if we want to retain wildlife options for future generations. The Final Plan does reduce the regulated timber base in order to retain these options.

We looked carefully at the anticipated supplies of timber in this area from all sources (see Appendix B of the FEIS). Our conclusion was that the Kootenai National Forest should provide as much timber as possible while simultaneously preserving critical options for the future. We looked at increased harvest during the ten-year life of the plan with declines in the future. We concluded that, while this may help the local economy temporarily, future adverse impacts would be intensified. The Final Plan maximizes the allowable sale quantity (ASQ) during the life of the plan in a way that will not require declines in the future. It was found that, even with a smaller regulated timber base, the allowable sale quantity of the Proposed Action could still be achieved. The large future increases in ASQ that could have been possible under the Proposed Action are given up.

Many people were under the impression that the Flathead and other National Forests in this area were proposing drastic declines in their timber sale programs. The following table is based upon the Final Plans for the Lolo, Flathead and Kootenai and the Proposed Action of the Idaho Panhandle.

NATIONAL FOREST TIMBER SALE PROGRAMS
PAST AND FUTURE

Source	Average Sold 1976-1985	Timber Sale Program Quantity (Planned)
Flathead	105 MMBF	108 MMBF
Idaho Panhandle	246 MMBF	275 MMBF
Kootenai	182 MMBF	233 MMBF
Lolo	73 MMBF	122 MMBF
TOTAL:	606 MMBF	738 MMBF

This shows that when total volumes sold in the past are compared to potential sales under the Forest Plans, all Forests have the potential for increased timber sale programs. The potential sale level shown is the "Timber Sale Program Quantity". This includes both regulated (live green) and unregulated timber sales, just like the sale volumes from past years.

Our analysis of timber supply (Appendix B of the FEIS) shows that the total timber volumes available for harvest (in Lincoln, Sanders and Flathead Counties in Montana and Bonner and Boundary Counties in Idaho) can remain constant even with harvest declines of up to 25% from private property. Any declines in private harvest levels would have the smallest effect on Lincoln County because Lincoln County has the largest percentage of National Forest land in this five-county area. If private land owners can maintain their historic harvest levels, we can expect more jobs during the life of the plan, even as fewer workers are required to produce a given volume of lumber. If private landowners can not maintain their historic harvest levels, we can expect declining job opportunities in the wood products industry.