

FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KOOTENAI NATIONAL FOREST PLAN

CHAPTER II

ALTERNATIVES

including the Proposed Action  
and Final Plan

This chapter describes the process that was used to develop the alternatives. It describes those alternatives and compares and contrasts them with respect to a wide range of factors. These factors relate to the way in which each alternative resolves the issues addressed in Chapter 1, and how the Public Response influenced the Final Plan.

## II. Alternatives including the Proposed Action and Final Plan

### A. Introduction

This chapter discusses the development, description, and comparison of alternative ways of managing the Forest's land and resources. The alternatives development process involves an analysis of the management situation which includes a determination of minimum and maximum resource and value potentials. This step identifies the capabilities of the Forest (see section B).

The alternative descriptions outline the objectives of each alternative, show where the alternative fits into the range of alternatives, and explains how the alternative responds to issues. The resource, economic, social, and land designation results are also shown (see section C). Section D compares alternatives by resource outputs, social and economic effects, response to major issues, and nonpriced benefits.

Maps are provided which display the location of land designation for each alternative.

### B. Alternative Development

#### Summary of Changes between the Draft and Final EIS

The Final Forest Plan (Alt. JF) is a variation of the Proposed Forest Plan (Alt. J) that was presented to the public in July, 1985. Alt. JF was developed as a result of the concerns raised by the public during the review, including the concern about timber supply and demand. See Chapter VI for the analysis of the public comment and how the comments were used in the development of the preferred alternative.

#### 1. Overview

Forest planning began by identifying public issues and management concerns (see Appendix A for a description of this process). Once the issues were known, information was needed to determine the Forest's capability to respond to each issue. This step was the "Analysis of the Management Situation" which involved the examination of resource data, economic information, and environmental/legal constraints. Benchmarks were developed and analyzed to measure resource and economic interrelationships and output ranges for alternative development.

Alternatives were developed that respond to issues, present net value (PNV), and net public benefits (NPB). The net public benefit of forest management is the overall value to the nation of all benefits minus all costs, regardless of whether the costs and benefits are expressed in priced or nonpriced terms. The non-priced components of net public benefit are subjectively evaluated. Starting with Maximum PNV benchmark as the base, net public benefit is improved when the benefits of providing additional nonpriced objectives exceed the opportunity cost of doing so. A single, numeric NPB value was not calculated since monetary values associated with

some resources such as timber cannot be added to the qualitative value of nonpriced benefits, such as a scenic view.

An understanding of the various types of values and interrelationships associated with Forest outputs aids in the selection of an alternative that maximizes net public benefits. Several nonpriced benefits were considered by the interdisciplinary (ID) Team during the development of alternatives. Benchmarks were constructed to examine the tradeoffs between PNV and the nonpriced components of net public benefit. For example, protecting grizzly bear habitat reduces PNV because timber management intensity is reduced. The choice of protecting the habitat and giving up some PNV could have a higher net public benefit than the alternative choice of maximizing PNV and sacrificing the habitat. The nonpriced outputs considered in this analysis include: jobs and community stability; visual quality; wilderness and roadless quality; accessibility for minerals and oil/gas exploration; grizzly bear recovery; lodgepole pine risk management; road access; and appropriated budget (see Appendix B, section IV for a further discussion of NPB).

The alternative development process used here is outlined in 36 CFR 219.12. These regulations include the following goals for alternative formulation:

- Provide basis for identifying the alternative that maximizes net public benefits.
- Alternatives shall be distributed between the minimum and maximum resource potential and reflect a range of environmental resource uses and expenditure levels.
- Formulated to facilitate analysis of opportunity costs and tradeoffs.
- Formulated to evaluate effects on present net value, benefits, and costs.
- Provide different ways to respond to major public issues.

**1a. Summary of the Public's Concern and How They Influenced the Development of the Final Plan (Alt. JF).**

The public's primary concerns were: Wilderness, Timber Harvest Levels, New Road Construction, Old-Growth Timber, Water Quality, Effects on the Local Economy, Economic Values and Budgets, and Fisheries.

They were polarized into two general groups: (1) those that felt that the Proposed Plan was biased on the side of development; such as timber harvesting and road construction at the expense of wilderness, water quality, old-growth timber and fisheries, and (2) those that felt that the Proposed Plan was too biased in favor of wilderness, roadless areas and wildlife (including the grizzly bear) at the expense of people, timber harvest and jobs.

Within this general polarized situation was some common ground. There was general agreement that the timber harvest levels experienced over the last decade are acceptable and/or should not be reduced. General concern was also expressed about the realism involved in the Proposed Plan's budget requirement, and in which resource management categories reductions would take place if a budget shortfall occurred.

The public agreed that water quality and fisheries should receive adequate protection because of their inherent values.

The expressed concerns were re-analyzed and tested against the known information on hand. Some concerns required additional analysis and information which is displayed in Appendix B and Chapter III. This includes the additional analysis and information which resulted from the Montana Timber Supply analysis. (This analysis displayed that with a significant increase in the demand for timber, including a significant price increase during the 10-15 year plan period, the Allowable Sale Quantity could be adjusted upward.)

The Final Forest Plan (Alt. JF) retains the same timber harvest level in the first decade as presented in the Proposed Forest Plan (Alt. J) while also providing additional wilderness, old-growth timber, and less road construction. The Monitoring and Evaluation Plan was revised to insure that environmental quality such as water and fisheries will not be compromised below acceptable standards.

## **2. Analysis of the Management Situation (AMS)**

### **No Changes occurred between the Draft and Final EIS**

The analysis of the management situation determined resource supply potentials by establishing minimum and maximum production levels called benchmarks. A level was also established from which the costs and effects of applying regulation and policy constraints were measured. Production capabilities were determined for single resources and for a set of multiple resource outputs that maximized present net value. This analysis established the benchmark levels required by NFMA regulation 219.12e.

#### **a. Benchmark Levels**

Six benchmark levels were developed to define resource supply potentials and economic relationships. Production capabilities were determined for a minimum level, for single resources, and for a set of multiple resource outputs that maximize present net value (NFMA regulation 219.12e). A level was also established from which the costs and effects of applying regulation and policy constraints were measured. A computer model, FORPLAN, was used to help determine the resource supply potentials.

The benchmark levels and analyses are summarized in this Chapter. Appendix B, Section VI provides a detailed discussion of the complete benchmark analysis.

**b. Constraints**

Regulation and policy constraints as applied in the benchmarks have, in most cases, the net effect of reducing the maximum resource supply potential. NFMA regulation 219.27 specifies that certain minimum management requirements be included in the planning process. The methods to model the effects of the minimum management requirements include developing standards and guidelines and appropriate management practices for management prescriptions, assignment of management prescriptions to analysis areas in FORPLAN, and applying specific constraints in FORPLAN. A complete description of the minimum management requirements can be found in Appendix B, Section VI. Constraints commonly applied to the six benchmark levels except for the minimum level benchmark are:

1. A fixed acreage is assigned to the existing Cabinet Mountain Wilderness Area (94,000 acres), the Ten Lakes Montana Wilderness Study Area (34,000 acres), and existing ranger stations and campgrounds (3,000 acres).
2. An ending timber inventory constraint that forces the timber inventory in 200 years to equal or exceed the inventory necessary to produce the long-run sustained-yield capacity indefinitely.
3. Minimum timber rotation ages set at the age where 95 percent of the culmination of mean annual increment of the timber volume is achieved. This assures that timber stands are not harvested before reaching the age where net growth over the life of the stand is maximized.
4. Non-declining Yield (NDY) timber harvest constraint except for the Maximum Present Net Value Benchmark.
5. Minimum Management Requirements which include providing (1) protection for T&E species (grizzly bear), (2) an upper limit on the amount of clearcutting that can occur in any decade in a watershed based on its existing condition (to protect water quality and soil productivity), (3) retention of at least 8 percent of appropriate acres in old-growth timber adequately distributed for wildlife and diversity purposes, and (4) limiting the size of clearcuts to 40 acres or less.

**c. Benchmark Descriptions****(1) Maximum Present Net Value**

This benchmark established the mix of resource uses and schedule of outputs and costs that maximized present net value using market and nonmarket assigned values. A limited departure from non-declining yield was used. This benchmark was carried forward as Alternative M and was also used to develop Alternative A. Alternative A provides the base sale schedule for this benchmark. This benchmark is displayed in this DEIS when a comparison of alternatives is made in order to provide a reference to the maximum present net value potential considered.

**(2) Maximum Timber**

The maximum capability of the Forest to produce timber over a 200 year period was determined by this benchmark. Non-declining yield was used. This benchmark was carried forward as Alternative L and was also used to develop the Resources Planning Act (RPA), Alternative (Alt D).

**(3) Maximum Wildlife Habitat Potential**

The purpose of this analysis was to analyze the potential for elk habitat based on the availability of cover and forage on summer range. The potential for elk habitat is based on the availability of forage and cover on both summer and winter range and open road densities. This benchmark was carried forward as Alternative F.

**(4) Maximum Wilderness**

Potential Wilderness designations were maximized in order to determine the benefits, costs, outputs and opportunity costs of wilderness. This benchmark was carried forward as Alternative H and was also used to develop Alternative G and Alternative E. This benchmark was also used to analyze semi-primitive non-motorized (SPNM) recreation use. SPNM use occurs on inventoried roadless areas and this benchmark analyzed all of these areas. Primitive and semi-primitive non-motorized recreation is provided for adequately in this benchmark.

**(5) Minimal Level**

This benchmark defined the minimum costs of public landownership and the resource outputs which are incidental to Forest management. This benchmark is not a viable alternative because it is not responsive to public issues and management concerns. It also does not provide multiple resource uses and outputs. It was used to compare fixed costs and outputs of public ownership to those outputs induced through management direction and activities.

**(6) Current Direction**

This benchmark defines the current level of goods and services and the most likely amount of goods and services expected in the future if current management direction continued. This benchmark followed existing approved management plan direction updated to meet all minimum requirements with current budget levels. It was carried forward as Alternative I.

The initial development of this benchmark did not include budget limitations. The initial analysis formed the basis for the Current direction Benchmark and aided in the development of Alternative J. It was not carried forward as a benchmark because the Current Direction Benchmark (Alt. I) served this purpose. It was not carried forward as an alternative because Alternative J was very similar.

Four other benchmarks were developed that were variations of the above. These benchmark levels examined the costs and benefits of grizzly bear recovery, soil and water protection, diversity, and visual management. Details are included in Appendix B, Section VI.

### 3. Benchmark Analysis

#### No Changes occurred between the Draft and Final EIS.

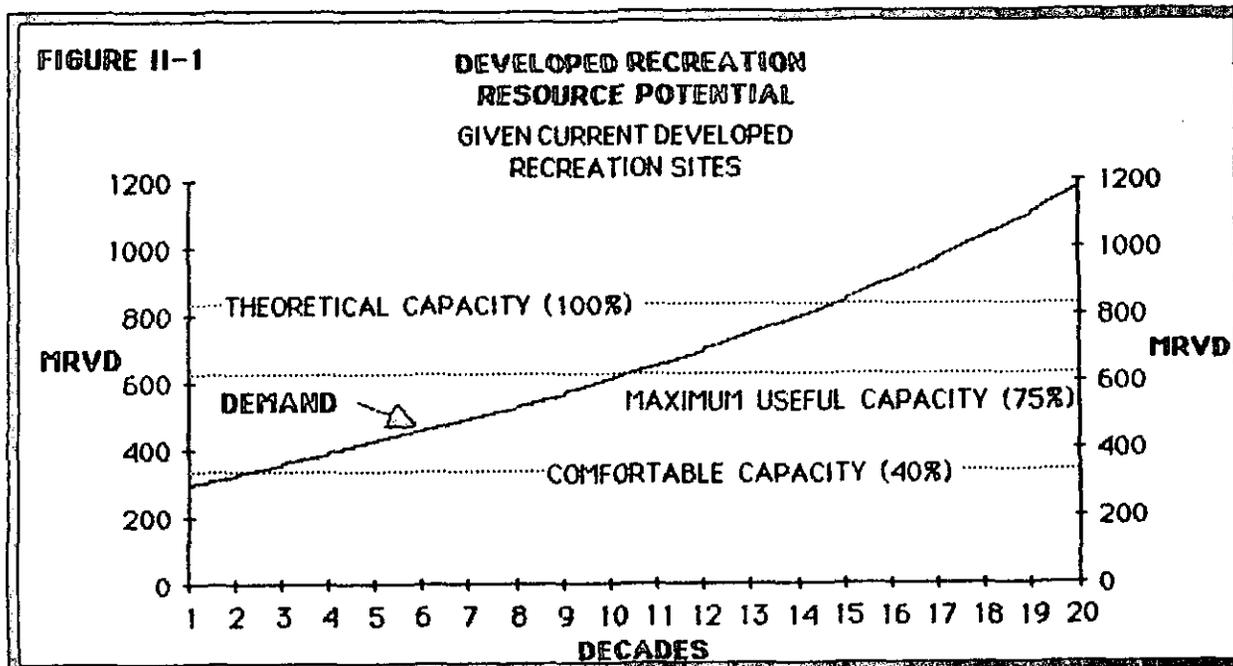
Analysis of the benchmarks established upper and lower potential production levels for selected resources. Additional analysis was done to estimate projected use levels (More detailed information can be found in Appendix B and in Chapter 3, Section B). The following resources were analyzed.

#### a. Recreation (Total)

The Kootenai's total recreation use in 1984 was 873,000 Recreation Visitor Days (RVDs) spanning most classes of the Recreation Opportunity Spectrum (ROS). They classes include: Primitive or Wilderness (P), Semi-primitive Nonmotorized (SPNM), and Semi-primitive Motorized (SPM). Roaded Natural-Appearing (RNA), and Rural (R) were combined for ease of discussion. There is no "Urban" class of use on the Forest.

#### b. Developed Recreation

Developed recreation use in 1984 was 297,000 RVDs. The existing developed recreation sites, including campgrounds, boating sites, picnic sites, and ski areas have a total physical capacity of about 831,000 RVDs. Normally use beyond 40 percent of the physical capacity (332,000 RVDs) will degrade the type of experience that users expect. Demand is expected to reach 332,000 RVDs during the third decade. By increasing management intensity (more garbage collection, more law enforcement etc.) use can probably be accommodated up to about 75 percent of physical capacity (623,000 RVDs). Demand is expected to reach 623,000 RVDs during the eleventh decade.



**c. Roaded Natural Recreation**

Roaded recreation use in 1984 was 435,000 RVDs, and is projected to reach 614,000 in the fifth decade. Roaded recreation capacity varies by alternative, but all alternatives are expected to meet anticipated use for at least the next 100 years. The quality of hunting and fishing, camping and picnicking, or driving for pleasure can decrease in some areas as the population increases and some areas require road closures for various reasons or the existing visual quality changes because of timber harvesting.

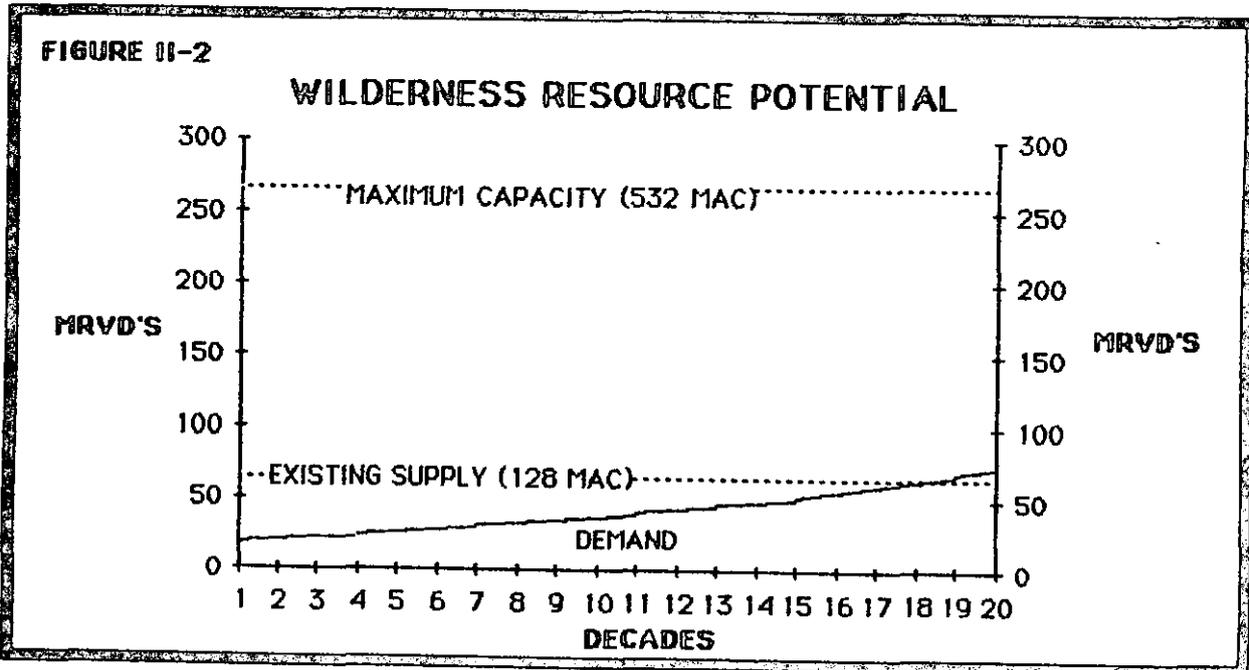
**d. Semi-primitive Non-motorized and Primitive Recreation**

1984 use was 47,000 RVDs. Projected use in this combined ROS category is 66,000 RVDs in the fifth decade and can be met on 132,000 acres of roadless areas if use could be uniformly distributed. Designation below this level will reduce the quality of experience in roadless areas, shift some use to wilderness areas and displace users to other Forests. The Forest currently has 404,000 acres of inventoried roadless areas.

**e. Wilderness Recreation**

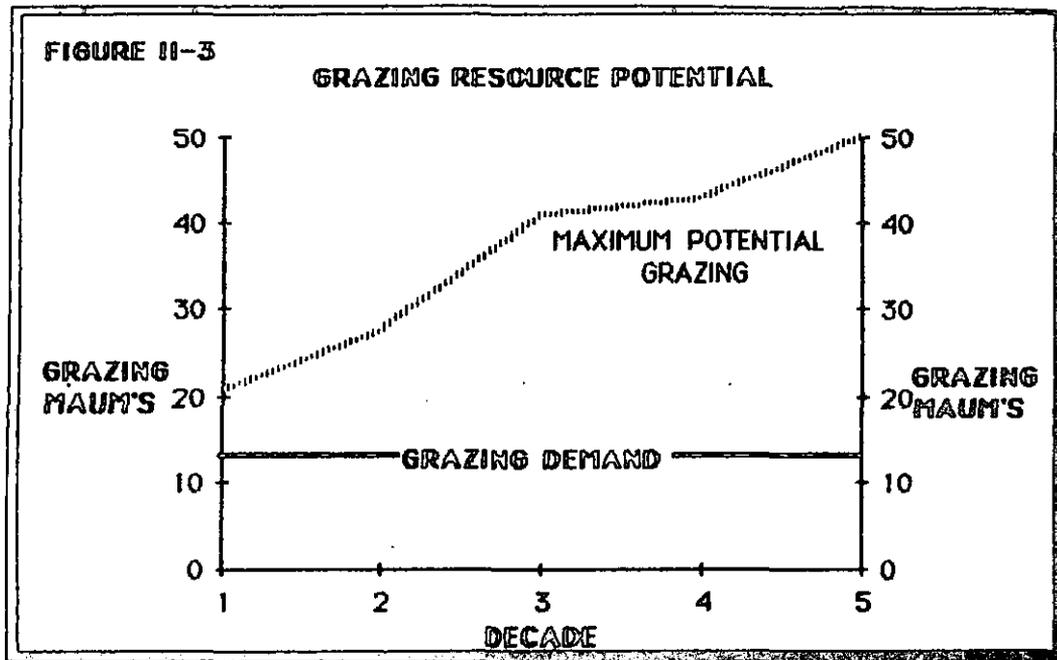
1984 use was 18,000 RVDs and is projected to reach 25,000 RVDs by the fifth decade. Fifth decade projections would require approximately 50,000 acres of wilderness to satisfy, if use could be uniformly distributed. The existing Cabinet Mountain Wilderness contains 94,000 acres and, since use is not uniformly distributed, shows evidence of overuse in specific areas.

The Forest currently has 94,000 acres of wilderness which has a capacity of 47,000 RVDs of wilderness recreation, indicating that current demand is below existing supply if use was distributed uniformly. The Forest has approximately 438,000 acres of potential wilderness which includes the 404,000 acres of inventoried roadless area plus the 34,000-acre Ten Lakes Montana Wilderness Study Area. In the Wilderness Benchmark (Alt. H), all of the above 438,000 acres were assigned a wilderness prescription which resulted in a 219,000 RVD capacity. This potential capacity plus the existing wilderness will provide a total capacity of 266,000 RVDs. Figure II-2 shows the relationship of current capacity, maximum capacity and projected use of wilderness recreation.



f. Livestock Range

The capacity of suitable transitory rangeland to support livestock exceeds current and future demand. The Forest currently (1980) permits livestock grazing in the amount of 12,600 animal unit months per year. Suggested demand levels in the Northern Regional Guide were estimated to reach 20,000 AUMs by the year 2030. Due primarily to considerations of winter weather and other costly problems, the Forest is not likely to see demand for grazing exceed current (1980) levels. The Forest has the capacity to exceed current levels and the suggested demand levels in the Northern Region Guide., as shown in Figure II-3.



**g. Elk Habitat**

Elk habitat carrying capacity can be increased over current levels. The Forest contains habitat to support more than the present population levels of approximately 5,500 elk (1983). By the end of the third decade, the Forest could provide habitat to allow existing elk herds to increase to about 9,900 animals as displayed in the wildlife benchmark (Alt. F). The goal suggested in the Northern Regional Guide is to provide habitat to allow for a 16 percent increase in herd levels by the year 2000. The Current Direction Benchmark provides for the smallest increase in herd size which still exceeds the Regional goal.

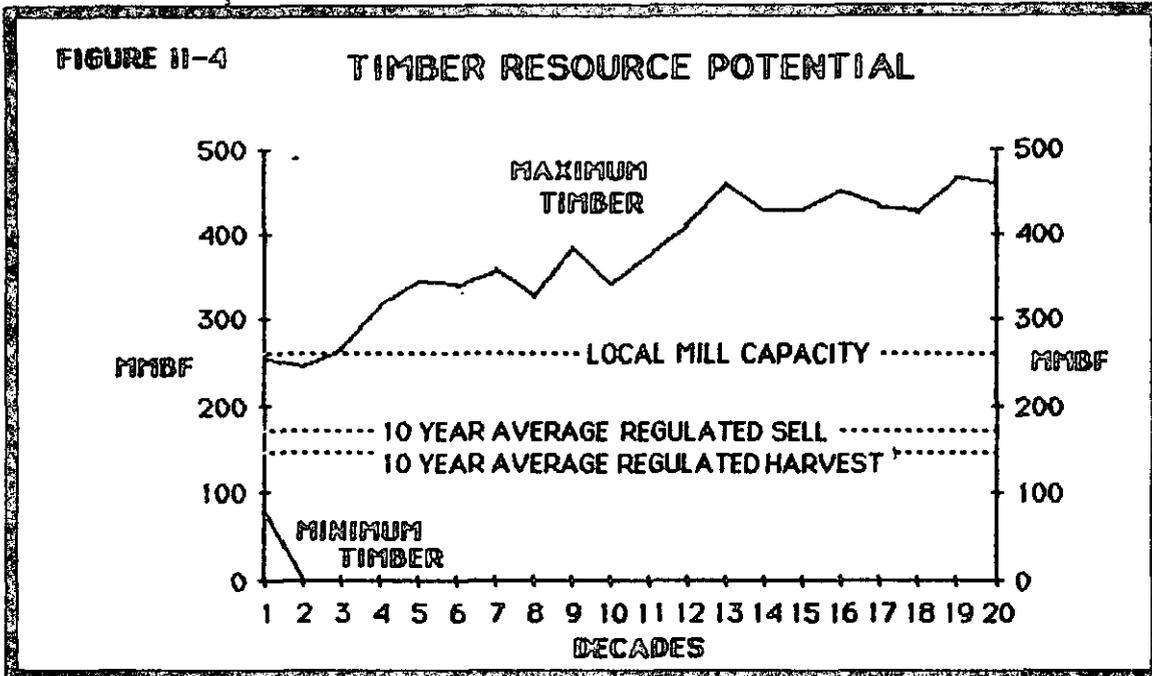
**h. Fisheries**

The productivity of trout populations is dependent upon the quality of stream, lake, and river habitats. Presently the Forest stream habitats are estimated to have the potential to produce approximately 205,000 two-year-old smolts (migratories) for major river and lake fisheries. The current trout population for all the streams, rivers and lakes is estimated to be 1,016,000 catchable-size fish.

The Minimum Level Benchmark represents the maximum trout production of 1,101,000 catchable-size trout by the end of the fifth decade. The Maximum Timber Benchmark represents the lowest benchmark fish population level of 961,000 trout by the end of the fifth decade.

i. Timber

The land base tentatively suitable for timber production is 1,788,000 acres as shown in the Timber Benchmark (Alt. L) and has the capacity to meet RPA targets for the next 50 years. In the Minimum Level Benchmark only the volume currently under contract is harvested. The maximum timber potential is represented by the Timber Benchmark (Alt. L) shown in Figure II-4. The long-term sustained yield of Alt. L is 455 MMBF/year.



The local area (Lincoln and Sanders Counties) mill capacity is approximately 260 million board feet annually. Over the last ten years (1974 - 1983) the Forest has sold an average of 170 MMBF per year of regulated timber plus 28 MMBF per year of dead trees, pulp, posts, poles and other products. About 53% of this volume (1980) was processed in Lincoln and Sanders Counties. Inventories of uncut Federal timber have increased substantially over the past several years due to depressed lumber markets. By 1983 the volume under contract was about 828 MMBF. On October 1, 1986, the volume under contract was 588 MMBF as a result of the Timber Buyback and an improved lumber market situation.

j. Present Net Value (PNV)

The maximum PNV attainable from the Forest is \$1,163,000,000 as defined by the PNV Benchmark (Alt. M) which meets minimum management requirements, precludes timber management from the existing wilderness, wilderness study area, campgrounds, and ranger stations, and allows a limited departure from non-declining yield.

## **k. Discounted Cost**

The minimum discounted cost (4%) of \$196,000,000 over the 200 year analysis period is represented by the Minimum Level Benchmark.

### **1. Employment**

Local KNF-related private sector employment was 1,666 jobs in 1980. In decade one, KNF-related private sector employment ranges from a potential 2,727 jobs with the Timber Benchmark (Alt. L) to a potential 2,006 jobs in the Wildlife Benchmark (Alt. F). In Decade 2, the minimum level benchmark potential drops to 797 jobs.

## **4. Range of Alternatives**

### **No Changes occurred between the Draft and Final EIS**

The benchmarks presented in the previous section were used to develop alternatives that represent a range of resource outputs. For example, the PNW and Minimum Level Benchmarks show that the allowable timber sale quantity (regulated) can range from a minimum of zero to 262 MMBF per year in Decade 1. Alternatives were then designed to span the benchmark range. The PNW Benchmark was used to determine the opportunity cost of meeting alternative objectives and provided a basis for changing objectives to maximize PNW while still meeting the minimum management requirements.

The benchmark analysis also aided in addressing the broad range of public issues and management concerns. There are six major issues and concerns that are addressed: (1) timber production and its associated road building, (2) wilderness and roadless areas, (3) wildlife and fish production, including managing for the recovery of the grizzly bear, (4) local economic impacts, (5) visual quality protection, and (6) minerals and oil/gas exploration accessibility.

Each alternative considered was formulated so that multiple resource use occurs. Each alternative harvests timber, builds roads, provides security and forage for elk and grizzly bear, provides a diversity of recreation opportunities including wilderness opportunities, protects wildlife, soil, and watersheds, etc. The difference among alternatives and how each alternative responds to the issues and concerns is reflected in the amount and emphasis placed on the individual resources.

The range of alternatives goes from emphasizing resources that are priced and have market outputs such as timber to emphasizing the nonmarket outputs such as the quality of the visual resource and wilderness experiences. There was considerable effort to develop feasible solutions that have a variety of mixes, as well as considering the roadless area proposed for wilderness, roadless or other resources management. One alternative is designed to meet the Resource Planning Act (RPA) goals identified in the Regional Guide (Alternative D).

Details concerning the development of the alternatives are provided in Appendix B, Section VII.

**a. Adequate Range of Alternatives**

An adequate range of alternatives was developed by first formulating the alternatives that were required by regulation or policy, including: one that maximized timber production and most market opportunities (Alternative L), one alternative that reflected the current program (Alternative I), one that recommended wilderness classification for all roadless lands (Alternative H), one that recommended no additional wilderness classification (Alternative A), and one that recommended wilderness classification for a substantial portion of the roadless areas while providing commodity production on the remainder of the Forest (Alternative G).

These alternatives were then examined to determine where they fit in the range of outputs expressed by the benchmarks, and how they responded to the issues.

Additional alternatives were then developed that responded in different ways to the wilderness issue (Alternatives B, C, and E). Other alternatives considered a departure from nondeclining timber harvest flow (Alternatives K and N) while others considered the maximum production of big game (Alternative F), the protection of visual quality and roadless areas (Alternative O) and the maximum provision for present net value (Alternative M). These alternatives including the one designed to meet RPA targets (Alternative D) and a proposed plan (Alternative J) helped to complete the range of alternatives. The Final Plan (Alternative JF) is a variation of Alternative J and was modified as a result of the Public response on the Draft EIS. All of the alternatives considered are implementable options for management of the Kootenai National Forest.

The 15 alternatives plus the Final Plan were tested against the benchmark capacities in order to determine if a sufficient range had been provided to respond to major issues. The comparison is shown in Figures II-5 to II-16 and in section D of this Chapter.

FIGURE II-5

TIMBER HARVEST IN THE FIRST DECADE  
(LIVE GREEN VOLUME ONLY)

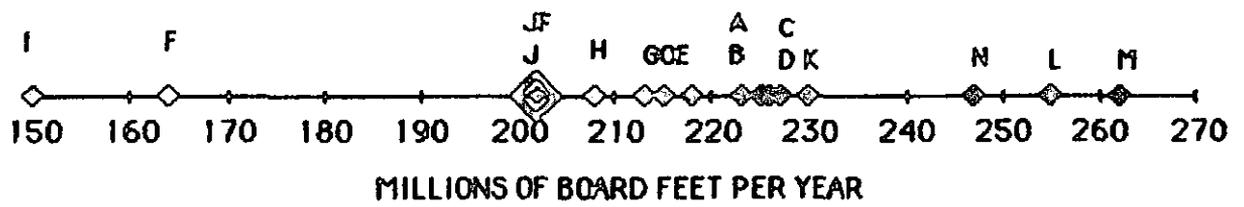


FIGURE II-6

SUITABLE TIMBERLAND

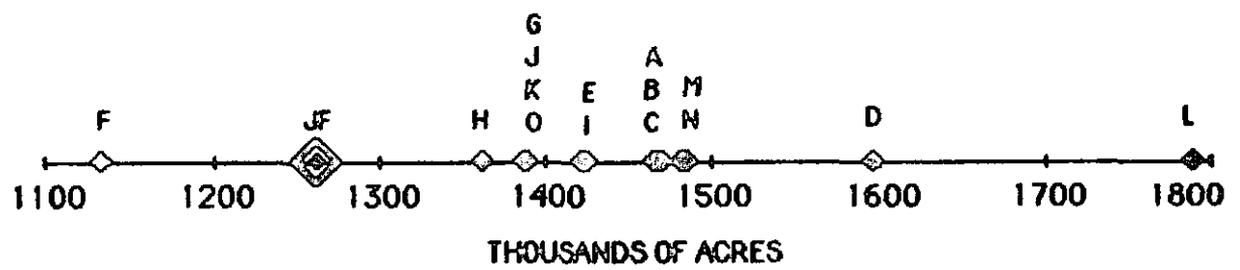


FIGURE II-7

NEW ROAD CONSTRUCTION NEEDED  
(After January 1, 1984)

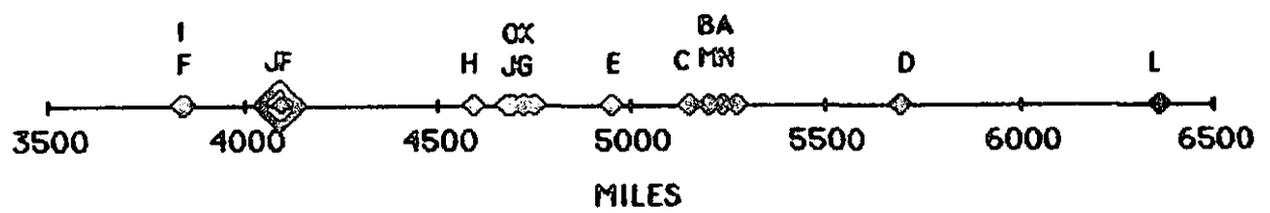


FIGURE 11-8

WILDERNESS RECOMMENDATIONS

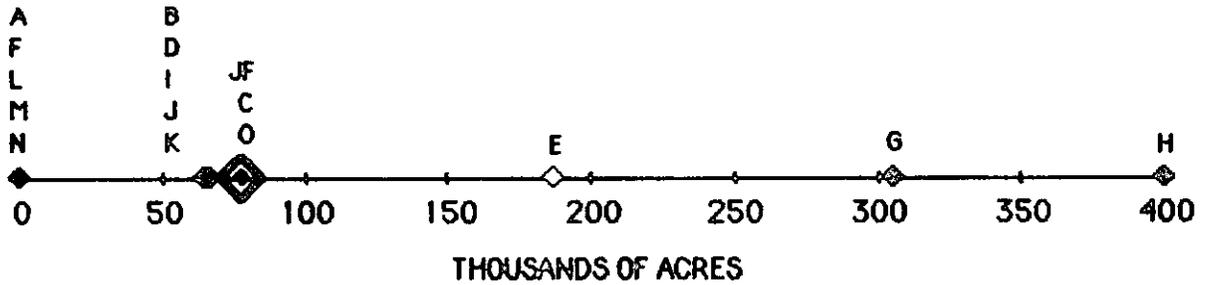


FIGURE 11-9

ROADLESS DESIGNATIONS IN INVENTORIED ROADLESS AREAS

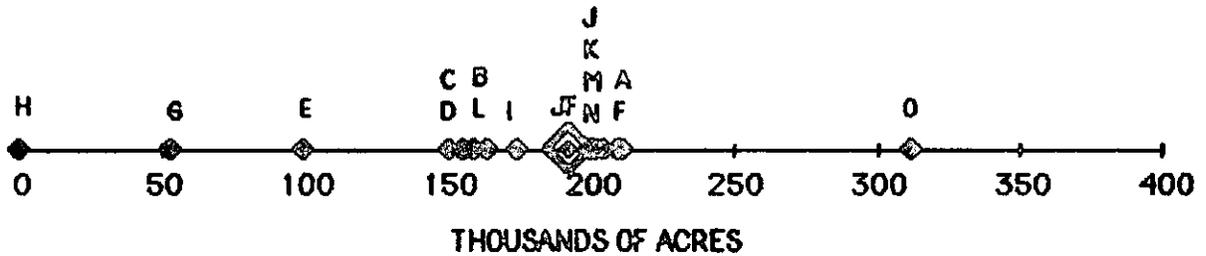


FIGURE 11-10

TOTAL ROADLESS RECREATION OPPORTUNITY

Includes Existing and Recommended Wilderness, Wilderness Study Area and Roadless Designations

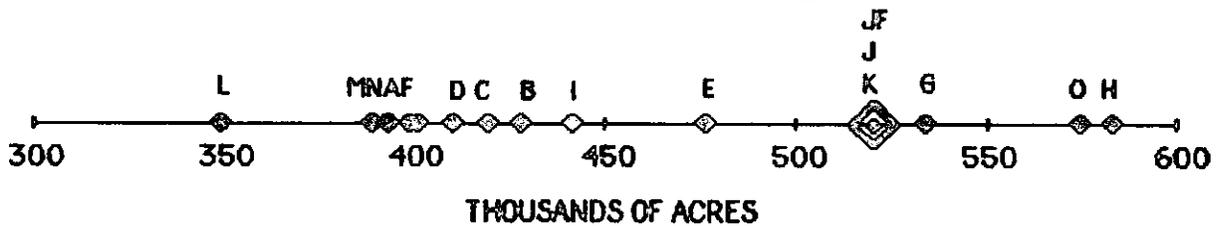


FIGURE 11-11

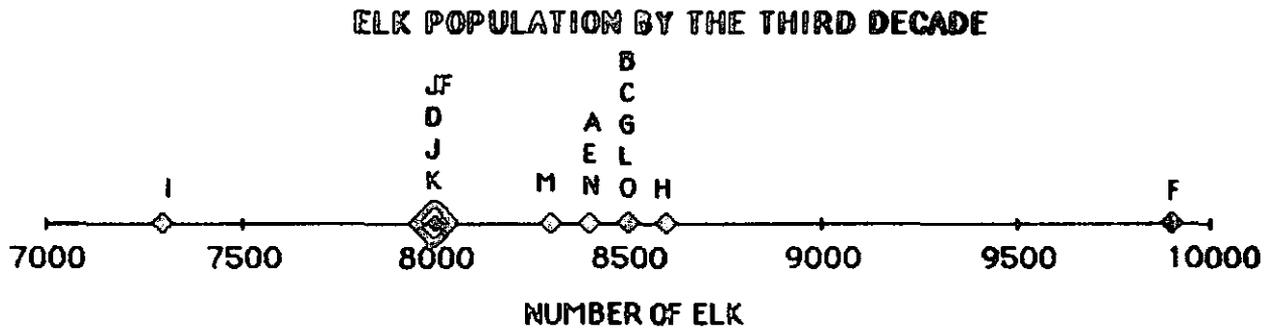


FIGURE 11-12

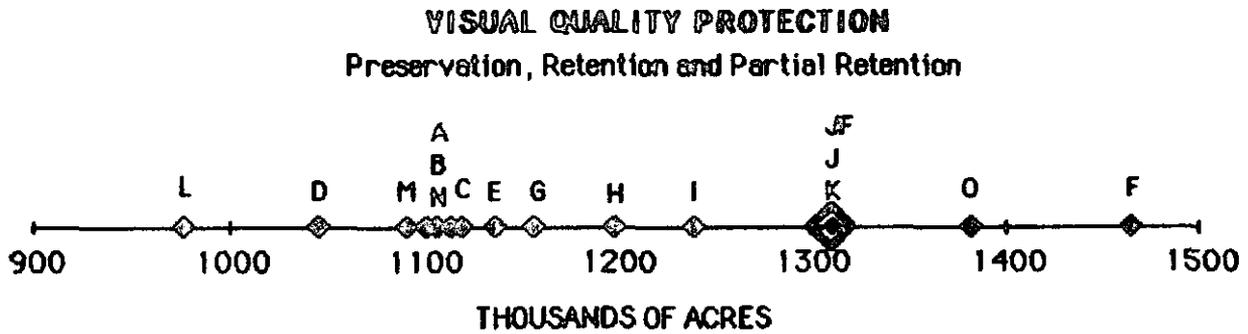


FIGURE 11-13

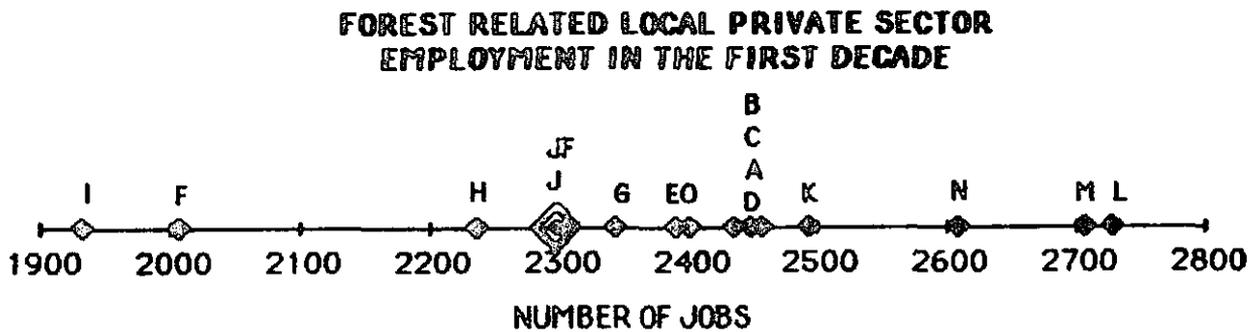


FIGURE II-14

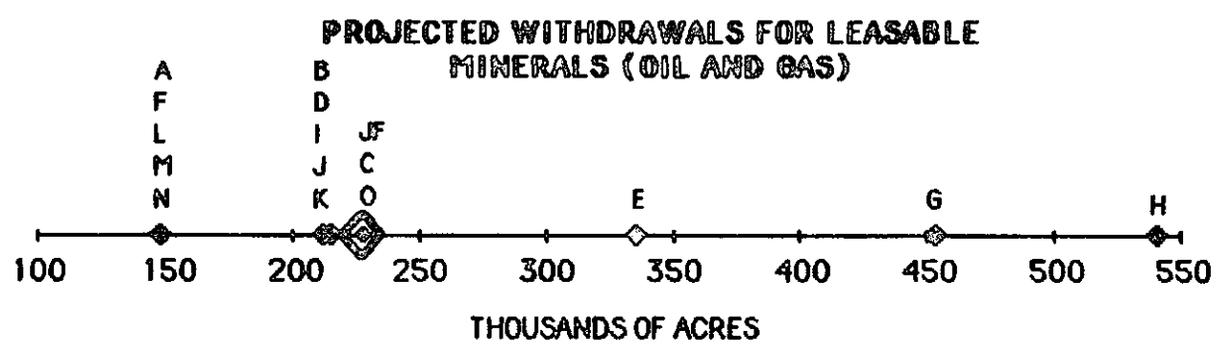


FIGURE II-15

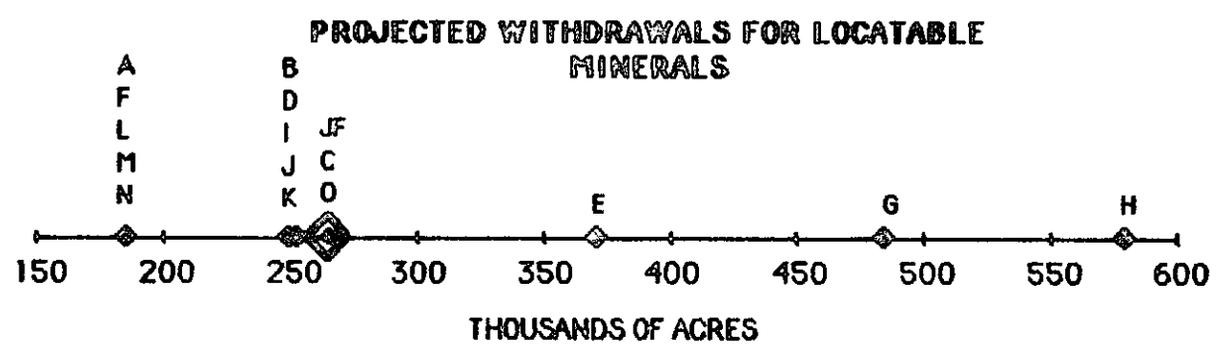
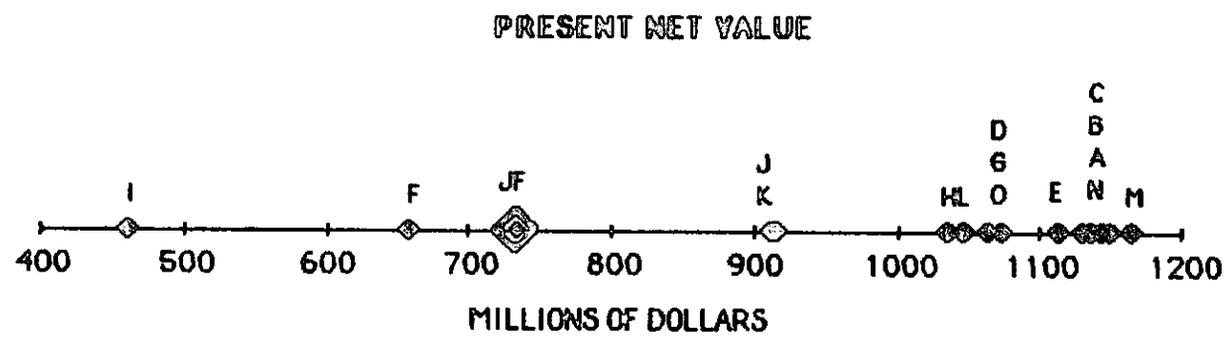


FIGURE II-16



The analysis comparing the alternatives to the benchmarks showed that there is an adequate range of resource outputs. Timber harvest volumes reflect a range that produces timber at 262 MMBF in the first decade compared to the average regulated sell level of 170 MMBF for the last 10 years (1974-83). The low end of the range is 150 MMBF, which is similar to the average historic regulated harvest of 148 MMBF.

Road construction ranges from a maximum total road system of 9,840 to 12,360 miles. This is 3,840 and 6,360 miles, respectively, of new roads in addition to the 6,000 miles existing in 1984.

Wilderness recommendations span the entire range from none to 404,000 acres which is the total inventoried roadless area. This compares to 64,000 acres recommended in the current direction (Alt. I) which reflects the RARE II wilderness recommendation.

Total roadless recreation opportunities (which includes wilderness and designated roadless areas) range from 349,000 to 583,000 acres or from 16% to 26% of the Forest, respectively. This is compared to 441,000 acres or 20% of the Forest in the current direction (Alt.I).

Habitat can be provided to support elk populations from approximately 7,000 to 9,900 elk by the third decade. This is compared to the existing elk herd of 5,500 animals in 1983 and the regional suggested goal of 6,400 elk by the year 2000.

Potential local Forest-related private sector jobs in the first decade can range from 1,931 to 2,727 jobs compared to 1,666 jobs in 1980.

Visual quality is provided in varying degrees from the low end of 976,000 acres in both "retention" and "partial retention" to 1,465,000 acres on the high end. This compares to 1,240,000 acres in the Current Direction (Alt. I).

Projected withdrawals for mineral and energy exploration range from the low end of 148,000 acres for leasable to 579,000 acres for locatable minerals. This compares to 212,000 and 249,000 acres, respectively, in the Current Direction (Alt. I).

Present net value ranges from \$460,000,000 to \$1,163,000,000.

#### **b. Constraints Used to Develop Alternatives**

Existing wilderness, wilderness study areas, campgrounds and ranger stations are maintained in all alternatives. Therefore, the primary focus of alternative discussions is on the 2.1 million acres of lands that are available for a variety of prescriptions.

Mitigation measures were incorporated in the management prescriptions, standards, and guidelines.

Minimum management requirements apply to all alternatives. These requirements include: (1) Openings created by management activities will generally be limited to 40 acres or less; (2) Water quality will be maintained such that state standards are met or exceeded; (3) Habitat for grizzly bear, and bald eagle shall be managed to provide for recovered populations; and (4) Sufficient old growth timber stands shall be managed to provide for at least minimum viable populations of old-growth dependent species. Additional minimum management requirements and discussion are found in Appendix B, Section VI.

Alternative constraints are described in detail in Appendix B, Section VII. In addition to the minimum management requirements, there is a common alternative constraint that applies to all the alternatives except K, N, and M. It is a nondeclining yield for timber outputs.

### c. Alternatives Eliminated from Further Consideration

Two other alternatives, P and Q, which attempted some variations on recommended wilderness area boundaries were dropped because of their close similarity to Alternatives E and G. Alternative P added 314,000 acres of wilderness as opposed to Alternative G at 305,000 acres. Alternative Q recommended 127,000 acres, but Alternative E recommended 187,000 acres, and had a similar PNV and other resource outputs.

## C. Description of Alternatives

### Summary of Changes between Draft and Final EIS

The Proposed Forest Plan (Alt. J) was modified to resolve the concerns raised during the Public Review period and is presented in this section as Alternative JF. Alt. JF provides additional recommended wilderness and old-growth timber while retaining the same level of planned timber sale offerings with less road construction. (In addition, the Final Plan provides for an increase in timber sale offerings if significant increases occur in the demand for and the price of timber during the Plan period. Any increase in the Allowable Sale Quantity would require an amendment to the Forest Plan.) The 12,000 acres of additional recommended wilderness is in the Scotchman Peak Roadless Area on Pellick Ridge. The additional 36,000 acres of old-growth timber management is distributed throughout the Forest.

Some additional clarification for oil and gas leasing has been added to all the alternatives.

The 15 alternatives plus the Final Forest Plan (Alt. JF) which were considered in detail are described in the following section. Each alternative has a schedule of resource outputs and a table of economic data projected for 20 decades (Table II-24). Additional details are included in Appendix B, Section VII. Maps portraying the 15 original alternatives accompanied the Draft EIS and are available upon request.

## 1. Alternative A

The intent of this alternative is to provide the most cost efficient landbase for timber management. No additional wilderness is recommended in keeping with the intent of maximizing opportunities for timber management.

Roadless recreation is provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide timber management opportunities. This alternative in conjunction with Alternative H can serve as a baseline for evaluating wilderness tradeoffs.

Timber Production and Associated Road Construction: The suitable timber base is 1,470,000 acres which is 82% of the maximum 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 226 mmbf/yr. is 33% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 53% increase over the last 10-year average regulated harvest level of 148 mmbf/yr. The sale schedule increases to 249 mmbf/yr. and 336 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 15% in the first decade and require 269 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 123 miles/yr. in the third decade when the road system will be essentially completed and total 11,270 miles, the third largest road system of all the alternatives. This will be a net increase of 5,270 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: No additions to the National Wilderness System are recommended. Approximately 211,000 acres or 52% of the 404,000 acres of inventoried roadless areas will be managed to remain in a roadless condition. These 211,000 acres are not cost efficient for timber management. The remaining 192,000 acres will generally be scheduled for timber harvest.

Total roadless recreation opportunities will be available on 399,000 acres which is approximately 18% of the Forest. This includes the 211,000 acres of inventoried roadless acres mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten lakes MWSA (34,000 acres), and 60,000 acres of unsuitable timberlands that are located in scattered parcels of land outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,400 animals, which is 85% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 5,110 miles of road closures to accomplish. This will be a net increase of 3,510 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover, but precludes any more significant increases in big game.

The total catchable trout population will decline approximately 5% over the next 40 years because of the additional road building. The migratory portion of the total trout population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,460 compared to the 1980 level of 1,670.

Return receipts to the State in the first decade could be \$5.9 million/yr., compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,108,000 acres. On the remaining 1,138,000 acres, timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 148,000 acres are projected for eventual withdrawal from oil and gas exploration; 185,000 acres are projected for eventual withdrawal from locatable mineral exploration, the lowest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,143,000,000 which is the third largest of all the alternatives. The budget during the first decade is \$27.2 million/yr.

## 2. Alternative B

The intent of this alternative is to display an historical perspective to the wilderness issue while simultaneously maximizing timber management options. The wilderness recommendations portray those endorsed by the Administration in RARE II (April 1979). Roadless recreation is provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide timber management opportunities.

Timber Production and Associated Road Construction: The suitable timber base is 1,464,000 acres which is 82% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 223 mmbf/yr. is 31% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 51% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 247 mmbf/yr. and 333 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 14% in the first decade and require 266 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 125 miles/yr. in the third decade when the road system will be essentially completed and total 11,200 miles, a net increase of 5,200 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: Wilderness is recommended on 64,000 acres in two locations on the Kootenai National Forest, including Scotchman Peak (48,000 acres) and Cabinet Mountains Wilderness additions (16,000 acres). (An additional 22,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 70,000 acres recommended for wilderness on Scotchman.)

In addition to the 64,000 acres of recommended wilderness, approximately 164,000 acres or 41% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 176,000 acres will be scheduled for timber harvest or road building over the next 10-30 years.

Total roadless recreation opportunities will be available on 420,000 acres which is 19% of the Forest. This includes the 164,000 acres of inventoried roadless area and 64,000 acres of recommended wilderness mentioned above, plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 64,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,500, which is 86% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 5,110 miles of road closure to accomplish. This will be an increase of 3,500 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline approximately 5% over the next 40 years because of the additional road building. The migratory fish portion of the total trout population will decline the most (approximately 9%). After this period of decline the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,440 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$5.7 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,114,000 acres. On the remaining 1,132,000 acres, timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 212,000 acres are projected for eventual withdrawal from oil and gas exploration; 249,000 acres are projected for eventual withdrawal from locatable mineral exploration.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,136,000,000. The budget during the first decade is \$27.0 million/yr.

### 3. Alternative C

The intent of this alternative is to display a wilderness recommendation similar to the Montana Wilderness Bill of June 1984, with some additions on contiguous areas in Idaho. Timber management options are maximized. Roadless recreation is provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide timber management opportunities. This alternative is similar to Alternative B in timber production. The significant difference is the location and amount of the recommended wilderness.

Timber Production and Associated Road Construction: The suitable timber base is 1,466,000 acres which is 82% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 225 mmbf/yr is 32% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 52% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 250 mmbf/yr. and 331 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 15% in the first decade and require 268 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 112 miles/yr. in the third decade when the road system will be essentially completed and total 11,150 miles, a net increase of 5,150 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: Wilderness is recommended on 81,000 acres in five locations on the Kootenai National Forest, including Scotchman Peak (29,000 acres), and the Cabinet Mountains Wilderness additions (30,000 acres), Trout Creek (13,000 acres), Tuchuck (2,000 acres), and Ten Lakes (7,000 acres). (An additional 22,000 acres of Scotchman and 8,000 acres of Trout Creek are recommended for wilderness on the adjoining Idaho Panhandle National Forest, for a total of 51,000 acres for Scotchman and 21,000 acres for Trout Creek.)

The 7,000 acres of recommended wilderness in Ten Lakes are in addition to 26,000 acres recommended inside the original Ten Lakes MWSA for a total of 33,000 acres. For more detail on Ten Lakes, see the Ten Lakes Final Report and Proposal when it becomes available.

In addition to the 81,000 acres of recommended wilderness (excluding the Ten Lakes MWSA), approximately 151,000 acres or 37% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 172,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 419,000 acres which is 19% of the Forest. This includes the 151,000 acres of inventoried roadless area and 81,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 59,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,500, which is 86% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 5,120 miles of road closure to accomplish. This will be a net increase of 3,520 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increases in big game.

Catchable trout populations will decline approximately 5% over the next 40 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 9%). After this period of decline the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,450 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$5.7 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,120,000 acres. On the remaining 1,126,000 acres, timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 228,000 acres are projected for eventual withdrawal from oil and gas exploration; 265,000 acres are projected for eventual withdrawal from locatable minerals.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,129,000,000. The budget during the first decade is \$27.1 million/yr.

#### 4. Alternative D - RPA

The intent of this alternative is to meet or exceed the Resources Planning Act (RPA) goals assigned to the Kootenai Forest for timber, wilderness, and wildlife. The wilderness recommendations are similar to Alternative B which is the RARE II recommendation of April 1979. Visual quality protection receives less emphasis because there are no specified goals for this resource.

Timber Production and Associated Road Construction: The suitable timber base is the second highest of all the alternatives. It is 1,595,000 acres which is 89% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 227 mmbf/yr is 33% more than the 170 mmbf/yr average sell for the last 10 years (1974-83) and will provide for a 53% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 285 mmbf/yr. and 344 mmbf/yr. in the third and fifth decades, respectively. RPA timber goals for the Kootenai are 228 MMBF/yr annual sell in the first decade, going to 292 MMBF/yr. and 345 MMBF/yr. by the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 15% in the first decade and require 267 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 166 miles/yr. in the third decade when the road system will be essentially completed and total 11,690 miles, a net increase of 5,690 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: Wilderness is recommended on 64,000 acres in two locations on the Kootenai National Forest, similar to Alternative B, including Scotchman Peak (48,000 acres) and Cabinet Mountains Wilderness additions (16,000 acres). (An additional 22,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 70,000 acres recommended for wilderness on Scotchman.)

In addition to the 64,000 acres of recommended wilderness, approximately 155,000 acres or 38% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 187,000 acres will be scheduled for timber harvest or road building over the next 10-30 years.

Total roadless recreation opportunities will be available on 410,000 acres which is 18% of the Forest. This includes the 155,000 acres of inventoried roadless area and 64,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 63,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,000, which is 81% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 4,770 miles of road closure to accomplish. This will be a net increase of 3,170 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increases in big game.

The total catchable trout population will decline approximately 7% in the next 30 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 11%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,460 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$6.0 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,046,000 acres. On the remaining 1,200,000 acres timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 212,000 acres are projected for eventual withdrawal from oil and gas exploration; 249,000 acres are projected for eventual withdrawal from locatable mineral exploration, similar to Alternative B.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,064,000,000. The budget during the first decade will be \$26.9 million/yr.

## 5. Alternative E

The intent 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 the most opportunity possible for timber management. Roadless recreation is provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide timber management opportunities outside the recommended wilderness areas.

Timber Production and Associated Road Construction: The suitable timber base is 1,425,000 acres which is 80% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 218 mmbf/yr. is 28% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 47% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 238 mmbf/yr. and 323 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 13% in the first decade and require 263 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 111 miles/yr. in the third decade when the road system will be essentially completed and total 10,950 miles, a net increase of 4,950 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Area: Wilderness is recommended on 187,000 acres, the third highest acreage, in six locations on the Kootenai National Forest, including Scotchman Peak (49,000 acres), the Cabinet Mountains Wilderness additions (68,000 acres), Trout Creek (24,000 acres), Roderick (20,000 acres), Galena (13,000 acres), and Cataract (12,000 acres). (An additional 22,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 71,000 acres recommended for wilderness on Scotchman.)

In addition to the 187,000 acres of recommended wilderness, approximately 99,000 acres or 25% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 118,000 acres will be scheduled for timber harvest or road building over the next 10-30 years.

Total roadless recreation opportunities will be available on 476,000 acres which is 21% of the Forest. This includes the 99,000 acres of inventoried roadless area and 187,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 63,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,400, which is 85% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 4,880 miles of road closure to accomplish. This will be a net increase of 3,280 miles over the 1,600 closed miles in 1984. Beyond the third decade timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increases in big game.

The total catchable trout population will decline approximately 5% in the next 30 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade can be 2,390 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade can be \$5.7 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,137,000 acres of sensitive lands (retention and partial retention). On the remaining 1,109,000 acres, timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 335,000 acres are projected to be eventually withdrawn from oil and gas exploration; 371,000 acres are projected to be eventually withdrawn from locatable mineral exploration, the third highest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,113,000,000. The budget during the first decade will be \$26.4 million/yr.

## 6. Alternative F

The intent of this alternative is to provide significant big game (elk) habitat management opportunities. Elk production receives more emphasis than timber production and visual quality protection and no additional wilderness is recommended in order to provide elk management opportunities. This alternative provides the highest level of elk production.

Timber Production and Associated Road Construction: This alternative produces one of the lowest timber yields and requires one of the smallest road system of all the alternatives.

The suitable timber base is 1,132,000 acres which is 63% of the 1,788,000 acres determined in the timber benchmark (Alt. L) The Plan period (first decade) allowable sale quantity (regulated) of 164 mmbf/yr. is 4% less than the 170 mmbf/yr average sell for the last 10 years (1974-83) and would result in a 11% increase compared to the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 190 mmbf/yr. and 198 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will decrease 13% in the first decade and require 202 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 103 miles/yr. in the third decade when the road system will be essentially completed and total 9,850 miles, a net increase of 3,850 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: No additional wilderness is recommended to allow the maximum opportunity to manage elk habitat.

Approximately 209,000 acres or 52% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 195,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 401,000 acres which is 18% of the Forest. This includes the 209,000 acres of inventoried roadless area mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 64,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 9,900, which is the highest of all the alternatives. This increase is estimated to occur over a 30-year period and will require 4,960 miles of road closure to accomplish. This will be a net increase of 3,360 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increases in big game.

The total catchable trout population will decline approximately 5% over the next 40 years because of the continued road building. The migratory portion of the population will decline the most (approximately 8%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade can be 2,010 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade can be \$4.4 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,465,000 acres, the highest of all the alternatives. On the remaining 781,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape.

Minerals/Energy: 148,000 acres are projected to be eventually withdrawn from oil and gas exploration; 185,000 acres are projected to be eventually withdrawn from locatable mineral exploration. This is similar to Alternative A and one of the lowest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$658,000,000 which is the second lowest of all the alternatives. The budget during the first decade will be \$20.7 million/yr., the second lowest of all the alternatives.

## 7. Alternative G

The intent of this alternative is to recommend significant amounts of additional wilderness while providing a high level of timber production. Roadless recreation is provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide for timber management outside the recommended wilderness areas.

Timber Production and Associated Road Construction: The suitable timber base is 1,386,000 acres which is 78% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 213 mmbf/yr. is 25% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 44% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 231 mmbf/yr. and 309 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 8% in the first decade and require 251 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 109 miles/yr. in the third decade when the road system will be essentially completed and total 10,750 miles, a net increase of 4,750 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: Wilderness is recommended on 305,000 acres, the second highest acreage, in 15 locations on the Kootenai National Forest, including Scotchman Peak (52,000 acres) and Cabinet Mountains Wilderness additions (83,000 acres), Trout Creek (30,000 acres), Roderick (25,000 acres), Galena (15,000 acres), Cataract (18,000 acres), Buckhorn Ridge (22,000 acres), Northwest Peaks (13,000 acres), plus seven other areas. (An additional 32,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 84,000 acres recommended for wilderness on Scotchman.)

In addition to the 305,000 acres of recommended wilderness, approximately 53,000 acres or 13% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 46,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 534,000 acres which is 24% of the Forest and the second highest of all the alternatives. This includes the 53,000 acres of inventoried roadless area and 305,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 48,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,500, which is 86% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 4,780 miles of road closure to accomplish. This will be a net increase of 3,180 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 5% in the next 30 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impact: Potential Forest-related private sector job opportunities in the first decade could be 2,340 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$5.7 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,157,000 acres. On the remaining 1,089,000 acres, timber harvest openings and road construction would be noticeable or dominate the landscape.

Minerals/Energy: 453,000 acres are projected for eventual withdrawal from oil and gas exploration; 184,000 acres are projected for eventual withdrawal from locatable mineral exploration, the second highest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,073,000,000. The first decade budget is \$25.7 million/yr.

## 8. Alternative H

The intent of this alternative is to recommend the highest possible amount of wilderness while maintaining a high level of timber production. Roadless recreation is provided only where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide for timber management outside of recommended wilderness areas. This alternative can serve as a baseline for evaluating wilderness tradeoffs.

Timber Production and Associated Road Construction: The suitable timber base is 1,361,000 acres which is 76% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 208 mmbf/yr. is 22% higher than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 40% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 223 mmbf/yr. and 294 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 6% in the first decade and require 248 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 111 miles/yr. in the third decade when the road system will be essentially completed and total 10,590 miles, a net increase of 4,590 miles over the existing 6,000 miles in 1984. This alternative produces the third least miles of all the alternatives.

Wilderness and Roadless Areas: Wilderness is recommended on 404,000 acres, the highest acreage, in 27 locations on the Kootenai National Forest, including Scotchman Peak (52,000 acres) and Cabinet Mountains Wilderness additions (86,000 acres). (An additional 32,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 84,000 acres recommended for wilderness on Scotchman.)

Total roadless recreation opportunities will be available on 583,000 acres which is 26% of the Forest and the highest of all the alternatives. This includes the 404,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 54,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,600, which is 87% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 4,730 miles of road closure to accomplish. This will be a net increase of 3,130 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest levels are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 7% in the next 30 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 11%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,240 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$5.6 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,199,000 acres. On the remaining 1,047,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape.

Minerals/Energy: 540,000 acres are projected for eventual withdrawal from oil and gas exploration; 579,000 acres are projected for eventual withdrawal from locatable mineral exploration, the highest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,035,000,000. The first decade budget is \$25.1 million/yr., the third lowest of all the alternatives.

## 9. Alternative I (Current Direction)

The intent of this alternative is to display the direction that the Kootenai National Forest is currently following. This Current Direction is a composite of 25 separate land use plans completed over a six-year period. It has been updated to meet recovery goals for the grizzly bear and to provide wildlife diversity for old growth timber-dependent species. The budget is constrained to the average amount actually experienced during the 1980-82 period. The wilderness recommendations are those endorsed by the Administration in RARE II which are the same as Alternatives B and D. Visual quality protection is provided for in sensitive areas along major travel routes and around communities. This alternative can be used as a baseline to measure changes in all resources, costs and benefits and is referred to as the "No Action" or "No Change" alternative.

Timber Production and Associated Road Construction: The suitable timber base is 1,422,000 acres which is 80% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 150 mmbf/yr. is 13% less than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will result in about the same harvest level as has been experienced over the last ten years (148 mmbf).

The sale schedule increases to 157 mmbf/yr. and 162 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will decrease 21% in the first decade and require 185 miles/yr., the lowest of all the alternatives. This is compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 138 miles/yr. in the third decade when the road system will be essentially completed and total 9,840 miles, a net increase of 3,840 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: Wilderness is recommended on 64,000 acres on the Kootenai National Forest, including Scotchman Peak (48,000 acres) and Cabinet Mountains Wilderness additions (16,000 acres). (An additional 22,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 70,000 acres recommended for wilderness on Scotchman.)

In addition to the 64,000 acres of recommended wilderness, about 174,000 acres of inventoried roadless areas will be managed in a roadless condition. The remaining 166,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 441,000 acres which is 20% of the Forest. This includes the 174,000 acres of inventoried roadless area and 64,000 acres of recommended wilderness acres mentioned above plus the existing Cabinet Mountain Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 76,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 7,300, which is 74% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 4,590 miles of road closure to accomplish, the second lowest of all the alternatives. This will be a net increase of 2,990 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 4% in the next 30 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 12%). After this period of decline the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade can be 1,930 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$2.3 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,240,000 acres, fourth highest of all the alternatives. On the remaining 1,006,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape.

Minerals/Energy: 212,000 acres are projected for eventual withdrawal from oil and gas exploration; 249,000 acres are projected for eventual withdrawal from locatable mineral exploration, which is similar to Alternatives B and D.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Existing oil and gas leases have been processed under the guidelines of the "Environmental Assessment on Oil and Gas Leasing on Nonwilderness Land" which is incorporated by reference to this EIS. This alternative allows for occupancy leasing opportunities for areas outside existing wilderness and wilderness recommended in the RARE II Final EIS.

Socio-economics: The present net value (PNV) is \$460,000,000, the lowest of all the alternatives. The first decade budget is \$19.6 million/yr., the lowest of all the alternatives.

## 10. Alternative J (Proposed Action as presented in the Draft EIS)

The intent of this alternative is to provide a combination of wilderness, roadless and timber management designations that provide for both stability and future options. Roadless designations are provided where timber management appears to be environmentally less desirable or not cost efficient. Other wildlife and fish production receive more emphasis to provide for a balanced multiple resource program. Visual quality protection is provided in sensitive areas such as along major travel routes and around communities and recreation sites. The total recommended wilderness acreage is similar to the RARE II proposal, but is significantly different in the location and amount of areas recommended.

Timber Production and Associated Road Construction: The suitable timber base is 1,386,000 acres which is 78% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 202 mmbf/yr. is 19% greater than the 170 mmbf/yr. average sell for the last 10 years (1974-83). It will provide for a 36% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 224 mmbf/yr. and 277 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 5% in the first decade and require 244 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 97 miles/yr. in the third decade when the road system will be essentially completed and total 10,690 miles, a net increase of 4,690 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas. Wilderness is recommended on 67,000 acres on the Kootenai National Forest, including Scotchman Peak (24,000 acres) and Cabinet Mountains Wilderness additions (36,000 acres), and additions to the Ten Lakes Montana Wilderness Study Area (7,000 acres). (An additional 22,000 acres of Scotchman is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 46,000 acres recommended for wilderness on Scotchman.) The figure of 67,000 acres does not reflect the 26,000 acres within the Ten Lakes MWSA that Alternative J recommends for wilderness because of the area's Congressionally-designated status as a "wilderness study area"; because of this status, the acreage for the area was not included in the inventory done of roadless areas and is not included in the recommended totals. For more detail on the Ten Lakes MWSA, see the Ten Lakes Report and Proposal when available.

In addition to the 67,000 acres of recommended wilderness, approximately 202,000 acres or 50% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 136,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 518,000 acres which is 23% of the Forest. This includes the 202,000 acres of inventoried roadless area and 67,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 122,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear population is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,000, which is 81% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 6,080 miles of road closure to accomplish. This will be a net increase of 4,480 miles over the 1,600 closed miles in 1984, and the most miles closed of all the alternatives. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 5% in the next 40 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,300 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$5.3 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality would be protected on 1,311,000 acres, the third highest of all the alternatives. On the remaining 935,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape.

Minerals/Energy: 215,000 acres are projected for eventual withdrawal from oil and gas exploration; 252,000 acres are projected for eventual withdrawal from locatable mineral exploration, the third lowest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$916,000,000. The first decade budget is \$25.2 million/yr.

### 10a. Alternative JF - (Final Plan)

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.

**Timber Production and Associated Road Construction:** The suitable timber base is 1,263,000 acres which is 71% of the 1,788,000 acres determined in the timber benchmark (Alt. L). This is a 9% decrease from Alt. J (123,000 acres) and is a result of designating land for old-growth timber dependent species. (The suitable acres could be increased if the demand for timber and its price rose significantly. See Appendix B for more details on the Montana Timber Supply analysis.)

The Plan period (first decade) regulated sell of live green timber is 202 mmbf/yr. which is no change from Alt. J. In addition 25 MMbf of dead lodgepole timber will be planned for harvest which is also no change from Alt. J. This will result in an allowable sale quantity of 227 MMbf which is 34% greater than the 170 mmbf/yr. average regulated sell for the 10-year period of 1974-83. It will provide for a 53% increase over the comparable 10-year average harvest level (regulated) of 148 mmbf/yr. This timber harvest level is a change from Alt. J. in definition only. The total Programmed Sell level (regulated plus unregulated) is planned at 233 mmbf/yr. which is no change from Alt. J.

The regulated sale schedule increases to 227 mmbf/yr. and 234 mmbf/yr. in the third and fifth decades, respectively. This will be a 16% reduction in the fifth decade compared to Alt. J.

New road construction necessary to manage the suitable timberlands in the first decade will require 237 miles/yr. This would decrease to 140 miles/yr. in the second decade when the road system will be essentially completed and total 10,050 miles, a net increase of 3,850 miles over the existing 6,200 miles in January, 1986. This is a 640 mile reduction (6%) from Alt. J.

**Wilderness and Roadless Areas:** Wilderness is recommended on 79,000 acres. This provides 12,000 acres more than Alt. J; and includes Scotchman Peak (36,000 acres), the Cabinet Mountain Wilderness Additions (36,000 acres), and additions to the Ten Lakes Montana Wilderness Study Area (7,000 acres).

NOTE: An additional 22,000 acres of Scotchman Peak is recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total wilderness recommendation of 58,000 acres within the Scotchman Peak Area.

NOTE: The total figure of 79,000 acres does not reflect the 26,000 acres of additional wilderness recommended within the Ten Lakes MWSA. This is because of the area's Congressionally-designated status as a Wilderness Study Area. The recommendation within the 34,200 acre area is for 26,000 acres of wilderness and 8,200 acres of non-wilderness. The 26,000 acres recommended wilderness inside the Ten Lakes MWSA and the 7,000 acres outside and adjacent would result in a total recommended wilderness of 33,000 acres for the overall Ten Lakes Area. For more detail on the Ten Lakes MWSA, see the Ten Lakes Final Report and Proposal when available.

In addition to the 79,000 acres of recommended wilderness, approximately 193,000 acres or 48% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 132,000 acres will be scheduled for timber harvest or other activities. This is similar to Alt. J.

Total roadless recreation opportunities will be available on 521,000 acres which is 23% of the Forest. This includes the 192,000 acres of inventoried roadless area and 79,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 122,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas. This is similar to Alt. J.

**Wildlife and Fish Production:** The recovery of the grizzly bear population is provided for in all Forest management activities that occur in identified grizzly habitat and the U.S. Fish and Wildlife Service has issued a non-jeopardy opinion on this Final Forest Plan.

The Forest would be managed to provide for habitat to support a potential herd size of 8,000 elk, which is 81% of the 9,900 potential as determined in the wildlife benchmark (Alt. F) and no change from Alt. J. This increase is estimated to occur over a 30-year period and will require 5,730 miles of road closure to accomplish. This will be a net increase of 4,130 miles over the 1,600 closed miles in 1984, and no change from the Proposed Plan (Alt. J) in the proportion of total roads closed (57%). The balance between timber harvest activity and elk habitat security will remain constant beyond the third decade.

The total projected catchable trout population will decline 5% in the next 40 years because of the calculated additional road building. The migratory fish portion of the population is projected to decline the most (approximately 9%). After this period of decline, the population is projected to stabilize and improve. This is the same as projected for the Proposed Plan (Alt. J) but the statistical reliability of the projections are unknown. Because of the low certainty of the projected fish losses, stronger measures for the protection of water quality have been incorporated within the Final Forest Plan to insure against a projected decline of this magnitude.

Local Economic Impacts: If the total Allowable Sale Quantity is harvested, the potential Forest-related private-sector job opportunities in the first decade could be 2,300 compared to the 1980 level of 1,670 jobs. This is the same as Alternative J.

Return receipts to the State in the first decade could be \$6.1 million/yr. compared to \$2.7 million in 1980. This is a 1% decrease from Alt. J and is due to the higher planned harvest of lodgepole pine which is a lower valued specie.

Visual Quality: Visual Quality would be protected on 1,311,000 acres, the highest of all the alternatives. On the remaining 935,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape. This is similar to Alt. J.

Minerals/Energy: 227,000 acres are projected for eventual withdrawal from oil and gas exploration; 264,000 acres are projected for eventual withdrawal from locatable mineral exploration. This is a 5% increase from Alt. J and results directly from a 12,000 acre increase in the wilderness recommendation on Scotchman Peak.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economic: The present net value (PNV) is \$733,000,000. The first decade budget is \$19.2 million/yr., a decrease of \$1.1 million/yr or 5%, from Alt. J.

## 11. Alternative K - Departure

The intent 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. This alternative is essentially the same as Alternative J except that a departure from non-declining sustained yield is allowed. Alternative J provides the base sale schedule for this departure alternative.

Timber Production and Associated Road Construction: The suitable timber base is 1,386,000 acres which is the same as Alternative J (Proposed Action). The Plan period (first decade) allowable sale schedule (regulated) of 230 mmbf/yr. is 35% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 55% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule decreases to 216 mmbf/yr. in the third decade, then increases to 271 mmbf/yr. in the fifth decade.

New road construction necessary to manage the suitable timberlands will increase 18% in the first decade and require 276 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 60 miles/yr. in the third decade when the road system will be essentially completed and total 10,720 miles. This is a net increase of 4,720 miles over the existing 6,000 miles in 1984 and similar to Alternative J.

Wilderness and Roadless Areas: Wilderness and roadless areas are the same as Alternative J.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for, in a manner similar to that in Alternative J.

Elk habitat and road closures would be similar to Alternative J.

Changes in the catchable trout populations will be similar to Alt. J.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,490 compared to the 1980 level of 1,670 jobs.

Return receipts to the State in the first decade could be \$6.1 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality protection is the same as Alternative J (Proposed Action).

Minerals/Energy: Minerals and oil and gas accessibility and leasing information is the same as Alternative J (Proposed Action).

Socio-economics: The present net value (PNV is \$911,000,000. The first decade budget is \$27.5 million/yr.

## 12. Alternative L

The intent of this alternative is to provide for the highest possible timber yields over the 200 year analysis period. No additional wilderness is recommended to provide options for timber management. Roadless designations are provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide options for timber management. This alternative serves as a baseline for evaluating timber management tradeoffs.

Timber Production and Associated Road Construction: This alternative produces the highest long-term timber yields and the largest road system. The suitable timber base is 1,788,000 acres, the highest of all the alternatives. The Plan period (first decade) allowable sale quantity of 255 mmbf/yr. is the second highest of all the alternatives and is 50% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83). It will provide for a 72% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 264 mmbf/yr. and 345 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 33% in the first decade and will require 310 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 187 miles/yr. in the third decade when the road system will be essentially completed and total 12,360 miles, a net increase of 6,360 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: No additional wilderness is recommended to provide options for timber management.

Approximately 159,000 acres or 39% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 245,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 349,000 acres which is 16% of the Forest. This includes the 159,000 acres of inventoried roadless area mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 62,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,500, which is 86% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 5,690 miles of road closure to accomplish. This will be a net increase of 4,090 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 5% in the next 40 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize but not improve.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,730 compared to the 1980 level of 1,670 jobs, the highest of all the alternatives.

Return receipts to the State in the first decade could be \$6.5 million/yr. compared to \$2.7 million in 1980, the second highest of all the alternatives.

Visual Quality: Visual quality would be protected on 976,000 acres, the second lowest of all the alternatives. On the remaining 1,270,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape.

Minerals/Energy: 148,000 acres are projected for eventual withdrawal from oil and gas exploration; 185,000 acres are projected for eventual withdrawal from locatable mineral exploration. This is similar to Alternatives A and F and the lowest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics. The present net value (PNV) is \$1,046,000. The first decade budget is \$34.2 million/yr., the highest of all the alternatives.

### 13. Alternative M - PNV

The intent of this alternative is to provide for the highest possible present net value. Timber harvest levels are allowed to depart from non-declining sustained yield and no additional wilderness is recommended to provide options for increasing present net value. Roadless designations are provided where it provides the highest present net value. Other wildlife and fish production and visual quality protection receive less emphasis to provide high present net value. This alternative serves as a baseline to measure opportunity costs for all the other alternatives. Alternative A provides the base sale schedule for this departure alternative.

Timber Production and Associated Road Construction: The suitable timber base is the third highest of all the alternatives. It is 1,484,000 acres which is 83% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 262 mmbf/yr. is the highest of all the alternatives and is 54% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83). It will provide for a 77% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 274 mmbf/yr. and 437 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 35% in the first decade and require 315 miles/yr., the highest of all the alternatives, compared to the 233 miles/yr. average for the last 5 years (1979-83). This would decrease to 104 miles/yr. in the third decade when the road system will be essentially completed and total 11,230 miles, a net increase of 5,230 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: No additional wilderness is recommended to provide options for higher present net value.

Approximately 200,000 acres or 50% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 204,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 389,000 acres which is 17% of the Forest. This includes the 200,000 acres of inventoried roadless area mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 61,000 acres of unsuitable timberland that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,300, which is 84% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 5,100 miles of road closure to accomplish. This will be a net increase of 3,500 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 5% in the next 40 years because of the additional road building. The migratory fish portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,710 compared to the 1980 level of 1,670 jobs, the second highest of all the alternatives.

Return receipts to the State in the first decade could be \$7.0 million/yr. compared to \$2.7 million in 1980, the highest of all the alternatives.

Visual Quality: Visual quality would be protected on 1,092,000 acres, the third lowest of all the alternatives. On the remaining 1,154,000 acres, timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 148,000 acres are projected to be eventually withdrawn from oil and gas exploration; 185,000 acres are projected to be withdrawn from locatable mineral exploration. This is similar to Alternatives A, F, and L and the lowest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,163,000,000 which is the highest of all the alternatives. The first decade budget is \$30.3 million/yr., the second highest of all the alternatives.

#### 14. Alternative N

The intent of this alternative is to provide high timber harvest levels in the first decade. It is similar to Alternative A except that a limited departure from non-declining sustained yield is allowed. No additional wilderness is recommended to provide options for timber management. Roadless designations are provided where timber management is not cost efficient. Other wildlife and fish production and visual quality protection receive less emphasis to provide timber management options. Alternative A provides the base sale schedule for this departure alternative.

Timber Production and Associated Road Construction: The suitable timber base is the third highest of all the alternatives and similar to Alternative M. It is 1,481,000 acres which is 83% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 247 mmbf/yr. is the third highest of all the alternatives and is 45% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83). It will provide for a 67% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 283 mmbf/yr. and 329 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 24% in the first decade and require 290 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-84). This would decrease to 109 miles/yr. in the third decade when the road system will be essentially completed and total 11,270 miles. This is a net increase of 5,270 miles over the existing 6,000 miles in 1984 and the third largest road system, similar to Alternative A.

Wilderness and Roadless Areas: No additional wilderness is recommended to provide options for timber management.

Approximately 205,000 acres or 51% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition. The remaining 199,000 acres will be scheduled for timber harvest or other activities.

Total roadless recreation opportunities will be available on 393,000 acres which is 18% of the Forest. This includes the 205,000 acres of inventoried roadless area mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 60,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,400, which is 85% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 5,130 miles of road closure to accomplish. This will be a net

increase of 3,530 miles over the 1,600 closed miles in 1984. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 5% in the next 40 years because of the additional road building. The migratory portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related private sector job opportunities in the first decade could be 2,610 compared to the 1980 level of 1,670 jobs, the third highest of all the alternatives.

Return receipts to the State in the first decade could be \$6.3 million/yr. compared to \$2.7 million in 1980, the second highest of all the alternatives and similar to Alternative L.

Visual Quality: Visual quality would be protected on 1,102,000 acres. On the remaining 1,144,000 acres, timber harvest openings and roads would be noticeable or dominate the landscape.

Minerals/Energy: 148,000 acres are projected for eventual withdrawal from oil and gas exploration; 185,000 acres are projected for eventual withdrawal from locatable mineral entry. This is similar to Alternatives A, F, L, and M and the lowest of all the alternatives.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,148,000,000 which is the second highest of all the alternatives. The first decade budget is \$29.1 million/yr., the third highest of all the alternatives.

## 15. Alternative 0

The intent of this alternative is to provide significant protection for roadless areas and visual quality. The wilderness recommendations are similar to the Montana Wilderness Bill (as in Alt. C) and roadless recreation is recommended for all the remaining inventoried roadless areas. Timber management receives less emphasis in order to meet the recommended visual quality goals in all areas outside of identified grizzly habitat. This alternative provides the highest level of visual quality and inventoried roadless area protection.

Timber Production and Associated Road Construction. The suitable timber base is similar to Alternatives G, J, and K. It is 1,389,000 acres which is 78% of the 1,788,000 acres determined in the timber benchmark (Alt. L). The Plan period (first decade) allowable sale quantity (regulated) of 215 mmbf/yr. is 26% more than the 170 mmbf/yr. average sell for the last 10 years (1974-83) and will provide for a 45% increase over the last 10-year average harvest level of 148 mmbf/yr.

The sale schedule increases to 263 mmbf/yr. and 320 mmbf/yr. in the third and fifth decades, respectively.

New road construction necessary to manage the suitable timberlands will increase 10% in the first decade and require 256 miles/yr. compared to the 233 miles/yr. average for the last 5 years (1979-84). This would decrease to 86 miles/yr. in the third decade when the road system will be essentially completed and total 10,680 miles. This is a net increase of 4,680 miles over the existing 6,000 miles in 1984.

Wilderness and Roadless Areas: This alternative achieves the highest protection of the inventoried roadless areas, similar to Alternative H. Wilderness is recommended on 81,000 acres in five locations on the Kootenai National Forest, including Scotchman Peak (29,000 acres), Cabinet Mountains Wilderness additions (30,000 acres), Trout Creek (13,000 acres), Tuchuck (2,000 acres), and Ten Lakes (7,000 acres). (An additional 22,000 acres of Scotchman and 8,000 acres of Trout Creek are recommended for wilderness on the adjoining Idaho Panhandle National Forest for a total of 51,000 acres recommended for wilderness on Scotchman and 21,000 acres for Trout Creek.)

The 7,000 acres of recommended wilderness in Ten Lakes are in addition to 26,000 additional acres inside the Ten Lakes MWSA for a total of 33,000 acres. (For more detail on Ten Lakes, see the Ten Lakes Final Report and Proposal when available.) In addition to the 81,000 acres of recommended wilderness, approximately 322,000 acres or the remaining 80% of the 404,000 acres of inventoried roadless area will be managed in a roadless condition.

Total roadless recreation opportunities will be available on 574,000 acres which is 26% of the Forest and the second highest of all the alternatives. This includes the 322,000 acres of inventoried roadless area and 81,000 acres of recommended wilderness mentioned above plus the existing Cabinet Mountains Wilderness (94,000 acres), the Ten Lakes MWSA (34,000 acres), and 42,000 acres of unsuitable timberlands that are located in scattered parcels outside of inventoried roadless areas.

Wildlife and Fish Production: The recovery of the grizzly bear is provided for in all Forest management activities that occur in identified grizzly habitat.

Elk habitat would be managed to provide for an eventual herd size of 8,500, which is 86% of the 9,900 potential as determined in the wildlife benchmark (Alt. F). This increase is estimated to occur over a 30-year period and will require 4,300 miles of road closure to accomplish. This will be a net increase of 2,700 miles over the 1,600 closed miles in 1984, the lowest of all the alternatives. Beyond the third decade, timber harvest activities are at a level that maintains adequate hiding cover but precludes any more significant increase in big game.

The total catchable trout population will decline 5% in the next 40 years because of the additional road building. The migratory portion of the population will decline the most (approximately 9%). After this period of decline, the population is expected to stabilize and improve, but not recover to current levels.

Local Economic Impacts: Potential Forest-related job opportunities in the first decade could be 2,400 compared to the 1980 level of 1,670 jobs. Return receipts to the State in the first decade could be \$5.3 million/yr. compared to \$2.7 million in 1980.

Visual Quality: Visual quality is protected on 1,382,000 acres, the second highest of all the alternatives. On the remaining 864,000 acres, timber harvest openings and roads will be noticeable or dominate the landscape.

Minerals/Energy: 228,000 acres are projected for eventual withdrawal from oil and gas exploration; 265,000 acres are projected for eventual withdrawal from locatable mineral exploration, similar to Alternative C.

New leases and subsequent lease reissuance will undergo additional analysis as required by NEPA, tiering to this EIS through incorporation by reference the information presented in this EIS. Special stipulations are used whenever the leased area has surface resource values needing special protection to meet the alternative management objectives.

Socio-economics: The present net value (PNV) is \$1,064,000,000. The first decade budget is \$26.9 million/yr.

#### D. COMPARISON OF ALTERNATIVES

The discussion in this section focuses on how major resource outputs and economic effects vary among alternatives. This information is provided to assist decision-makers in their determination of which alternative provides the highest level of net public benefits. A summary of how each issue is affected by alternatives is in Table II-14 in the middle of this chapter. Total outputs for each alternative and selected benchmarks are shown in Table II-24 at the end of this chapter and outputs that vary significantly among alternatives are discussed below.

##### Summary of Changes between the Draft and Final EIS

The Proposed Forest Plan (Alt. J) was re-analyzed to resolve the concerns expressed by the Public during the Public Review period, including the concerns expressed by State officials and others questioning the assumptions used to determine timber supply and demand. As stated earlier, the public's primary concerns were; Wilderness, Timber Harvest Levels, New Road Construction, Old-Growth Timber, Water Quality, Effects on the Local Economy, Economic Values and Budgets, and Fisheries. Changes were made in each of these categories to resolve the Public's concern as stated during the Review Period. For a complete description of the Public's concerns, see Chapter VI, Consultation With Others. For those interested in the actual public input and the Kootenai Forest response, see Appendix E, Public Comments and Forest Service Response.

#### 1. Timber

##### Summary of Changes between the Draft and Final EIS

This section has been rewritten to present recent information on future timber supplies and clarification of timber supplies available on suitable timberlands. The final Forest Plan (Alt. JF) will have a smaller suitable timber base than the Proposed Plan (Alt. J) in the Draft EIS. This is because of the need to provide for adequate amounts of old-growth timber for dependent wildlife species. The suitable timber base will be 1,263,000 acres compared to 1,386,000 acres in Alt. J. This smaller suitable timber base will still provide for the same Total Timber Sell Program and Allowable Sale Quantity (ASQ) as Alt. J. The ASQ in the Final Plan will be 227 MMbf/yr and the Total Planned Timber Sell Program will be 233 MMbf/yr. The Total Timber Sale Program for the Final Plan is the same as displayed for Alt. J in Appendix 11 in the Proposed Forest Plan document in the Draft EIS.



The Volume Under Contract reached a high point in 1985 which resulted in the Timber Payment Modification Act (Timber Buyback). This Act allowed for the return of previously purchased timber sales, under certain conditions, to alleviate financial hardships being experienced as a result of the recent recession. After this Timber Buyback period, the Volume Under Contract returned to the normal 3-years sell level.

**(2) Historic and Projected Timber Supplies in the Local 5-County Market Area**

Recent concern has been expressed about the availability of future timber supplies in the local market area. The concern appears to be 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.

Some of the public response received on the Draft Forest Plan stated that because of the recent speculation on National Forest timber in the late 70's and early 80's, timber companies were having to cut heavier on private timberlands to offset the high prices that they had bid on the National Forest timber. The result of this increased dependence on private timber was an overcutting on the private timberlands. This raised the concern that an increased demand would then shift back to the National Forest timber to offset the inevitable decline on the private lands.

In order to respond to this concern, 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 Appendix B, Section V. H.

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 anticipated supply-level changes in the future.

Table II-1b

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 most recent ten-year period that data was available. 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 the 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 be adequate to provide this timber sell 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. 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 shown on the following Table:

Table II-1c

**TIMBER VOLUMES EXPECTED TO BE AVAILABLE IN THE NEXT DECADE**  
 (\* Scenarios Described below)  
 (MMBF Average Annual)

<u>SOURCE</u>	<u>LINCOLN</u>	<u>SANDERS</u>	<u>FLATHEAD</u>	<u>BONNER</u>	<u>BOUNDARY</u>	<u>TOTAL</u>
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.
- 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 II-1d

**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)

<u>COUNTY</u>	<u>PAST CUT</u>	<u>POTENTIAL FUTURE CUT: VOLUME AND % CHANGE FROM PAST</u>			
	<u>1976-1985</u>	<u>SCENARIO I</u>	<u>SCENARIO II</u>	<u>SCENARIO III</u>	<u>SCENARIO IV</u>
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%

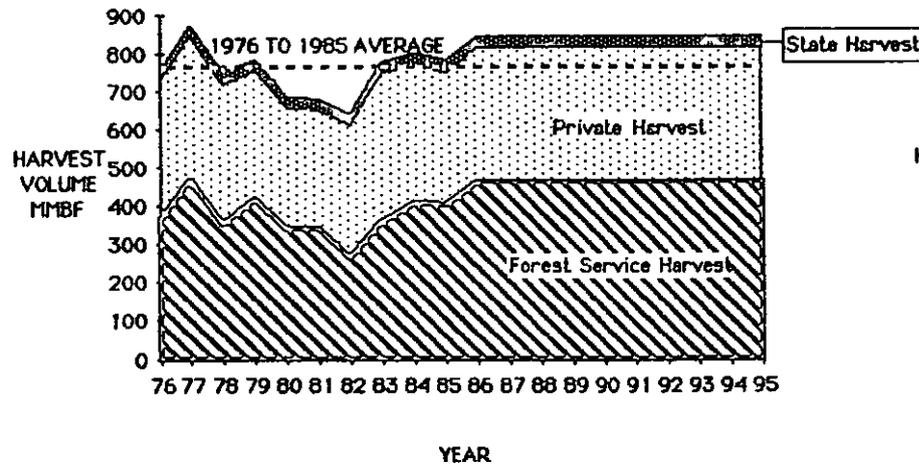
This data is displayed in the following figures:

# Figure II-16a. FIVE COUNTY<sup>2</sup> TIMBER SUPPLY SITUATION PAST AND FUTURE

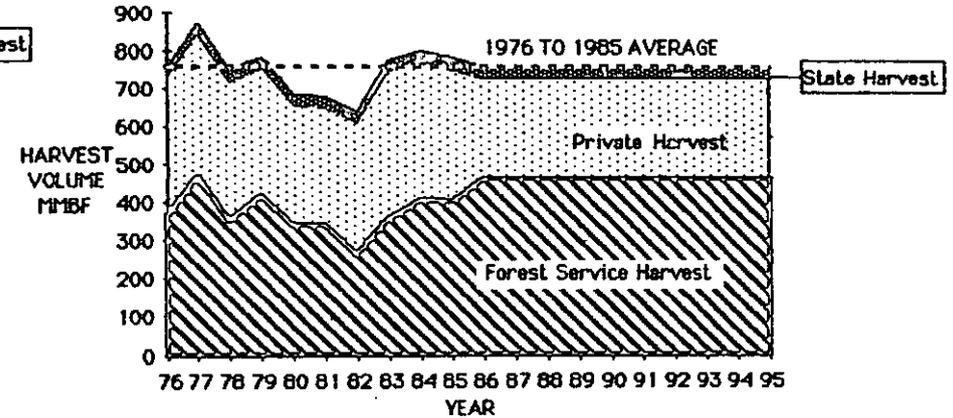
**SCENARIO I:** The future harvest from private lands will be the same as the last decade harvest level.

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

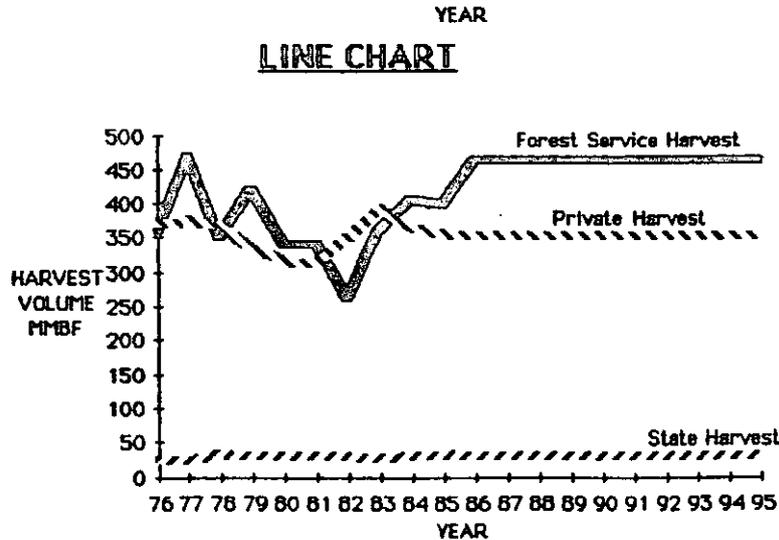
CUMULATIVE AREA CHART



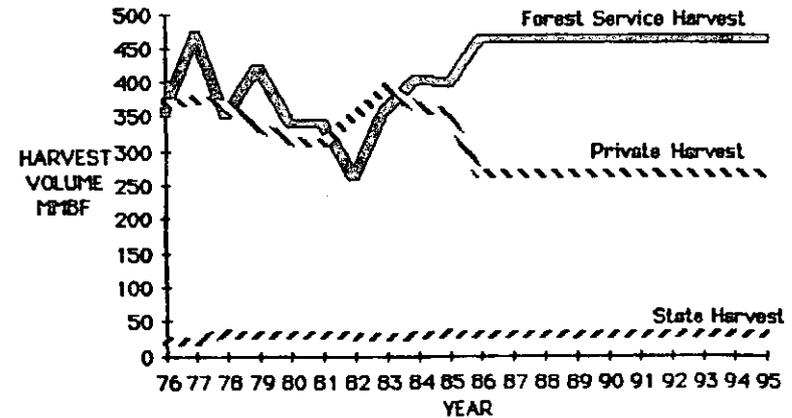
CUMULATIVE AREA CHART



LINE CHART



LINE CHART



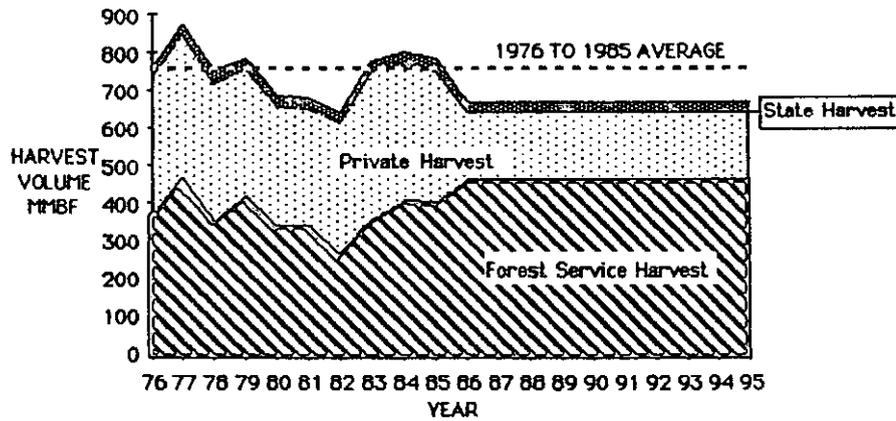
\* Montana: Lincoln, Sanders, Flathead Counties  
Idaho: Boundary and Bonner Counties

Figure II-16a  
(continued)

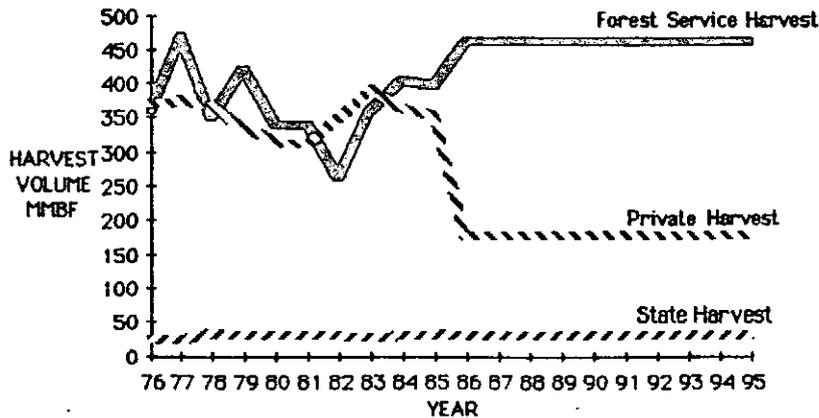
# FIVE COUNTY<sup>2</sup> TIMBER SUPPLY SITUATION PAST AND FUTURE

**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

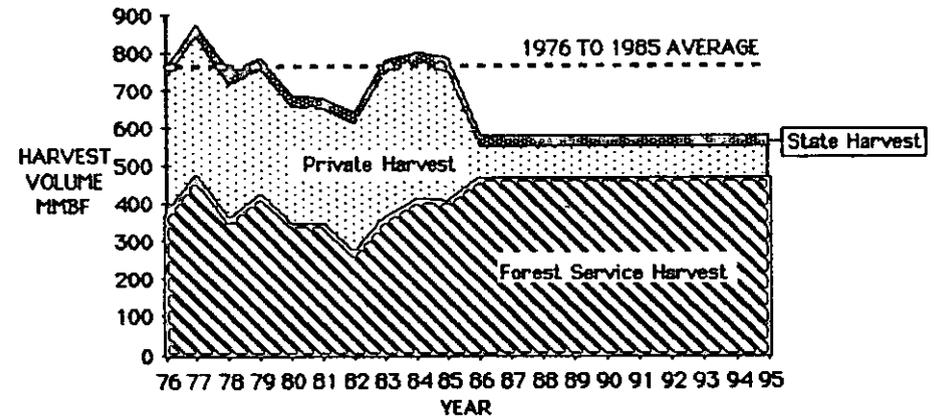


LINE CHART

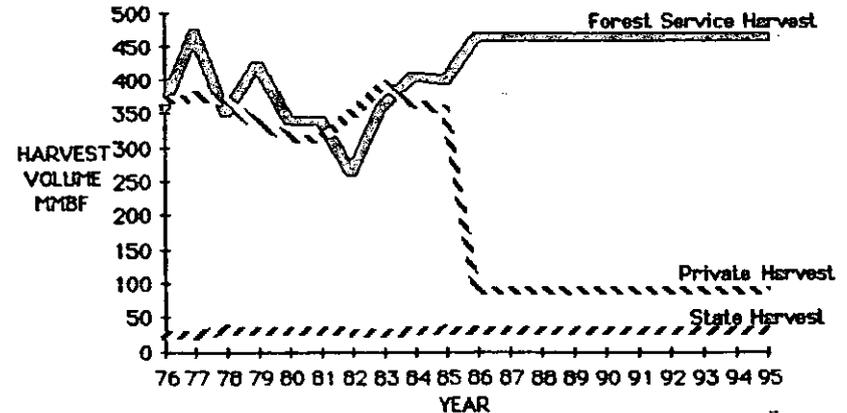


**SCENARIO IV: The future harvest from private lands will be one fourth of the last decade harvest level.**

CUMULATIVE AREA CHART



LINE CHART



FS 1976 cut does not include the transition quarter

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

The assumption of Scenario II indicates that no change in the total 5-county timber supply will occur, compared to the last ten years, if private land timber harvest levels decline no more than 25 percent (except for some localized shortages in Sanders and Flathead Counties, Montana, and Bonner County, Idaho). The assumptions of Scenario III and IV (50% and 75% decline in private timber, respectively) indicates that there will be a decline in the total supply of timber in the five-county area 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 projected declines in harvest levels on private lands. It is unknown at this time what the magnitude of change will be on private timberlands. Estimates have been suggested that the change will be between 25-50%.

**(3) Projected Timber Supplies in Northwest Montana and Northern Idaho**  
(as indicated by the Montana and Idaho Timber Supply Studies)

The recent concern for future timber supplies resulted in two statewide studies, entitled "Montana's Timber Supply: An Inquiry into Possible Futures", and "A Report on Idaho's Timber Supply". These studies analyzed the total timber supply possibilities from all ownerships in each respective State. The local area of concern in these two studies is Northwest Montana in the Montana Study and Northern Idaho in the Idaho Study.

The results of the Montana Study indicated that, statewide, harvest levels from industrial timberlands cannot be maintained at current levels because of inventory limitations. The existing total Statewide harvest levels can be maintained if the Forest Plans on the National Forests were implemented, and other non-industrial forest owners continue to harvest their lands at the current rate. (The Montana Study did qualify that a supply problem could occur in Northwestern Montana because of inventory limitations on industrial timber lands which supports the analysis of possible timber supply shortages presented in the previous section.)

The results of the Idaho Study (for North Idaho) indicated that timber supply is adequate to maintain recent harvest levels if the Forest Plans on the National Forests are implemented. It also points out that harvest levels from industrial timberlands cannot be maintained, but that increases in harvest from other ownerships, including the National Forests, can offset the anticipated decline.

These two studies were used to determine a more specific range of potential timber supply requirements in each National Forest area. The following Table displays the range of potential timber supply needed in the next five decades for the Kootenai National Forest. The assumptions that are important in the displayed timber supply requirements are that the volumes described in the Forest Plans within the respective areas will be available to the timber industry.

These projections are dependent on existing log flow and marketing patterns as well as expected market share. To the extent that these patterns change, a different requirement could result.

For more detail on future timber supply opportunities on the Kootenai National Forest, see Appendix B, Section V.

Table II-1e

## Kootenai National Forest

Range of Potential Timber Supply Requirements for 5 Decades  
(Estimated from the Montana and Idaho Timber Studies data)  
(million board feet per year)

<u>Decade 1</u>	<u>Decade 2</u>	<u>Decade 3</u>	<u>Decade 4</u>	<u>Decade 5</u>
178-224	192-224	196-259	236-295	295-340

Regional goals based on 1980 RPA projections of demand for Kootenai Forest timber are 228 MMbf/yr. This compares to 231 MMbf/yr for the Standard and Special component of the current Timber Management Plan.

(4) Minimum Projected Timber Yields Over Time by Forest Plan Alternative.

Estimates were made for all alternatives to analyze the minimum timber volumes that would be available over time to meet timber industry needs and provide for local community stability. These estimates were made only for the live green timber on the suitable timberlands using the Forplan linear program model. (For more information on the use of the Forplan model, see Appendix B.) The additional volume that would be available during the life of the Forest Plan (10-15 years) such as salvage of dead timber is discussed in the next section entitled "Allowable Sale Quantity (ASQ) and Total Planned Timber Sell Program".

The following two tables display the projected average annual live green timber volume available for each alternative for 20 decades in both board feet and cubic feet. Graphic displays of both of these two Tables follow to provide for an easier comparison between alternatives.

Although the first decade live green timber volumes in the Final Plan (Alt. JF) are the same as the Proposed Plan (Alt. J), the projected harvest levels during the second through the fifth decades will not increase at the same magnitude as the Proposed Plan. There will be a difference in live green timber volume of 3 mmbf per year to 43 mmbf per year, respectively, because of the decrease in the suitable timber base. This is a 1% and 16% reduction, respectively. (See Table II-1 and the section on suitable timberland.) An analysis has been done in Appendix B, Section V.I and V.J, to determine additional opportunities for increased timber production within the framework of the Final Forest Plan. Any increased opportunities, if implemented, will require an amendment to the Final Plan.

Regional timber targets based on 1980 RPA projections for the Kootenai Forest are 228, 248, 292, 315, and 345 MMBF/yr for the first 5 decades, respectively.

All alternatives provide for increases over the 1977-1986 average timber harvest level of 182 MMbf/yr except Alternatives F and I. Alternative F is short of the 10-year average in the first and eighth decades, while Alternative I does not reach this average harvest level until the 10th decade and then is deficient again until the 17th decade. Alternative I is the Current Direction alternative and is constrained by budgetary limitations to not exceed the average outputs of the 1980-82 period which was a period of low timber harvest. Table II-1f and g, and the graphic displays indicate that timber harvest increases are available on the Kootenai National Forest if budgetary limitations are not excessive.

Alternatives A, B, C, E, G, H, L, N, and O all produce timber in excess of the 260 MMbf/yr estimated existing mill capacity in Lincoln and Sanders Counties. The Kootenai Forest has produced about half of the volume utilized by these mills, the remainder having been supplied by State and private timber lands.

Mill capacity for the 5-county area (Lincoln, Sanders, Flathead Counties in Montana, and Bonner and Boundary Counties in Idaho) is estimated at 800 MMbf/yr

Kootenai National Forest

Projected Average Annual Timber Harvest Volume by Decade (MMBF) - Live Green Timber only.

Decade	Alternative																Dec.
	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	
1	226	223	225	227	218	164	213	208	150	202	202	230	255	262	247	215	1
2	253	250	253	248	241	191	234	222	152	233	230	241	245	224	240	247	2
3	249	247	250	285	238	190	231	223	157	224	227	216	264	274	283	263	3
4	314	302	300	320	294	185	283	273	143	256	213	251	316	326	322	301	4
5	336	333	331	344	323	198	309	294	162	277	234	271	345	437	329	320	5
6	349	348	345	358	338	197	322	310	172	280	229	274	339	362	340	340	6
7	334	332	331	318	320	193	310	300	163	279	222	271	360	251	319	328	7
8	313	312	309	213	296	181	282	270	180	258	217	248	327	245	296	325	8
9	326	323	321	279	328	264	328	348	164	267	203	261	385	322	317	312	9
10	290	288	286	306	280	224	275	290	194	239	190	237	341	238	282	321	10
11	295	294	294	310	282	242	276	291	162	256	216	283	375	306	287	298	11
12	348	348	344	377	342	244	332	323	172	309	289	311	410	393	345	360	12
13	396	392	388	385	383	241	373	357	169	321	282	316	458	502	406	371	13
14	391	389	385	404	384	256	373	359	164	296	281	306	427	371	395	387	14
15	382	378	372	383	362	228	348	337	172	328	285	326	427	336	381	378	15
16	369	365	363	407	359	261	348	333	177	321	267	312	449	436	370	386	16
17	373	369	364	390	369	236	367	349	188	313	248	323	432	445	378	378	17
18	371	368	363	361	369	239	364	350	201	311	269	310	426	346	377	397	18
19	378	378	376	391	366	243	350	339	207	327	284	320	464	262	385	378	19
20	345	345	341	383	338	241	327	318	215	309	291	312	455	278	339	353	20

Table II-1g

Kootenai National Forest

Projected Average Annual Timber Harvest Volume by Decade (MMCF) - Live green timber only

Decade	Alternative																	Decade	
	RPA					CD					PA	FP	Dep	PNV					
	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alt. H	Alt. I	Alt. J	Alt. JF	Alt. K	Alt. L	Alt. M	Alt. N	Alt. O			
1	56	56	56	56	54	40	52	50	36	51	: 49 :	57	59	66	62	55	1		
2	56	56	56	56	54	40	52	50	36	51	: 49 :	53	59	49	53	55	2		
3	56	56	56	66	54	40	52	50	36	51	: 49 :	48	59	61	63	55	3		
4	71	71	70	76	69	42	66	64	36	59	: 49 :	57	74	77	76	69	4		
5	71	71	70	76	69	42	66	64	36	59	: 49 :	57	74	96	69	69	5		
6	71	71	70	75	69	42	66	64	36	59	: 49 :	57	74	74	69	69	6		
7	71	71	70	66	69	42	66	64	36	59	: 49 :	57	74	55	69	69	7		
8	71	71	70	50	69	42	66	64	39	59	: 49 :	57	74	57	69	69	8		
9	71	71	70	63	69	52	67	70	39	59	: 49 :	57	87	71	69	69	9		
10	71	71	70	78	69	52	67	70	39	59	: 49 :	57	87	59	69	69	10		
11	71	71	70	78	69	54	67	70	39	59	: 49 :	65	87	74	69	69	11		
12	84	83	82	87	81	54	79	76	41	71	: 63 :	71	98	92	84	82	12		
13	84	83	82	87	81	54	79	76	41	71	: 63 :	71	98	110	84	82	13		
14	84	83	82	87	81	54	79	76	41	71	: 63 :	71	98	82	84	82	14		
15	84	83	82	87	81	54	79	76	41	71	: 63 :	71	98	77	84	82	15		
16	84	83	82	87	81	54	79	76	41	71	: 63 :	71	98	93	84	82	16		
17	84	83	82	87	81	54	79	76	41	71	: 63 :	71	98	102	84	82	17		
18	84	83	82	87	81	54	79	76	41	71	: 63 :	71	102	77	84	82	18		
19	84	83	82	87	81	54	79	76	41	71	: 63 :	71	102	58	84	82	19		
20	84	83	82	87	81	54	79	76	41	71	: 63 :	71	102	70	84	82	20		

FIGURE II-18

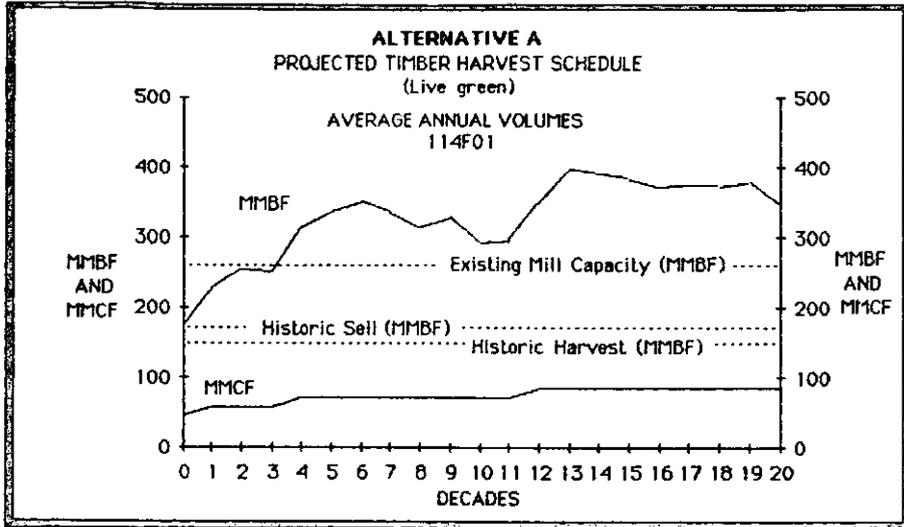


FIGURE II-19

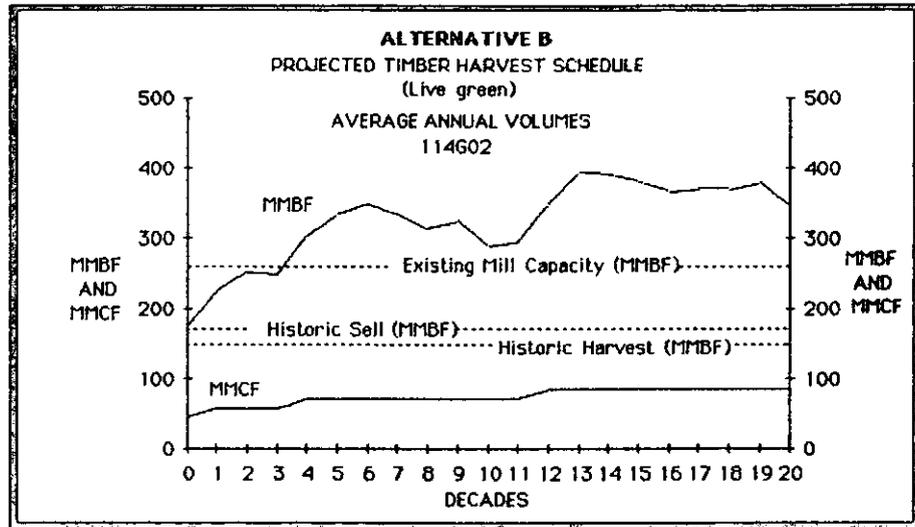


FIGURE II-20

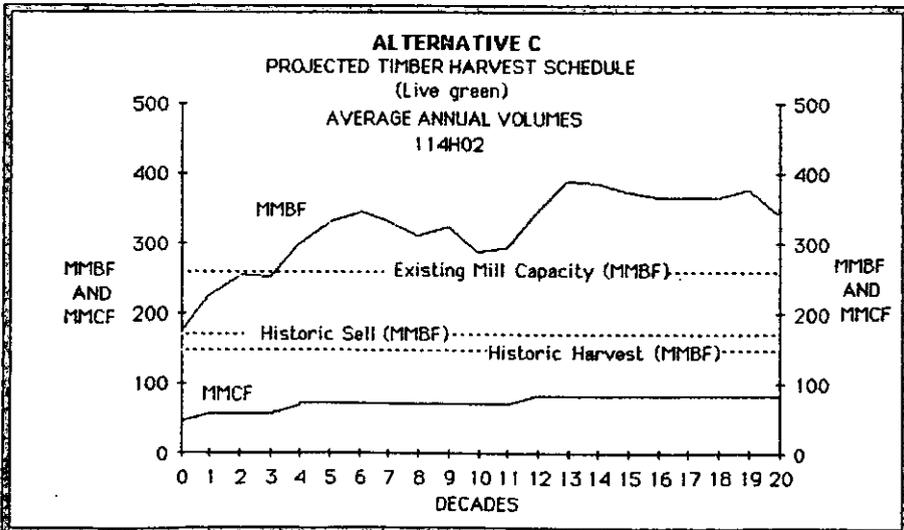


FIGURE II-21

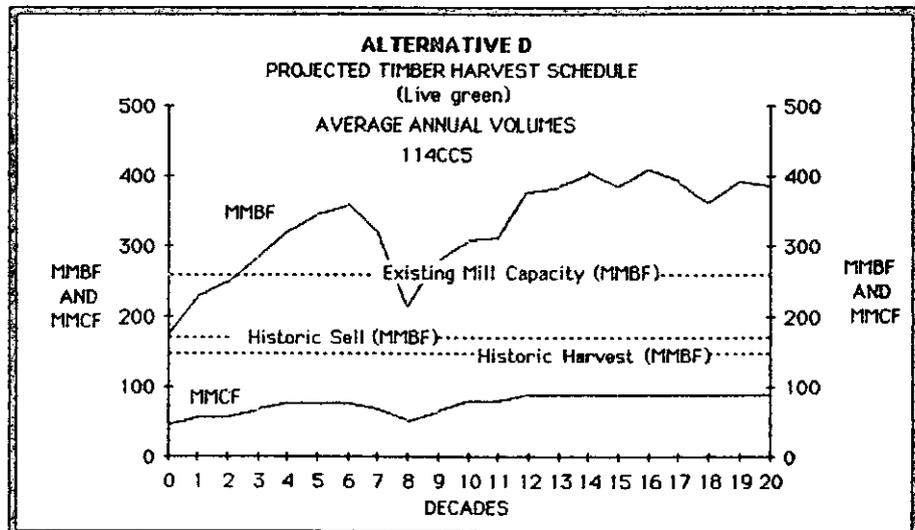


FIGURE 11-22

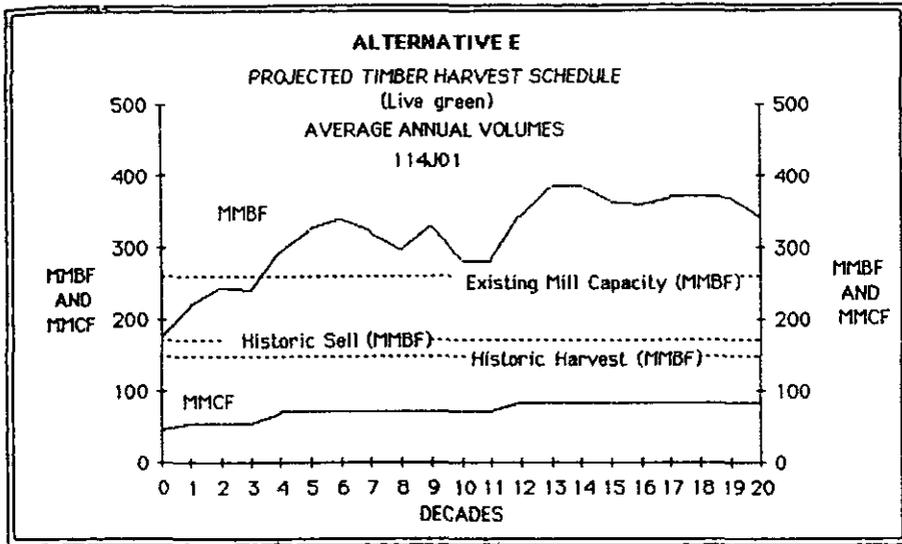


FIGURE 11-23

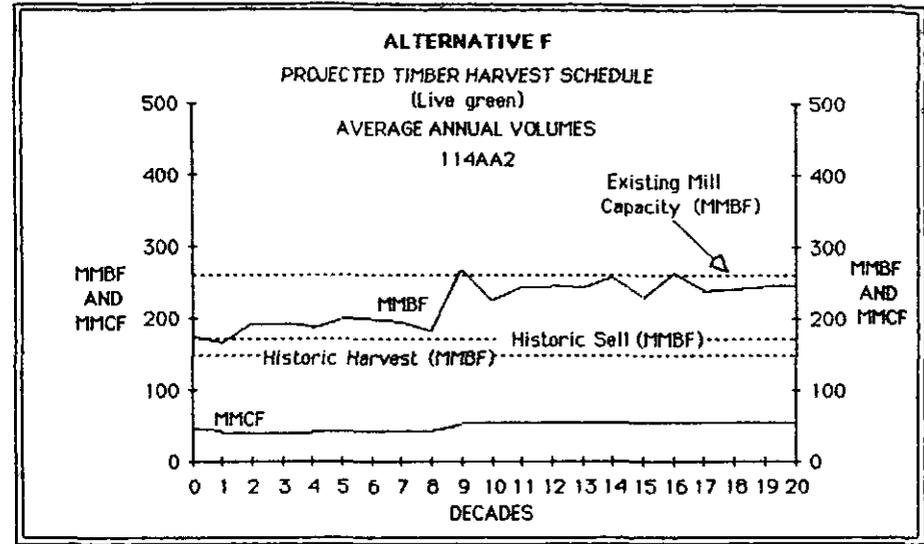


FIGURE 11-24

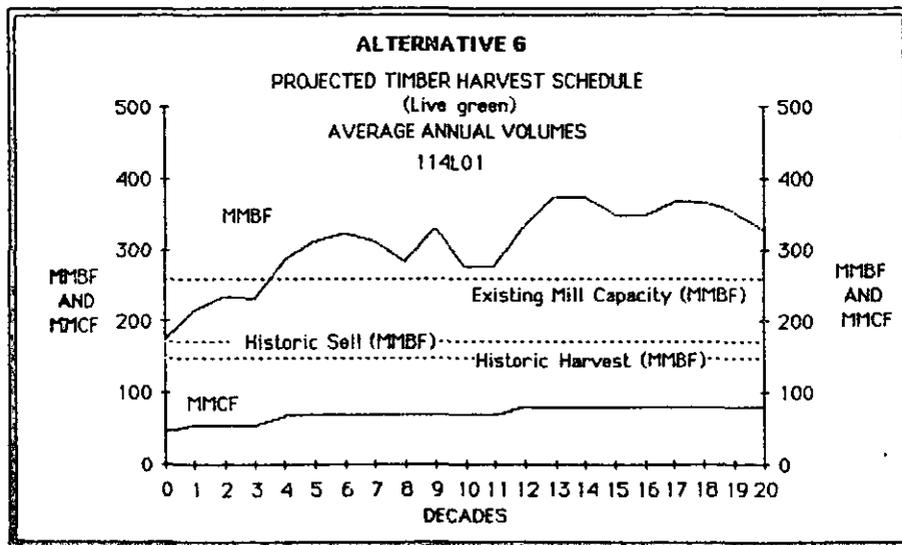


FIGURE 11-25

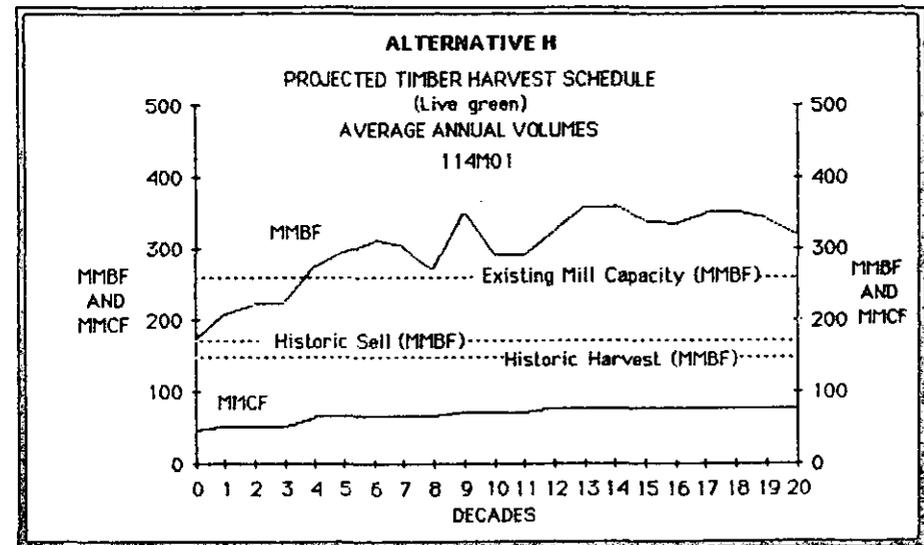


FIGURE II-26

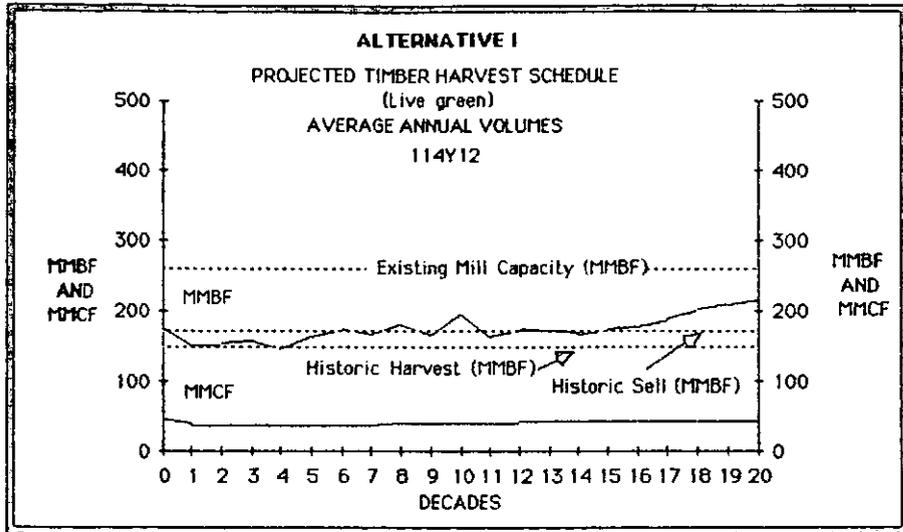


FIGURE II-27

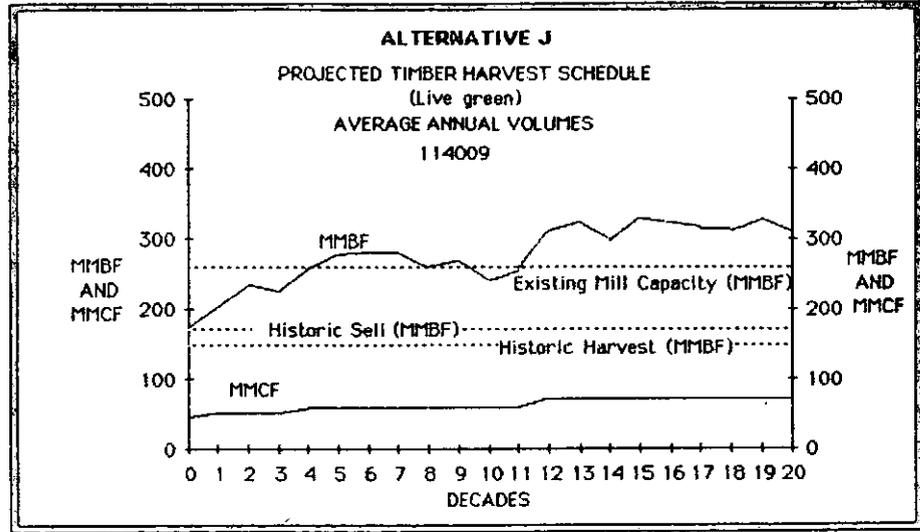


FIGURE II-27A

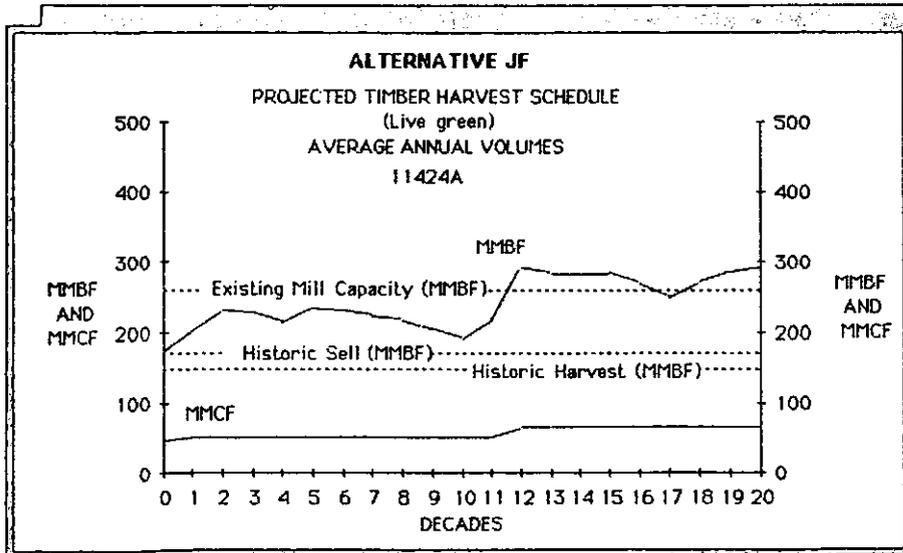


FIGURE II-28

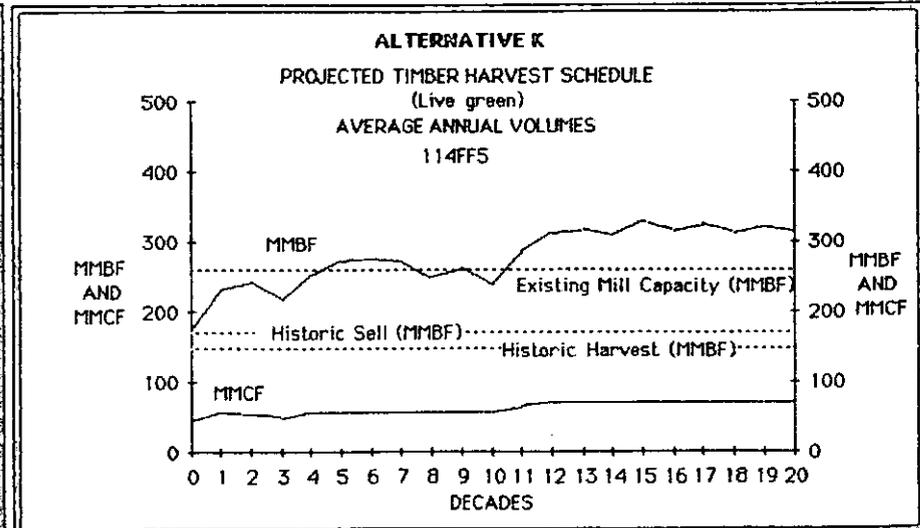


FIGURE 11-29

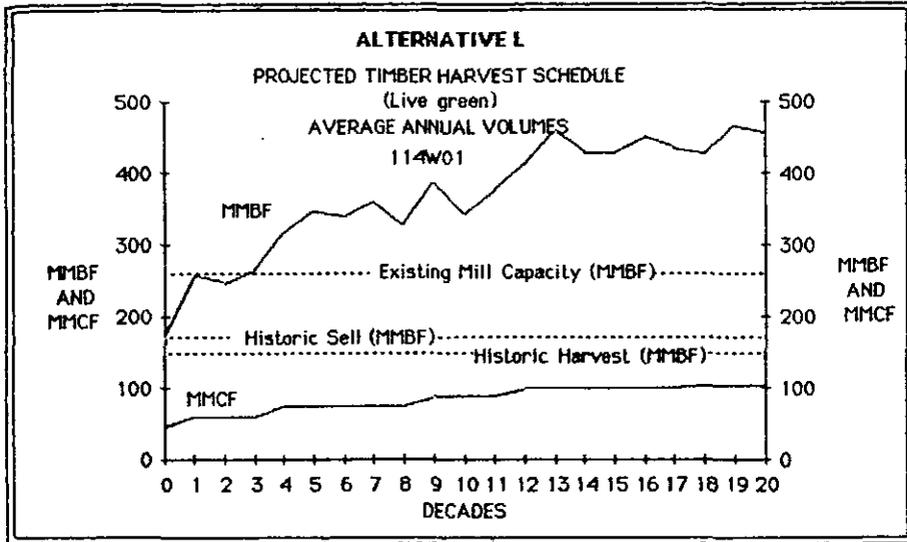


FIGURE 11-30

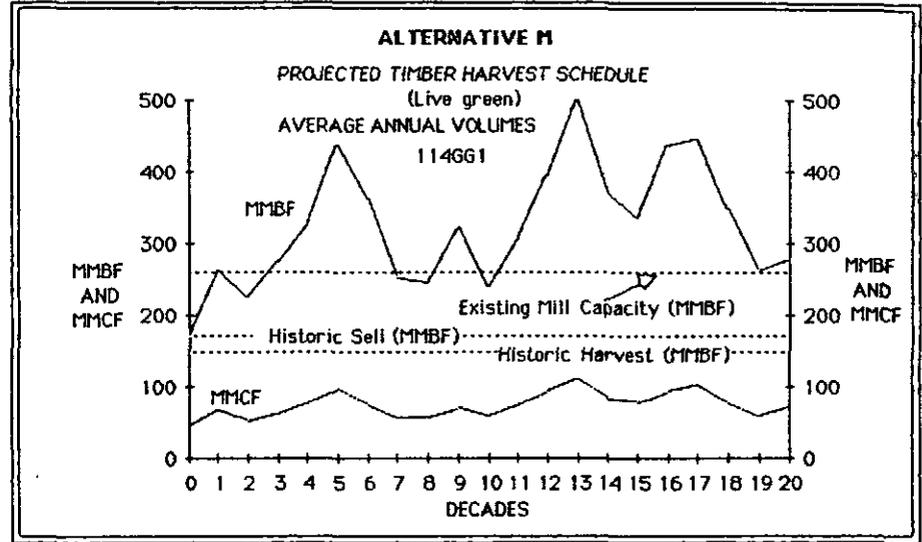


FIGURE 11-31

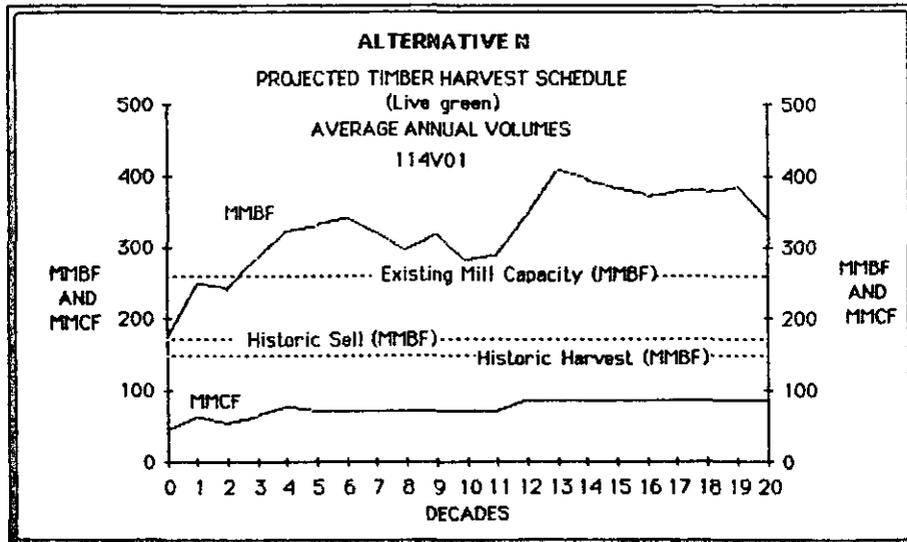
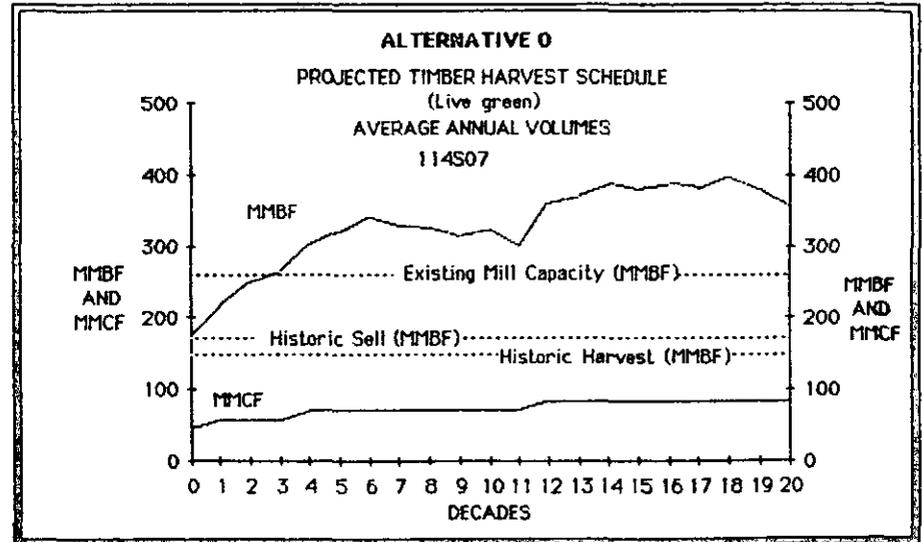


FIGURE 11-32



## (5) Allowable Sale Quantity (ASQ) and Total Planned Timber Sale Program.

### Summary of Changes between the Draft and Final EIS

Clarification of what is to be included in the allowable sale quantity in the first decade representing the 10-15 year life of the Forest Plan has been added since the Draft EIS. Further clarification has also been added to display the Total Planned Timber Sell Program as outlined in Appendix 11 of the Forest Plan document to more clearly show the total planned timber sale offerings during the life of the Forest Plan.

The Allowable Sale Quantity (ASQ) is the amount of live green plus the dead timber volume on the suitable timberlands. (The dead timber on the suitable timberlands is part of the non-interchangeable component. See Appendix B, Section V, I, for a more complete description of this component. On the Kootenai Forest the non-interchangeable component is primarily dead lodgepole pine timber.) Additional timber volume (both live and dead) can be harvested on unsuitable lands where timber harvest is permissible. This additional volume on unsuitable lands plus the ASQ volume on suitable lands constitutes the Total Planned Sell Program. Because of the uncertainty of the amount of dead timber available on suitable lands and the amount of timber that would be harvested on unsuitable lands, the ASQ and Total Planned Timber Sell Program are calculated only for the first decade which corresponds closely to the life of the Forest Plan (10-15 years).

The Allowable Sale Quantity for the final Forest Plan (Alt. JF) is 202 mmbf/yr (live green harvest) plus 25 MMbf of non-interchangeable component which consists mostly of dead lodgepole pine timber, for a total of 227 MMbf/yr. This is the same as the Proposed Plan (Alt. J). Timber volume in the first decade was retained at the same level as the Proposed Forest Plan to provide for local community stability. See previous Section 2 and Appendix B, Section V, Subsections H, I and J for more detail on the timber volume issue, including timber supply and demand in Northwest Montana and Northern Idaho, and the Kootenai National Forest.

The final Forest Plan will have a Total Planned Timber Sell Program of 233 MMbf/yr which compares to the Regional 1980 RPA projection of 228 MMbf/yr.

This projected timber sale level is a 7% increase over the average annual timber sale offerings of 218 MMbf/yr over the last ten years as displayed in Table II-1a.

The projected sale level of 233 mmbf/yr will provide for an expressed desire of the timber industry to retain the recent timber sale program at the same level or higher to insure against possible shortages in the future because of recent cutting levels on private timberlands. See previous section 2 and Appendix B, Section V. H, for a discussion on Timber Supply in the Local Area.

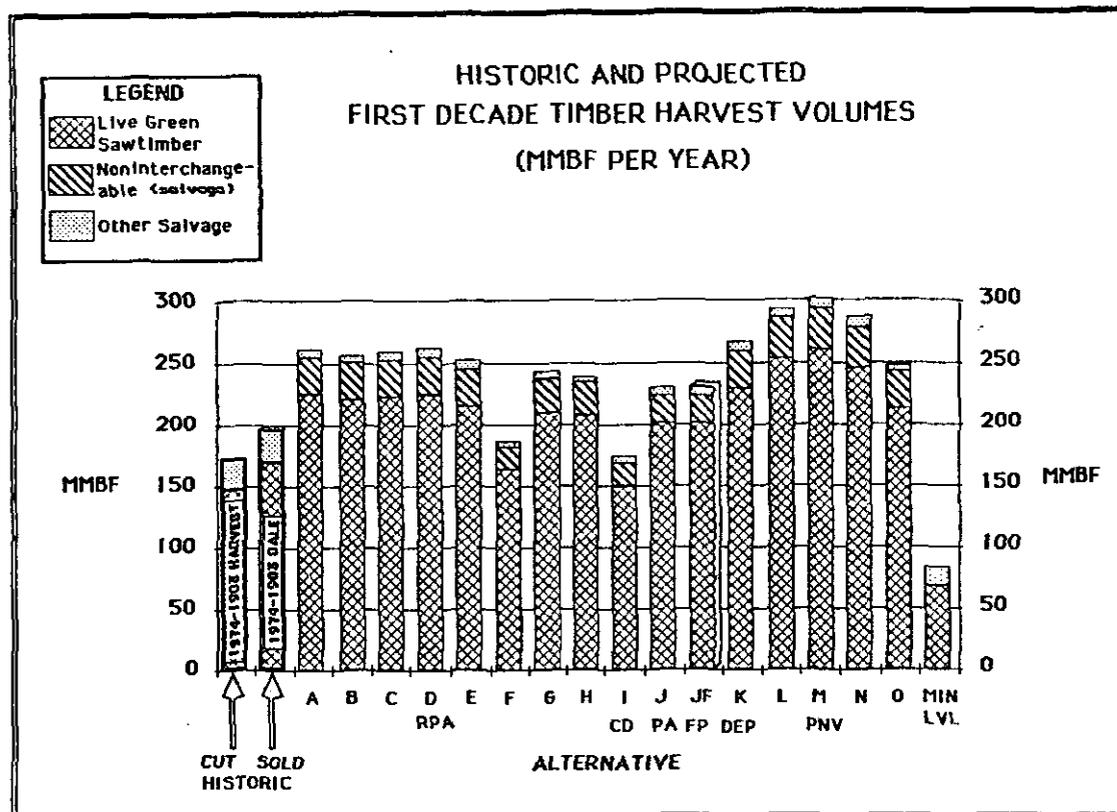
The following figure displays the first-decade total planned-sell timber volumes for each alternative which includes the live-green and dead timber portion (non-interchangeable component), plus the estimated volume of both live and dead timber on unsuitable timberland where timber harvest is permitted.

Kootenai National Forest

FIRST DECADE TOTAL ALLOWABLE SALE QUANTITY (ASQ) AND TOTAL PLANNED TIMBER SALE OFFERINGS (MMBF)

TIMBER CATEGORY	Alternative															
	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
Live Green Sawtimber on suitable lands	226	223	225	227	218	164	213	208	150	202	202	230	255	262	247	215
Non-inter- changeable salvage component on suitable lands	28	27	28	28	27	20	27	26	18	25	25	28	31	32	31	27
TOTAL ASQ (suitable land)	254	250	253	255	245	184	240	234	168	227	227	258	286	294	278	242
Other Harvest or Salvage on non-suited portion of tentatively suitable lands	7	7	7	7	6	5	6	6	5	6	6	7	8	8	7	6
TOTAL PLANNED TIMBER SALE VOLUME OFFERINGS	261	257	260	262	251	189	246	240	173	233	233	265	294	302	285	248

FIGURE II-17



As can be seen in Figure II-17, Alternatives L, M, and N produce the highest timber harvest levels in the first decade. Alternative L produces high yields because it utilizes all the tentatively suitable timberlands. It also requires the highest budget. Alternatives M and N are departure alternatives which utilize approximately 83% of the tentatively suitable timberlands and have the second and third highest budgets, respectively. No additional wilderness is recommended in any of these three alternatives.

While producing high timber yields, Alternative L retains 39% of the inventoried roadless areas and Alternatives M and N retain about 50%. All three of these alternatives provide for a low degree of visual quality protection in sensitive viewing areas with Alternative L giving the least protection.

New road construction requirements are high in these three alternatives. Alternative L requires the highest total miles (6,360) while Alternative M requires the highest amount of road building in the first decade (3,150 miles). Additional road closures to protect big game will be significant, with Alternative L requiring 4,090 miles of road closures because of the large number of road miles to be eventually constructed.

As can also be seen in Figure II-17, Alternatives F and I produce the lowest timber harvest levels. The objective of Alternative F was to produce big game (elk), so only the timber that maximized PNV consistent with this objective was harvested. This resulted in a low budget requirement. Alternative I also produced low timber yields because of a budget constrained to meet the 1980-82 average expenditures which were similar, but lower than those of Alternative F.

Alternative F recommends no additional wilderness and Alternative I recommends 64,000 acres. Alternative F retained 52% of the inventoried roadless areas, while Alternative I retained 43%. Both of these alternatives provide for a high degree of visual quality protection in sensitive areas. These alternatives also require the lowest amount of new road construction and subsequently require fewer road closures than most of the other alternatives.

Most of the remaining alternatives fall within the middle range of timber volume harvest in the first decade in keeping with their stated objectives which were to:

- 1) Recommend wilderness and designate roadless management and that reduced the amount of suitable timberland available (Alts. B, C, D, E, G, H, J, K, and O).
- 2) Protect visual quality which reduced the volume per acre available for harvest (Alts. J, K, and O).
- 3) Specify timber yields to meet RPA goals (Alt. D).
- 4) Provide no additional wilderness and non-declining timber flow (Alt.A)

The Allowable Sale Quantity in the Final Plan in the future could possibly increase 24 MMBF if significant increases occurred in the demand and price paid for timber. See Appendix B, Section V. I, for an analysis of currently unsuitable timberland which could be added to the suitable timber base if certain conditions take place. These additional timber lands would require an amendment to the Forest Plan before the timber volume could be realized. The next section on Suitable Timberlands discusses this item further.

FIGURE II-33

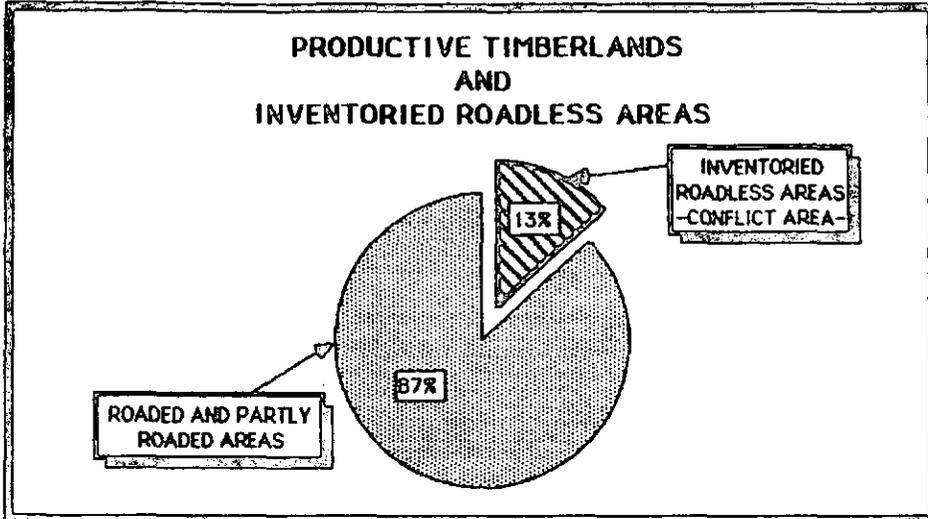


FIGURE II-34

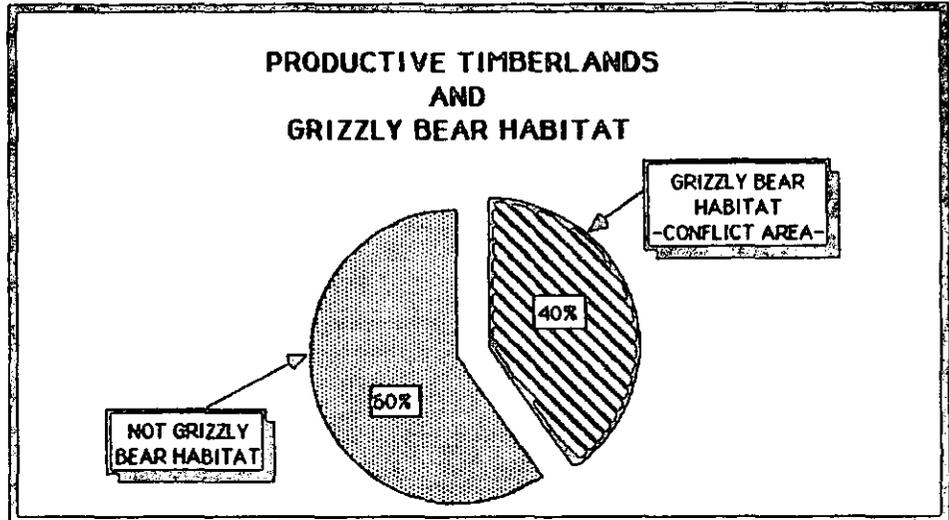


FIGURE II-35

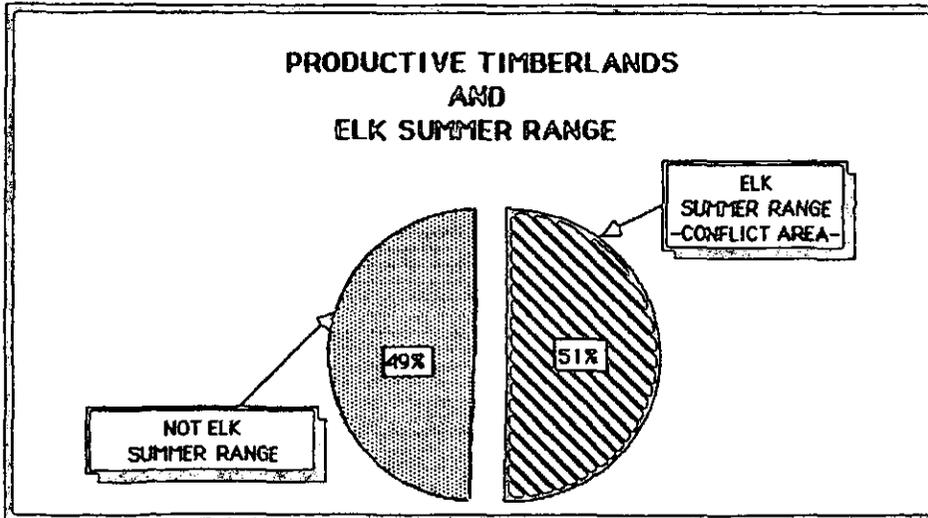
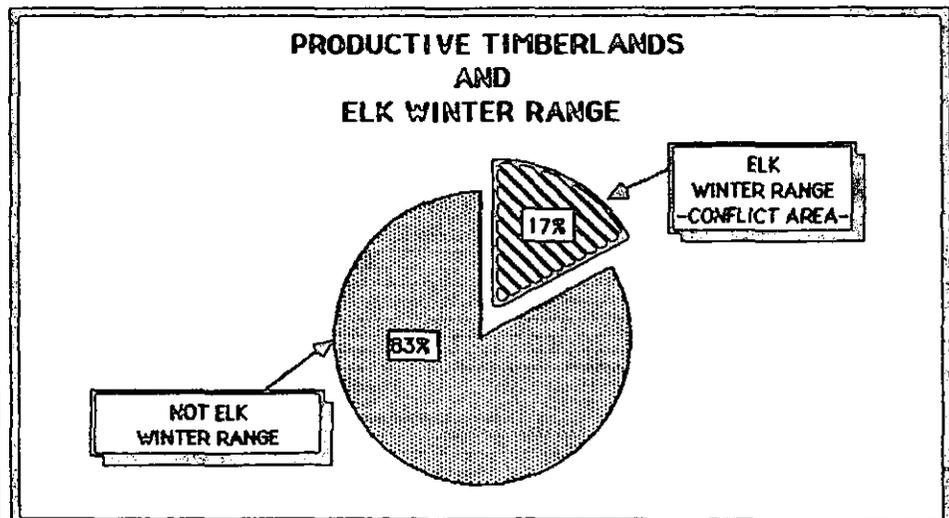


FIGURE II-36



## b. Land Suitable for Timber Harvest

Suitable timberlands are those lands considered biologically capable of producing timber, harvestable with present technology, available for harvest (i.e., have not been Congressionally or administratively withdrawn), where timber harvest would not conflict with the management direction for an area and is calculated as being cost-efficient.

Available productive timber land includes all the land which is biologically capable of producing commercial timber except that withdrawn from commercial timber uses by Congress or the Chief of the Forest Service (Wilderness, campgrounds, administrative sites etc.). The preceding page displayed the relationship between four components of the wildlife and roadless area issues and the available productive timber land base. In general, conflicting opinions arise concerning management where suitability for these components exist on available productive timber lands. The degree to which conflicts will occur is usually in direct proportion to the amount of productive timberland area in conflict. As can be seen in Figures II-33 to II-36, the largest amount of conflict with timber production is on elk summer range and grizzly habitat. Elk winter range and inventoried roadless areas have a lesser amount of conflict.

### Summary of Changes between the Draft and Final EIS

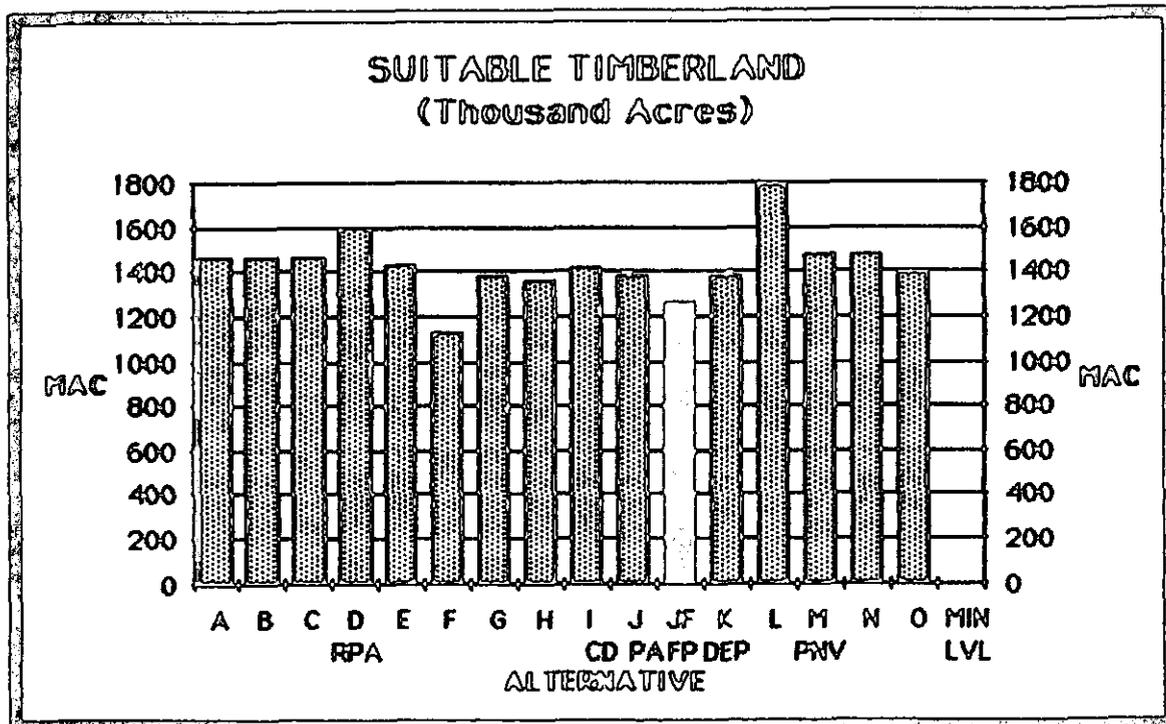
The acreage suitable for timber harvest in the final Forest Plan (Alt.JF) is 1,263,000 acres. This is a reduction of 123,000 acres (9%) compared to Alt. J, and is the result of providing additional acres for old-growth management for wildlife diversity and removing old-growth timber acres from the suitable timber base. This was an on-the-ground determination of existing old-growth timber stands which appeared to provide the highest biological potential for old-growth timber species and the least effect on timber production and costs. See Appendix B for more detail on the analysis of old-growth timber. An analysis has been added to display the relative efficiency and intensity of management on the suitable timberland base within each alternative (See Section f, in this section). Additional analysis has also been done on the amount of potential timberland that would be available if significant increases occurred in the demand and price paid for timber (See Appendix B, Section V.I).

The maximum acreage of suitable timberland is 1,788,000 acres in the timber benchmark (Alt. L). The difference in suitable timberlands between alternatives is due to the amount of roadless, wilderness, or other nondevelopmental designations present in an alternative. The following figure displays the amount of suitable timberlands in each of the alternatives. Appendix B, Section II explains why the remainder of the Forest is never considered suitable timberland.

Alternative M, the PNW Benchmark, utilizes 83% of the suitable timberland identified in Alternative L, the Timber Benchmark. This indicates that 304,000 acres are not cost-efficient for timber production when PNW is maximized. These 304,000 acres are still suitable for timber production, but require higher investments in relation to their potential return.

The Final Plan (Alt. JF) includes 139,000 acres that could be added to the suitable timber base if the demand and price paid for timber increased significantly. These lands are currently considered unsuitable because of the high costs required to manage the site (e.g., habitat types that are difficult and expensive to regenerate, etc.). See Appendix B, Section V.I. for more details on these potentially suitable timberlands. An Amendment or a revision to the Forest Plan would be required before these lands would be added to the suitable timber base.

FIGURE II-37



c. Lodgepole Pine Management

(1) Lodgepole Pine Harvest

The issue of lodgepole pine (LPP) harvest stems from the mountain pine beetle which is infesting stands of lodgepole pine sawtimber 80 years old and older, primarily. The objective of the lodgepole pine harvest would be to salvage as much mature lodgepole pine as possible before being killed by the mountain pine beetle.

### Summary of Changes between the Draft and Final EIS

The amount of lodgepole pine scheduled for sale and potential harvest will be 78 mmbf/yr (live green) in the first decade, a 4% increase (3 mmbf/yr.) compared to Alt. J and similar to the Current Direction (Alt. I). In addition, approximately 20 mmbf/yr. of dead lodgepole pine volume (a portion of the non-interchangeable component) is also projected for a total lodgepole pine sell level of 98 mmbf/yr. which is consistent with the lodgepole pine sale schedule of the recent past, as shown in the following table.

Table II-3

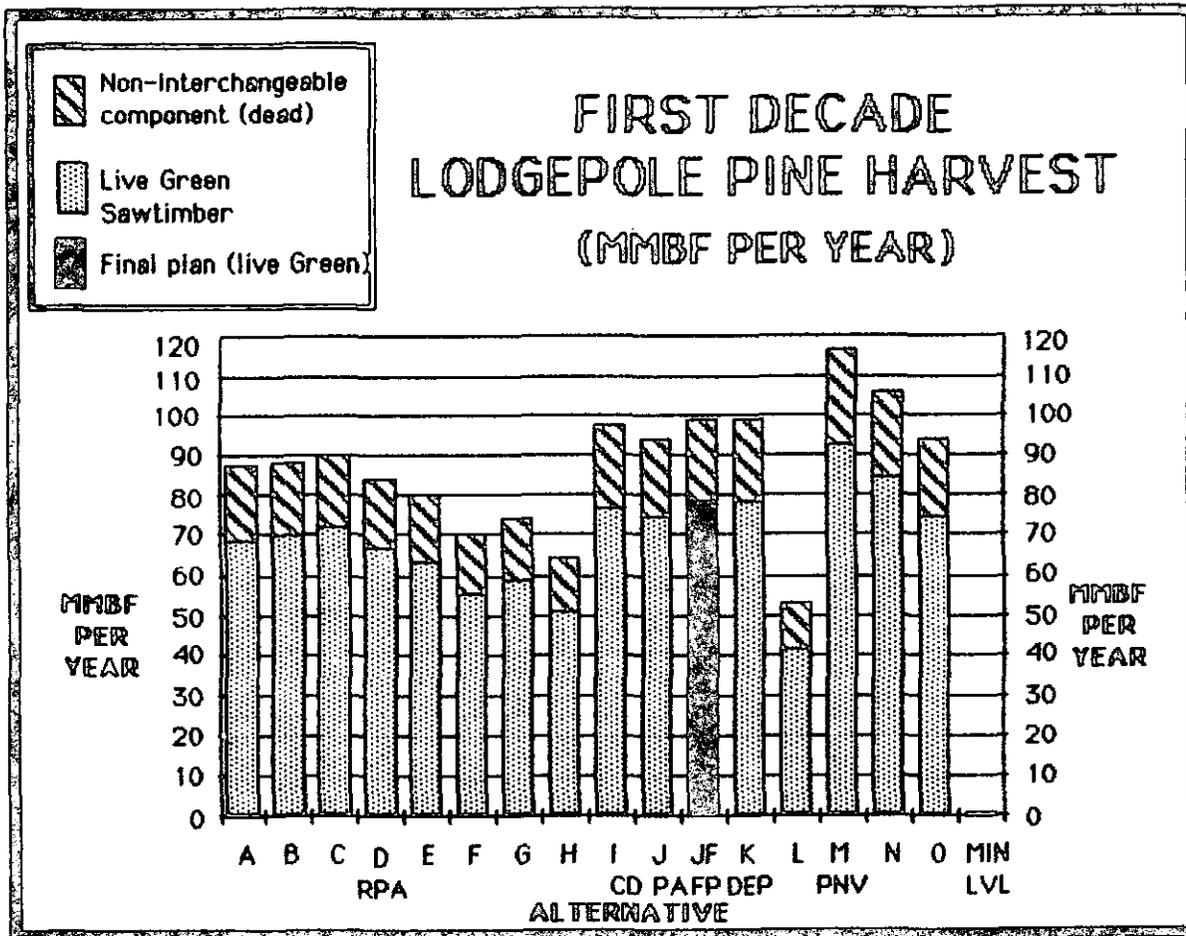
#### Kootenai National Forest

##### Lodgepole Pine (LPP) Timber Sold and Harvested (mmbf)

Fiscal Year	Total Timber Volume Sold	Total LPP Volume Sold	% LPP Sold	Total LPP Harvested
1979	206	36	17	46
1980	176	48	26	34
1981	264	93	35	50
1982	221	91	41	50
1983	245	97	39	72
1984	212	98	46	72
1985	224	97	43	67

As can be seen from the Table, the lodgepole pine harvest volume has been on a steady increase indicating continued demand for this stumpage. This demand will enable the continued salvage of mature lodgepole pine to reduce the loss from the current Mountain Pine Beetle infestation.

The following chart displays the amount of live green plus the dead lodgepole pine that would be offered for harvest each year (average) during the first decade for each alternative. Estimates beyond 10 years are considered academic because all high-risk lodgepole pine stands would be infested by that time and the rapid deterioration of this species will prevent successful economic salvage. The lodgepole pine timber volume shown here is a subtotal included within the allowable sale quantity displayed earlier in this section.



Alternatives M and N harvest the highest volume of lodgepole pine sawtimber in the first decade because they are departure alternatives with no restrictions on the suitable timberland base (no recommended wilderness or designated roadless areas).

Alternative L harvests the least volume of lodgepole in the first decade because the objective of this alternative is to maximize timber over the entire 200 year analysis period. This results in postponing the harvest in lodgepole pine sawtimber stands and concentrates the harvest and regeneration into higher-productive and higher volume mixed-conifer stands in the earlier decades so they can be harvested again before the end of the 200 year planning horizon.

Most of the remaining alternatives fall in the middle range of harvest volume in the first decade because of a combination of objectives or a single objective which were to:

- 1) Recommend wilderness and designate roadless areas and that reduces the amount of suitable timberland available (Alts. B, C, D, E, G, H, I, J, K, and O).
- 2) Maximize big game (elk) which results in harvesting only where big game would be the most favorably affected (Alt. F).

- 3) Protect visual quality which reduces the volume per acre available for harvest on the higher volume mixed-conifer stands allowing the lower volume per acre lodgepole pine sawtimber to compete favorably for timber harvest scheduling (Alts. I, J, K, and O).
- 4) Provide no additional wilderness and non-declining timber flow (Alt. A).

## (2) Conversion of Stagnated Lodgepole Pine Stands

There are 94,000 acres of lodgepole pine on the Kootenai Forest where the existing small saplings and poles are so thick that annual growth is at a virtual standstill. These stands are very dense and heavily loaded with fuels causing them to be very poor habitat for big-game species and potential fire hazards. These stands need to be completely replaced to regain the inherent productivity of the site.

It is estimated that it will take approximately 50 years to convert the 94,000 acres (approximately 1,880 acres/year) and that it will take approximately 80 years before the new timber stands are mature enough to harvest.

The amount of stagnated lodgepole situated outside inventoried roadless areas is 73,000 acres. The remaining 21,000 acres or 22% are located within 13 inventoried roadless areas.

### Summary of Changes between the Draft and Final EIS

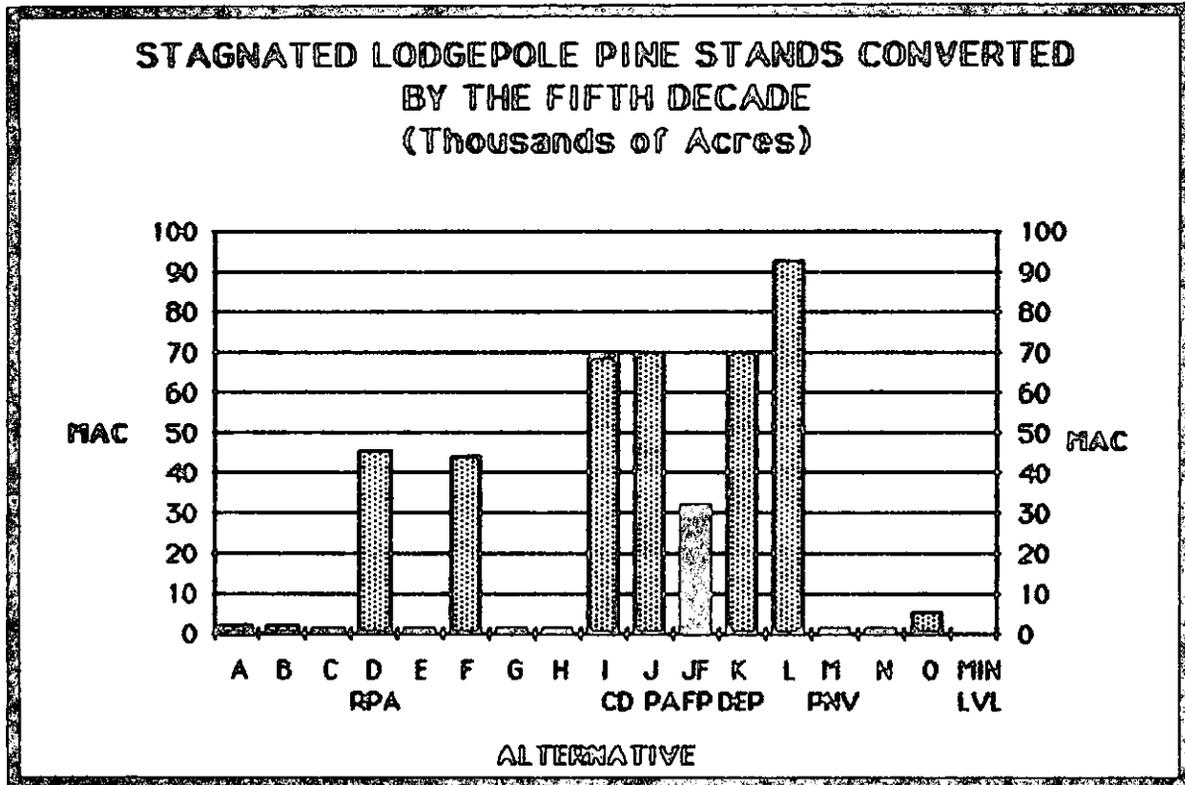
The Final Forest Plan (Alt. JF) projects 32,000 acres of stagnated lodgepole pine are to be converted by the fifth decade. Budget reductions represented in the first part of the planning period necessitated a reduction of 38,000 acres from the Proposed Action (Alt. J) in the Draft EIS. See Appendix B for more detail on this analysis.

The following figure displays how many acres are converted in each alternative by the fifth decade.

As can be seen in the figure, only six alternatives converted a significant amount of stagnated lodgepole pine (Alts. D, F, I, J, K, and L). Alternative F converted 44,000 acres or 47% of the total acreage to produce the highest possible benefit for the elk population. Alternative L converted 93,000 acres or 99% of the total acreage to produce the highest possible timber yield and the lowest risk of catastrophic fire. Alternative D converted almost half of the total acreage (45,000 or 48%) to produce the timber yields of the RPA goals. Alternatives I, J, and K converted approximately 70,000 acres (74%) each to produce desired timber and wildlife benefits. The remaining alternatives did not result in conversion of the stagnated

stands because they were not needed to satisfy the goals and because conversion was not cost-efficient.

FIGURE II-39



**d. Silvicultural Systems**

The silvicultural systems used will be even-aged and uneven-aged. In most cases, even-aged management will be used because it more nearly parallels the natural processes observed on the Kootenai. Acres shown in the Final EIS for even-aged management, such as clearcutting, are not targets but model projections that indicate optimum levels. Final determination of which silvicultural system to use will be determined by a certified silviculturist after an on-the-ground site survey. See Chapter IV in the Final EIS for acreages of clearcutting harvest, and Appendix 2 in the Forest Plan document for criteria used in determining the appropriate vegetation management practices.

#### e. Timber Utilization Standards

All timber harvest volumes are based on the desirable Regional Utilization Standards presented in the Regional Guide. The results of an analysis of the volume differences and economic value are displayed in Appendix B, section VI. In summary, the difference between the current and desired Regional utilization standard is approximately 7%.

#### f. Timber Resource Management Summary

##### Significant Changes from Draft to Final EIS

This section was not displayed in the Draft EIS and is presented here to give a composite technical review of the timber resource.

##### (1) Introduction

Management of the timber resource is a complex problem that involves biological and ecological productivity, social compatibility, as well as economic and physical effects. On a large productive Forest such as the Kootenai, the timber resource is involved in every aspect of Forest Management; including fire protection, insect and disease control, recreation and visual quality, water quality and soil protection, wildlife and fisheries, etc. As a general rule, the amount of timber available for harvest usually determines the amount of potential economic activity and the level of environmental effect. An extension of this rule is that the amount of land managed for timber usually determines the level of timber harvest. With these two rules in mind the following discussion is presented along with Tables II-2x and II-2y

Table II-2x displays all of the 15 Alternatives that were presented in the Draft EIS, plus The Final Plan (Alt. JF). The alternatives are presented in descending order from the largest to the smallest suitable timber base (land available for timber management) and the Final Plan is highlighted for ease of reference. Table II-2y displays pertinent information from the existing Timber Management Plan for comparative purposes.

In summary, the Final Plan (Alt. JF) will operate at a higher intensity on an acre-per-acre basis than the Current Direction (Alt. I). The suitable timber base will be smaller as a result of the removal from timber harvest of additional acres for old-growth timber management for wildlife diversity, and the removal of steep lands and lands that are difficult to regenerate from the suitable timber base during the life of the Forest Plan.

A section which further describes the results of an evaluation of timber supply and suitable land on the Forest can be found in Appendix B, Section V, Subsections H, I, and J.

Table II-2x  
Kootenai National Forest

Timber Resource Management Information by Benchmark and Alternative

Benchmark or Alternative	Suitable Lands (M Acres)	Timber Inventory			First Decade			Long-Term Sustained Yld.			Ave. Ann. Gross Growth		
		Begin.	Begin./Ac.	End	Average Annual ASQ			(Decade			Begin.	2030	2030
		(MMCF)	(CF)	(MMCF)	(MMCF)	(% Col.2)	(MMBF)	(MMCF)	(% Col.4)	Met)	(CF/Ac)	(CF/Ac)	(MMCF)
Column No.---->	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<u>Benchmark</u>													
Maximum Timber	1,788	4,950	2,770	4,559	59	1.2	255	102	2.2	18	51	78	66
Maximum PNV	1,484	4,311	2,900	3,736	66	1.5	262	84	2.2	NA/1/	54	99	50
<u>Alternative</u>													
L - Max Timber	1,788	4,950	2,770	4,559	59	1.2	255	102	2.2	18	51	78	66
D - RPA	1,595	4,519	2,830	4,465	56	1.2	227	90	2.0	12	54	86	60
M - Max PNV	1,484	4,311	2,900	3,736	66	1.5	262	84	2.2	NA/1/	55	99	50
N - No Wldns/Dep	1,481	4,034	2,720	3,762	62	1.5	247	84	2.2	90%/2/	55	74	40
A - No Wilderness	1,470	4,320	2,940	3,806	56	1.3	226	84	2.2	12	55	80	48
C - MT Wldns Bill	1,466	4,279	2,920	3,750	56	1.3	225	83	2.2	12	55	81	48
B - RARE II Wldns	1,464	4,289	2,930	3,781	56	1.3	223	84	2.2	12	55	81	48
E - RARE II+	1,425	4,210	2,950	3,809	54	1.3	218	82	2.2	12	55	79	44
I - Current Direc	1,422	3,809	2,680	5,715	36	1.0	150	74	1.3	55%/2/	51	55	43
O - Max Rdls/Visl	1,389	4,211	3,030	4,059	55	1.3	215	83	2.0	12	54	89	54
G - RARE II++	1,386	4,119	2,970	3,771	52	1.3	213	80	2.1	12	55	78	42
J - Prop Action	1,386	3,714	2,680	3,416	51	1.4	202	72	2.1	12	51	76	45
K - Prop Act/Dep	1,386	3,714	2,680	3,446	57	1.5	230	72	2.1	12	51	75	47
H - Max Wildernes	1,361	4,055	2,980	3,762	50	1.2	208	78	2.1	12	55	77	40
-----													
JF - Final Plan	1,263	3,187	2,528	2,957	49	1.5	202*	63	2.1	12	53	70	39
-----													
F - Max Elk	1,132	3,335	2,950	4,634	40	1.2	164	56	1.2	16	51	68	35

NOTES: Tentatively Suitable Lands for all Alternatives is 1,788,000 acres, and Beginning Inventory is 4,950 MMCF. Column 7 is the Live Green Sawtimber only. Column 13 is Average Annual Net Growth for the 5th Decade.  
\* The Total ASQ for Alt. JF is 227 MMBf which includes 25 MMBf of non-interchangeable salvage volume.  
/1/ LTSY is not reached within the 20 decade analysis period and the percentage is not calculable because of the wide variation in harvest levels.  
/2/ The percentage of LTSY that is achieved either during or at the end of the 20 decade analysis period.

Table II-2x (continued)  
Kootenai National Forest

Timber Resource Management Information by Benchmark and Alternative

Benchmark or Alternative	Area and Percent of Suitable Land by Yield Level						First Decade Harvest Method			Total 1st Decade Harvest Acs. (% Col.1)
	Full Yield (100%)		80-100% Yield		50-80% Yield		Clearcut	Shelterwood	Overstry Renoval	
	(M Acres) (14)	(% Col.1) (15)	(M Acres) (16)	(% Col.1) (17)	(M Acres) (18)	(% Col.1) (19)	(M Acres) (20)	(M Acres) (21)	(M Acres) (22)	
<u>Benchmark</u>										
Max. Timber	811	45	574	32	402	23	192	0	0	11
Max. PNW	644	43	442	30	398	27	166	0	0	11
<u>Alternative</u>										
L - Max Timber	811	45	574	32	402	23	192	0	0	11
D - RPA	734	46	422	26	439	28	136	0	0	8
M - Max PNW	644	43	442	30	398	27	166	0	0	11
N - No Wldns.-Dep	626	42	512	35	344	23	151	0	0	10
A - No Wilderness	623	42	522	36	325	22	137	0	0	9
C - MT Wldns. Bill	616	42	516	35	333	23	138	0	0	9
B - RARE II Wldner	627	43	509	35	328	22	137	0	0	9
E - RARE II +	643	45	438	31	344	24	132	0	0	9
I - Cur. Direction	441	31	437	31	543	38	88	2	0	6
O - Max. Rdls/Visl	0	0	1,185	85	212	15	106	37	0	10
G - RARE II ++	632	46	424	30	330	24	129	0	0	9
J - Prop. Action	315	23	559	40	513	37	117	20	0	10
K - Prop. Act.-Dep	315	23	559	40	513	37	135	20	0	11
H - Max. Wiildernes	606	45	440	32	315	23	125	0	0	9
-----										
JP - Final Plan	268	21	565	45	426	34	135	22	0	12
-----										
F - Max. Elk	30	3	698	62	404	35	97	0	0	9

NOTES: Tentatively Suitable Lands for all Alternatives is 1,788,000 acres. Beginning Inventory is 4.950 MMCF.

Table II-2y  
Kootenai National Forest

Pertinent Timber Data from the Existing Timber Management Plan

Average Annual Potential Yield		Average Annual Chargeable Volume Sold (1967-1985)		Total of Standard, Special, and Marginal Lands Used for Potential Yield Calculation
MMCF	MMBF	MMCF	MMBF	Thousand Acres
69	277	50	198 1/ 162 2/	1,490

- 1/ Includes Salvage Volume and the Timber "Buy-Back" Volumes.
- 2/ Excludes Salvage Volume and Timber "Buy-Back" Volumes and is directly comparable to ASQ's in Table II-2x (Column 7).

(2) Timber Resource Information

In Table II-2y, the Average Annual Potential Yield corresponds to the First Decade Average Annual Allowable Sale Quantity (ASQ) in Table II-2x (Columns 5 and 7). The Total of Standard, Special and Marginal Lands corresponds to Suitable Lands in Table II-2x (Column 1).

The Average Annual Chargeable Volume Sold, in Table II-2y is the historical total timber volume sold and represents a combination of budget constraints and local demand. It also includes the timber volume that has since been "Bought Back" under the Timber "Buy-Back" Bill. When the Timber "Buy-Back" is removed from the 198 mmbf/year shown above, the total Chargeable Volume is 186 mmbf/year. This still includes salvage volumes of dead timber which averages 24 mmbf/year. When salvage volume is excluded, the result is a "net" regulated Chargeable Volume of 162 mmbf/year which can be compared to the First Decade Average Annual Allowable Sale Quantity (ASQ) in Table II-2x (Column 7).

Suitable Lands - Column 1, Table II-2x: Suitable lands are those areas that are to be specifically managed to produce regulated yields of green timber (plus the non-interchangeable component) during the life of the Forest Plan (10-15 years). In general, the amount of suitable timberland in each alternative is a direct reflection of the amount of roadless or wilderness recommended; the higher the amount of suitable timberland, the lower the amount of roadless or wilderness. The exception is Alt. F which only selected timberlands that would produce optimum habitat levels for elk management. Alt. L, the maximum timber alternative, has the highest amount of timberland available for management and the lowest available for roadless designation.

Alt. M, the maximum PNV alternative, is the 3rd ranked in descending order because of economic limitations on 304,000 acres of tentatively suitable timberland. Alt. H, the maximum wilderness alternative, utilizes only the

economically-suited timberlands outside of inventoried roadless areas and provides the highest amount of roadless opportunity.

The Final Plan (Alt. JF) has the second lowest suitable timberland because of a combination of a large amount of roadless/wilderness opportunity, a significant amount of old-growth timber (126,000 acres) designated as unsuitable for timber management during the life of the Forest Plan, and lands that are steep and/or difficult to regenerate (116,000 acres). These are the reasons for the difference between the Suitable Land for Alt. JF and the Total Acres of Standard, Special and Marginal lands Used to Calculate the Potential Yield for the Existing Timber Management Plan displayed in Table II-2y. Much of the roadless opportunity provided in Alt. JF are those lands identified as economically unsuitable in Alt. M (Maximum PNV).

Timber Inventory - Columns 2, 3 and 4, Table II-2x: The Beginning Inventory (Column 2) is the total amount of measurable timber volume that is available on the suitable timberlands (Column 1) and is usually directly related. The exceptions are Alts. I, J, K, and JF. These alternatives purposefully selected more suitable timberland with insect-infested lodgepole pine which has a lower timber-volume per acre, and stagnated lodgepole pine stands which do not have any merchantable volume (See Column 3). In addition, Alt. JF has 126,000 acres of old-growth timber designated as unsuitable timberland. These old-growth stands have high volumes-per-acre which, when removed, reduce the beginning inventory.

The Beginning-Timber-Inventory per Acre (Column 3) is the result of dividing Column 2 by Column 1, and indicates the average stocking per acre at the start of the analysis period (200 years). The higher volumes-per-acre are the result of selecting a higher proportion of well-stocked timberland in contrast to Alt. L (Max. Timber) which includes all the tentatively suitable timberlands, including poorly-stocked and stagnated lodgepole pine stands. Alts. I, J, K, and JF had lower volumes-per-acre because of the purposeful selection of more area with insect-infested lodgepole pine which has a lower volume-per-acre, and stagnated lodgepole pine which does not have any merchantable volume per acre. In addition, Alt. JF designated 126,000 acres of old-growth timber as unsuitable timberland. These stands were high volume-per-acre stands which, when removed, reduced the inventory and the resulting inventory per acre.

The Timber Inventory at the End of the Planning Period (Column 4) is a function of the intensity of timber management and the amount of suitable acres (Col.1). The more suitable acres available, the higher the ending inventory; and the more constraints on timber management, such as visual quality which restricts the amount and frequency of timber harvest, the higher the ending inventory.

Alt. I and Alt. F have the highest ending inventories because of budget constraints that limited the regulated timber harvest to 150 mmbf/year (Alt. I), and to limited timber harvesting because of the goal to optimize elk habitat (Alt. F). Both of these alternatives resulted in inventory increases (50% and 39% respectively) in contrast to Alt. L (Maximum Timber) which experienced an 8% reduction. All other alternatives resulted in an inventory reduction. Alt. M (PNV) had the largest inventory reduction of all the alternatives (13%) which resulted from a significant departure schedule. Alt. D, the RPA alternative, had the smallest inventory reduction (1%), indicating that timber management intensities and inventories were in close balance.

First Decade Average Annual Allowable Sale Quantity (ASQ) - Cols. 5, 6 and 7: Columns 5 and 7 display the ASQ (green timber only) for the first decade, which is the planning period for the Forest Plan, and are in cubic and board feet, respectively. Volumes are generally proportional to the amount of suitable land (Column 1). (See the discussion on Table II-2y, above.) The exceptions are Alts. M, N, I, and K. Alts. M, N and K are allowed to depart from the non-declining, even-flow principle of timber harvest. This allows a higher harvest rate earlier in the analysis period (200 years) which is usually the first decade. This higher harvest rate would then have to be offset by a decline sometime in the future, usually 3 to 6 decades later.

Alt. I (Current Direction) has a disproportionately lower harvest level because it is purposefully constrained to simulate the average budget level experienced during the 1980-1982 period. Without this budget constraint, Alt. I could harvest approximately 204 mmbf/year which is similar to Alt. J and JF (See section VI.D.5.e. in Appendix B).

The difference between the Average Annual Potential Yield shown in Table II-2y and Alt. JF (the Final Plan) is because of the combination of the lower suitable timberland base, and the spatial timber harvesting constraints that have been incorporated for the recovery of the grizzly bear; a species that is threatened with extinction. The lower suitable timberland base in Alt. JF is primarily because the old-growth timber designations (Management Area 13) were revised to not allow the production of regulated timber yields during the life of the Forest Plan, and the steep and difficult-to-regenerate lands were removed from the suitable base (Management Areas 19 and 18, respectively). The spatial timber-harvesting constraints for the grizzly bear have been designed and incorporated since the Existing Timber Management Plan was formulated in 1967. These spatial constraints restrict the amount of acreage that can be developed or impacted at any time to approximately 8% of the identified grizzly habitat.

Column 6 is the result of dividing Column 5 by Column 2. It displays the relative intensity of timber management in the first decade regarding the amount of land treated to produce the yields stated in Columns 5 and 7. Alt. I (Current Direction) has the lowest rate of intensity because of the budget constraint stated above. Alts. M, N and JF have the highest rate of intensity. Alts. M and N are departure alternatives and are producing high timber volume levels in the first decade as stated above. Alt. JF, the Final Plan, has a high rate of intensity also because it is attempting to produce high timber volumes in the first decade on a non-declining basis on a small suitable timberland base.

Long-Term Sustained Yield - Columns 8, 9 and 10, Table II-2x: Long-Term Sustained Yield (LTSY) is the average annual timber harvest level that could be sustained indefinitely at some point in the future. It is usually directly related to the amount of suitable land available for timber management (Col.1); the higher the amount of suitable land, the higher the potential LTSY. The exceptions to this are when the suitable timberland is not being utilized efficiently for timber management; such as in Alt. I (Current Direction) which is purposefully constrained to simulate a particular budget level. This budget level constraint does not allow the harvest level to reach its potential which results in a high ending inventory as displayed in Column 4.

Column 10 displays the time period (decade) when LTSY is reached. It is an indication of the relative productive efficiency of the timber management program; the earlier the LTSY is reached, the more efficient the Alternative. The exception is Alt. L, the maximum timber alternative. This alternative is producing the highest possible amount of timber and the Minimum Management Requirements that are necessary dictate that 18 decades will be needed to achieve the LTSY on 1,788,000 acres.

Alts. M and I do not reach LTSY within the analysis period (200 years). Alt. M, the maximum PNV alternative, does not achieve LTSY because of the nature of the departures allowed in the harvest schedule; the decadal harvest level can increase or decrease plus or minus 25% from the preceding decade. This departure allowance never achieves LTSY within the 200 year analysis period. Alt. I, the Current Direction alternative, does not achieve LTSY within the 200 year planning period because of the constrained budget mentioned above which resulted in reduced timber harvest levels.

Column 9 is the result of dividing Column 8 by Column 4. This also gives a relative comparison of the efficiency of the timber management program inherent in the alternative. As can be seen, Alts. I and F have the lowest ratings. Alt. I is low because of the previously-decried harvest level constraints. Alt. F is low because of the emphasis on providing for optimum elk habitat. Both of these alternatives produce high ending inventories (Column 4) which results in a low rating.

**Average Annual Gross Growth - Columns 11, 12 and 13, Table II-2x:** The Beginning Average Annual Gross Growth Per Acre (Column 11) is an indication of the efficiency of the alternative for timber production. The alternatives with the highest growth-per-acre are utilizing the most productive lands. Alts. L, I, J, K and F have the lowest Beginning Growth-per-acre. This is because they all have a higher percentage of insect-infested lodgepole pine which is a lower total volume-per-acre (and therefore a lower total growth-per-acre) species. They also include significant amounts of stagnated lodgepole pine stands which do not produce any growth. (NOTE: Columns 11 and 12 displays gross growth-per-acre instead of net growth-per-acre because net-growth data was not available for Column 11. The comparisons between the Alternatives in Columns 11 and 12 are still valid.)

Column 12 is the Average Annual Gross Growth Per Acre at the end of 50 years. Alt. M, the Maximum PNV alternative, has the highest average net growth because it selected only the highly productive lands which produced the highest economic returns. Alt. I, the Current Direction, has the lowest gross growth because of the combination of reduced harvest levels dictated by a restricted budget, a significant amount of insect-infested lodgepole pine stands as well as a large acreage of stagnated lodgepole pine.

Column 13 is the Total Average Annual Net Growth in million of cubic feet that could be expected at the end of 50 years. It is comparable to Columns 8 and is usually in direct proportion to the suitable timber base (Column 1). Alt. L, the Maximum Timber alternative has the highest total net growth and Alt. F, the Maximum Elk Habitat alternative, has the lowest total net growth.

**Area and Percent of Suitable Land by Yield Level, Columns 14-19:** Columns 14 and 15 display the acres of Full-Yield Timber Production (Management Area 15) and the percent of the Suitable Timber Base (Column 1). It displays the relative intensity of timber production among the alternatives. Alt. L, the Maximum Timber alternative, has the highest total acreage in the Full Yield Category. Alt. O, the Roadless/Visual Quality Protection alternative, has the least amount of acres in this category with Alt. F also on the low end. These two alternatives did not have high timber harvest levels as an important objective. Alts. D and G have the highest percentage of Suitable Timber in the Full-Yield Timber category. Both of these alternatives were attempting to produce high timber harvest levels as well as resolve other issues such as wilderness. Alt. JF, the Final Plan, has a relatively low acreage and percentage because of the goal of producing wildlife and visual quality as well as timber production (See Columns 16 and 17).

Columns 16 and 17 display the acres of Suitable Timber (Column 1) and the percentage in the reduced production range of 80-100%. Timber management prescriptions in this category are usually those associated with visual quality protection and elk summer range management (Management Areas 16, 17 and 12 respectively). As can be seen, Alt. O, the Visual Quality Protection alternative, has the highest total acreage and percentage in this category. Alt. D, the RPA alternative, had the lowest amount and percentage in this category because visual quality protection was not a primary objective. Alt. JF, the Final Plan, has a relatively high amount of area and percentage in this category because of the emphasis on visual quality protection and elk summer-range management.

Columns 18 and 19 display the acres of Suitable Timber (Column 1) and the percentage in the reduced production range of 50-80%. Timber management prescriptions in this category are those associated with big-game winter range, grizzly bear and old-growth timber management (Management Areas 11, 14 and 13 respectively). Alt. I, the Current Direction, has the highest acreage and percentage because of the combination of emphasis on winter-range, grizzly bear and old-growth timber management. Alt. O, the roadless/visual quality alternative, has the lowest acreage and percentage in this category because of its goal of visual quality (See Column 16 and 17).

**First Decade Harvest Method, Columns 20-22:** These three columns display the acres of clearcutting, shelterwood and overstory removal that was modeled for each alternative in the first decade which is the approximate life of the Forest Plan. In general, the amount of clearcutting is closely related to the amount of Suitable Acres displayed in Column 1. The exception is Alt. O, the Visual Quality Protection alternative, which has the lowest clearcut acreage (Column 20). Alts. O, J, K and JF were the only alternatives that utilized extensive acreages of shelterwood harvesting in the first decade because of their concern for visual quality protection (Column 21). No alternatives utilized overstory removal in the first decade (Column 22).

**Total First Decade Harvest Acres, Column 24:** This Column is the total of Columns 20-22 and divided by Column 1. It is a relative indicator of the intensity of timber management for each alternative. Alt. JF, the Final Plan, has the highest percentage of suitable acreage available for harvest in the first decade. This is because of the goal of harvesting as much insect-infested lodgepole pine as possible as well as maintaining an historical level of timber for sale to provide for local economic stability. Alt. I, the Current Direction, has the lowest percentage because of the restrained harvest level dictated by a given budget level.

## 2. Facilities

### Summary of Changes between the Draft and Final EIS

The total amount of roads needed to manage the Kootenai Forest in the Final Plan (Alt. JF) was reduced by 6% from the Proposed Plan (Alt. J) because the suitable timberland base was reduced to provide for old-growth timber-dependent species. No change occurred in the proportion of road restrictions needed.

#### a. Road Construction

There were approximately 6,000 miles of roads (3,750 miles of local roads and 2,250 miles of arterials and collector roads) in place on the Kootenai on January 1, 1984. (There were 6,200 miles of road as of January 1, 1986.) Each alternative requires additional miles of road construction, the amount of which is dependent on the size of the area from which timber will be harvested (suitable timberland).

### Summary of Changes between the Draft and Final EIS

The projected additional miles of road to be built (as of 1/1/86) in the Final Forest Plan (Alt. JF) is 3,850 or a 62% increase from the existing mileage of 6,200. This construction will occur in the next 20 years and will result in a final total of 10,050 miles of road needed to manage the suitable timberland base and a 6% decline from the Proposed Plan (Alt.J).

The maximum rate of road construction is calculated at 2,370 miles in the first decade during the life of the Forest Plan. This is a 3% decline from the Proposed Plan (Alt. J).

As of January, 1986 there were 6,200 miles of existing road on the Kootenai National Forest, including 3,950 miles of local roads (200 miles more than the January 1, 1984 data presented in the Draft EIS) and 2,250 miles of arterial and collector roads.

The rate of new road construction was projected using results from previous years. Recent experience indicates that the rate is on a decline as a result of more intense timber sale design to protect water quality and reduce total timber sale costs. The following Table II-4 displays the actual road construction mileages for 1980-1985.

Table II-3b

Kootenai National Forest

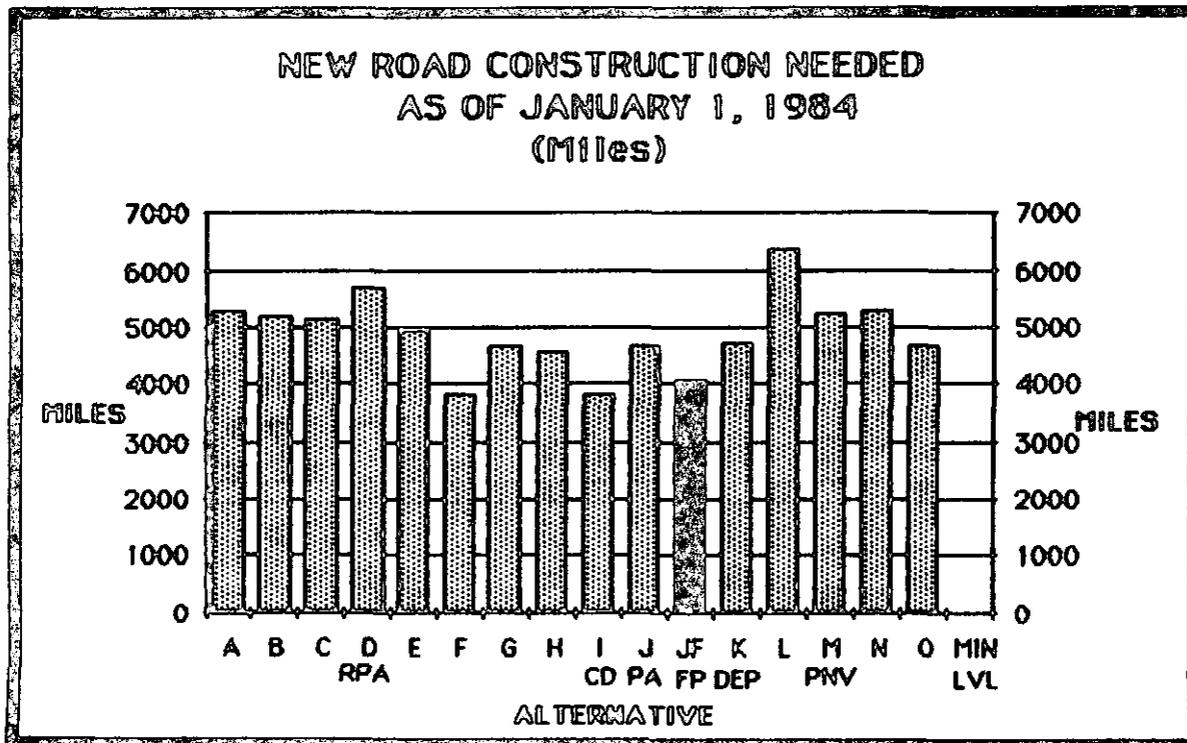
New Road Construction by Calendar Year (miles)

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 2.a., above.

The following chart displays the total miles of new road to be built by the fifth decade as of January 1, 1984.

FIGURE II-40



The alternative displaying the highest new road construction is Alternative L. This is because Alternative L has the largest acreage of suitable timberland (see the previous section on suitable timberland). Conversely, Alternative F has the smallest acreage of suitable timberland and one of the smallest needs for new road construction.

The exception is Alternative I which did not call for building of all the required roads within the 200-year planning horizon because of the required budget limitations. (Approximately 740 more miles of road would have been built and considerably more timber harvested if adequate funding had been available.)

All the other alternatives follow the pattern displayed above by Alternatives L and F, that is, the more suitable timberland designated in an alternative, the more road construction needed to manage the total acreage.

#### **b. Road Restrictions**

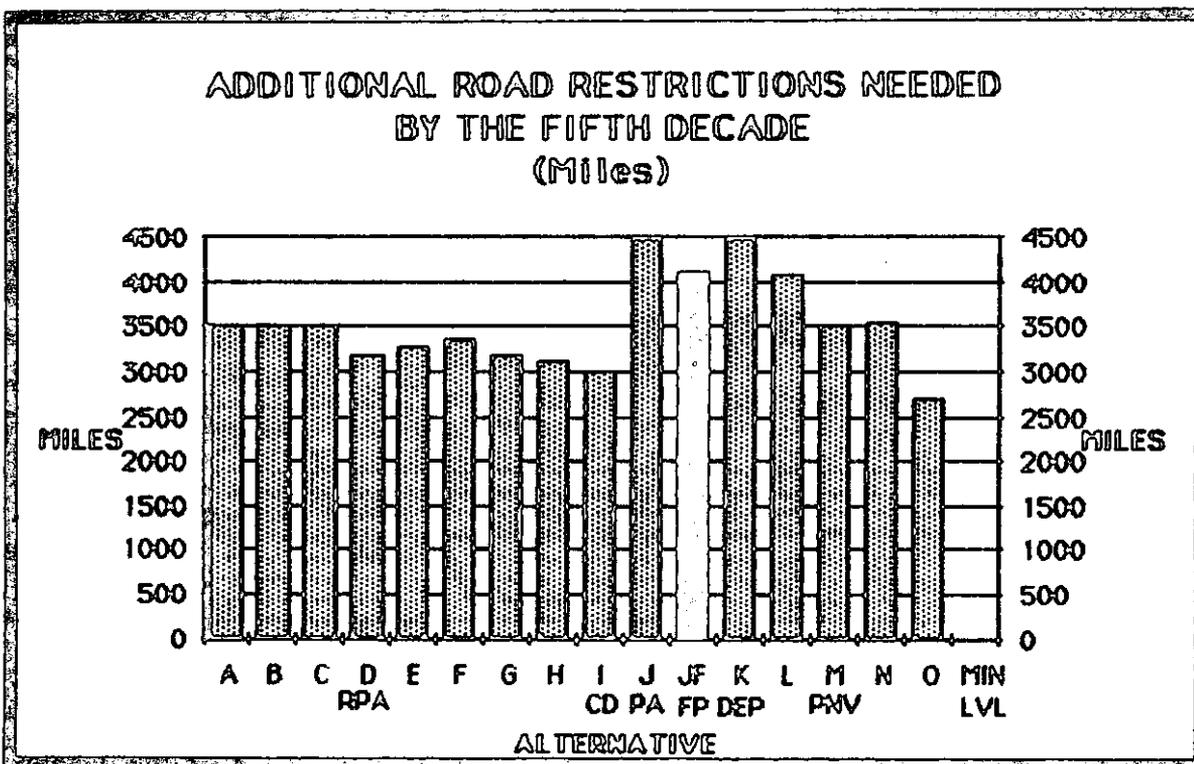
Road restrictions, either year long or seasonally, are done in order to minimize the cost of maintaining a road after a project has been completed, to protect recreation values of an area, or to protect wildlife values during seasons of wildlife use. Each alternative proposes a certain amount of roads to be closed. There are currently 1,600 miles of roads on the Kootenai that are closed either seasonally or year-long (700 and 900 miles, respectively).

#### **Summary of Changes between the Draft and Final EIS**

The total miles of restricted roads under the Final Forest Plan (Alt.JF) will be 5,730 miles. This is a 6% decrease from the Proposed Plan (Alt. J) because of the 6% decrease in the total miles of road needed to manage the suitable timberland. The percentage of closed roads is still the same as Alt. J (57%).

The following chart displays the additional miles of road needing eventual restrictions for all the alternatives, either during a portion of each year or year-long, by the year 2030.

FIGURE II-41



In general, the amount of road restrictions is in direct proportion to the amount of road construction needed to manage the suitable timberland and the goal of the alternative. A certain minimum amount is required to provide for the recovery of the grizzly bear. Approximately 48% to 68% of all total road restrictions needed in any alternative are considered necessary to meet the recovery goal for grizzly. These restrictions also protect recreation and other wildlife and soils values.

Alternative L requires more miles of road than any other alternative and also requires a high level of additional road restrictions. Alternative F, in contrast, requires the fewest miles of additional roads but requires a significant amount of additional road restrictions because of the emphasis on elk management. Alternative O requires the least amount of additional road restrictions because of a moderate amount of new road construction and a low emphasis on elk management. Alternatives J and K require the highest amount of additional road restriction because of the emphasis on wildlife and non-motorized recreation management.

### 3. Wilderness and Roadless Areas

#### Summary of Changes between the Draft and Final EIS

An additional 12,000 acres of wilderness have been recommended on Pellick Ridge in the Scotchman Peak Roadless Area, in response to public comment received during the review period and more recent information on mineral potential in that area. See section II.D.7, Locatable Minerals.

##### a. The Inventory

#### No Changes occurred between the Draft and Final EIS

The Cabinet Mountains Wilderness, at 94,360 acres, is the only designated wilderness on the Forest. During the 1979 RARE II study, twenty seven roadless areas were evaluated for wilderness. As a result of this study, four roadless areas were recommended for wilderness totalling about 64,000 acres. The areas included Scotchman Peaks, and Cabinet Face West, Chippewa Creek, and McKay Creek. The latter three are collectively referred to as "Cabinet Additions." (Scotchman Peaks proposed wilderness also included about 22,500 acres located on the Idaho Panhandle National Forest). These areas were not designated as wilderness prior to the 1983 re-inventory, however. See Chapter III for a general discussion of the roadless areas on the Forest and Appendix C for a detailed discussion of each roadless area.

In 1983, the Forest updated the inventory of the roadless areas from the 1979 RARE II Final EIS, a nation-wide study. Added to the inventory were roadless lands that were part of unit plans completed prior to RARE II. In addition, portions of roadless areas were deleted from the inventory because of developmental activities that had occurred in them.

The 1983 inventory update identified 403,700 acres of roadless areas in 32 separate locations which met the roadless criteria. This includes 376,100 acres in Montana and 27,600 acres in Idaho. TABLE II-4 shows the areas considered for wilderness in this EIS and shows how and why they have changed in acres from the RARE II inventory.

Figure II-42 shows how the Forest is designated for Wilderness, other roadless recreation, and other categories which generally involve roads. Each column represents the total acreage of the Forest. The top portion (grey) represents those acres which may involve roads. The dotted portion represents the acreage of the inventoried roadless areas on the Forest which are designated for roadless, non-wilderness recreation. The solid black area represents areas of existing and proposed Wilderness.

FIGURE II-42

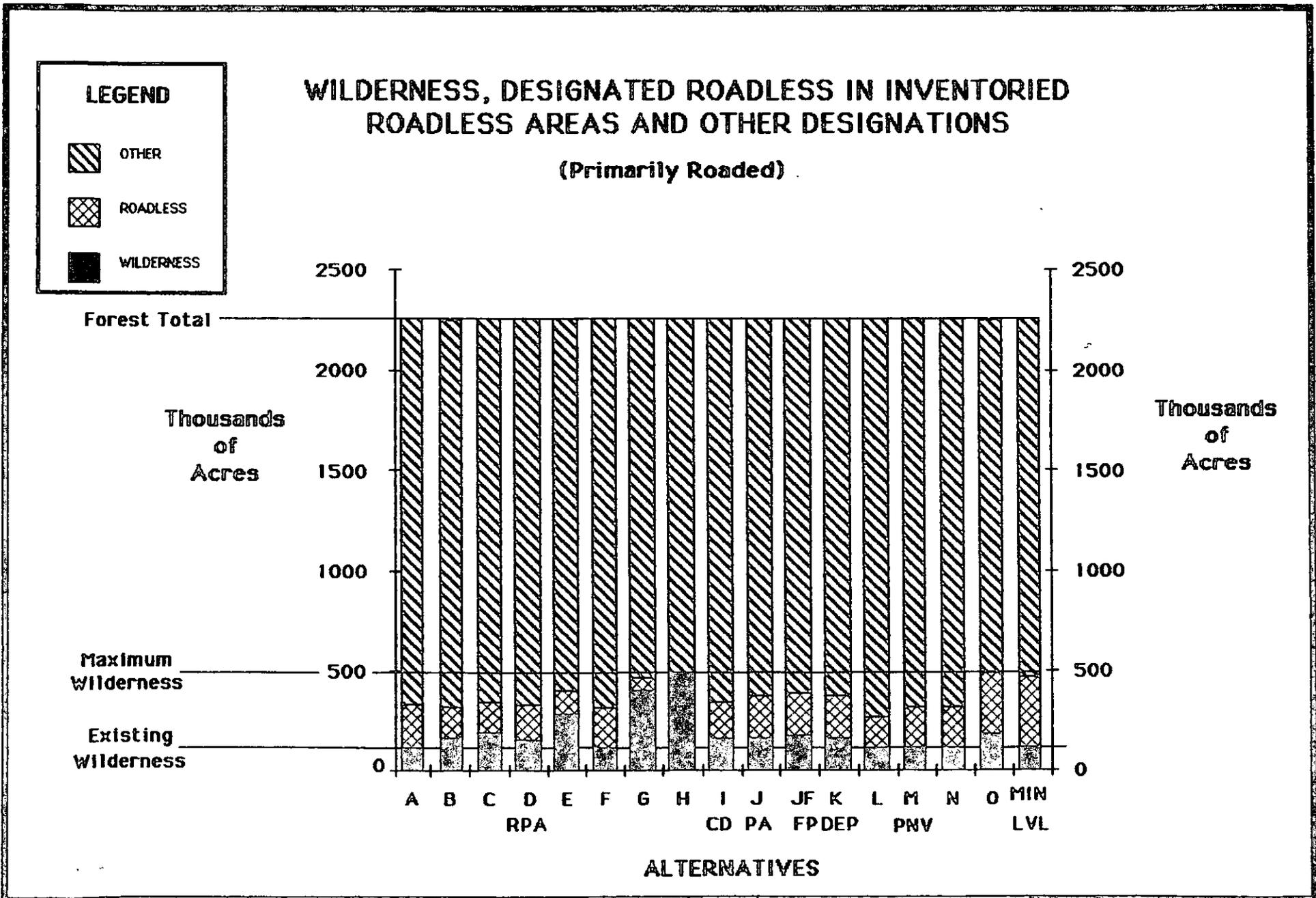


Table II-4, Part 1

## ADJUSTMENTS MADE TO RARE II ROADLESS AREAS

AREA ID	AREA NAME	GROSS ACRES	NET ACRES	CHANGE IN GROSS ACRES	CHANGE IN NET ACRES	REASON FOR CHANGE	REVISED GROSS ACRES	REVISED NET ACRES
672	Berray Mountain	8600	8200	0	+100	data base adjustment	8600	8300
661	Buckhorn Ridge - Koot.	2900	2900	+20000	+20000	Combined with a former RARE I Area	22000	22000
	IPNF	5500	5500	+4300	+4300	Additional acres identified.	9800	9800
671	Cabinet Face East	18200	18000	+36600	+32400	Combined with a RARE I and former RARE II Area.	54800	50400
670	Cabinet Face West	12000	9600	+1300	+1300	data base adjustment	13300	10900
665	Cataract - Koot.	18200	18100	-400	-400	Timber sale affecting 1200 acres plus 300 additional acres identified plus data base adjustment	17800	17700
	Lolo	9900	9900	0	0		9900	9900
682	Chippewa	1000	1000	+1300	+1300	Additional acres identified adjacent to Cabinets plus data base adjustment	2300	2300
784	Cube-Iron - Koot.	400	400	+800	+800	data base adjustment	1200	1200
	Lolo	24200	23900	+15000	+13800	Timber sale affecting 1200 acres plus additional acres identified.	39200	37700
678	East Fork Elk Creek	6400	6400	-1400	-1400	Timber sale affecting 1000 acres & data base adjustment	5000	5000
X690	Flagstaff Mountain	0	0	+9500	+9500	New Roadless Area	9500	9500
677	Galena	17000	15000	+500	+500	Timber sale affecting 1400 acres plus addition of former Canyon Peak roadless area (3200 gross acres) plus data base adjustment	17500	15500
668	Gold Hill	17300	17300	-6600	-6600	Timber sale scheduled will affect 7900 acres; plus 1300 additional acres	10700	10700
X176	Gold Hill (West)	0	0	+10200	+10200	RARE I Roadless Area	10200	10200
673	Government Mountain	8600	8600	0	0		8600	8600
667	Grizzly Peak	5900	5900	+100	+100	data base adjustment	6000	6000
674	Lone Cliff-Smeads	14200	14200	-7600	-7600	7600 acres affected by a timber sale	6600	6600
507	LeBeau	0	0	+800	+800	New acres identified	800	800
	Koot Flathead	5400	5400	0	0		5400	5400

Table II-4, Part 2

## ADJUSTMENTS MADE TO RARE II ROADLESS AREAS

AREA ID	AREA NAME	GROSS ACRES	NET ACRES	CHANGE IN GROSS ACRES	CHANGE IN NET ACRES	REASON FOR CHANGE	REVISED GROSS ACRES	REVISED NET ACRES
141	Maple Peak - Koot. IPNF	900 8820	900 8740	+500 -90	+500 -90	data base adjustment 90 acres affected by road construction.	1400 8730	1400 8650
	Lolo			+6960	+6960	6960 acres identified.	6960	6960
X172	Marston Face	0	0	+6000	+6000	RARE I Roadless Area	6000	6000
676	McKay Cr.	11800	11700	+2700	+2700	Additional acres identified (2300) plus data base adjust.	13600	13500
675	McNeeley	8800	8800	-1100	-1100	data base adjustment	7700	7700
663	Northwest Peak - Koot. IPNF	8800 5670	8800 5670	+5100 0	+5100 0	4200 additional roadless acres identified plus data base adjustment	13400 5670	13400 5670
X691	Roberts Mountain	0	0	+8000	+8000	RARE I Roadless Area	8000	8000
X693	Rock Creek	0	0	+400	+400	New Roadless Area adjacent to Cabinets	400	400
684	Roderick	1600	1600	+23200	+23200	Combined with former Rare I roadless acres plus 2900 additional roadless acres.	24800	24800
662	Scotchman Peaks - Koot. IPNF	52600 33660	52100 32190	-200 +190	-200 -350	data base adjustment Timber Sale	52400 33850	51900 31840
683a	Ten Lakes Contiguous	0	0	+7100	+7100	New Roadless Area adjacent to TEN LAKES MWSA	7100	7100
483	Thompson-Seton - Koot. Flathead	5700 23000	5700 23000	+14400 +29650	+14400 +29650	Combines Deep Creek roadless area (10,400 acres) plus 4000 additional acres. 700 acre deletion due to recalculation of acreage plus additional 30350 identified.	20100 52650	20100 52650
664	Trout Creek - Koot. IPNF	32600 8500	32600 8400	-800 -100	-800 -100	Timber sale affecting 800 acres.	31400 8300	31400 8300
482	Tuchuck - Koot. Flathead	2300 18600	2300 18600	0 -1080	0 -1080	data base adjustment	2300 17520	2300 17520
X692	West Fork Elk Creek	0	0	+4800	+4800	New Roadless Area	4800	4800
173	Willard-Lake Estelle-Koot. IPNF	0 0	0 0	+18500 +35300	+18500 +35300	RARE I Roadless Area RARE I Roadless Area	18500 35300	18500 35300
X166	Zulu Creek	0	0	+6400	+6400	RARE I Roadless Area	6400	6400



Table 11-5, Part 2

## RECOMMENDED WILDERNESS DESIGNATION FOR ROADLESS AREAS BY ALTERNATIVE (thousands of acres)

Roadless Area	No.	MAcs	RPA								CD	PA	: FP	: Dep	PNV					
			Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Alt. F	Alt. G	Alt. H					Alt. I	Alt. J	: Alt. JF	: Alt. K	Alt. L	Alt. M
Gold Hill (West)	X176	10.2	0	0	0	0	0	0	0	10.2	10.2	0	0	:	0	:	0	0	0	0
										100%	100%			:		:				
Berray Mountain	672	8.3	0	0	0	0	0	0	0	8.0	8.2	0	0	:	0	:	0	0	0	0
										96%	100%			:		:				
East Fork Elk Creek	678	5.0	0	0	0	0	0	0	0	5.0	5.0	0	0	:	0	:	0	0	0	0
										100%	100%			:		:				
Lone Cliff Smeads	674	6.6	0	0	0	0	0	0	0	0	6.6	0	0	:	0	:	0	0	0	0
										100%				:		:				
McNeeley	675	7.7	0	0	0	0	0	0	0	0	7.7	0	0	:	0	:	0	0	0	0
										100%				:		:				
Flagstaff Mountain	690	9.5	0	0	0	0	0	0	0	0	9.5	0	0	:	0	:	0	0	0	0
										100%				:		:				
Roberts Mountain	691	8.0	0	0	0	0	0	0	0	0	8.0	0	0	:	0	:	0	0	0	0
										100%				:		:				
Grizzly Peak	657	6.0	0	0	0	0	0	0	0	0	6.0	0	0	:	0	:	0	0	0	0
										100%				:		:				
Zulu Creek	166	6.4	0	0	0	0	0	0	0	0	6.4	0	0	:	0	:	0	0	0	0
										100%				:		:				
Marston Face	172	6.0	0	0	0	0	0	0	0	0	6.0	0	0	:	0	:	0	0	0	0
										100%				:		:				
Willard-Lake Estelle	173	53.7	0	0	0	0	0	0	0	0	53.7	0	0	:	0	:	0	0	0	0
										100%				:		:				
Idaho Panhandle		35.3									35.3			:		:				
Kootenai		18.4									18.4			:		:				
Cube-Iron	784	38.9	0	0	0	0	0	0	0	0	38.9	0	0	:	0	:	0	0	0	0
											100%			:		:				
Lolo		37.7									37.7			:		:				
Kootenai		1.2									1.2			:		:				
Thompson-Seton	483	72.7	0	0	0	0	0	0	0	28.0	72.7	0	0	:	0	:	0	0	0	0
										38%	100%			:		:				
Flathead		52.6								22.3	52.6			:		:				
Kootenai		20.1								5.7	20.1			:		:				
Tuchuck	482	19.8	0	0	19.7	0	0	0	0	19.8	19.8	0	0	:	0	:	0	0	0	19.7
					98%					100%	100%			:		:				98%
Flathead		17.5			12.5					17.5	17.5			:		:				12.5
Kootenai		2.3			2.2					2.3	2.3			:		:				2.2
Maple Peak	141	17.0	0	0	0	0	0	0	0	0	17.0	0	0	:	0	:	0	0	0	0
											100%			:		:				
Idaho Panhandle		8.6									8.6			:		:				
Lolo		7.0									7.0			:		:				
Kootenai		1.4									1.4			:		:				
LeBeau	507	6.2	0	0	0	0	0	0	0	0	6.2	0	0	:	0	:	0	0	0	0
											100%			:		:				
Flathead		5.5									5.5			:		:				
Kootenai		.7									.7			:		:				

**b. Contiguous Areas on Adjacent Forests****No Changes occurred between the Draft and Final EIS**

Eleven roadless areas extend into the three adjoining Forests which are the Flathead National Forest to the east; the Lolo National Forest to the south; and the Idaho Panhandle National Forest to the west.

The roadless areas adjoining the Flathead Forest are Tuchuck (#482), Thompson-Seton (#483), and LeBeau (#507).

The roadless areas adjoining the Lolo Forest are Cube Iron (#784) and Cataract (#665) and Maple Peak (141). The roadless areas adjoining the Idaho Panhandle Forest are: Maple Peak (#141), Trout Creek (#664), Scotchman Peak (#662), Willard-Lake Estelle (# X173), Buckhorn Ridge (#661), and Northwest Peaks (#663). Information is shown for the respective Forests in Appendix C and summarized in Table II-5.

**c. Ten Lakes Montana Wilderness Study Area****No Changes occurred between the Draft and Final EIS**

The Ten Lakes Montana Wilderness Study Act Area (MWSA) contains 34,000 acres and is discussed in a separate document. The roadless inventory below, however, includes the "Ten Lakes Contiguous" areas (an additional 7,100 acres). A portion of the original 34,000 acre Montana Wilderness Study Area was included in the Montana Wilderness Bill of June 1984. A similar portion (26,000 acres) is being recommended for wilderness in the Final Ten Lakes Report and Proposal. The contiguous portion of 7,100 acres is being evaluated for wilderness in this Draft EIS and 7,000 acres are being recommended for wilderness in the Proposed Action (Alt. J). This would result in a total of 33,000 acres of recommended wilderness in the Ten Lakes Area. (See the Ten Lakes Final Report and Proposal which includes maps).

Table 11-5, Part 1

Inventoried Roadless Areas  
Summary of Management Emphases by Alternative, Including Contiguous Areas\* (thousands of acres)

Management Emphasis	Alternatives															
	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
<b>Nonwilderness (Roadless)</b>																
Primitive/Semiprimitive Recreation, Viewing, Minimum Use Areas																
Kootenai:	211.2	164.4	150.8	155.4	98.9	209.0	53.1	0	174.2	202.1	193.1	202.1	158.6	199.6	204.8	322.4
Idaho Panhandle NF:	70.7	52.4	48.9	63.4	65.0	70.7	0	0	63.5	65.6	65.6	65.6	70.7	70.7	70.7	62.9
Flathead NF:	26.6	67.2	44.9	20.2	20.2	26.6	44.9	0	27.8	37.4	37.4	37.4	26.6	26.6	26.6	44.9
Lolo NF:	8.0	3.6	3.6	3.6	8.0	3.6	7.7	0	2.0	8.0	8.0	8.0	8.0	8.0	8.0	3.5
<b>Nonwilderness (Some Development)</b>																
Big Game Winter Range																
Kootenai:	9.4	9.4	9.4	9.0	7.9	9.4	5.4	0	23.0	41.6	39.1	41.6	9.4	9.4	9.4	0
Idaho Panhandle NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flathead NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lolo NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Nonwilderness (Development)</b>																
Timber Harvest With Wildlife and/or Viewing Management, Minimum Use Areas due to Steep Slopes or Regeneration Problems																
Kootenai:	183.1	166.0	162.2	175.4	110.3	185.3	40.3	0	143.6	93.5	93.5	93.5	235.7	194.7	189.5	0
Idaho Panhandle NF:	37.4	33.8	31.5	22.2	25.6	37.4	0	0	23.1	19.9	19.9	19.6	37.4	37.4	37.4	14.5
Flathead NF:	5.4	31.5	5.0	31.5	31.5	5.4	.5	0	39.6	6.1	6.1	6.1	5.4	5.4	5.4	5.0
Lolo NF:	1.9	2.2	2.2	2.2	1.9	2.2	2.2	0	7.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2
<b>Wilderness</b>																
Recommended Wilderness																
Kootenai	0	63.9	81.3	63.9	185.6	0	304.9	403.7	62.9	66.5	78.5	66.5	0	0	0	81.3
Idaho Panhandle	0	22.5	30.8	22.5	22.5	0	108.8	108.8	22.5	22.5	22.5	22.5	0	0	0	30.8
Flathead	0	0	0	0	0	0	22.6	97.7	0	0	0	0	0	0	0	0
Lolo	0	0	0	0	0	0	0	9.9	0	0	0	0	0	0	0	0

Table 11-5, Part 2

Inventoried Roadless Areas  
Summary of Management Emphasis by Alternative, Including Contiguous Areas\* (thousands of acres)

	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	PNW Alt. N	Alt. N	Alt. O
<b>Summary of Management Emphasis</b>																
<b>Nonwilderness</b>																
<u>Developed</u> - Decade 1:																
Kootenai:	46.2	50.4	44.7	38.7	45.0	48.6	17.4	0	34.0	10.5	10.5	10.5	57.0	54.6	41.7	0
Idaho Panhandle NF:	16.4	17.7	17.6	13.9	14.2	16.4	0	0	8.0	11.9	11.9	10.1	16.4	16.4	16.4	12.8
Flathead NF:	.7	4.3	.5	4.8	4.8	.7	.5	0	4.9	2.2	2.2	2.2	.7	.7	.7	.5
Lolo NF:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decade 5:																
Kootenai:	183.1	166.0	162.2	175.4	110.3	185.3	40.3	0	143.6	93.5	93.5	93.5	235.7	194.7	189.5	0
Idaho Panhandle NF:	53.4	39.4	33.8	31.2	27.7	53.4	0	0	34.8	29.2	29.2	28.9	53.4	53.4	53.4	23.3
Flathead NF:	16.1	30.5	5.0	30.5	30.5	16.1	5.0	0	28.5	12.2	12.2	12.2	16.1	16.1	16.1	5.0
Lolo NF:	1.9	2.2	2.2	2.2	1.9	2.2	2.2	0	7.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2
<u>Roadless</u> - Decade 1:																
Kootenai:	351.5	289.4	277.7	301.1	171.8	355.1	81.4	0	306.8	326.7	314.7	326.7	346.7	349.1	362.0	322.4
Idaho Panhandle NF:	94.4	62.6	60.4	56.5	72.1	94.4	0	0	78.3	69.6	69.6	71.4	94.4	94.4	94.4	60.2
Flathead NF:	97.0	92.3	49.4	92.3	92.3	97.0	49.4	0	6.0	6.0	6.0	6.0	6.2	6.2	6.2	6.2
Lolo NF:	9.9	9.9	9.9	9.9	9.9	9.9	9.9	0	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
Decade 5:																
Kootenai:	211.2	154.4	150.8	155.4	98.9	209.0	53.1	0	174.2	202.1	190.1	202.1	158.6	199.6	204.8	322.4
Idaho Panhandle NF:	55.4	46.9	44.2	55.1	57.9	55.4	0	0	51.0	55.5	55.5	55.5	55.4	55.4	55.4	53.2
Flathead NF:	20.9	56.7	44.9	66.7	66.7	80.9	44.9	0	69.4	85.5	85.5	85.5	80.9	80.9	80.9	44.9
Lolo NF:	8.0	3.6	3.6	3.6	8.0	3.6	7.7	0	2.0	8.0	8.0	8.0	6.0	8.0	8.0	3.6
<b>Recommended Wilderness</b>																
Kootenai:	0	63.9	81.3	63.9	186.6	0	304.9	403.7	62.9	66.5	78.5	66.5	0	0	0	81.3
Idaho Panhandle NF:	0	22.5	30.8	22.5	22.5	0	108.8	108.8	22.5	22.5	22.5	22.5	0	0	0	30.8
Flathead NF:	0	0	0	0	0	0	22.5	97.7	0	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	0

\*Does not include acreage on the Lolo for Cube-Iron and the Idaho Panhandle and the Lolo for Maple Peak.