

Kootenai National Forest

Forest Plan – Volume 1

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Forest Service

Kootenai
National Forest



KOOTENAI NATIONAL FOREST

FOREST PLAN

NORTHERN REGION

FOREST SERVICE

U.S. DEPARTMENT OF AGRICULTURE

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VOLUME I

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I. Introduction

A. Purpose

The Forest Plan guides all natural resource management activities and establishes management standards for the Kootenai National Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management.

B. Management Direction

The goals, objectives, standards, schedule of management practices, and monitoring and evaluation requirements comprise the Plan's management direction. However, the projected outputs, services, and rates of implementation are dependent on the annual budgeting process.

C. Relationship to Other Documents

Environmental Impact Statement -

The Forest Plan is based on the various considerations which have been addressed in the accompanying Environmental Impact Statement (EIS), and represents the Final Plan (Alternative JF) in that EIS. The planning process and the analysis procedure used in developing this Plan, as well as the other alternatives that were considered, are described or referenced in the EIS. Project level activities will be planned and implemented to carry out the management direction in this Plan. The NEPA requirements will be followed as the site specific issues and impacts are addressed during project development.

Regional Guide -

The Regional Guide displays the Northern Region's portion of the Forest and Rangeland Renewable Resources Planning Act (RPA) Program among the National Forests, provides direction for National Forest plans, and develops standards and guidelines for addressing major issues and management concerns which need to be considered at the Regional level to facilitate Forest Planning. The Regional Guide process allows for discussion and analysis of National Forest program capabilities to determine opportunities to meet short and long-term natural resource demands.

D. Forest Location, Description, and Organization

1. Location

The Kootenai National Forest is located in the northwest corner of Montana and contains 2.2 million acres (see reference map that follows). The Forest boundaries encompass almost all of Lincoln County and parts of Sanders and Flathead Counties, Montana, and small portions of Bonner and Boundary Counties, Idaho. Principal towns include Libby (Lincoln County seat), Eureka, and Troy, Montana. Major travel routes include US Highways 2 and 93 and

State Highways 200, 45, and 37. The closest metropolitan area is Spokane, Washington, a distance of approximately 150 miles.

2. Forest Organization and Headquarters Location (see map page I-3)

The organizational structure of the Kootenai Forest is composed of seven Ranger Districts and two Engineering Zones. The Supervisor's Office is located in Libby. The Ranger Districts and their Ranger Station locations include:

- Rexford Ranger District (Station at Eureka)
- Yaak Ranger District (Station at Sylvanite)*
- Fortine Ranger District (Station at Murphy Lake)
- Troy Ranger District (Station at Troy)*
- Libby Ranger District (Station at Libby)
- Fisher River Ranger District (Station at Canoe Gulch)
- Cabinet Ranger District (Station at Trout Creek)

The Eastside Engineering Zone includes Rexford, Murphy Lake, Libby and Fisher River Ranger Districts with offices at Canoe Gulch. The Westside Engineering Zone includes the Yaak, Troy, and Cabinet Ranger Districts and has offices located at Troy.

3. Forest Management Structure

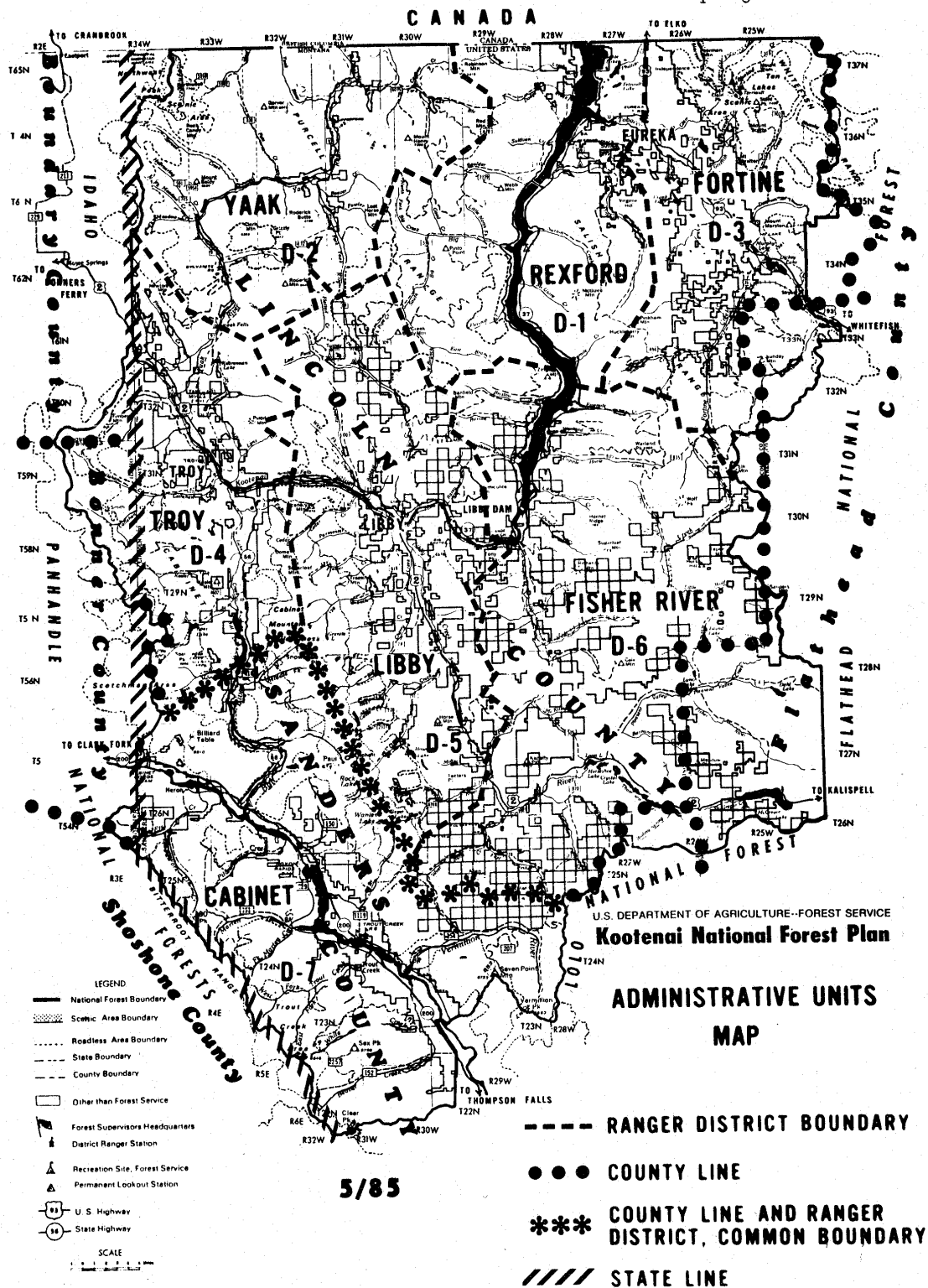
The managerial organization of the Kootenai consists of the Forest Supervisor, seven District Rangers, two Zone Engineers, and seven Staff Officers, including: Timber Staff, Fire Management Staff, Lands/Minerals and Recreation Staff, Resources Staff, Planning Staff, Engineering Staff, and Administrative Staff.

The Forest workforce numbers about 540 (1986 figure). This includes 200 seasonal employees who are hired during the April to November field season.

4. Ranger District Descriptions

The Rexford Ranger District, D-1, is located in the north central part of the Forest, bordered by the Yaak Ranger District to the west, Fortine Ranger District to the east, and Canada to the north. Kootenai Reservoir bisects the District into eastern and western halves, with the Tobacco River, Big Creek, Pinkham Creek, Dodge Creek, and Young Creek being important drainages flowing into the Reservoir. The Tobacco River Valley provides most of the livestock grazing capacity within the Kootenai Forest, with timber harvesting and commercial Christmas tree harvesting also important resource uses. Bighorn sheep range occurs on the slopes just east of the Reservoir.

* As of August, 1987 the Yaak District headquarters is located in Troy.



The Yaak Ranger District, D-2, is located in the northwest corner of the Forest, bordered by the Idaho Panhandle National Forests to the west, the Rexford Ranger District to the east, and Canada to the north. The Yaak River is the principal drainage flowing north and south with Pete, Burnt, Spread, and Seventeenmile Creeks being important drainages. The Yaak District contains some of the most suitable timberlands and contributes substantially to the Kootenai annual timber production. The Northwest Peaks Scenic Area is located in the northwest corner of the District and contains grizzly bear habitat. Grizzly habitat also occurs in the Grizzly Peak/Roderick Butte area.

The Fortine Ranger District, D-3, is located in the northeast corner of the Forest, bordered by the Rexford Ranger District to the west, Flathead National Forest to the east, and Canada to the north. The Tobacco and Stillwater Rivers are the principal drainages with Grave, Sunday, and Fortine Creeks the main tributaries. The Ten Lakes Scenic Area is located along the Canadian border. Commercial timber harvesting and Christmas tree harvesting are important activities and grizzly habitat occurs along the eastern edge of the District in the Whitefish Range.

The Troy Ranger District, D-4, is located on the western edge of the Forest, bordered by the Yaak District to the north and the Cabinet District to the south. The Kootenai River running westerly bisects the District. Important tributaries of the Kootenai include the Yaak River and Callahan, Lake, and O'Brien Creeks. Important resource activities include timber harvesting and recreation. The northern half of the scenic Bull River Valley is located in the District, including Bull Lake, a well-used, developed recreation area, and the Ross Creek Cedars Scenic Area. A portion of the Cabinet Mountains Wilderness, Recommended Additions, and the Scotchman Peaks Recommended Wilderness are located on the District. ASARCO's MT. Vernon mine is located immediately west of Bull Lake. Important wildlife values include grizzly habitat on most of the District, and mountain goat habitat along the rocky spires west of Bull Lake. The Lower Ross Creek Proposed Research Natural Area is located adjacent to the Ross Creek Scenic Area.

The Libby Ranger District, D-5, is located in the center of the Forest. The Kootenai River flows through the District east to west, and the important tributaries of the river include Libby, Pipe, and Quartz Creeks. The District contains the east half of the Cabinet Mountains Wilderness and important viewing areas are seen from the town of Libby and Highway 2. Important resource activities include timber harvesting and recreation. W.R. Grace Company operates a vermiculite mine a few miles northeast of Libby.

The Fisher River Ranger District, D-6, is located on the southeastern section of the Forest, bordered by the Rexford and Fortine Districts to the north, Libby and Cabinet Districts to the west and southwest, and the Flathead National Forest to the east. The Fisher River and its important tributary, Wolf Creek, flow into the Kootenai River at the big bend of the Kootenai. Libby Dam and a portion of Koocanusa Reservoir are located in the District. Timber harvesting and recreation are important resource activities. The well-used recreation areas associated with Loon, Crystal, Thompson, and McGregor Lakes are located in the District.

The Cabinet District, D-7, is the southernmost District on the Forest, bordered by the Idaho Panhandle National Forests on the south and west and the Lolo National Forest to the east. The Clark Fork River flows northwest through the District and is fed by the Bull River and Vermilion River tributaries and other streams including Pilgrim, Marten, and Beaver Creeks. The District contains the southwest portion of the Cabinet Mountains Wilderness, Recommended Additions and the major portion of the Scotchman Peaks Recommended Wilderness. ASARCO and Pacific Coast Mines (U.S. Borax) have established valid existing rights on mining claims within the Cabinet Mt. Wilderness Area. ASARCO's proposed mine is in the EIS stage and Borax's is in the conceptual planning stage. Elk herds of State-wide importance are located within the District. Ulm Peak Proposed Research Natural Area is also located on the southern boundary of the District.

KOOTENAI NATIONAL FOREST

FOREST PLAN

CHAPTER II - FORESTWIDE MANAGEMENT DIRECTION

II. FORESTWIDE MANAGEMENT DIRECTION

A. Goals

Goals are statements of long-range management intent. All objectives and Management Area (MA's) standards must support the goals and all activities on the Kootenai National Forest will be conducted to contribute to the eventual realization of the goals. The following goals reflect how the Forest Plan responds to the public issues and management concerns.

1. Provide a sustained yield of timber volume responsive to National and Regional needs, scheduled to encourage a stable base of economic growth in the dependent geographical area.
2. Construct the minimum number of roads necessary to permit the efficient removal of timber and mineral resources. Construct and reconstruct roads only to the minimum standards necessary to prevent soil loss, maintain water quality, minimize safety hazards for a reasonable and prudent Forest user, and provide access for fire protection where needed to meet Management Area goals.
3. Maintain a balance of open and closed roads to continue present levels of motorized access, insure big-game habitat security, insure grizzly bear security to meet recovery goals, and reduce road maintenance costs.
4. On those Management Areas designated for roadless management (MA 2 and MA 29) provide roadless recreation opportunities subject to the legal requirements of the mining and mineral leasing laws.
5. Maintain or enhance sufficient grizzly bear habitat to meet the population recovery goals established in the grizzly bear recovery plan. Maintain or enhance all identified eagle nesting sites and seasonal use sites, and identified potential nesting sites to help facilitate recovery of endangered bald eagles. Maintain or enhance all identified gray wolf habitat to facilitate recovery. Identify and maintain peregrine falcon habitat to facilitate recovery.
6. Determine the status of sensitive species and provide for their environmental needs as necessary to prevent them from becoming threatened or endangered.
7. Maintain diverse age classes of vegetation for viable populations of all existing native, vertebrate, wildlife species, including old-growth timber in sufficient quality and quantity to maintain viable populations of old-growth dependent species and to maintain habitat diversity representative of existing conditions.
8. Manage for sufficient snags and snag replacement trees to maintain viable populations of snag-dependent species.
9. Optimize economic and social benefits to the dependent area by coordination and cooperation with the land and resource management efforts of other federal agencies, the Kootenai/Salish Confederation, State, and local governments, and adjacent landowners.

10. Protect the wilderness character of designated and recommended wilderness, and wilderness study areas.
11. Encourage responsible development of mineral resources in a manner that recognizes National and local needs and provides for economically and environmentally sound exploration, extraction, and reclamation.
12. Maintain big-game habitat to support the recreational hunting demand for resident big-game species.
13. Maintain or enhance fisheries habitat.
14. Maintain a natural appearing landscape adjacent to major travel corridors, around local communities and around popular destinations such as campgrounds.
15. Minimize management conflicts with adjacent or intermingled land owners using land exchange opportunities, conservation easements, or cooperative management plans.
16. Harvest the maximum amount of high risk lodgepole pine marketable, to minimize losses from the mountain pine beetle.
17. Use prescribed fire to simulate natural ecological processes, prevent excessive natural and activity fuel buildups, create habitat diversity for wildlife, reduce suppression costs, and maintain ecosystems.
18. Provide developed recreation facilities to meet demand.
19. Meet or exceed State water quality standards.
20. Provide forage to meet all anticipated demand for domestic livestock grazing.
21. Manage cultural resources on the Forest to maintain their scientific, social and historical value in compliance with preservation management goals in applicable Federal laws and Forest Service policy to increase our understanding of past human occupations of the Forest.
22. Provide administrative sites and a workforce at locations which will effectively and safely serve the public in a cost-effective manner.
23. Attempt to stop the spread and suppress the existing levels of noxious weeds through land management and weed suppression activities. An integrated pest management program including the use of herbicides will be used in accordance with the Noxious Weed Treatment Program Final Environmental Impact Statement for the Kootenai National Forest (July 1986).
24. Protect Forest users, property, and resources from wildfire.

B. Objectives

1. Resource Activity Summaries.

Following are brief summaries of how the various resources and activities will be managed under the Forest Plan. A complete understanding of the management direction can be attained by reading the Forest-wide goals and standards in this chapter, and the Management Area goals and standards in Chapter III.

The following sections summarize the direction of this Forest Plan for each of the major resources and activities. None of the summaries can be read as standing alone out of context from the rest of the Forest Plan. Management of all of the resources and activities of the Kootenai National Forest are related to each other. For example: The standards referring to soil and water will be adhered to when fulfilling the objectives of the timber management activities, as will the standards associated with fish and wildlife, recreation, visual management, etc. Only a knowledge of, and adherence to, all of the standards for all of the resources/activities will meet the complete intent of this Forest Plan. The same is true of each Management Area (MA). Since individual resources will be managed in several different MA's, the standards for each of those areas (Chapter III) must be understood and followed.

Wilderness

The Cabinet Mountains Wilderness Area will be managed according to the Wilderness Act of 1964. Standards are prescribed in Management Area 7 (Chapter III), and the Cabinet Mountains Wilderness Action Plan (Appendix 23).

Areas recommended for wilderness (Scotchman, and Cabinet additions) and the Ten Lakes Wilderness Study Area will be managed to protect their wilderness values until such time as Congress either designates them as wilderness or releases them for other uses. If any are designated wilderness, then individual wilderness management direction will be developed for each area following the Forest Plan amendment procedures.

Roadless

Throughout the life of this plan approximately 314,000 acres of the roadless resource outside of wilderness areas will remain roadless and be managed for semi-primitive and primitive recreation and wildlife values. In addition 126,000 acres of roadless areas allocated to other resource management goals will provide additional semi-primitive recreation opportunities until development activities occur. This roadless resource is well distributed throughout the Forest and currently provides a variety of recreation experiences to Forest users. Some of the more well known areas are Trout Creek (22,500 acres) and Northwest Peaks (13,200 acres).

Timber

Regulated timber harvest will occur on 1,263,000 suitable acres or 56% of the Kootenai National Forest. The total harvest volume available for sale annually during the first decade of this plan is 233 MMbf, including 31 MMbf of salvage, with an eventual sustained yield level of 290 MMbf. To achieve this level of harvest the following must occur:

1. Region 1 Utilization Standards will be implemented.
2. All harvested acres must be restocked within five years of harvest.
3. All acres restocked will be examined for stocking levels; if they are overstocked they will be thinned to a spacing appropriate to the habitat and Management Area prescription.
4. Insects and disease will be controlled to historic endemic levels, and lodgepole pine will be harvested prior to future outbreaks of mountain pine beetle. Other problems such as root rot, mistletoe, blister rust, and spruce budworm will be addressed in silvicultural prescriptions utilizing integrated pest management strategies and treatments.
5. Roads, including capital investment roads, will be built to access harvest areas on schedule.
6. There will be a market for all timber offered.
7. Hydrologic recovery will occur at the rate estimated for individual watersheds.

If any of the above conditions are not met, the harvest volume will be recalculated and an adjustment in the allowable sale quantity and programmed sale level may be made. Recalculation of harvest volumes will occur if any way to improve yields is discovered or if utilization standards are changed.

Fertilization of trees is not presently planned as a method to improve timber harvest volumes. Fertilization may be used if it is not in conflict with the Management Area standards, but the planned harvest volumes do not reflect any increase which may result. Use of such techniques will occur only if they are estimated to be economically efficient.

Planned harvest volumes do not reflect increases due to genetically improved stock. If such increases are realized the planned harvest volumes will be adjusted.

Management of mature and overmature lodgepole pine will be emphasized during the next ten years to minimize the losses from the mountain pine beetle.

Commercial thinning may be performed where it is estimated to be economically efficient or where other resource values justify the action. Planned harvest volumes do not include scheduled commercial thinnings.

The soil and water conservation practices specified in FSH 2509.22 will be applied during Forest Plan implementation to ensure that Forest water quality goals are met.

Additional information about the timber resource is found in Appendices 1 through 6.

Recreation

The demand for roadless recreation, including wilderness, is expected to be about 65,000 Recreation Visitor Days (RVD'S) in the first decade. 23% or 521,000 acres of the Kootenai National Forest is in roadless Management Areas (including wilderness areas). Trails will be maintained and new trails may be constructed where they can increase the number of roadless RVD's or prevent resource damage.

Existing developed recreation opportunities (campgrounds, picnic areas, boat launches, etc.) will be expanded if the demand increases beyond the capacity of the existing facilities. Private concessionaires will be sought and encouraged to construct and operate any new developed sites.

Increase the amount of groomed cross-country ski trails and snowmobile trails. Cooperate with State, County, and local ski clubs.

The Forest Travel Planning process will be used to review, evaluate, and implement the goals and standards of the Management Areas, with regard to roads, trails, and motorized-vehicle use.

Cultural Resources

Cultural resource management will be integrated into the overall Forest multiple resource management effort.

The Forest will work closely with the appropriate scientific community and Native American groups concerning cultural resources.

Cultural resources will be inventoried and evaluated before ground disturbing activities take place. All significant resources will be protected or mitigation actions will be taken. See Appendix 19.

Visual Resources

The visual resource will be inventoried, evaluated, and managed throughout all management activities. Consideration for the visual resource will guide all activities seen from major travel corridors and local communities. Other activities will consider landscape management to a degree dependent on the visual sensitivity of the area, and its compatibility with the primary goals of the individual Management Areas.

Air Quality

Maintain the excellent air quality on the Forest. Protect local and regional air quality by cooperating with the Montana Air Quality Bureau in the Prevention of Significant Deterioration (PSD) program and State Implementation Plan (SIP). Requirements of PSD and SIP and the Montana Smoke Management Plan will be met.

Prevent long-term deterioration of the air quality, classified as Class I for the Cabinet Mountains Wilderness, and Class II for the rest of the Forest.

Range

Available forage will continue to be in excess of the anticipated demand. Since forage is transitory and timber harvest dependent, some relocation of available areas is inevitable. Forage use will only occur on transitory range after timber regeneration is established. Grazing management will insure protection of soil and water resources and riparian areas. If a situation develops where insufficient forage is available for both livestock and big game, enough forage for the big game will be assured. Livestock numbers will be reduced or the livestock will be moved to other available forage.

The soil and water conservation practices specified in FSH 2509.22 will be applied during Forest Plan implementation to ensure that Forest water quality goals are met.

Threatened and Endangered Species

Management will facilitate the recovery of the grizzly bear and augmentation of the existing grizzly population may occur for the purpose of reaching recovery goals. Augmentation is a well established and routine wildlife management practice that can be an important tool in managing wildlife species. Generally, individuals of a specific age and sex are selected for augmentation to maximize the chances for success. Such selective augmentation has not occurred on the Kootenai National Forest but seven grizzlies have been relocated on the Forest since 1977 under an interagency relocation agreement. In addition, studies of grizzlies have occurred and will continue; including trapping, radio collaring, and monitoring.

All management in the Whitefish range will maintain or enhance identified potential habitat for the woodland caribou and the gray wolf. The status of these species will be monitored cooperatively with other responsible agencies.

Important perch and nest sites for bald eagles as well as historical, current, and potential nest sites have been, and will continue to be identified and monitored. Management will maintain or enhance nest sites and nesting opportunities as well as protecting important wintering sites (perches and roosts) to facilitate recovery of bald eagles.

Management will be sensitive to the occurrence of peregrine falcons and efforts will be made to followup any sightings which are reported.

Wildlife and Fish

Management of elk habitat will provide for a potential habitat carrying capacity which, by the third decade, is nearly 40% greater than present elk numbers. Habitat to support huntable populations of all other big game species will be maintained. All endemic vertebrate species of wildlife will have sufficient habitat to maintain viable population levels. -

Unless it is already below that level, old-growth habitat will not be reduced below 10% of the area of each major drainage below the 5,500 feet elevation level (except where wilderness occupies a portion of the drainage and the 10% cannot be controlled). During the next decade, timber stands will be inventoried and all stands capable of meeting old-growth-timber wildlife habitat requirements will be identified.

Cavity habitat will be perpetuated by managing for snags and snag replacement trees. The Cavity Habitat Management Guidelines of Appendix 17 will be used.

Habitat for fish will be maintained in all streams and lakes where they presently exist. Stream blockages preventing fish migration will be modified to allow passage if physically possible and biologically desirable. Priority will be given to self-sustaining populations, especially migratory and unique trout species.

Soil and Water

Ground-disturbing activities such as road construction, road reconstruction and timber harvest will be accompanied by mitigating measures to prevent or reduce increases in sedimentation and stream channel erosion. The amount of harvest allowed will depend on the rate of hydrologic recovery after timber has been removed.

Municipal watersheds such as Flower Creek and O'brien Creek will be managed to provide current streamflows and keep water quality at current high levels.

The soil and water conservation practices specified in FSH 2509.22 or those activities or standards which will prevent or reduce stream sedimentation will be implemented. Examples include: Location of roadbeds out of stream bottoms, design of stream crossing structures to allow water to freely pass, rock surfacing of roads at stream crossings, keeping equipment from operating in or alongside streams, and maintenance of roads to allow proper drainage. These practices will be implemented in order to help maintain water quality.

Each project plan for which the use of heavy equipment is required shall evaluate the effect of operating that equipment on soil productivity. When it is determined that equipment operation is a hazard to soil productivity the project plan shall:

- a. Establish a standard for how much of the project area will be allocated to skid trails, landings, temporary roads or similar areas of concentrated equipment travel. The standard shall minimize the area allocated to those uses to the extent practical.

- b. Consider the potential hazard to soil productivity before planning the practices requiring the operation of equipment off established roads and trails. Practices such as dozer piling of brush or mechanical site preparation shall not be planned without considering the feasibility of limiting the soil conditions under which these practices are applied or alternative practices which do not require the use of equipment.

Minerals

Mineral exploration and development may occur on 1,981,000 acres (88% of the Forest). As mineral exploration and development occurs, the protection and possible development of other resources will be considered.

The soil and water conservation practices specified in FSH 2509.22 will be applied during operating plan implementation to ensure that Forest water quality goals are met.

As of May, 1987, 648,800 acres on the Forest are leased for oil and gas. While there has been geophysical activity associated with exploration for these resources there have been no wells drilled to date on National Forest land.

A major silver/copper mine, the Asarco-Mt.Vernon mine is currently operating on the Troy Ranger District. Two other major mine proposals (Rock Creek Project-ASARCO, and Rock Peak/Rock Lake-U.S. Borax) have been received by the Forest which could also produce silver and copper. Both mine proposals call for mining under the Cabinet Mountain Wilderness. Preliminary work on these proposals is currently underway giving consideration to applicable mining laws, the Wilderness Act, and the Threatened and Endangered Species Act.

For Leasable Minerals: Mineral access, exploration and development activities will be encouraged while striving to protect other resources and uses. This plan provides for resource coordination and identifies stipulations for new and reissued leases, to ensure that oil and gas activities are conducted in a manner that protects other physical and biological resources.

For Locatable Minerals: Mining activities related to locatable minerals will be encouraged under the appropriate laws and regulations and according to the direction established by this plan.

For Saleable Minerals: Common mineral materials will be administered on a permit basis and only in areas where it does not conflict with other resource activities or not will unduly compete with private sources.

The following Environmental Assessments have been completed and are incorporated as part of this Forest Plan. Copies are located at the Forest Supervisor's Office, Kootenai National Forest, Libby, Mt.

ENVIRONMENTAL ASSESSMENT, GAS AND OIL LEASE APPLICATIONS,
EXPLORATION AND DEVELOPMENT, LINCOLN AND FLATHEAD COUNTIES, 7/25/80.
(This EA covers the area east of Lake Koocanusa)

ENVIRONMENTAL ASSESSMENT, OIL AND GAS LEASE APPLICATIONS,
KOOTENAI NATIONAL FOREST, 10/22/82. - (This EA covers lands exclusive of wilderness, recommended wilderness and wilderness study areas, and the northeastern portion of the Forest.

Two decision notices:

1. Lease outside grizzly habitat.
2. Lease inside grizzly habitat.

The terms of some leases issued under these two Decision Notices may differ from the standards in this Forest Plan. For those leases issued prior to the approval of this Forest Plan the stipulations of the lease apply.

Lands

The Lands Management program will carry out these broad missions:

1. To locate and identify National Forest boundaries to prevent encroachments.
2. Provide service to other resource areas to carry out their activities in an efficient manner.
3. To provide service to the public for legitimate special needs on National Forest land.

Rights-of-way will be granted as necessary on those Management Areas where such grants do not conflict with this Forest Plan, or when other statutory rights prevail.

Necessary rights-of-way will be acquired and maintained to manage the Forest resources and meet the goals of this Forest Plan. Landownership adjustments will be sought to support the goals of this plan. Grizzly habitat will be a priority for acquisition, and lands adjacent to communities or which have lost their National Forest character will be a priority for disposal. The landownership adjustment plan for the Kootenai National Forest is included as Appendix 9.

As a general rule special-use permits will not be used when the result encumbers Forest lands if the use can be reasonably accommodated on private land or other public land or if a land exchange is more appropriate. The Forest boundary will be located and marked to: efficiently carry out resource activities adjacent to the boundary, minimize or prevent further encroachments

from occurring on National Forest land, and systematically inventory, evaluate, and solve previous encroachments.

Roads and Trails

Transportation facilities including roads, trails and bridges will be constructed and maintained to meet the objectives of this Forest Plan.

The soil and water conservation practices specified in FSH 2509.22 will be applied during Forest Plan implementation to ensure that Forest water quality goals are met.

There are presently (1/1/87) 6,300 miles of road on the Kootenai National Forest. The eventual total road system planned is 10,050 miles. The new road construction remaining (3,750 miles) will be built at the estimated rate shown in Table II-1 which has been adjusted for the road construction that has occurred since 1978 (the base year for road calculations shown in the EIS). Presently 1,600 miles or 26% are permanently or seasonally restricted to travel by motorized vehicles. When the total system is in place 5,730 miles or 57% will be permanently or seasonally restricted to vehicle use.

There are 1,300 miles of trail on the Kootenai National Forest and they will be maintained except in areas where they will be replaced by roads. The Forest will continue to seek out and cooperate with various user groups to assist in trail maintenance, construction and reconstruction.

Protection

98 MMbf annually of mature and overmature lodgepole pine is intended for sale during the first ten years. This includes 78 MMbf of regulated volume and 20 MMbf of non-interchangeable volume. More will be sold if there is a market available. The intent is to utilize and salvage as much as possible prior to attack by the mountain pine beetle. As lodgepole pine stands are brought under management they will be harvested prior to reaching a size and age class conducive to pine beetle attack.

The use of biological agents, insecticides, or herbicides will be considered as protection and management alternatives in project environmental analyses.

Through land management practices and coordination with Local, State, and other Federal agencies, the Forest will attempt to control the spread of noxious weeds on National Forest System lands. This will include, but not necessarily be limited to preventive, physical, chemical, and biological means, as well as through public awareness. Any use of herbicides will include procedures outlined by NEPA.

Disturbed sites are the primary sites for noxious weed invasion. To help control the spread of noxious weeds, all roads, including the surfaces of roads that are closed for significant time periods, will be revegetated. Project planning will consider the need for revegetation on excavated/designed skid trails, landings and other areas of surface disturbance.

Fire

The fire protection program will seek to minimize the number of acres lost to damaging wildfire. Specifically, the program's aim is to minimize cost plus net value change while providing for the safety of the public and personnel engaged in fire protection activities.

The fuels management program intends to treat both activity fuels and natural vegetation to the degree needed to facilitate implementation of the fire protection program and other dependent activities of the Forest Plan.

Corridors

Establish Exclusion, Avoidance, and Window Areas according to the criteria outlined in Appendix 15 of the Forest Plan and using the Facilities management standards in each Management Area.

Facilities

Buildings and improvements such as ranger stations, work centers, lookouts, recreation facilities, boat ramps, etc., will be constructed, maintained, and restored as necessary to meet the Standards of this Forest Plan. All facilities will provide for a safe environment for occupants and users.

Riparian Areas

Site-specifically identify and map all riparian areas on the Forest before project activity. Management Standards are at the end of Chapter II.

Special Areas

An analysis of the Yaak, Kootenai, Bull and Vermilion rivers will be done and a recommendation made to the Chief on their potential for inclusion into the Wild and Scenic Rivers System. In the interim, management activities will protect the river corridor values so as to not preclude their potential candidacy.

The following are Cultural Resource areas with the objective of providing site-specific plans for the protection, study, evaluation, interpretation and possible nomination to the National Register of Historic Places:

Boyd Hill Cemetery,	Kootenai Falls Cultural Resource District,
Bull River Guard Station,	Yahk Historic Mining Area.

The following are Scenic Areas with the objective of protecting the on-site characteristics that make them scenic:

Northwest Peaks,	Ross Creek,
Wood Creek Larch.	

The following are Geologic Areas with the objective of protecting and preserving these unique resources for safe public use:

Devil's Gap
Rexford Hoodoos
Star Creek Canyon

Sunday Creek Falls
Ten Mile Talus
West Fork Yaak Falls

The Berray Cedars Botanical Area will have the objective of protecting and preserving the unique characteristics for the the publics use and enjoyment.

The Big Creek Riparian Ecosystem will have the objective of protecting the unique riparian features for wildlife, fish and recreation uses.

2. Projected Outputs and Activities by Time Period

Projected outputs and activities that will be used for programming, budgeting, and attainment reporting are displayed in Table II-1. The projected budget required to implement the Forest Plan is shown in Appendix 7.

The Appendices include activity schedules for various resources and activities. Projects will be added to these activity schedules periodically as they are identified during the continuous planning process; projects may also be deferred or modified if problems are identified during project level environmental analysis (refer to Chapter IV, Section C for a discussion of project planning).

Table II-1

Kootenai National Forest
Projected Outputs and Activities by Time Period

Target Item	Output or Activity	Unit of Measure	:.....:				
			: PLANNED:	PROJECTED			
				: Average Annual Units			
			: 1987-	: 1997-	2007-	2017-	2027-
			: 1996	: 2006	2016	2026	2036
Recreation	Developed Use	M RVD	: 297	: 325	354	385	417
	Dispersed Use		:	:			
	Wilderness	M RVD	: 18	: 20	22	23	25
	Non-wilderness	M RVD	: 559	: 613	668	726	787
Wildlife & Fish	Wildlife Habitat Imp.	M Acs.	: 5.6	: 5.6	5.6	5.6	5.6
	Fish Habitat Imp.	Acres	: 120	: 130	120	140	140
	T& E Habitat Imp.	Acres	: 150	: 150	150	150	150
			:	:			
Range	Permitted Grazing Use	M AUM	: 12.6	: 12.6	12.6	12.6	12.6
Soil	Soil Inventory	M Acs.	: 15.7	:			
			:	:			
Lands	Land Exchange	M Acs.	: 1.7	:			
Minerals	Minerals Mgt.	Cases	: 300	:			
			:	:			
Protection	Fuels Treatment, Natural	Acres.	: 800	: 800	800	800	800
Timber	Total Volume Offered	MM BF	: 233*	: 230**	227**	213**	234**
	Reforest. - Approp.	M Acs.	: 7.0/1/	7.5	8.2	7.0	6.4
	Reforest. - KV	M Acs.	: 7.1/1/	7.6	8.2	7.0	6.5
	Tbr. Std. Imp. - Approp.	M Acs.	: 4.0/2/	3.6	6.0	6.0	3.9
	Tbr. Std. Imp. - KV	M Acs.	: 1.0/2/	1.5	2.5	2.6	1.6
	Stand Examination	M Acs.	: 139	: 139	139	139	139
	Fuel Treatment - BD/KV	M Acs.	: 12.7	: 14.1	14.0	13.3	14.4
			:	:			
Facilities	Roads (as of 1/1/87)		:	:			
	Arterial/Collector		:	:			
	Construction	Miles	: 5	: 5	0	0	0
	Reconstruction	Miles	: 7	: 7	7	7	7
	Local		:	:			
	Construction	Miles	: 232	: 134	0	0	0
	Reconstruction***	Miles	: 46	: 32	41	84	53
	Trail Const./Reconst.	Miles	: 7.5	: 7.5	10.0	12.5	15.0
			:.....:				

* Includes 25 MMBF/year of non-interchangeable volume (primarily dead lodgepole pine) plus 6 MMBF of unregulated volume expected to be offered during the life of this Plan in addition to the 202 MMBF of live green timber.

** Live green timber volume only. No estimates have been made for other volumes.

*** Includes only major reconstruction (not resurfacing, reclearing, etc.).

/1/ Includes Timber Purchaser obligations for natural regeneration site preparation.

/2/ Includes precommercial thinning and release.

3. Research Natural Area Objectives

The Regional Habitat types listed in Table II-2 have been assigned by the Northern Regional Guide as the Forest's objectives for Research Natural Area (RNA) recommendations. The table also lists a candidate area (or areas) representative of each assigned type. RNA status will be pursued for all the listed areas, and establishment reports will be prepared.

Table II-2

Habitat Type Code	Vegetative Habitat Type*	Occurrence**	Existing or Proposed RNA
Forested Types			
250	PSME/VACA	M	Big Creek
320	PSME/CARU	M	Norman Mountain
420	PICEA/CLUN	M	Hoskins Lake
530	THPL/CLUN	M	Lower Ross Creek
550	THPL/OPHO	m	Lower Ross Creek
570	TSHE/CLUN	M	Lower Ross Creek
680	TSME/MEFE	m	Ulm Peak
830	ABLA/LUHI	M	Ulm Peak
840	TSME/LUHI	m	Ulm Peak
	Cottonwood (Populus SPP)	M	Parmenter
Aquatic Types			
	Type 1 Stream		Pete Creek Meadows
	Type 3 Stream		Falls Creek
	Waterfalls		Wolf/Weigel
	Low Production Potential Lakes		Snowshoe Lake
	Average Production Potential Lakes		Wanless Lake
	High Production Potential Lakes		Hoskins Lake
	Lakes With Fish		Hoskins Lake
	Lakes Without Fish		Bramlet Lake

* These vegetative descriptions are abbreviations of species names.

** M = Major representative in a zone

m = Minor representative in a zone

Falls Creek, Snowshoe Lake, Wanless Lake, and Bramlet Lake are located in the Cabinet Mountain Wilderness Area

Norman Mountain, Part of Lower Ross Creek, and a small part of Parmenter are located in recommended wilderness areas.

The remainder of the listed areas are included in Management Area 21.

4. Additional Data Requirements and Accomplishment Schedule.

Table II-3 identifies additional requirements that are needed to improve the Forest's data base, revise current data base inventories to new standards, and to incorporate new data base requirements that have recently been identified.

TABLE II-3

<u>Data Requirements</u>	<u>Accomplishment Schedule</u>
1. 100% timber stand data base with age class.	1990
2. Regeneration results and cost on the Forest by habitat type and regeneration technique (seeding, planting, natural).	1990
3. Actual mortality resulting from bear and squirrel damage.	1990
4. Inventory roadless areas for wildlife enhancement needs.	1990
5. Locate, verify, and designate old growth stands.	1990
6. Actual costs and benefits for projects to be used for future economic analysis.	1990
7. Site specific visual significance.	1988
8. Sediment change and hydrologic impact on major fisheries streams.	1990
9. Site specific riparian area locations.	1988
10. Inventory wilderness for concentrated use areas.	continuing
11. Monitor the status of the woodland caribou.	continuing
12. Site specific habitat components for grizzly bear.	1990
13. Habitat status of grey wolf, peregrine falcon, and bald eagle.	1990
14. Mineral/oil and gas potential ratings and an inventory of mineral materials (saleable minerals) for the Forest.	1988

An additional requirement not tied to a specific resource is a data base capable of handling basic resource data on all timber stands (age class) for the Forest, and a mapping system stored, updated, and accessed locally.

C. Research Needs

The following research needs have been identified during development of this Forest Plan; they will be evaluated by the Regional Forester for inclusion in the Regional research program proposal. It is anticipated that more research needs will become apparent during monitoring and evaluation of the Forest Plan as it is implemented.

1. Determine the specific hydrologic recovery rates for various drainages including a determination of the significant water yield variables, and a determination of channel tolerances.
2. Determine soil loss by logging system.
3. Cooperate with other agencies to determine status, distribution, habitat use, and population parameters of grizzly bears in the Cabinet/Yaak ecosystem.
4. Determine a cost effective technique for establishing regeneration on those sites where standard techniques will not guarantee a five-year establishment period, thus rendering the sites unsuitable.
5. Determine the management needs of old-growth timber to perpetuate the conditions and determine whether fire may be allowed to occur and under what circumstances.
6. Determine parameters and techniques for identifying old-growth timber and replacement old-growth stands and the listing of those stands in the timber stand data base.
7. Determine the applicability and use of uneven-aged management, including development of yield information and benefits to wildlife management, especially grizzly bears.
8. Determine the feasibility (including economic feasibility) of removing and reforesting stagnated lodgepole pine stands on suitable timber acres.
9. Determine cost-effective methods for commercial thinning.
10. Determine a cost-effective treatment for root rot.

D. Desired Future Condition of the Forest

This section describes what the future Forest should be like if the management direction contained in the Forest Plan is implemented. It summarizes the anticipated physical changes which would result from carrying out planned management practices, at two points in time: at the end of ten years and at the end of fifty years (RPA planning horizon).

The Forest in 1995 - The First Decade

By the end of the first decade after implementing this plan there will be some changes to the Kootenai National Forest. The most noticeable change will be additional road building and timber harvest in areas where these activities were not readily apparent in the past, or occurred in minor amounts. 2,380 miles of new road will have been constructed and 2,330 MMbf of timber from 161,000 acres will have been harvested. Of the 404,000 acres inventoried as being roadless, 394,000 acres are still roadless. The size of cutting units will be smaller than some of those in the past except where larger units are necessary because of cutting in mountain pine beetle infestations, and the new roads will be narrower and of less impact than those in the past. There will be a greater proportion of roads permanently closed or seasonally restricted for soil and water protection, road surface protection, and wildlife security.

There will be about 13% more recreational hunters and anglers using the Forest. Elk numbers will have remained stable at about 5500 animals. Fish numbers may be slightly reduced due to sediment resulting from previous road construction and natural floodings. Recreation Visitor Days (RVD's) in developed camp areas will also be stable at about 310,000 RVD's per year although this use will be more concentrated around Lake Koocanusa. The number of people using roadless and nonmotorized recreation opportunities will have increased to about 68,000 per year while Off Road Vehicle (ORV) use (primarily snowmobiles) will have increased about 12%.

There are 521,000 acres designated for roadless recreation including 94,000 acres of wilderness. If Congress acts on the proposals in this plan, there will be three additional wilderness areas: Scotchman Peaks, Ten Lakes, and additions to the Cabinet Mountains Wilderness Area totaling 104,000 acres. There will be 26,000 acres of primitive recreation, and 288,000 acres of semi-primitive non-motorized recreation areas. In addition, there will be 116,000 roadless acres on areas which will eventually be developed, but not by 1995.

The grizzly bear population will be stable or show a slight increase. The present population is unknown, but known to be quite low.

Oil and gas exploration and possible development may be present on the Forest. The potential is slightly higher on the East side of the Forest. There will be more mineral exploration and there could be one or two major mines adjacent to the Cabinet Mountains Wilderness. If such development occurs there will be significant changes to the Bull river valley and the Noxon area; changes could involve more homes, mobile home parks, more demand for services, more demand for recreational hunting, fishing, hiking, and all the other changes an increased population represents.

There will be a slight increase in local employment and economic base resulting from programs on the Kootenai National Forest although this may be offset by declining harvest from private lands and increased mill automation. Annual timber sales will average 233 MMbf and the recreation use will generate some additional revenue. Employment by the Forest Service will be 10% less than at present.

Firewood, especially from timber sale areas will continue to be available but users will have to drive farther, on the average, to find it, and they will have to change their preference for larch to other available species.

As a result of completion of an analysis to NFMAS standards, the Forest will begin to set in motion a Fire Management Program that is fully integrated and commensurate with the implemented level of the Forest Plan.

There will be days during the summer and fall when some smoke will be evident as the areas available for allowing prescribed fire will increase.

The Forest in 2034 - The Fifth Decade

There will be about the same evidence of activity on, and around, the Kootenai National Forest as in 1995. The most obvious evidence will be roads and timber harvest activities. All of the permanent road network of 10,050 miles will have been in place for nearly 30 years. Those roads will be minimum standard and 57% of them will be closed or seasonally restricted from motorized vehicle use. The suitable timber acres will have a spread of age classes from recently harvested to over 210 years old. 60% of the suitable timber base will have been harvested (750,000 acres) and the average age of the suitable timber will be 65 years old. Areas of lodgepole pine on suitable lands will be managed on an 80-year rotation to promote stand conditions that minimize attacks from the mountain pine beetle. There will be patches of old-growth timber in blocks of 40 acres and larger scattered throughout the Forest, much like today, and there will be snags saved for cavity habitat over most of the Forest.

Fish numbers will be stable and the elk population will have increased 40%. Based on security and habitat the elk will be spread more evenly over the Forest. Recreational hunting use will have increased over 400% or 190,000 RVD's. Streams supporting fish will have had the impediments removed and some will have artificial pools created to improve the fisheries. Sediment sources will be stabilized and water quality will be stable.

The wilderness areas, along with the 26,000 acres of primitive recreation and 288,000 acres of semi-primitive nonmotorized recreation, will comprise the roadless resource on the Forest and provide recreational hiking, camping and horseback riding experiences. Opportunity for solitude, especially in popular areas around mountain lakes or along trails will be more limited. The demand for roadless recreation will have increased to 91,000 RVD's from today's demand.

The population of grizzly bears will be stable at a recovered level estimated to be approximately 70 bears in the Cabinet/Yaak Grizzly Bear Ecosystem, the Kootenai containing about 70% of that system. The Whitefish Range portion of the Northern Continental Divide Grizzly Bear Ecosystem on the Kootenai will contribute proportionally to that recovered total. The population of bald eagles will be at a stable and recovered level. The status, on the Kootenai National Forest, of the grey wolf, and peregrine falcon will have been determined and appropriate actions taken depending on the status.

In areas where wildfire occurrence is a high probability, natural and activity-fuel accumulations will be treated sufficiently to facilitate fire protection standards. Where lands are to resemble a near-natural condition fire will be allowed to operate with minimal constraint as an agent of ecological adjustment and maintenance. Overall, wildfire suppression activities will be conducted in a manner reducing net resource loss and firefighting expenditures on National Forest System lands. Human life and property on, adjacent to, or in close proximity to, NFS lands will enjoy a reduced probability of loss caused by wildfire.

If any oil and gas discoveries were made there could have been developments (wells) but they would probably have been reclaimed before the fifth decade.

The existing mineral developments, and those developed during the first decade will probably have exhausted the ore supply and be closed. Others may replace them in different locations.

The National Forest ownership pattern will have changed. There will be few National Forest acres close to communities, more National Forest acres on land needed by the grizzly bear, and more National Forest land where roadless recreation is a major use. There will be fewer acres of checkerboard ownership as owners block up their holdings.

The Forest will be completely inventoried for cultural sites. Those determined to be significant will be preserved and protected, and those that are suitable to having their location revealed will have been interpreted.

There will be an increase in local employment and economic base resulting from programs on the Kootenai National Forest. Harvest from private lands may also be increasing as stands harvested in the 1950's and 1960's reach commercial size. Regulated timber sales will have increased from the 202 MMbf of the first decade (live and recently dead timber only) to a volume of 234 MMbf per year and increased recreation demands will generate additional revenue.

E. Standards

The following standards apply to the National Forest land that is administered by the Kootenai National Forest. They are intended to supplement, not replace, the National and Regional policies, standards and guidelines found in Forest Service Manuals and Handbooks and the Northern Regional Guide.

1. General

As soon as practicable, and subject to valid existing rights, all outstanding and future permits, contracts, cooperative agreements, and other instruments for occupancy and use of lands of the Kootenai National Forest will be made consistent with the Forest Plan.

During the environmental analysis phase of project planning, site specific management requirements and mitigating measures will be identified, if needed, to insure compliance with the resource objectives and the resource standards listed in this plan. Each environmental assessment will include a monitoring schedule to check compliance with the management requirements and mitigating measures as appropriate, during the execution of the project. Activities found not in compliance will either be brought into compliance, modified, or stopped.

Subsequent activities affecting the Forest, including budget proposals, shall be based on the Forest Plan. Proposed implementation schedules may be changed to reflect differences between proposed annual budgets and appropriated funds. Such scheduled changes shall be considered an amendment to the Forest Plan, but shall not be considered a significant amendment, or require the preparation of an environmental impact statement, unless the changes significantly alter the long term relationship between levels of multiple use goods and services projected under planned budget proposals as compared to those projected under actual appropriations.

All projects will be designed to consider other resource needs so that if possible no additional mitigation is required. (When extraordinary measures for mitigation are required, the project will not proceed until sufficient funds are available.) Where unforeseen problems arise that require mitigation on completed projects, they will be prioritized and funded as funds become available.

If it is determined during project design that the best way to meet the goals of the Forest Plan conflicts with a Forest Plan standard, the Forest Supervisor may approve an exception to that standard for that project; such exceptions and the rationale must be described in the Finding of No Significant Impact/Decision Notice for the project, and the rationale for making the exception must be documented in the Project File or Environmental Assessment.

2. Timber

Following the required KV reforestation needs, KV "other" expenditures will be assigned priorities based on the resource priorities stated in the goals for the Management Area on which the expenditure takes place.

Examine all silvicultural techniques before clearcutting.

The most cost effective logging system that meets the Management Area standards will be used.

All silvicultural prescriptions will be aimed at maximizing growth and yield consistent with Management Area standards and goals. The prescriptions will be reviewed and approved by a certified silviculturist.

Commercial thinning is not expected or planned. Commercial thinning will be used when it can be shown to contribute positively toward present net value, or it is needed to meet Management Area standards.

3. Recreation

All recreation activities and management will be based on the Recreation Opportunity Spectrum (ROS) inventory.

Outfitter and Guide permits will be issued in accordance with the policy outlined in Appendix 24.

Specific standards for developed recreation are found in Management Area #6.

An analysis of the Yaak, Kootenai, Bull and Vermilion rivers will be done and a recommendation made to the Chief on their potential for inclusion into the Wild and Scenic Rivers System. In the interim, management activities will protect the river corridor values so as to not preclude their potential candidacy.

Management of National Recreation Trails will be in accordance with the direction found in FSM 2353.

4. Wildlife

The following will be conducted to further identify and protect important habitat for threatened or endangered species:

1. Habitat component mapping and cumulative effects will be completed for all grizzly habitat.
2. Results from the MDFWP Cabinet Mt. grizzly bear study will be used to improve habitat identification and cumulative effects analysis.
3. Known bald eagle nest sites will be surveyed regularly during nesting season and nesting territory management plans will be completed for each nest site.
4. Surveys of wintering bald eagles will be conducted to further define important winter habitat.
5. Followup investigations will be made on any caribou sightings. The results will be used to direct caribou management in cooperation with other responsible agencies.

At any time 10% of the Kootenai National Forest land base below 5,500 feet in elevation will be in an old-growth timber condition, providing habitat for those wildlife species dependent on old growth timber for their needs. The old growth will be spread evenly through most major drainages, and will represent the major forest types in each drainage.

The Kootenai National Forest will continue to cooperate with all agencies responsible or involved with the management of threatened or endangered species and their habitat. Specifically the Kootenai will participate as needed in the development and implementation of interagency recovery plans for those species that have essential or critical habitat on the Forest. Population objectives will be established when sufficient biological information is available.

The maintenance of viable populations of existing native and desirable non-native vertebrate species, as monitored through indicator species, will be attained through the maintenance of a diversity of plant communities and habitats. Specific Forest Guidelines exist and will be applied for:

1. Cavity habitat and dependent species (Appendix 16).
2. Old growth habitat and dependent species (Appendix 17).
3. Each Management Area may also contribute toward achieving this objective through:
 - a. Maintaining habitat for at least 40% of potential capacity of cavity dependent species. (Snags and replacement trees)
 - b. Providing a diversity of vegetation, habitat types, and age classes of timber.

- c. Maintaining a variety of unit sizes of generally 40 acres or less. Where catastrophic conditions such as insects, disease, or fire creates a condition whereby larger unit sizes will have no additional effect on the wildlife habitat, larger cutting units may be used.
- d. Providing old growth habitat, both natural and managed, in various unit sizes from about 40 to 300 acres well distributed across the Forest.
- e. Protecting and maintaining important riparian zone features, marshes, and water bodies.
- f. Providing extensive acres of undeveloped native habitat.

Elements contained in the Kootenai Grizzly Management Situation Guidelines, (Appendix 8), will be applied to all MA's which contain identified grizzly bear habitat situations 1, 2 or 3.

Studies of grizzly bears have occurred and will continue, including trapping and installation of radio collars on selected individuals. Augmentation of existing grizzly populations may occur for the purpose of reaching recovery goals. Bears having any history of problems with humans will not be considered for augmentation.

Best Management Practices, as specified by the Montana Bald Eagle Management Plan (draft), will be applied to all known bald eagle nest sites, important roost or perch sites, and known wintering sites.

The management or identification of habitat for threatened, endangered and sensitive species will be in accordance with applicable state-of-the-art information.

The standard for evaluation of elk habitat quality and for formulation of prescriptions for timber sales and road development projects is, THE MONTANA COOPERATIVE ELK-LOGGING STUDY, 1970-1985, January, 1985.

5. Soil and Water

See Appendix 18 for the Kootenai National Forest Water Yield Guidelines.

Soil and water conservation practices as outlined in the Soil and Water Conservation Practices Handbook (FSH 2509.22) will be incorporated into all land use and project plans as a principal mechanism for controlling non-point pollution sources and meeting soil and water quality goals, and to protect beneficial uses. Activities found not in compliance with the soil and water conservation practices or State standards will be brought into compliance, modified, or stopped.

Sufficient amounts of water necessary to carry out Forest operations will be claimed in accordance with State water rights law. Non-consumptive water uses (instream flows) necessary to maintain fisheries habitat, recreational uses, or other beneficial water uses will be claimed for appropriate water bodies and streams.

A floodplain/wetland analysis will be made for all management actions involving wetlands, streams, or bodies of water.

Applications for hydropower, water diversion, water storage, or other water-related facilities will be evaluated on a case-by-case basis. The applicant may be required to use private consultants or his own personnel to make environmental studies needed by the Forest service and/or State agencies for evaluation of the proposal. Close coordination and cooperation with other agencies where appropriate will be sought.

In those drainages of checkerboard ownership, the Forest Service will work closely with the private landowners to develop watershed objectives, and where necessary, modify or delay management activities to ensure that the desired condition of the watershed is maintained.

The following hierarchical approach will be used to achieve watershed protection on lands with intermingled ownership:

- a. Cooperative: Accelerate efforts to develop mutually agreeable water quality management standards with other landowners practicing forest management in areas of intermingled ownership. Seek cooperative agreements with landowners on the shared responsibilities for achieving or maintaining the standards.
- b. Buffering: This approach is to modify or delay activities on National Forest system land that could cause stream channel damage when coupled with activities that have taken place or are in progress on intermingled lands of other ownership. This approach will be used only as an interim action during watershed reparation.
- c. Land Acquisition: This will be considered only for small parcels of land in areas where watershed protection could be better achieved if lands were in a single ownership. Acquisition could be through purchase or land exchange.
- d. Legal Action: The Forest will support existing State or Federal laws for watershed protection by involving responsible enforcement agencies as necessary and by supporting legislation aimed at strengthening watershed protection (e.g., a Forest Practices Act).

Each project plan for which the use of heavy equipment is required shall evaluate the effect of operating that equipment on soil productivity as described in the Soil and Water Objectives in Section B of this Chapter.

Projects involving significant vegetation removal will, prior to including them on implementation schedules, require a watershed cumulative effects feasibility analysis to ensure that water yield or sediment will not increase beyond acceptable limits. The analysis will also identify opportunities, if any exist, for mitigating adverse effects on water-related beneficial uses.

6. Wilderness

Existing and proposed wilderness will be managed to allow natural processes to continue (See standards for MA 7, 8, and 9). Future wilderness opportunities will be evaluated and considered at the time of the next scheduled revision of this Forest Plan (10 to 15 years). A Wilderness Management Action Plan for the Cabinet Mountains Wilderness can be found in Appendix 23 of this Forest Plan. Any new wilderness designated by Congress will have Management Plans prepared as soon as practical and added to this Forest Plan in subsequent Appendices.

7. Roads

Developmental activities will be rigorously examined to insure that the minimum number and length of roads are constructed to the minimum standard necessary.

8. Snow Courses

Existing snow courses will be allowed to remain in all MA's, however, motorized access may be restricted. See Appendix 20.

9. Off-Road Vehicles

The Forest Travel Planning process will be used to review, evaluate, and implement the goals and standards of the Management Areas in this Forest Plan with regard to road, trail, and area-wide motorized vehicle use.

10. Corridors

The existing corridors for the transmission of electricity will be managed in accordance with the standards for MA 23. Future corridors will be designated and managed in a manner prescribed by Appendix 15 and the MA's affected by the proposed corridor. Potential identified windows are identified in Appendix 15-3.

11. Lands

The Forest will systematically proceed to accomplish withdrawal reviews by 1990 as required by FLPMA. Appendix 12 contains a listing of current and proposed withdrawals on the Forest along with proposed actions.

12. Cultural

The Forest will undertake a systematic program of cultural resource inventory. Evaluate, protect, and nominate to the National Register significant cultural resource values.

Cultural resources will be inventoried and evaluated before ground disturbing activities take place. All significant resources will be protected or effects of activities will be mitigated.

The Forest will consult with Native American traditional religious leaders on any project having the potential to affect Native American cultural sites and practices. See Appendix 19.

Cultural resource sites determined to be eligible for the National Register will be preserved in place whenever possible.

13. Air

Activities on the Forest will meet State Air Quality Standards, and the Forest will cooperate with the State in meeting the requirements of the State Implementation Plan and the Smoke Management Plan.

14. Protection

Insects and Disease: Integrated pest management strategies and treatments will be used to reduce long-term losses due to insects and disease to acceptable levels.

Fire: On all Kootenai National Forest lands that are protected by the State of Montana, the only wildfire suppression strategy authorized for implementation is that of "control." Prescribed fire from unplanned ignitions will not be used on Kootenai National Forest lands protected by the State of Montana. Prescribed fire from unplanned ignition will not be used if there is probable threat to private lands.

The Forest will plan, implement, and maintain a fire management program that is responsive to the requirements of this Forest Plan. The program will provide for the lowest total costs, i.e., fire protection plus fire fighting plus net value change (C+NVC) will be minimized. The most cost efficient (MCE) option for fire protection is determined using the National Fire Management Analysis System (NFMAS).

The selection of an appropriate suppression response for a wildfire will be based on specific MA standards and results of the analysis conducted under NFMAS. Appropriate suppression responses will be described in the Fire Management Action Plan as a part of preplanned responses. When alternative suppression strategies are authorized by the Forest Plan their selection will be based on minimizing cost plus damage and/or mitigating firefighting safety concerns. The selection of a suppression strategy for an escaped fire will consider MA standards when an escaped-fire analysis is made.

On Grizzly Situations 1 and 2 lands, suppression tactics will avoid human/grizzly conflicts and existing policy will be emphasized to leave no trash or other attractants of any kind in the area. Fire camps will be located outside Grizzly Situation 1 and 2 lands if possible.

An average of 330 acres are expected to burn annually using the most cost efficient (MCE) program level as determined by the use of the National Fire Management Analysis System and direction in this Forest Plan. Maximum losses from wildfire, both for single fires and periodic totals per MA, will be prescribed in the Fire Management Action Plan addressing direction of the Forest Plan.

15. Minerals

Areas withdrawn from mineral entry will be re-evaluated every ten years (or when this plan is revised) in accordance with Federal Land Policy and Management Act (FLPMA) to determine if the withdrawal is still necessary. Criteria to be considered during withdrawal from mineral entry is included in Appendix 13.

Locatable: Recognize the value and importance of the mineral resource in management activities. Road access for mineral purposes will be allowed if it is the next logical step in the development of the mineral resource, subject to statutory restrictions such as the Wilderness Act and Threatened and Endangered Species Act. Approval for Plans of Operation will include requirements designed to minimize surface impacts and reclaim disturbed sites. Such requirements shall be reasonable and justifiable. The Forest will provide guidance to the mineral industry, where possible, during the development of mining plans to minimize environmental damage and reduce cases of non-compliance from lack of knowledge of mining requirements.

Leasable: Before recommendations are made on any lease applications, additional, site specific analysis of environmental effects will be made. Stipulations which are displayed in Appendix 10 will be recommended in accord with management direction in Chapter III.

Saleable: Requests for common minerals will be processed promptly and will be accommodated where extraction will not conflict with other resource values.

16. Visual Quality

The Visual Quality Objectives (VQO's) for each Management Area are prescribed in Chapter III. Projects involving significant vegetative alteration will include a visual quality analysis to determine opportunities to meet the inventoried VQO for the area.

17. Special Areas

The Special Areas in Management Areas 21 and the Wild and Scenic River corridors will be protected to maintain the characteristics which led to their existing status.

18. Monitoring

Program reviews will be used to monitor adherence to established standards as displayed in the Monitoring and Evaluation Plan in Chapter IV.

F. Riparian Areas

Description

The riparian areas include water features (e.g. perennial streams, lakes, and ponds) and the transition zone between the water feature and adjacent terrestrial habitat. The riparian zone includes at least 100' from the aquatic feature and can be a greater distance depending on:

1. Recognizable soil characteristics and distinctive vegetative communities that require free or unbound water.
2. Intermittent and ephemeral channels including bogs, wet meadows, seeps, and side channels of perennial streams.
3. Floodplains (100 year) and wetlands.

The riparian areas exist in nearly all of the MA's on the Forest. The activities permitted and the standards established vary by MA. For example: Timber harvest is allowed and scheduled in riparian areas which occur in MA's which are suitable for timber production. The opposite is, of course, also true. The goals and standards listed below apply to the riparian areas themselves and are in addition to the goals and standards for the MA in which the riparian area is located.

Riparian areas are typically the highest productive sites for timber, very important for most wildlife, centers of old-growth timber, preferred for grazing of domestic livestock, key to fisheries, sought after for recreation, and often the easiest terrain for road construction.

How activities are modified in riparian zones may vary depending on whether the zone includes a perennial or intermittent stream. Constraints on activities may be less stringent along reaches that naturally do not contain water all year because activities can be permitted adjacent to a dry channel where fish populations do not exist, and ephemeral channel zones are usually smaller than those for perennial streams.

Riparian areas, especially the relatively high quality lakes, rivers, and streams on the Kootenai National Forest, are by far the primary focal point for most of the Forest's recreation activities.

Goals

The goal for riparian area management is to manage the vegetation to protect the soil and water resources and to provide the following: high quality water, habitat for indigenous wildlife species, timber for harvest, habitat to contribute to the recovery of the grizzly bear on grizzly situations 1 and 2, old-growth timber for dependent wildlife species, water-oriented recreation, fisheries habitat, and a pleasing view.

Riparian Conditions

Note: Most riparian areas have not been site specifically determined. They have been estimated on maps, based on topographical features. As MA's are examined for on-site activities the riparian areas will be precisely located and mapped.

1. Desirable

Riparian zones in a desirable condition have both coniferous and deciduous vegetation of varying age. Vigorous, diversified streamside vegetation contributes to stable soil conditions, good bank stability, and stable channel conditions. Streamside thermal cover, as a protection against summer heating and winter icing of streams, is present in suitable quantities and locations. Streamside stands of various ages provide for stream debris and log recruitment, cover and habitat for wildlife species, and options for long term maintenance of old growth over selected areas of the watershed. Water quality is high and sedimentation associated with human-related activities is within acceptable limits and reflective of healthy streamside plant communities and stable channel conditions. Cutting units within riparian zones will be designated to meet the needs of the other resources as well as timber management.

The intent for riparian zone management is to be "light on the land." That may mean operations on snow or frozen ground, or flotation (low psi) equipment, or suspend all harvested logs or other low-impact strategies. The intent in these important and sometimes fragile areas is to integrate total resource production including water, wildlife, fish, and recreation, and not incur any losses. Activities will be expected to enhance the riparian zone to the fullest extent possible.

In order to achieve a desired riparian zone, the guidelines herein will be considered during the planning phases of activities in the riparian zones. These zones will support timber stands on normal rotation lengths as well as segments of old-growth timber which will not be harvested. Streamside openings developed by management activities will not exceed that which is necessary to provide adequate debris recruitment for pool formation and organic energy input over time. Also, these openings will allow for enough streamside canopy to remain so that summer water temperatures will not increase by more than 2 degrees Fahrenheit from natural, and anchor icing in winter will not significantly increase over natural levels. In addition, adequate cover will be left as deemed necessary to meet wildlife needs. Site-specific limitations can be developed through MA intent, available stream management plans, local vegetative conditions, and specific fish and wildlife requirements.

2. Undesirable

Riparian zones in an undesirable condition lack vegetative diversity or vegetative cover over major portions. Lack of cover may contribute to stream temperature problems in summer and/or winter, lack of wildlife cover and habitat, impediments to wildlife movement, and undesirable levels of debris and log recruitment to the stream. Water quality and sedimentation associated with human-related activities may not be within acceptable limits. Streamside

conditions may include unstable banks, a lack of healthy vegetation, and evidence of channel instability.

Riparian Area Standards

1. Recreation

- a. Encourage new developments to occur outside riparian areas. Improvements of existing structures should include protection of the riparian areas involved.
- b. ORV use is permitted only on permanently established roads and trails. Snowmobiles can be allowed off-road in riparian areas, but snow should be at least six inches in depth to prevent soil compaction or increase the potential for erosion.
- c. Areas of concentrated public use tend to form near easily accessible riparian areas and use increases with improved access. Many of these sites are not established use areas and should either be properly developed and controlled or have access closed off.
- d. The Visual Quality Objective will be determined based on the MA in which the riparian area lies.
- e. Recreation trail maintenance, new construction and reconstruction are normally permitted.
- f. Improvements planned or existing in riparian areas will have surfaces designed to minimize sedimentation (e.g. paving, seeding, graveling). Improvements include boat ramps, roads, and trails.
- g. The ROS class is predominantly roaded-natural and semi-primitive motorized recreation. Some small parcels of other ROS classes occur.

2. Wilderness

Inventory and resolve site-overuse problems within riparian areas.

3. Wildlife and Fish

- a. When openings in riparian zones are developed through management activities, the following minimum wildlife habitat considerations will be accommodated: (1) The size of contiguous streamside openings developed will be dependent on resident species' needs and wildlife goals for the area, (2) The juxtaposition of openings developed will be controlled to minimize simultaneous change on both sides of a riparian zone, and (3) intervening spaces between openings will be sufficient to provide cover and viable habitat for resident species needs, and wildlife goals for the area.

- b. Identify and protect nest sites and perch trees for bald eagles and osprey.
- c. Maintain cavity-dependent habitat to at least 70% of maximum levels as described in "Cavity Habitat Management Guidelines" (Appendix 16). The 70% applies even though the MA may require a lower percentage outside of the riparian area.
- d. Maintain fish habitat capable of supporting sport fisheries to at least 90% of current levels on a decadal basis.
- e. Develop fisheries inventories and stream surveys for all streams capable of supporting trout. Site-specific management plans may be necessary for selected high-priority fishery stream reaches.
- f. Assure that there are streamside timber stands to provide for log and debris recruitment necessary for sufficient pool development and organic energy (organic debris) into the aquatic ecosystem.
- g. Coordinate monitoring and stocking (fisheries) activities with the State of Montana.

4. Range

- a. Identify the riparian areas in each allotment that domestic livestock can use. Prevent livestock use of other than permitted segments of riparian areas.
- b. Locate all range improvements (grass seeding, fencing, salt blocks, etc.) to discourage or prevent livestock use of prohibited segments of riparian areas.

5. Timber

- a. Simultaneous openings resulting from timber harvest on both sides of a stream are not permitted, unless the results can be shown to be an enhancement for the riparian area.
- b. The rotation length for riparian areas will normally be longer than the rotation length for the MA itself. Harvest decisions for riparian areas will be based on site specific considerations of: old growth, cavity habitat, stream temperatures, wildlife cover, stream condition, log size for recruitment, stream-bank stability, soil type, reducing frequency of entries, visual requirements, etc.
- c. Dozer scarification and landings are not permitted in riparian areas unless the results can be shown to be an enhancement of the riparian area.
- d. Skid trails and landings in riparian areas will be revegetated.

- e. For riparian areas other than streams, (wet meadows, bogs, etc.) the cover requirements and operational limits will be determined prior to initiation of any activity that requires surface disturbance.
- f. Regeneration of cutover acres may include planting deciduous species.
- g. Generally, even-age management will be pursued to reduce entries. Uneven-age management is an option when site conditions dictate or the results can be shown to be an enhancement of the riparian area.
- h. Prescriptions must consider long-term management needs to avoid removal of only the high-value resource of the stand.
- i. Harvest activities on frozen ground or snow will be favored unless other methods will create less resource damage.
- j. Use harvest techniques such as complete-tree removal to minimize activity fuels.

6. Water

- a. Instream-flow water rights are presently being determined. Once these rights are determined, this Forest Plan will be reviewed to insure that all riparian standards are applicable.
- b. Conduct representative water quality monitoring during ground disturbing activities to insure State standards are being met.

7. Minerals, Oil, and Gas

- a. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
- b. Stipulate no surface occupancy for oil and gas leases.
- c. The sale and removal of common minerals will not be permitted unless the results can be shown to be an enhancement of the riparian area.

8. Lands

Special uses, rights-of-way, and cost-share roads are permitted and riparian area management objectives will be incorporated into all agreements and permits.

9. Facilities

- a. Roads which parallel streams will be located at a distance determined by sediment transport models, and outside the 100 year floodplain.
- b. Active construction projects will be completed or treated prior to expected peak runoff times to minimize sediment yield.
- c. When funds for road maintenance are limited, roads and drainage structures in riparian zones will be a top priority.
- d. Necessary streamcourse crossings will insure fish passage, non-erosive water velocities and channel stability, and insure erosion control on cuts, fills, and road surfaces.
- e. Eliminate or replace existing structures that are identified as fish barriers or sediment sources.
- f. Roads will be located to avoid key riparian habitats such as willows, bogs, and wet meadows unless there is no reasonable alternative. In any case as much screening, cover, and distance as possible will be retained.
- g. Road closures will be used to protect the riparian habitat and values.

10. Fire

The decisions and standards applicable to prescribed fire and wildfire are dependent on the MA in which the affected riparian area is found. The following standards are in addition to those of the MA and apply to all riparian areas.

- a. Prescribed fire will normally be used rather than mechanical treatment of activity fuels.
- b. Erosion control measures required to restore damage resulting from fire suppression activity will be undertaken as soon as practical to do so.
- c. Fire suppression tactics will emphasize minimizing disturbance.

11. Monitoring and Evaluation

Even though the Riparian Areas exist in all M.A's on the Forest, the following monitoring and evaluation requirements from Chapter IV apply:

Recreation	A-2, A-5, A-7
Wildlife	C-1 through C-10
Soil and Water	F-1, F-2, F-3
Minerals	G-1
Range	D-2
Facilities	L-1
Protection	P-1

KOOTENAI NATIONAL FOREST

FOREST PLAN

CHAPTER III - MANAGEMENT AREA DIRECTION

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III. MANAGEMENT AREA DIRECTION

The National Forest land within the Kootenai National Forest has been divided into 23 mapped and one unmapped Management Areas (MA's), each with different management goals, resource potential and limitations. The MA's are shown on the accompanying map which can be used for reference. The MA maps of record consist of a set of 2.64" = 1 mile maps on file at the Forest Supervisor's Office in Libby, Montana. The Riparian Areas are not all mapped at this time, but will be mapped as part of all planned resource activities (See the Standards for Riparian Areas in Chapter II).

Except for Congressionally established or special administrative boundaries, the MA boundaries are not firm lines and do not always follow easily identified topographic features such as major ridges, rivers, streams, roads, etc. The boundaries represent a transition from one set of opportunities and constraints to another with direction established for each. The boundaries are flexible to assure that the values identified are protected and to incorporate additional information gained from further on-the-ground reconnaissance and project level planning.

The Forest-wide management direction included in Chapter II of this plan applies to all MA's.

This chapter describes each MA and lists the goals, management standards, schedule of management practices, and monitoring requirements for each area.

The Management Areas are listed in the following order:

<u>Management Area</u>	<u>Page Number</u>
MA-2 Semi-primitive Non-motorized Recreation (Unsuitable Timberland)	III-2
MA-3 Semi-primitive Motorized Recreation (Unsuitable Timberland)	III-8
MA-5 Viewing Areas (Unsuitable Timberland)	III-13
MA-6 Developed Recreation Sites (Unsuitable Timberland)	III-17
MA-7 Existing Wilderness (Unsuitable Timberland)	III-21
MA-8 Recommended Wilderness (Unsuitable Timberland)	III-26
MA-9 Montana Wilderness Study Area, 10 Lakes (Unsuitable Timberland)	III-32
MA-10 Big-Game Winter Range (Unsuitable Timberland)	III-38
MA-11 Big-Game Winter Range (Suitable Timberland)	III-43
MA-12 Big-Game Summer Range (Suitable Timberland)	III-48
MA-13 Designated Old-Growth Timber (Unsuitable Timberland)	III-54
MA-14 Grizzly Habitat Management (Suitable Timberland)	III-58
MA-15 Timber Production (Suitable Timberland)	III-64
MA-16 Timber with Viewing (Suitable Timberland)	III-69
MA-17 Viewing with Timber (Suitable Timberland)	III-74
MA-18 Regeneration Problem Areas (Unsuitable Timberland)	III-79
MA-19 Steep Lands (Unsuitable Timberland)	III-83
MA-20 Administrative Sites (Unsuitable Timberland)	III-87
MA-21 Special Interest Areas (Unsuitable Timberland)	III-90
MA-23 Electric Transmission Corridor (Unsuitable Timberland)	III-113
MA-24 Low Productivity Areas (Unsuitable Timberland)	III-116
MA-29 Primitive Recreation (Unsuitable Timberland)	III-119
MA-30 Lake Koocanusa Drawdown Area (Unsuitable Timberland)	III-124

MANAGEMENT AREA 2

283,400 ACRES

A. DESCRIPTION

This MA is characterized by a natural-appearing environment offering roadless recreation opportunities. The areas, varying in size from 300 to over 22,000 acres, are located throughout the Forest and are generally associated with ridgetop experiences. Vegetation varies from full timber cover to open meadows. In some places existing roads may be found, but they will generally be of low standard. 87% of this MA is in grizzly situations 1 or 2 and the security offered on that affected habitat is significant to the eventual recovery of the species. Topography varies from steep slopes to gentle uplands.

B. GOALS

The goal of this MA is to provide for the protection and enhancement of areas for roadless recreation use and to provide for wildlife management where specific wildlife values are high. Within grizzly management situations 1 and 2 it is the goal of this MA to provide habitat that will contribute to the recovery of the grizzly bear.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this Management Area (MA).

Recreation

1. The Visual Quality Objective (VQO) is retention.
2. The Recreation Opportunity Spectrum (ROS) class is semi-primitive non-motorized. Some semi-primitive motorized and roaded natural recreation opportunities occur in the vicinity of the roads listed below. The following roads in MA-2 are currently open to some form of motorized recreational use, at least on a seasonal basis (some additional roads may be open periodically for other uses such as mineral access, etc.).

<u>ROAD NAME</u>	<u>ROAD NUMBER</u>	<u>APPROX. LENGTH</u>
Sutton Ridge	#494	0.5
Little North Fork-Gold Creek loop.	#751	0.5
Good Creek	#7183	0.3
Upper Bear Creek	#4784	2.0
Upper Leigh Creek	#4786	1.2
Upper Granite Creek (Double Mac Mine)	#618	0.3
Bramlet Creek	#2332	1.0
West Fisher	#6746	2.0
Snowshoe	#6213	2.0
Upper Sims Creek	#2232	0.8

3. Trails will normally be closed to all motorized vehicles.
4. The roads listed above may be used by snowmobiles unless conflicts with non-motorized uses such as cross-country skiing, winter range use by big game, or spring grizzly bear use occur. Cross-country use of snowmobiles will generally be allowed unless conflicts with seasonal grizzly use or denning areas occur.
5. Roads existing prior to the establishment of this MA may be left open to motorized use if access is necessary to an MA in which motorized use is permitted, and if the continued use of the road will not otherwise affect the goal of this MA. Groomed snowmobile trails are not permitted.

Wildlife and Fish

1. Wildlife habitat will generally be managed in a natural condition, but habitat enhancement may occur using prescribed fire. Specific enhancement projects are not scheduled but may be initiated after more detailed inventories are completed.
2. Any activity that conflicts with grizzly bear management in grizzly situation 1 will be modified or prohibited. Standards and guidelines as specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all management activities in grizzly bear situations.
3. Vegetative management for wildlife habitat enhancement will be compatible with recreation use except, habitat enhancement for grizzly bear recovery will take precedence over recreation use.
4. Any habitat enhancement activity must maintain or enhance old-growth timber and cavity-dependent species habitat.
5. Isolated enclaves of pure strain trout species will be identified and any management activity will be designed to maintain or enhance the population.

Range

1. Livestock grazing is not generally permitted except for recreational pack stock. Existing grazing permits for livestock will be continued.

Timber

1. This MA is unsuitable for timber production.
2. Timber harvest will not occur.

Soil, Water, and Air

1. If land disturbing activities occur, vegetation to protect watershed and wildlife values will be established. The soil and water conservation practices (FSH 2509.22) will guide implementation of all projects. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See riparian area standards in Chapter II.)Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions, if necessary, will be negotiated with the operator.
2. Surface occupancy for oil and gas purposes is generally not permitted. Existing roads may be used on a case-by-case basis. Seasonal constraints to minimize conflicts with grizzly bear will apply to geophysical activities.
3. The extraction of common minerals is generally not consistent with this MA.

Lands

1. No further Cost-Share Agreements.
2. Special uses, rights-of-way, and easements may be permitted on a case-by-case basis. This MA will not be considered as a timber tributary area in the calculation of shares for Cost-Share Agreements.
3. Facilities such as radios, microwaves, etc. which require frequent maintenance or occupancy will normally not be allowed. Existing facilities will be evaluated and moved if possible. If existing facilities can not be moved, a maintenance or occupancy schedule that does not conflict with grizzly bear seasons of use will be established. Existing facilities may be modified to fit the ROS class and the VQ0.

Facilities

1. Roads will not be constructed for surface land management purposes. Roads will be permitted for mineral activities where construction is justified on the basis of mineral showings or data, and where it is the next logical step in the development of the mineral resource. (This will apply whether the mineral is located within this MA or an adjacent MA.)
2. New trails may be constructed and existing trails may be reconstructed for recreation use, but must not conflict with grizzly bear recovery goals.
3. Trails will be maintained at level 1 or 2.
4. This MA is classified as a corridor avoidance area. See appendix 15.

FirePrescribed Fire

Planned Ignitions:

1. Acceptable as a means of fuels management and wildlife habitat enhancement. All prescribed fires must be consistent with cavity-habitat management, old-growth timber requirements, and applicable soil, air, and water quality standards.

Unplanned Ignitions:

1. May be used in this MA to perpetuate the natural ecological process.
2. The fire must involve this MA and/or adjacent ones for which the use of unplanned ignitions for prescribed fire has been approved.
3. The expected life cycle effects of the fire must not adversely affect the goals or standards of this or any other MA.
4. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" in Chapter II.)

Suppression Strategy:

Critical Fire Season:

Wildfires will normally be controlled. However, an analysis including evaluation of expected fire behavior, time of year, and location with respect to private land and adjacent MA's may lead to a contain or confine strategy.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or by the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence. Mechanized equipment generally will not be used. Use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

- | | |
|--------------------------------------|-------------|
| 1. Trail construction/reconstruction | 4.5 miles |
| 2. Fish habitat improvement | 7 acres |
| 3. T & E habitat improvement | 38 acres |
| 4. Fuel Treatment (wildlife burning) | 1,139 acres |

Projected - Second Decade - Average Annual

- | | |
|--------------------------------------|-------------|
| 1. Trail construction/reconstruction | 4.5 miles |
| 2. Fish habitat improvement | 6 acres |
| 3. T & E habitat improvement | 38 acres |
| 4. Fuel Treatment (wildlife burning) | 1,100 acres |

E. MONITORING AND EVALUATION REQUIREMENTS

1. The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-5, A-6, A-7
Wildlife and Fish	C-1 through C-10
Range	D-1, D-2
Timber	E-4
Minerals	G-1
Human & Comm Dev	H-2, H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 3

13,300 ACRES

A. DESCRIPTION

This MA consists of lands with a natural-appearing environment and a minimal number of adjacent or internal roads offering roaded recreation opportunities. The MA occurs primarily along the west and north edge of the Forest and in the northeast corner adjacent to Highway 93, and in isolated smaller parcels elsewhere. Most of the MA is in the upper elevations from 4,500' and up. About 9,000 acres or 63% of this MA are in grizzly situations 1 and 2. Timber productivity varies from nonproductive to medium productivity.

B. GOALS

The goal of this MA is to provide opportunities for dispersed recreation activities in a natural-appearing environment using trails and primitive roads for access. This MA will provide habitat for recovery of the grizzly bear on situations 1 and 2, and habitat for big-game species including: black bear, elk, moose, whitetail deer, mule deer, cougar, and others. The productive timberland will be reassigned to the suitable timber base when market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is maximum modification in areas of low viewing significance, modification in areas of moderate viewing significance, and partial retention in areas of high viewing significance.
2. The ROS class is predominantly semi-primitive motorized. Some semi-primitive non-motorized and some roaded-natural recreation opportunities also occur.
3. Roads and trails will normally be open to motorized vehicles except seasonal closures may occur on grizzly situations 1 and 2 to prevent grizzly/human conflicts.
4. Existing dispersed recreation sites will be maintained at a minimum level. A recreation management plan will be developed for any sites receiving intensive use.

Wildlife and Fish

1. Wildlife habitat will generally be managed in a natural condition, but habitat enhancement may occur using prescribed fire or timber harvest. Specific enhancement projects are 'not scheduled,' but may be planned after more detailed inventories are complete.
2. Any activity that conflicts with grizzly bear management on Situation 1 and 2 lands will include compensation. Standards and Guidelines specified in appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities in grizzly habitat.
3. Vegetative management for wildlife habitat enhancement will not conflict with recreation use except, habitat enhancement, necessary for recovery of the grizzly, will take precedence over recreation use.
4. Any activity such as timber salvage or wildlife habitat enhancement will insure that sufficient cavity dependent habitat is available in the rest of the area.
5. Existing old-growth timber and mature timber stands designated for future old growth will be maintained.
6. Road construction will avoid important wildlife habitat such as calving areas, bogs, wet meadows, riparian zones, denning areas, etc.
7. Isolated enclaves of pure-strain trout species will be identified and preserved.

Range

1. Livestock grazing for cows, and recreational pack stock is normally allowed in this MA.
2. If areas show signs of overuse, wildlife will be given preference for available forage, and livestock grazing permits will be revised or cancelled.
3. Fencing for domestic livestock control may be allowed to prevent overuse in an area, eliminate competition for forage, or reduce conflicts with grizzly management.
4. Range structures will be constructed and located to allow for safe ORV travel on roads and trails.

Timber

1. This MA is presently unsuitable for timber production.
2. Timber harvest may occur to meet the Management Goal, to minimize the spread of insects or disease to adjacent MA's, or for wildlife habitat enhancement except on areas of inventoried old-growth or where old-growth retention is needed. (Specific projects are not scheduled but may be after more detailed inventories are complete.)
3. Reassign the productive timberlands to the suitable timber base when market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit.

Soil, Water, and Air

1. If land disturbing activities occur, vegetation to protect watershed and wildlife values will be established. Soil and water conservation practices will guide implementation of all projects. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area guidance in Chapter II Section F)

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Surface occupancy for oil and gas leases will be permitted where compatible with the management of other resources.
3. The extraction of common minerals is generally not consistent with this MA. Existing roads may be used on a case-by-case basis.

Lands

Special uses, rights-of-way, easements, or cost-share agreements may be authorized on a case-by-case basis.

Facilities

1. Facilities (such as radio installations) which require frequent maintenance or occupancy will normally not be allowed. Existing facilities will be evaluated and moved if possible. If existing facilities can not be moved, a maintenance or occupancy schedule that does not conflict with grizzly seasons of use will be established. Existing facilities may be modified to fit the existing ROS class and the VQO.
2. No additional permanent roads will be permitted unless they are specified and required for a semi-primitive motorized recreation experience. (This includes roads utilized for aerial timber harvest if the productive timberlands are reassigned to the suitable timber base.) Roads will be permitted for mineral activities where construction is justified on the basis of mineral showings or data, and where it is the next logical step in the development of the mineral resource.
3. New roads will be low standard, primitive and designed to enhance the semi-primitive motorized recreation experience as much as possible.
4. Road closures will be accomplished using natural methods such as earthen barriers.
5. Open roads will be maintained at level 1, 2 or 3.
6. Trails will be maintained at level 1 or level 2.

7. For roadside seeding on open roads, eliminate any component (e.g. clover) which may attract grizzlies.
8. This MA is classified as a corridor avoidance area. (See appendix 15)

Fire

Prescribed Fire

Planned Ignitions:

1. Acceptable as a means of fuels management and wildlife habitat enhancement. All prescribed fires must be consistent with cavity-habitat management, old-growth requirements, VQO, and applicable soil, air, and water quality standards.

Unplanned Ignitions:

1. May be used in this MA to perpetuate the natural ecological process.
2. The fire must involve this MA and/or adjacent ones for which the use of unplanned ignitions for prescribed fire has been approved.
3. The expected life cycle effects of the fire must not adversely affect the goals or standards of this or any other MA.
4. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see Standards in Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will normally be controlled, but, an analysis including evaluation of expected fire behavior, time of year, and location with respect to private land and adjacent MA's may lead to a contain or confine strategy.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will attempt to minimize disturbance. Dozers may be used, but dozer fireline construction will avoid areas of important wildlife habitat such as meadows, bogs, and riparian zones.
2. On grizzly situations 1 and 2, suppression tactics will avoid human / grizzly conflicts and existing policy will be emphasized to leave no trash or bear attractants of any kind in the area. Fire camps will be located outside grizzly situations 1 and 2 whenever possible.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average Annual

- | | |
|--------------------------------------|-----------|
| 1. Trail construction/reconstruction | 0.2 miles |
| 2. Fish habitat improvement | 8 acres |
| 3. Fuel Treatment | 53 acres |

Projected - Second Decade - Average Annual

- | | |
|--------------------------------------|-----------|
| 1. Trail construction/reconstruction | 0.2 miles |
| 2. Fish habitat improvement | 9 acres |
| 3. Fuel Treatment | 50 acres |

E. MONITORING AND EVALUATION REQUIREMENTS

- 1: The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-2, A-3, A-5, A-6, A-7
Wildlife and Fish	C-1 through C-10
Range	D-1, D-2
Minerals	G-1
Timber	E-4
Facilities	L-1
Human & Community	
Development	H-2, H-3, H-4
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 5

21,260 ACRES

A. DESCRIPTION

This MA contains the often-viewed foreground and midground areas in highly sensitive viewsheds (High Viewing Significance). The MA is located along, or close to the major travel corridors (Highways 2, 37, 56 and 200 and Forest Development Road 228). It contains a variety of vegetative types including dense vegetation in moist habitats, open stands, and steep cliffs.

B. GOALS

Maintain or enhance the landscape to provide a pleasing view, provide forage for domestic livestock and big game, and provide old-growth timber and cavity habitat for dependent wildlife species. Reassign the productive timberland to the suitable timber base when market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is retention. Although not all of the MA has the appropriate configuration and productivity, management should attempt to achieve park like stands of large trees in the immediate foreground, and visual diversity characteristic of the vegetative type in the midground.
2. The ROS class is mixed and largely dependent upon proximity to the existing road systems. It includes roaded-natural, semi-primitive motorized, and semi-primitive non-motorized recreation opportunities.
3. Facilities are not usually appropriate in this MA. If an area requires facilities because of use pressure, the MA will be changed to MA #6.

Wildlife and Fish

1. Maintain snags for a viable population of cavity-dependent species.
2. Old-growth timber will be maintained unless it is so close to a major travel corridor that it is ineffective for wildlife security, or it is a safety hazard.
3. Wildlife habitat may be enhanced using the most cost effective technique, provided there is no long term degradation of the viewing resource.
4. Specific habitat enhancement projects are not scheduled but may be after more detailed inventories are complete.

Range

1. Domestic livestock grazing is allowed provided that:
 - a. The livestock can be prevented from entering or crossing the travel corridors.
 - b. There is sufficient forage for big game, especially if the area is used as big game winter range.
2. Fences will not be constructed for control of domestic livestock unless:
 - a. They can not be seen from the travel corridor.
 - b. They will not adversely affect wildlife.

Timber

1. This MA is presently unsuitable for timber production. Harvest is permitted to maintain or enhance the view, for wildlife habitat improvement, or to minimize the spread of insects or disease to adjacent MA's.
2. Reassign the productive timberland to the suitable timber base when market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit.
3. Any harvest operation, while not expressly limited, will usually resemble a shelterwood harvest with thorough slash cleanup in the foreground, underburning and precommercial thinning.
4. Key vista points may be identified. Vegetative screening may be removed from identified vista points.
5. After any harvest operation, vegetation will be established to protect the soil and provide a pleasing view.
6. Catastrophic events such as fire, windstorm, disease, or insects, may create situations where harvest is necessary to maintain the long-term VQO. In such cases a short-term reduction in the VQO is permitted.
7. Timber will not be harvested on areas of inventoried old-growth timber or where old-growth retention is needed.

Soil, Water, and Air

While few land disturbing activities are expected to occur, Soil and Water Conservation Practices will be followed to protect watershed values and enhance visual quality. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Surface occupancy for oil and gas leasing will be permitted where the retention VQO can be met. Seasonal constraints for wildlife protection may apply to geophysical activities.
3. Common minerals may be disposed of where the VQO can be fully met.

Lands

1. Acquire scenic easements on private land for key sites.
2. Special uses, rights-of-way, easements, or cost-share agreements may be authorized on a case-by-case basis.

Facilities

1. Provide for public use of roads to developed sites and logging roads that meet the retention VQO.
2. Maintain existing roads and access to developed sites at level 3 or better.
3. Existing trails will normally be maintained at level 2.
4. This MA is classified as a corridor avoidance area (See appendix 15).

FirePrescribed Fire

Planned Ignitions:

1. Acceptable as a means of fuel management or wildlife habitat management (in areas where wildlife habitat management is acceptable).
2. All prescribed fires must meet the retention VQO and meet all soil, air, and water quality standards.
3. All activity fuels will be treated to meet the retention VQO within one season in areas immediately adjacent to highways and in the immediate foreground.

Unplanned Ignitions:

Unplanned ignitions will not be used as prescribed fire in this MA.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" in Chapter II.) ;

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

Wildfire will normally be controlled, but, if an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or by the State of Montana.)

Tactics will emphasize the least possible disturbance. Dozers generally will not be used.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average Annual

1. Fuel Treatment 85 acres

Projected - Second Decade - Average Annual

None Projected

E. MONITORING AND EVALUATION REQUIREMENTS

1. The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and Fish	C-1 through C-9
Range	D-1, D-2
Timber	E-4
Minerals	G-1
Human & Community Dev	H-2, H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 6

3,570 ACRES

A. DESCRIPTION

This MA includes developed campgrounds, picnic areas, boat ramps, Turner Mt. Ski Area, and other developed recreation sites. The area is in numerous locations scattered across the Forest, and is usually associated with water features such as lakes, reservoirs, streams, etc.

B. GOALS

This MA will be managed to provide safe and sanitary developed recreation in a setting that is pleasant and visually attractive. Additional sites in this MA will be provided as demand increases.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The minimum VQO is partial retention in the foreground.
2. The ROS class is predominantly roaded-natural. Some rural and semi-primitive motorized settings may surround developed sites.
3. Existing sites that are unsuitable or unused will be phased out.
4. Locate and encourage concessionaires to manage existing recreation sites.
5. Trash disposal containers will be provided, except for designated "pack it in, pack it out" sites, and their use will be enforced for sanitation, aesthetics, and to prevent attracting animals to the site.

Wildlife and Fish

1. Provide displays and information to make site users more aware of and informed about the area wildlife.
2. New recreation sites will be located away from important wildlife habitat such as calving areas, meadows, winter range, etc. If the only available sites are on wildlife habitat, the recreation use season will be adjusted to avoid conflict with important wildlife use seasons.
3. New recreation sites will not be constructed in grizzly situations 1 or 2.
4. Cavity-dependent habitat will be maintained unless a hazard to recreationists exists.
5. Any stocking of high use fishing areas will be coordinated with Montana Department of Fish Wildlife and Parks.

Range

Domestic livestock grazing is generally not permitted.

Timber

1. This MA is unsuitable for timber production.
2. Salvage harvest may occur to remove trees infested by insects or disease, to remove hazard trees, or for other land clearing necessary for recreation purposes.
3. Reforestation will occur, not for timber production, but to protect the soil and water resources, or to enhance the visual quality.
4. Intensive insect or disease treatment, such as spraying individual trees, may occur to protect the appearance of sites in this MA.

Soil, Water and Air

Soil and Water Conservations Practices will be followed for any activity. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Sites not already withdrawn from mineral entry for locatable minerals will be considered for such withdrawal, following the criteria in Appendix 13.
2. Stipulate no surface occupancy for leasable minerals.
3. Removal of common minerals will not be permitted.

Lands

If demand occurs and the most suitable sites for development are on non-NFS lands, pursue opportunities for exchange, purchase, or donation; or encourage compatible development by the private sector.

Facilities

1. Roads within campgrounds will be maintained at a minimum of level 3.
2. This MA is classified as a corridor avoidance area. (See Appendix 15.)

Fire

Prescribed Fire

Planned Ignitions:

May be used for vegetative alteration, hazard reduction, and removal of any activity fuels. 100% of all activity fuels will be treated within the first season following the activity.

Unplanned Ignitions:

Unplanned ignitions will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see Standards, Chapter II)

Suppression Strategy:

Critical Fire Season:

All wildfire will be controlled.

Noncritical Fire Season:

1. Wildfires will normally be controlled.
2. If an analysis of the time of year and expected fire behavior disclose no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest land whether protected by the National Forest or by the State of Montana.)

1. Tactics will emphasize minimum disturbance of the site.
2. Dozers may be used to prevent damage to facilities, but rehabilitation of control lines will follow immediately. Rehabilitation may include grasses, shrubs, and trees. Grass mixtures should not contain clover which will attract bears.

D. SCHEDULE OF MANAGEMENT PRACTICES**Planned - First Decade - Average annual**

Development & Construction	0.3 sites
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Projected - Second Decade - Average annual

Development & Construction	0.2 sites
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E. MONITORING AND EVALUATION REQUIREMENTS

1. The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-4, A-7
Range	D-2
Minerals	G-1
Human and Comm Dev	H-1, H-3, H-4
Protection	P-1

The process outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 7

94,360 ACRES

A. DESCRIPTION

This MA is composed entirely of the Cabinet Mountains Wilderness Area and is located in the southwest-central portion of the Forest in both Lincoln and Sanders counties. This MA is located on, and administered by the Cabinet, Libby, and Troy Ranger Districts.

The Cabinet Mountains Wilderness Area is approximately 34 miles long and varies from 1/2 mile to 7 miles wide. Elevations range from 2,500' to 8,700' above sea level, and the vegetation is predominantly subalpine. Glaciation has produced spectacular features such as high craggy peaks, vertical cliffs, knife edge ridges, and many amphitheater-like basins. There are approximately 85 lakes with the largest (Leigh Lake) at 142 acres. The MA is almost entirely grizzly situation 1. There are significant mineral reserves such as copper and silver which have recently been discovered and valid rights have been established. Efforts to develop those minerals are underway. There have been no oil and gas leases issued, hence there are no valid existing lease rights. The Cabinet Mountain Wilderness is designated Class I by the 1977 Clean Air Act amendments. This designation provides special protection to air-quality related values, including visibility, from adverse effects of air pollutants.

B. GOALS

This MA will be managed in accordance with the Wilderness Act of 1964. Management will allow natural processes to continue, maintain the opportunity for solitude and primitive forms of recreation, provide habitat contributing to the recovery of the grizzly bear, and provide natural habitat for viable populations of all other species of wildlife which historically have occupied the area.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA. A Management Action Plan for this area is included in Appendix 23.

Recreation

1. The VQO is preservation.
2. The ROS class is predominantly primitive.
3. Roadless non-motorized forms of recreation (hiking and horseback riding) will be accommodated and managed.
4. Overused sites will be managed to prevent further deterioration and improve site condition where possible.
5. "No trace" use of the wilderness will be emphasized.
6. Reduce the potential for grizzly/human conflicts with signs advising users of the presence of grizzlies, educational signs and brochures concerning proper camping techniques, and enforcement of food and trash disposal.

Wilderness

1. The Cabinet Mountain Wilderness Action Plan will be used to identify indicators, standards, and processes for site specific management of this wilderness area. (See Appendix 23.)
2. Permanent facilities for commercial outfitters and guides will not be permitted. Some minor improvements such as hitching racks may be approved on a case-by-case basis.
3. Wilderness rangers will be provided.
4. Wilderness management needs will be reviewed and updated about every ten years in conjunction with Forest planning updates.

Wildlife and Fish

1. Habitat enhancement projects are not permitted in this MA. Prescribed fire, unplanned ignition, may, however, enhance some habitat as part of the natural ecological process.
2. Some lakes have historically been stocked with fish. The program will be permitted to continue but may be cancelled if sites adjacent to stocked lakes are overused.
3. Studies of the grizzly bears have occurred and will continue, including trapping, and installation of radio collars on selected individuals. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities.
4. Isolated enclaves of pure strain trout species will be identified and preserved.

Insects and Disease

1. Insects and disease occurrences within the wilderness boundary will be allowed to run its natural course.

Range

1. This MA has no existing allotments for domestic livestock grazing, and none are permitted.
2. Recreational pack stock is permitted in this MA, but grazing will not be allowed in most popular and heavily used sites.

Timber

1. This MA is unsuitable for timber production.
2. Timber harvest will not occur.

Soil, Water and Air

1. All site rehabilitation projects will be done in a manner that protects wilderness values, using only native species for revegetation.
2. The standards for protecting air quality will be identified when reviewing notice of a Prevention of Significant Deterioration (PSD) action which may impact the wilderness.
3. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).Minerals and Geology

1. Valid mineral rights have been recognized within the Cabinet Mountain Wilderness and these rights will be managed in accordance with the Wilderness Act and other applicable laws and regulations.
2. Extraction of common minerals will not be permitted.
3. Oil and gas leasing will not be permitted.

Lands

1. No rights-of-way, easements or cost-share agreements will be permitted.

Facilities

1. No road construction is permitted.
2. Trails may be reconstructed or relocated if resource damage is occurring.
3. This MA is classified as a corridor exclusion area. (See Appendix 15.)

FirePrescribed Fire

Planned Ignitions:

As a general management practice planned ignition, prescribed fire will not be used in this MA. Should it become necessary to consider the use of prescribed fire from planned ignitions in this MA, Forest Service Manual 2324.22 provides the necessary direction.

Unplanned Ignitions:

1. May be used in this MA to perpetuate the natural ecological process.
2. The fire must involve only this MA and/or adjacent ones for which the use of unplanned ignitions for prescribed fire has been approved.
3. The expected life cycle effects of the fire must not adversely affect the goals or standards of this or any other MA.
4. A decision flow chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will normally be controlled, however, an analysis including evaluation of expected fire behavior, time of year, and location with respect to private land and adjacent MA's may lead to a contain or confine strategy.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective than control, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. Dozers will not be used.
3. Use of mechanized equipment, excepting dozers, requires Forest Supervisor approval.
4. Suppression tactics will avoid human/grizzly conflicts and existing policy will be emphasized to leave no trash or other bear attractants of any kind in the area.
5. Rehabilitation (return to natural condition) of all campsites, control lines, and other evidence of human presence will occur as soon as it is safe to do so, but always within one season after the fire occurs.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

- | | |
|------------------------------------|-----------|
| 1. Trail relocation/reconstruction | 1.5 miles |
|------------------------------------|-----------|

Projected - Second Decade - Average annual

- | | |
|------------------------------------|-----------|
| 1. Trail relocation/reconstruction | 1.5 miles |
|------------------------------------|-----------|

E. MONITORING AND EVALUATION REQUIREMENTS

1. The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-7
Wildlife and Fish	C-9
Range	D-2
Minerals	G-1
Human and Comm. Dev.	H-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 8

78,500 Acres

A. DESCRIPTION

This MA includes the following areas recommended by the Kootenai National Forest for Congressional designation as Wilderness:

1. Scotchman Peaks Recommended Wilderness

36,200 acres in the Southeast portion of the Forest. There are, in addition, 22,000 acres on the Idaho Panhandle National Forest which join the Kootenai portion of the Scotchman area and are also recommended for Wilderness designation. The Kootenai portion lies in Lincoln and Sanders counties in Montana with a small area in Bonner county, Idaho. Elevations range from approximately 2,400' to nearly 7,000' above sea level. Vegetation is predominantly sub-alpine with pockets of pine and fir in the lower elevations. Little Spar is the only lake in the area. There has been recent interest in the mineral potential and a large silver mine is operating just northeast of the proposed boundary. The entire area is in grizzly situations 1 and 2, and the Scotchman area is considered to be part of the Cabinet-Yaak Grizzly Bear Ecosystem.

2. Cabinet Additions

35,500 acres consisting of several parcels along the West and Northeast sides of the existing Cabinet Mountains Wilderness area. The proposed recommended additions lie in Lincoln and Sanders counties. The vegetation is principally sub-alpine and medium productivity fir forest on the west side and medium productivity fir with inclusions of highly productive pine and fir forest on the Northeast side. The entire area is in grizzly situations 1 and 2 as part of the Cabinet-Yaak Grizzly Bear Ecosystem. There have been recent mineral discoveries along the west central and southwest edge of the Cabinet Mountain Wilderness Area, and a feasibility analysis for two proposed mines near Chicago Peak are presently being done. The exact areas and amount of the mineral reserves is unknown but assumed to be significant.

3. Ten Lakes Contiguous Area

6,800 acres in the Northeast corner of the Forest along the periphery of the Ten Lakes Montana Wilderness Study Act Area (MWSA). See the descriptions of the MWSA under MA-9, below. This area is outside of the MWSA and is not covered by that legislation, thus it is described as MA-8. MA-9 is a special area directly related to the MWSA.

B. GOALS

Retain the wilderness characteristics and values, allow natural ecological processes to continue, maintain the opportunity for primitive forms of recreation and provide habitat which will contribute to the recovery of the grizzly bear.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is preservation.
2. The ROS class is predominantly primitive. Some roads adjacent to proposed boundaries create a small amount of semi-primitive non-motorized and semi-primitive motorized recreation opportunities.
3. Roadless non-motorized forms of recreation (horseback riding and hiking) will be accommodated and managed.
4. Snowmobile use is presently permitted in portions of the Ten Lakes Contiguous Area. That use may continue unless it is determined to conflict with grizzly management or other wildlife standards. It is assumed that snowmobile use will be prohibited on all areas which are designated as Wilderness by Congress. No motorized use is permitted in the remainder of this MA.
5. Overused sites will be monitored, and if resource damage occurs the sites will be restricted or closed and rehabilitated.
6. Wilderness rangers will not be provided but signs and brochures will be made available for recreationists instructing them on "no trace" camping techniques, and "pack it in, pack it out" hiking.
7. Signs and informational brochures will be made available advising users of the presence of grizzlies, and techniques of food storage and disposal to prevent conflict with the bears.

Wilderness

1. Any portion of this MA, or lands not presently in this MA that become Congressionally designated wilderness will be placed in MA-7.
2. A Wilderness Action Plan will be prepared for any area designated wilderness.
3. Permanent facilities for commercial outfitters and guides will not be permitted.

Wildlife and Fish

1. Habitat enhancement projects using prescribed fire, both planned and unplanned ignition, may occur, especially on areas of winter range.
2. Areas of mature timber and old growth are considered to be part of the old growth habitat on the Forest. Before using prescribed fire in an old growth area the amount of old growth will be determined for the major drainage affected, and not allowed to fall below the designated minimum (usually 10%).
3. Stocking of lakes with indigenous fish is permitted except the program may be cancelled for selected lakes if sites adjacent to those lakes become overused.
4. Isolated enclaves of pure strain trout species will be identified and preserved.

Range

1. There are no existing allotments for grazing domestic livestock and none are permitted.
2. Recreational pack stock is permitted to graze in this MA. If popular areas are overused or resource damage occurs the grazing of pack stock will be discontinued on those sites.

Timber

1. This MA is not suitable for timber production.
2. Timber harvest will not occur.

Soil, Water, and Air

1. All site rehabilitation projects will be done in a manner that protects wilderness values, using only native species for revegetation.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. No mineral leases will be issued.
3. Extraction of common minerals will not be permitted.

Lands

1. No rights-of-way, easements, or cost-share agreements are permitted.

Facilities

1. No road construction is permitted.
2. New trails may be constructed except when in conflict with grizzly situations 1 and 2.
3. Trails will be maintained at level 1 or 2.
4. This MA is classified as a corridor exclusion area. (See Appendix 15.)

FirePrescribed Fire

Planned Ignitions:

Acceptable as a means of wildlife habitat enhancement. All prescribed fires must be consistent with cavity habitat management, old growth requirements, and applicable soil, air, VQO and water quality standards.

Unplanned Ignitions:

1. May be used in this MA to perpetuate the natural ecological process, provide habitat diversity for wildlife and prevent a buildup of fuels which could lead to a catastrophic fire in the future.
2. Fire must involve only this MA and/or adjacent ones for which the use of unplanned ignition for prescribed fire has been approved.
3. The expected life cycle effects of the fire must not adversely affect the goals or standards of this or any other MA.
4. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana, see "Standards" Chapter II).

Suppression Strategy:

Critical Fire Season:

All wildfires will normally be controlled, but, an analysis including evaluation of expected fire behavior, time of year, and location with respect to private land and adjacent MA's may lead to a contain or confine strategy.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. Use of any mechanized equipment, including the use of dozers requires Forest Supervisor approval.
3. Suppression tactics will avoid human/grizzly conflicts, and existing policy will be emphasized to leave no trash or other bear attractants of any kind in the area.
4. Rehabilitation (return to a near natural condition) of all campsites, control lines and other evidence of human presence will occur as soon as it is safe to do so, and no longer than one season after the fire occurs.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

- | | |
|--------------------------------------|-----------|
| 1. Trail construction/reconstruction | .9 miles |
| 2. Wildlife habitat enhancement | 140 acres |

Projected - Second Decade - Average annual

- | | |
|--------------------------------------|-----------|
| 1. Trail construction/reconstruction | .9 miles |
| 2. Wildlife habitat enhancement | 140 acres |

E. MONITORING AND EVALUATION REQUIREMENTS

1. The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-3, A-5, A-6, A-7
Wildlife and Fish	C-1 through C-10
Range	D-2
Timber	E-4
Minerals	G-1
Human and Comm. Dev.	H-1, H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 9

34,200 Acres

A. DESCRIPTION

NOTE: The Ten Lakes Recommended Wilderness Area involves 7,000 acres outside of the Montana Wilderness Study Act Area (a portion of MA-8) and 26,000 acres inside the Study Area (a portion of MA-9) for a total of 33,000 acres. The entire area of MA-9 (34,200 acres) must be managed as described below in accordance with provisions of the Montana Wilderness Study Act even though all of the area is not recommended for Wilderness designation.

This entire area lies in Lincoln County. Elevations range from approximately 4000' to nearly 8000'. There are several small lakes in the area, many of which are popular for fishing. The size and configuration of the area is such that many people hike in and out the same day. The vegetation is sub-alpine with a few spruce basins scattered over the area. The west side is pine and fir and is high quality winter range for elk and deer. Recent discovery of caribou sign in the Ten Lakes area indicates a few animals may be present at least intermittently, however, no resident caribou population exists. The species is listed as sensitive on the Kootenai national Forest. The entire area is grizzly situation 1, and is in the Whitefish Range of the Northern Continental Divide Grizzly Bear Ecosystem. There has been some mineral activity in the past and a low level of exploration activity continues. The potential for mineral discoveries is low to moderate over most of the area. There has been interest in the oil and gas potential since the area lies within the Overthrust Belt. There are no active exploratory operations presently occurring.

B. GOALS

Retain the wilderness characteristics and values, allow natural ecological processes to continue, maintain the opportunity for primitive forms of recreation, and provide habitat which will contribute to the recovery of the grizzly bear.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is preservation.
2. The ROS class is predominantly primitive. Some roads adjacent to proposed boundaries create a small amount of semi-primitive non-motorized and semi-primitive motorized recreation opportunities.
3. Roadless non-motorized forms of recreation (horseback riding and hiking) will be accommodated and managed.
4. Snowmobile use is presently permitted in this MA. That use may continue unless it is determined to conflict with grizzly management or other wildlife standards. It is assumed that if any part of this MA becomes Congressionally designated Wilderness, snowmobile use will no longer be allowed.
5. Overused sites will be monitored, and if resource damage occurs the sites will be restricted or closed and rehabilitated.
6. Wilderness rangers will not be provided but signs and brochures will be made available for recreationists instructing them on "no trace" camping techniques, and "pack it in, pack it out" hiking.
7. Signs and informational brochures will also be made available advising users of the presence of grizzlies, and techniques of food storage and disposal to prevent conflict with the bears.

Wilderness

1. A Final Report and Proposal for the Ten Lakes area is in the process of being submitted to Congress. The separate report is required because Ten Lakes was designated a Montana Wilderness Study Area.
2. Any portion of this MA, or lands not presently in this MA that become Congressionally designated wilderness will be placed in MA-7.
3. A Wilderness management plan will be prepared for any area designated wilderness.
4. Permanent facilities for commercial outfitters and guides will not be permitted.
5. The cabin at Wolverine Lake will be retained. If the area is designated wilderness, the eventual disposition of the cabin will be determined by a site specific wilderness management plan.

Wildlife and Fish

1. Habitat enhancement projects using prescribed fire, both planned and unplanned ignition, may occur, especially on areas of winter range.
2. Areas of mature timber and old growth are considered to be part of the old growth habitat on the Forest. Before using prescribed fire in an old growth area the amount of old growth will be determined for the major drainage affected, and not allowed to fall below the designated minimum (usually 10%).
3. Stocking of lakes with indigenous fish is permitted except the program may be cancelled for selected lakes if sites adjacent to those lakes become overused.
4. Isolated enclaves of pure strain trout species will be identified and preserved.

Range

1. There are no existing allotments for grazing domestic livestock and none are permitted.
2. Recreational pack stock is permitted to graze in this MA. If popular areas are overused or resource damage occurs the grazing of pack stock will be discontinued on those sites.

Timber

1. This MA is not suitable for timber production.
2. Timber harvest will not occur.

Soil, Water, and Air

1. All site rehabilitation projects will be done in a manner that protects wilderness values, using only native species for revegetation.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. No mineral leases will be issued.
3. Extraction of common minerals will not be permitted.

Lands

1. No rights-of-way, easements, or cost-share agreements are permitted.

Facilities

1. No road construction is permitted.
2. New trails may be constructed except when in conflict with grizzly habitat needs.
3. Trails will be maintained at level 1 or 2.
4. This MA is classified as a corridor exclusion area. (See Appendix 15.)

FirePrescribed Fire

Planned Ignitions:

Acceptable as a means of wildlife habitat enhancement. All prescribed fires must be consistent with cavity habitat management, old growth requirements, and applicable soil, air, VQO and water quality standards.

Unplanned Ignitions:

1. May be used in this MA to perpetuate the natural ecological process, provide habitat diversity for wildlife and prevent a buildup of fuels which could lead to a catastrophic fire in the future.
2. Fire must involve only this MA and/or adjacent ones for which the use of unplanned ignition for prescribed fire has been approved.
3. The expected life cycle effects of the fire must not adversely affect the goals or standards of this or any other MA.
4. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana, see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will normally be controlled, but, an analysis including evaluation of expected fire behavior, time of year, and location with respect to private land and adjacent MA's may lead to a contain or confine strategy.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. Use of any mechanized equipment, including the use of dozers requires Forest Supervisor approval.
3. Suppression tactics will avoid human/grizzly conflicts, and existing policy will be emphasized to leave no trash or other bear attractants of any kind in the area.
4. Rehabilitation (return to a near natural condition) of all campsites, control lines and other evidence of human presence will occur as soon as it is safe to do so, and no longer than one season after the fire occurs.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

None Planned.

Projected - Second Decade - Average annual

None Projected.

MA-9

E. MONITORING AND EVALUATION REQUIREMENTS

The monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-3, A-5, A-6, A-7
Wildlife and Fish	C-1 through C-10
Range	D-2
Timber	E-4
Minerals	G-1
Human and Comm. Dev.	H-1, H-3, H-4
Facilities	L-1
Protection	P-1

MANAGEMENT AREA 10

112,010 ACRES

A. DESCRIPTION

This MA is used by various species of big game for winter habitat (usually between December 1 and April 30). It is characterized by less than average depth and duration of snow than most other MA's, and spring foliage develops quicker. The MA is usually below 4500' and mostly on southeast, south, southwest, and west aspects. Most portions of this MA are steep, and of low timber productivity. The MA is located primarily along the major river valleys of the Kootenai, Clark Fork, and along Lake Koocanusa. There are also areas along side drainages of the Yaak and Tobacco Rivers. Most of the MA is visible from major travel corridors. Almost half of the MA or 52,900 acres are in grizzly situation 1 or 2.

B. GOALS

Maintain or enhance the habitat effectiveness for winter use by big-game species including elk, moose, sheep, goats, whitetail deer, and mule deer. Maintain or enhance the viewing resource in areas visible from major travel corridors.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. Motorized access, including snowmobiles, is generally not permitted during important wintering periods (Usually December 1 through April 30). However, some roads through this MA have been traditionally used as snowmobile routes to higher elevations. These routes may remain open unless it is determined that continued snowmobile activity limits use of the area by big game. If a conflict with big-game winter-use develops, the road will be closed to all motorized use.
2. The ROS class is predominantly roaded-natural and semi-primitive motorized. Some small areas of semi-primitive non-motorized recreation occur.
3. The VQO is maximum modification in areas of low viewing significance, modification in areas of moderate viewing significance, and partial retention in areas of high viewing significance.

Wildlife and Fish

1. The following cover forage ratios are recommended. Modifications based on site-specific attributes may occur:

elk and mule deer	30/70	
whitetail deer	70/30	
moose	50/50	
sheep and goats		maintain thermal cover adjacent to wintering areas.

2. Old growth stands will be perpetuated as part of the cover requirements. Type conversions for forage will avoid converting old growth stands.
3. Existing cavity habitat will be retained.
4. Prescribed fire will normally be used for habitat maintenance or enhancement in this MA.
5. Any activity (salvage harvest, fuel treatment, etc) will be conducted so as not to interfere with wildlife movement patterns.
6. Standards and guidelines as specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied in all management activities on grizzly habitat.

Range

1. Grazing of domestic livestock is permitted unless there is insufficient forage for wildlife. If it is determined that all available forage is required for wildlife, livestock grazing will not be permitted.
2. Fencing may be constructed to control livestock unless it interferes with the natural movement patterns of wildlife.

Timber

1. This MA is unsuitable for timber production.
2. Salvage harvest may occur to prevent the spread of insects or disease to adjacent MA's.
3. Harvest may occur for wildlife habitat maintenance or enhancement.
4. Harvest will not occur on areas of inventoried old-growth timber or where old-growth retention is needed.

Soil, Water, and Air

1. Soil and Water Conservation Standards will guide implementation of all projects when land disturbing activities occur.
2. Emphasis will be given to establishing vegetation as quickly as possible to protect watershed values and enhance wildlife habitat.
3. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Seasonal restrictions will be stipulated for oil and gas leases and geophysical activities.
3. Common materials may be disposed of provided all other resource standards are met.

Lands

Special-uses, rights-of-way, cost-share agreements and easements may be permitted, but will include provisions for scheduling to prevent conflict during periods of wildlife use.

Facilities

1. Local roads and collectors will normally be seasonally restricted during periods of winter wildlife use. (December 1 through April 30)
2. When open, roads will be maintained at level 2.
3. This MA is classified as a corridor avoidance area on grizzly situations 1 and 2. Corridors may usually be located on the remainder (See Appendix 15).

Fire

Prescribed Fire

Planned Ignitions:

Planned ignitions are acceptable in this MA. Planned ignitions will be used to maintain or enhance wildlife habitat and as the primary tool for fuels management.

Unplanned Ignitions:

1. Will not be used in this MA unless: (a) the fire primarily involves an adjacent MA for which unplanned ignitions approved for use as prescribed fire are a general management standard, (b) the expected life cycle effects of the fire must not adversely affect the goals or standards of this, or any other MA and, (c) the fire start occurs during the non-critical fire season, or (d) they occur in an area covered by an approved burn plan for a planned ignition and will meet all provisions of that plan.
2. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Suppression tactics are limited only by the standards for this MA and by the Management Standards for the Forest (such as soil, water, riparian etc). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Wildlife habitat enhancement	4,200 acres
2. Fish habitat improvement	2 acres
3. T & E habitat improvement	37 acres
4. Fuel Treatment	450 acres
5. Timber Harvest	6 MMBF

Projected - Second Decade - Average annual

1. Wildlife habitat enhancement	4,200 acres
2. Fish habitat improvement	3 acres
3. T & E habitat improvement	37 acres
4. Fuel Treatment	470 acres

E. MONITORING AND EVALUATION REQUIREMENTS

The monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and Fish	C-1 through C-9
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 11

229,450 ACRES

A. DESCRIPTION

This MA occurs on lands used by most species of big game for winter range. It is found at lower elevations in most major drainages and the topography ranges from steep to moderate and rolling topography. Some parcels of this MA are visible from major travel corridors, and there are 46,000 acres of grizzly situations 1 and 2. Timber productivity is moderate to high.

B. GOALS

The goal of this MA is maintaining or enhancing the winter-range habitat effectiveness for big-game species (including elk, moose, sheep, goats, whitetail deer, and mule deer) while also producing a programmed yield of timber, and maintaining the viewing resource in areas of high visual significance.

C. STANDARDS

The forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. Motorized access is generally not permitted during important wintering periods (Usually December 1 through April 30). However, some roads through this MA have been traditionally used as snowmobile routes to higher elevations. These routes may remain open unless it is determined that continued snowmobile activity limits use of the area by big game. If a conflict with big game winter use develops, the road will be closed to all motorized use.
2. The ROS class varies throughout the MA from semi-primitive non-motorized to roaded-natural.
3. The VQO is maximum modification in areas of low visual significance, modification in areas of moderate visual significance, and partial retention in areas of high visual significance, unless infeasible when attempting to meet the goals of the Management Area.

Wildlife and Fish

1. The following cover/forage ratios are recommended. Modifications based on site specific attributes may occur:

elk and mule deer	30/70
whitetail deer	70/30
moose	50/50
sheep and goats	maintain thermal cover adjacent to wintering areas.
2. Cavity habitat will be managed to at least 40% of maximum levels as described in "Cavity Habitat Management Guidelines" (Appendix 16)
3. Prescribed fire will normally be used for habitat maintenance or enhancement.
4. Any activity (e.g. timber harvest) will be conducted so as not to interfere with animal movement patterns.
5. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities in grizzly habitat.
6. Key habitat components (wallows, wet meadows, bogs, etc.) will be avoided when constructing roads. As they are identified those key components will be mapped and managed as riparian areas.

Range

1. Grazing of domestic livestock is permitted unless there is insufficient forage for wildlife. If it is determined that all the available forage is required for wildlife then livestock grazing will not be permitted.
2. Fencing may be constructed to control livestock unless it interferes with the natural movement patterns of wildlife.
3. Grazing may be restricted in areas where concentrated use would affect the timber goals of this MA (e.g. new plantations).

Timber

1. This MA is suitable for timber production but there are minor inclusions of winter range which are unsuitable for timber production. Timber harvest will be used to create and maintain optimum cover/forage ratios by cycling cutting units through seral stages (grass-forbs-saplings-poles-mature trees).
2. The timing (season) of timber operations, including road construction, will be coordinated with big game requirements to minimize conflict.
3. Favor broadcast burning for site preparation.
4. When planting is required, favor Douglas fir and ponderosa pine.
5. Precommercial and commercial thinning may occur to achieve proper stocking for timber production where there is an economic advantage in this level of stocking control.
6. In thinning and harvest areas, movement corridors will be maintained for wildlife.
7. Proper cover/forage ratios will be achieved by adjusting rotation length for timber, if necessary.

8. Maximize edge effect within economical timber harvest constraints, by shaping timber harvest areas. When the edge length is maximized the shape becomes more important than the size of the units, but generally unit sizes should not exceed:
 - mule deer and elk - 40 acres
 - whitetail deer and moose - 20 acres
9. The regeneration period may be lengthened to create or maintain forage areas and proper cover/forage ratios.

Soil, Water, and Air

1. Soil and Water Conservation Standards will guide implementation and mitigation of all land disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Seasonal restrictions will be stipulated for oil and gas leases and geophysical activities.
3. Common minerals may be disposed of when the standards for other resources can be met.

Lands

1. Special uses, rights-of-way, cost-share agreements and easements may be permitted but will include provisions for scheduling to prevent conflict during periods of wildlife use.

Facilities

1. Roads may be constructed for timber harvest.
2. Roads will normally be closed during periods of big game winter use (December 1 through April 30).
3. Roads will be maintained at level 2 or closed (level 1).
4. Temporary roads will be closed, properly drained, and revegetated.
5. This MA is classified as a corridor avoidance area on grizzly situations 1 and 2. (See Appendix 15).

Fire

MA-11

Prescribed Fire

Planned Ignitions:

Planned ignitions are acceptable in this MA. Planned ignitions will be used to maintain or enhance wildlife habitat and as the primary tool for fuels management.

Unplanned Ignitions:

1. Will not be used in this MA unless: (a) the fire primarily involves an adjacent MA for which unplanned ignitions approved for use as prescribed fire are a general management standard, (b) the expected life cycle effects of the fire must not adversely affect the goals or standards of this, or any other MA and, (c) the fire start occurs during the non-critical fire season, or (d) they occur in an area covered by an approved burn plan for a planned ignition and will meet all the provisions of that plan.
2. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest land protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

1. If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain strategy will be used.
2. Unplanned ignitions in areas covered by an approved burn plan are acceptable provided all provisions of the plan are met.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Suppression tactics are limited only by the standards for this MA and the management standards for the Forest (such as soil, water, riparian, etc.). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Wildlife Habitat Improvement	560 acres
2. Fish Habitat Improvement	16 acres
3. Regeneration harvest	6 MMBF on 690 acres*
4. Planting	185 acres
5. Natural regeneration	430 acres
6. Site preparation	615 acres
7. Precommercial thinning & release	600 acres
8. Soil Inventory	690 acres
9. Fuel Treatment	410 acres
10. Road Construction	43 miles

* Includes non-interchangeable component.

Projected - Second Decade - Average annual

1. Wildlife Habitat Improvement	560 acres
2. Fish Habitat Improvement	16 acres
3. Regeneration harvest	6 MMBF on 730 acres
4. Planting	200 acres
5. Natural regeneration	460 acres
6. Site preparation	660 acres
7. Precommercial thinning	612 acres
8. Soil Inventory	730 acres
9. Fuel Treatment	430 acres
10. Road Construction	44 miles

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and fish	C-1 through C-9, F-1 through F-4
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1, L-2
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 12

444,530 ACRES

A. DESCRIPTION

This MA is the largest of all the MA's on the Forest and constitutes 20% of the Forest and 35% of the suitable timberland. It is located generally at, or above elevations of 4,000', and contains inclusions of moist or wet habitat types. Most species of big game use this MA during the period from late spring through late fall. The MA is characterized by suitable timber producing sites, and moderate to rolling topography. There are few oversteepened slopes. 179,000 acres are in grizzly situations 1 and 2 in the Cabinet Yaak Grizzly Bear Ecosystem, and the Whitefish Range. Portions of this MA are found over most of the Forest.

B. GOALS

The goal of this MA is to maintain or enhance nonwinter big-game habitat (i.e. summer/fall) and produce a programmed yield of timber. The major species include black bear, grizzly bear, elk, moose, whitetail deer, and mule deer.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. ORV use will be regulated, including permanent or seasonal use restrictions where ORV use conflicts with big game.
2. The VQO is maximum modification in areas of low visual significance, modification in areas of moderate visual significance, and partial retention in areas of high visual significance, unless infeasible when attempting to meet the goals of the Management Area.
3. The ROS class is predominantly roaded-natural with some semi-primitive motorized and rural opportunities.

Wildlife and Fish

1. Manage to provide habitat diversity including cover and forage areas in a ratio appropriate for the species being considered (see list of species in MA goals). Results of the Montana Elk Logging Study and related guidelines are incorporated in and are considered as additional direction for this MA.
2. Developments or uses which increase the potential for conflicts with grizzlies on situation 1 or 2 habitat will be compensated for. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.

3. Cavity habitat will be managed to at least 40% of maximum levels as described in "Cavity Habitat Management Guidelines" (Appendix 16).
5. Coordinate proposed programs in this MA with the State of Montana Department of Fish Wildlife and Parks on at least an annual basis.
6. Provide direct habitat improvement as needed. Projects include pot-hole construction, prescribed fire, special plantings of hardwood in riparian areas, and seeding of road cuts and fills with grasses and legumes.
7. Maximize edge effect within economical timber harvest constraints, by shaping timber harvest units and maintain movement corridors of at least two sight distances between openings. When the edge is maximized, the shape becomes more important than the size of the units, but generally the unit sizes should not exceed:
 - elk and mule deer - 40 acres or less.
 - moose and whitetail deer - 20 acres.
8. Key habitat components (wallows, wet meadows, bogs, etc.) will be avoided when constructing roads. As they are identified those key components will be mapped and managed as riparian areas.

Range

1. Grazing of domestic livestock is permitted unless it is detrimental to the big game or timber goals of this MA.
2. Fencing may be constructed to control livestock provided there is no conflict with the big game goals of this MA.

Timber

1. This MA is suitable for timber production.
2. Timber harvest will be coordinated with big-game requirements. Emphasize natural regeneration and activity scheduling which reduces the frequency of entries. New units will not be harvested until adjacent units provide suitable hiding cover
3. Favor even-age harvest systems.
4. Precommercial thinning is expected in this MA outside of Grizzly Situation I and II lands to meet the programmed timber harvest goals. Precommercial thinning may occur within Grizzly Situation I and II lands where it does not conflict with grizzly management goals.
5. Provide for full stocking levels after timber harvest for diversity, big-game cover needs, and timber production.
6. On slopes over 30% favor broadcast burning over the use of mechanical means of site preparation.
7. Catastrophic events such as fire, windstorm, disease, or insects, especially the periodic infestations of the mountain pine beetle in mature lodgepole pine, may create situations where harvest is desirable. In such cases a short-term reduction in the VQO is permitted.

Soil, Water, and Air

1. Soil and Water Conservation Practices will guide implementation and mitigation of all land-disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Seasonal restrictions will be stipulated for oil and gas leases and geophysical activities.
3. Common minerals may be disposed of where compatible with management of other resources.

Human and Community Development

Activity camps or developments will not be located where they are in conflict with the big-game goals of this MA unless there is no reasonable alternative.

Lands

1. Seek out conservation easements on adjacent private lands where grizzly habitat components have been identified.
2. Give priority to acquiring grizzly habitat components in the land adjustment program.

Facilities

1. Facilities which require frequent maintenance or occupancy will normally not be allowed. Existing facilities will be evaluated and moved if possible. If existing facilities cannot be moved, a maintenance or occupancy schedule that does not conflict with grizzly seasons of use will be established.
2. Road densities will be the minimum necessary to accomplish the timber harvest goals of this MA, and construction to minimum standards will be emphasized.
3. Roads open to public use will not exceed an average density of 3/4 mile per square mile within the contiguous MA.
4. Local roads will normally be closed (Level I). When local roads are open they will be maintained at Level II.
5. Road locations will avoid key summer range habitat elements (e.g. wallows, wet meadows), unless there is no reasonable alternative. Maintain a buffer of at least one sight-distance around key habitat features.
6. Temporary roads will be closed, drained, and revegetated.
7. This MA is classified as a corridor avoidance area on grizzly situations 1 and 2. (See appendix 15).
8. When seeding areas adjacent to open roads in grizzly situation I and II, do not use any component (such as clover) which may attract grizzly bears.

FirePrescribed Fire

Planned Ignitions:

Planned ignitions are acceptable in this MA and will be used to maintain or enhance wildlife habitat and as the primary tool for fuels management.

Unplanned Ignition:

1. Will not be used in this MA unless: (a) the fire primarily involves an adjacent MA for which unplanned ignitions approved for use as prescribed fire are a general management standard, (b) the expected life cycle effects of the fire must not adversely affect the goals or standards of this, or any other MA and, (c) the fire start occurs during the non-critical fire season, or (d) they occur in an area covered by an approved burn plan for a planned ignition and will meet all provisions of that plan.
2. A decision flow-chart will be prepared as part of the Fire Management Action plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II),

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

1. If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.
2. Unplanned ignitions in areas covered by an approved burn plan are acceptable provided all provisions of the plan are met.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Suppression tactics are limited only by the standards for this MA and the management standards for the Forest (such as soil, water, riparian etc.). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Wildlife Habitat Improvement	280 acres
2. Fish Habitat Improvement	18 acres
3. T & E Habitat Improvement	37 acres
4. Regeneration harvest	141 MMBF on 8,800 acres*
5. Planting	2,400 acres
6. Natural regeneration	5,500 acres
7. Site preparation	7,900 acres
8. Precommercial thinning & release	1,200 acres
9. Soil Inventory	8,800 acres
10. Fuel Treatment	6,800 acres
11. Road Construction	84 miles

* Includes non-interchangeable component.

Projected - Second Decade - Average annual

1. Wildlife Habitat Improvement	280 acres
2. Fish Habitat Improvement	18 acres
3. T & E Habitat Improvement	37 acres
4. Regeneration harvest	143 MMBF on 9,200 acres
5. Planting	2,600 acres
6. Natural regeneration	5,900 acres
7. Site preparation	8,500 acres
8. Precommercial thinning	1,200 acres
9. Soil Inventory	9,300 acres
10. Fuel Treatment	7,100 acres
11. Road Construction	86 miles

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-2, A-3, A-5, A-7
Wildlife and fish	C-1 through C-10, F-1 through F-4
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1, L-2
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 13

124,230 ACRES

A. DESCRIPTION

This MA consists of scattered parcels of existing old growth or mature timber stands which contain components of old growth. Old growth is a distinct successional stage in the development of a timber stand that has special significance for wildlife, generally characterized by: (1) large diameter trees (often exceeding 20" dbh) with a relatively dense, often multilayer canopy, (2) the presence of large, standing dead or dying trees, (3) down, dead trees, (4) stand decadence associated with the presence of various fungi and heartrots, (5) an average age often in excess of 200 years, and (6) a basal area ranging from 150 to 400 square feet per acre. The MA usually occurs below 5,500' in elevation, but there are stands above that level which provide many of the components necessary. The units are located in every major drainage on the Forest and range in size from about 50 acres to over 1,200 acres. 26,800 acres are in grizzly situations 1 and 2. The lodgepole pine timber type is not included.

B. GOALS

The goal of this MA is to provide the special habitat necessary for old-growth dependent wildlife (usually other than big game) on a minimum of 10% of each major drainage on the Forest, and in units that represent the major habitat types and tree species of each drainage.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. ORV use is normally not permitted from May 1, to November 30.
2. When this MA is adjacent to or enclosed by big-game winter range, ORV use will normally not be permitted at any time.
3. The VQO is maximum modification in areas of low visual significance, modification in areas of moderate visual significance, and partial retention in areas of high visual significance.
4. The ROS is distributed in all ROS classes depending on the location with respect to other MA's.
5. Existing trails will be maintained at level 1 or 2.
6. Developed or concentrated recreation sites are not permitted.

Wildlife and Fish

1. Uses which conflict with grizzlies in situations 1 and 2 will be modified or prohibited. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.
2. Habitat manipulation for wildlife is not required, or even desirable in this MA. The natural processes which lead to stand aging, decadence, and eventual deterioration are sufficient to maintain the habitat.
3. Some old-growth stands occur within or adjacent to important summer or winter range. Old growth can be an integral part of summer or winter range by providing thermal cover and security areas.

Range

Use of this MA by domestic livestock is not prohibited, but, because little or no forage is available, its use is not anticipated.

Timber

1. This MA is not suitable for timber production.
2. Firewood cutting and salvage are not permitted in this MA.
3. Timber harvest will not occur.

Soil, Water, and Air

1. If land disturbing activities occur, they will be guided by the Soil and Water Conservation Practices.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Seasonal restrictions will be stipulated for oil and gas leases and geophysical activities. Allow surface occupancy only where it will not reduce old growth stand size below minimum effective acreage.
3. Common minerals may be disposed of where compatible with management of other resources.

Lands

Special uses, rights-of-way, easements or cost-share agreements may be authorized on a case-by-case basis.

Facilities

1. Local roads will be restricted to prevent premature cutting of the snag component.
2. Temporary roads will be closed, drained, and revegetated.
3. This MA is classified as a corridor avoidance area (See appendix 15).

FirePrescribed Fire

Planned Ignitions:

Planned ignitions are acceptable to maintain old growth characteristics. i.e. old growth ponderosa pine stands.

Unplanned Ignitions:

Will not be used in this MA.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter 2.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

Wildfires will normally be controlled, however if an analysis of the time of year and expected fire behavior discloses no effect to this, or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.

1. Suppression tactics are limited only by the standards for this MA and by the Management Standards, such as soil and water which are established for the Forest. Dozers may be used when necessary.
2. Avoid cutting snags except to assure the safety of firefighting resources and where the accomplishment of control objectives would be adversely compromised if left standing.

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D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First decade - Average annual

1. Fish habitat improvement - 26 acres

Projected - Second decade - Average annual

1. Fish habitat improvement - 26 acres

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-5, A-7
Wildlife and fish	C-3 through C-10
Range	D-2
Timber	E-3, E-4
Minerals	G-1
Human & Comm Dev	H-3, H-4
Facilities	L-1

MANAGEMENT AREA 14

200,760 ACRES

A. DESCRIPTION

This MA consists of identified Interagency Grizzly situations 1 and 2 that are in conjunction with suitable timber land. This MA occurs in the Cabinet-Yaak Grizzly Bear Ecosystem and in the Whitefish range. The Cabinet-Yaak Ecosystem is located on the West half of the Forest from the Canadian border south to the Clark Fork River, including the Yaak River drainage and the Cabinet Mountains. The Whitefish range is part of the larger Northern Continental Divide Grizzly Bear Ecosystem. The portion on the Kootenai National Forest lies in the Northeast corner of the Forest including all of the Ten Lakes Wilderness Study Area. See the Grizzly Bear Management Guidelines in Appendix 8 for more description of the habitat.

B. GOALS

The goal of this MA is to maintain or enhance grizzly bear habitat, reduce grizzly/human conflicts, assist in the recovery of the grizzly bear, realize a programmed level of timber production, and provide for the maintenance or enhancement of other wildlife, especially big game. The grizzly bear management guidelines are incorporated as part of the direction for this MA and can be found in Appendix 8.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is maximum modification in areas of low visual significance, modification in areas of moderate visual significance, and partial retention in areas of high visual significance, unless infeasible when attempting to meet the goals of the Management Area.
2. ORV use will normally be allowed except seasonal restrictions may occur in areas such as spring range, or denning habitat. Some permanent closures may be necessary in areas of concentrated grizzly bear use, as those areas are identified.
3. Discourage concentrated recreation use such as campgrounds, campsites, picnic areas, and concentrated fishing use that could create opportunities for grizzly/human conflicts.
4. Improvements are permitted only if they do not conflict with the MA goal. Improvements that concentrate human use during the same season as grizzly use are not permitted.
5. The predominant ROS classes are semi-primitive motorized and roaded-natural but small areas of other ROS classes occur.

Wildlife and Fish

1. Maintain snags and snag replacement trees for cavity dependent species at a minimum of 40% of maximum levels. See "Cavity Habitat Management Guidelines" (Appendix 16).
2. Grizzly habitat components are presently identified and will be maintained or enhanced. For the components which are riparian related refer to the riparian areas discussion in Chapter II.
3. Additional grizzly bear management standards to be followed on the Kootenai National Forest are found in the Grizzly Bear Management Guidelines in Appendix 8.
4. Key habitat components (wallows, wet meadows, bogs etc.) will be avoided when constructing roads. As they are identified those key components will be mapped and managed as riparian areas.

Range

1. Grazing opportunities for domestic livestock will be available unless there is a site-specific conflict with grizzly bear management or the grazing use conflicts with timber management goals.

Timber

1. This MA is suitable for timber production.
2. Timber harvest will be coordinated with grizzly bear habitat requirements using cumulative effects analysis, scheduling of sales to provide displacement areas, road closures, and restrictions on logging seasons.
3. Broadcast burning will normally be used for site preparation where habitat conditions are favorable for grizzly bear food production.
4. Precommercial thinning for timber production may occur subject to the same scheduling requirements and restrictions as timber harvest.
5. Regeneration harvest:
 - a. Use silvicultural systems and harvest schedules which will maintain cover needs while enhancing food supplies for the grizzly bear.
 - b. Maintain corridors approximately 600' wide between cutting units. The uncut corridors will remain intact until the adjacent cutting units have regenerated sufficiently to provide cover requirements for the grizzly bear.
 - c. Maximize edge effect by shaping cutting units.

Soil, Water, and Air

1. Soil and Water Conservation Practices will guide implementation and mitigation of all land disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, page III-2).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Seasonal restrictions will be stipulated for oil and gas leases and geophysical activities.
3. Common minerals may be disposed of where compatible with management of other resources.

Human and Community Development

Workcamps, permanent or temporary, will be restricted during seasons of grizzly use.

Lands

1. Seek out conservation easements on adjacent private lands where grizzly habitat components have been identified.
2. Give priority to acquiring key grizzly habitat components in land adjustment program.
3. Special uses, rights of way, easements, or cost share agreements may be authorized on a case by case basis.

Facilities

1. Facilities which require frequent maintenance or occupancy will normally not be allowed. Existing facilities will be evaluated and moved if possible. If existing facilities can not be moved, a maintenance or occupancy schedule that does not conflict with grizzly seasons of use will be established.
2. Roads for timber management purposes are acceptable but all roads will be managed to minimize the potential for grizzly/human conflicts.
3. All new local roads will be closed (Level I) to motorized use. Existing local roads will be evaluated, and most will be closed. If an administrative need is demonstrated, roads may be opened temporarily.
4. Existing collector roads will be evaluated for closure on a case-by-case basis, with the intent of minimizing open road densities. The goal is 3/4 mile or less of road open per square mile of area during periods of grizzly bear use.
5. For roadside seeding on open roads, eliminate any component (e.g. clover) which attracts grizzlies.
6. Road construction activities will normally occur outside the season of active grizzly bear use.
7. This MA is classified as a corridor avoidance area (See Appendix 15).

FirePrescribed Fire

Planned Ignitions:

Planned ignitions are acceptable in this MA and will be used to maintain or enhance grizzly habitat and as the primary tool for fuels management, unless other methods can be proven to better accomplish the MA Goal.

Unplanned Ignitions:

1. Will not be used in this MA unless: (a) the fire primarily involves an adjacent MA for which unplanned ignitions approved for use as prescribed fire are a general management standard, (b) the expected life cycle effects of the fire must not adversely affect the goals or standards of this, or any other MA and, (c) the fire start occurs during the non-critical fire season, or (d) they occur in an area covered by an approved burn plan for a planned ignition and will meet all provisions of that plan.
2. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel type necessary for declaring an unplanned ignition a prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest land whether protected by the National Forest or the State of Montana.)

1. Suppression tactics are limited only by the standards for this MA and the management standards for the Forest (such as soil, water, riparian, etc.). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Wildlife Habitat Improvement	280 acres
2. Fish Habitat Improvement	17 acres
3. T & E Habitat Improvement	38 acres
4. Regeneration harvest	17 MMBF on 1,220 acres*
5. Planting	330 acres
6. Natural regeneration	770 acres
7. Site preparation	1,100 acres
8. Precommercial thinning	0 acres
9. Soil Inventory	1,220 acres
10. Fuel Treatment	900 acres
11. Road Construction	38 miles

* Includes non-interchangeable component.

Projected - Second Decade - Average annual

1. Wildlife Habitat Improvement	280 acres
2. Fish Habitat Improvement	17 acres
3. T & E Habitat Improvement	38 acres
4. Regeneration harvest	17 MMBF on 1,300 acres
5. Planting	350 acres
6. Natural regeneration	850 acres
7. Site preparation	1,200 acres
8. Precommercial thinning	0 acres
9. Soil Inventory	1,300 acres
10. Fuel Treatment	950 acres
11. Road Construction	39 miles

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and fish	C-1 through C-10, F-1 through F-3
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1, L-2
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 15

267,820 ACRES

A. DESCRIPTION

This MA is located throughout the Forest at medium elevations, generally 3,000' to 4,500' on moderate topography and is characterized by its ability to produce timber volumes suitable for harvest by conventional methods. The habitats are medium to highly productive. Most species of wildlife occur, but the wildlife habitats are not unique and they do not require special management techniques to meet wildlife population goals. There is no identified habitat for threatened or endangered species.

B. GOALS

This MA will focus upon timber production using various standard silvicultural practices while providing for other resource values such as soil, air, water, wildlife, recreation, and forage for domestic livestock.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. Most roads will be available for motorized recreation (up to 3 miles per square mile).
2. ORV use is normally permitted throughout the year. Some restrictions may occur if there are conflicts with other resources.
3. Exceptions to 1 and 2 above may occur if access is through an MA for which motorized use is not permitted or is seasonally regulated.
4. The VQO is maximum modification.
5. The ROS class is predominantly roaded natural and rural. A few small areas of semi-primitive motorized occur.

Wildlife and Fish

1. Habitat to support viable populations of ~~apr~~ be provided.
2. Wildlife habitat effectiveness and security limiting the number of miles of open road t or less.
3. Cavity dependent habitat will be maintained described in "Cavity Habitat Management Gui
4. Key habitat components (wallows, wet meadow when constructing roads. As they are ident will be mapped and managed as riparian area
5. A combination of hiding and thermal cover f throughout the contiguous MA:
 - elk and mule deer = at least
 - moose and whitetail deer = at least

existing species will
 maintained by
 miles per-square mile,
 of maximum as
 " (Appendix 16).
 , etc.) will be avoided
 those key components
 game; will be maintained

Range

1. Grazing of domestic livestock is permitted or water standards or with the establishmen. are conflicts with regeneration, they are u years following establishment.
2. Fencing to control livestock is permitted u wildlife movement patterns.

it conflicts with soil
 generation. If there
 limited to the first 10
 t interferes with

Timber

1. This MA is suitable for timber production.
2. Adequate stocking will be maintained to per harvest at the time of culmination of mean
3. Although natural regeneration will be empha to insure full stocking and species diversi
4. Precommercial thinnings will be used to ins following are not standards, but are assump management of this MA:

Mixed Conifer I (high productivity)
 Precommercial thinning between ages 10

Mixed Conifer II (medium productivity)
 Precommercial thinning between ages 20

Lodgepole Pine
 Precommercial thinning between ages 10

5. Existing cutting units larger than 40 acres they are certified as regenerated.
6. Silvicultural systems will normally be even shelterwood).
7. Commercial thinning is permissible.

imal volumes of timber
 increment.
 planting will be used
 timal stocking. The
 and expectations for

t be enlarged until
 clearcut, seed tree,

Soil, Water, and Air

1. Soil and Water Conservation Practices will guide implementation and mitigation of all land disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Oil and gas leases will be issued with standard stipulations.
3. Common minerals may be disposed of where compatible with management of other resources.

Facilities

1. Roads will be constructed and maintained at the lowest standard to permit timber harvest and removal at the lowest cost consistent with all standards.
2. Temporary roads will be closed, drained, and revegetated.
3. When local roads are open they will be maintained at level 2.

FirePrescribed Fire

Planned Ignitions:

Planned ignitions for fuels management are permitted.

Unplanned Ignitions:

Will not be used as prescribed fire in this MA.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Suppression tactics are limited only by the standards for this MA and the management standards for the Forest (such as soil, water, riparian etc.). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Fish Habitat Improvement		16 acres
2. Regeneration harvest	28 MMBF on	2,050 acres*
3. Planting		550 acres
4. Natural regeneration		1,280 acres
5. Site preparation		1,840 acres
6. Precommercial thinning & release		1,600 acres
7. Soil Inventory		2,050 acres
8. Fuel Treatment		1,470 acres
9. Road Construction		50 miles

* Includes non-interchangeable component.

Projected - Second Decade - Average annual

1. Fish Habitat Improvement		16 acres
2. Regeneration harvest	28 MMBF on	2,200 acres
3. Planting		590 acres
4. Natural regeneration		1,380 acres
5. Site preparation		1,970 acres
6. Precommercial thinning		1,600 acres
7. Soil Inventory		2 200 acres
8. Fuel Treatment		1,550 acres
9. Road Construction		51 miles

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and fish	C-1 through C-10, F-1 through F-3
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1, L-2
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 16

89,950 ACRES

A. DESCRIPTION

This MA is located throughout the Forest at elevations ranging from 2,800' to 5,000'. It is characterized by productive forest land that has moderate viewing sensitivity. This MA is usually in the midground or background as viewed from major travel corridors or the foreground to midground of well travelled, but secondary travel corridors. Most wildlife species occur in this MA, but it is not critical to their existence, or population goals. There is no identified habitat for threatened or endangered species.

B. GOALS

Produce timber while providing for a pleasing view. Wildlife habitat will be managed to provide for viable populations of existing native species.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. Most roads will be available for motorized recreation (up to 3 miles per square mile).
2. ORV use is permitted throughout the year.
3. Exceptions to 1 and 2 above may occur if access to this MA is through an MA for which motorized use is not permitted, or is seasonally restricted.
4. The minimum VQO is modification.
5. The ROS class is predominantly roaded natural with some opportunity for semi-primitive motorized recreation in the higher elevations.

Wildlife and Fish

1. Habitat to support viable population levels of presently existing species will be provided.
2. Wildlife habitat effectiveness and security will be maintained by limiting the miles of open road to 3 miles per square mile or less.
3. Cavity dependent habitat will be maintained at 40% of maximum as described in "Cavity Habitat Management Guidelines" (Appendix 16).
4. Key habitat components (wallows, wet meadows, bogs, etc.) will be avoided when constructing roads. As they are identified these key components will be mapped and managed as riparian areas.
5. A combination of hiding and thermal cover for big game will be maintained throughout the contiguous MA.
 - elk and mule deer = at least 15%
 - moose and whitetail deer = at least 30%

Range

1. Grazing of domestic livestock is permitted unless it conflicts with soil or water standards or with the establishment of regeneration. If there are conflicts with regeneration they are usually limited to the first 10 years following establishment.
2. Fencing to control livestock is permitted unless it interferes with wildlife movements.

Timber

1. This MA is suitable for timber production.
2. Adequate stocking will be maintained to permit optimal timber harvest volumes.
3. Timber will be harvested as close to the culmination of mean annual increment as the visual quality objective and other standards will allow.
4. Existing cutting units will not be enlarged until they are certified as regenerated and recovered to the point that additional harvest can be conducted and still meet the VQO of modification or better.
5. Although natural regeneration will be emphasized, planting will be used to insure full stocking.
6. Precommercial thinning will be used to insure optimal stocking. The following are not standards but are assumptions and expectations for management of this MA:

Mixed Conifer I (high productivity)
Precommercial thinning between ages 15 and 25.

Mixed Conifer II (medium productivity)
Precommercial thinning between ages 15 and 25.

Lodgepole Pine
Precommercial thinning at approximately age 10.

7. Catastrophic events such as fire, windstorm, disease, or insects, especially the periodic infestations of the mountain pine beetle in mature lodgepole pine, may create situations where harvest is desirable. In such cases a short term reduction in the VQO is permitted.
8. Commercial thinning is permissible.

Soil, Water, and Air

1. Soil and Water Conservation Practices will guide implementation and mitigation of all land disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Oil and gas leases will be issued with standard stipulations.
3. Common minerals may be disposed of where compatible with management of other resources.

Facilities

1. Roads will be constructed and maintained at the lowest standard to permit timber harvest and removal at the lowest cost consistent with all other resource standards.
2. Temporary roads will be closed, drained, and revegetated.
3. When local roads are open they will be maintained at level 2.

Fire

Prescribed Fire

Planned Ignitions:

Planned ignitions for fuels management are permitted.

Unplanned Ignitions:

Will not be used as prescribed fire in this MA.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Suppression tactics are limited only by the standards for this MA and the management standards for the Forest (such as soil, water, riparian etc.). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Regeneration harvest	29 MMBF on 2,520 acres*
2. Planting	680 acres
3. Natural regeneration	1,580 acres
4. Site preparation	2,260 acres
5. Precommercial thinning & release	750 acres
6. Soil Inventory	2,520 acres
7. Fuel Treatment	1,380 acres
8. Road Construction	17 miles

* Includes non-interchangeable component.

Projected - Second Decade - Average annual

1. Regeneration harvest	30 MMBF on 2,670 acres
2. Planting	730 acres
3. Natural regeneration	1,700 acres
4. Site preparation	2,430 acres
5. Precommercial thinning	770 acres
6. Soil Inventory	2,670 acres
7. Fuel Treatment	1,450 acres
8. Road Construction	17 miles

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and fish	C-1 through C-9, F-1 through F-3
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1, L-2
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 17

30,470 ACRES

A. DESCRIPTION

This MA is located near, and viewed from major travel corridors, usually at mid-elevations ranging from 2,500' to 4,000'. It is characterized by productive forest land with high viewing sensitivity in the foreground or midground of major travel corridors. Most wildlife species occur in this MA but it is not critical to their existence or population goals. There is no identified habitat for threatened or endangered species, except for a small area near Dickey lake that contains habitat for both grizzlies and eagles.

B. GOALS

To maintain or enhance a natural appearing landscape to provide a pleasing view, produce a programmed volume of timber and manage the habitat to provide for viable populations of existing native wildlife species.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. Most roads will be available for motorized recreation (up to 3 miles per square mile).
2. ORV use is permitted throughout the year.
3. Exceptions to 1 and 2 above may occur if access to this MA is through an MA for which motorized use is not permitted or is seasonally restricted.
4. The minimum VQO is partial retention.
5. The ROS class is predominantly roaded-natural with some opportunities for semi-primitive motorized recreation opportunities at the higher elevations.

Wildlife and Fish

1. Habitat to support viable population levels of presently existing species will be provided.
2. Wildlife habitat effectiveness and security will be maintained by limiting the miles of open road to 3 miles per square mile or less.
3. Cavity-dependent habitat will be maintained at 40% of maximum as described in "Cavity Habitat Management Guidelines" (Appendix 16).
4. Key habitat components (wallows, wet meadows, bogs, etc.) will be avoided when constructing roads. As they are identified these key components will be mapped and managed as riparian areas.
5. A combination of hiding and thermal cover for big game will be maintained throughout the contiguous MA.
 - elk and mule deer = at least 15%
 - moose and whitetail deer = at least 30%

Range

1. Grazing of domestic livestock is permitted unless it conflicts with soil or water standards or with the establishment of regeneration. If there are conflicts with regeneration they are usually limited to the first 10 years following establishment.
2. Fencing to control livestock is permitted unless it interferes with wildlife movements.

Timber

1. This MA is suitable for timber production.
2. Even though the rotations will usually be extended to maintain the prescribed visual quality, adequate stocking will be maintained for optimal timber volumes.
3. Timber will be harvested as close to the culmination of mean annual increment as the visual quality objective and the other standards will allow.
4. Existing cutting units will not be enlarged until they are certified as regenerated and recovered to the point that additional harvest can be conducted and still meet the VQO of partial retention or better.
5. Although natural regeneration will be emphasized, planting will be used to insure full stocking when necessary.

6. Precommercial thinnings will be used to insure optimal stocking. The following are not standards but are assumptions and expectations for management of this MA:

Mixed Conifer I (high productivity)

Precommercial thinning between ages 15 and 25.

Mixed Conifer II (medium productivity)

Precommercial thinning between ages 15 and 25.

Lodgepole Pine

Precommercial thinning at approximately age 10.

7. Catastrophic events such as fire, windstorm, disease, or insects, especially the periodic infestations of the mountain pine beetle in mature lodgepole pine, may create situations where harvest is necessary to maintain the long term VQO. In such cases a short term reduction in the VQO is permitted.
8. Commercial thinning is permissible.

Soil, Water, and Air

1. Soil and Water Conservation Practices will guide implementation and mitigation of all land disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Oil and gas leases will be issued with standard stipulations.
3. Disposal of common minerals will only be permitted where the VQO will be fully met.

Facilities

1. Where possible, roads will be located so they are not seen from major travel corridors.
2. Roads will be constructed and maintained at the lowest standard to permit timber harvest and removal at the lowest cost consistent with all other resource standards.
3. Temporary roads will be closed, drained, and revegetated.
4. When local roads are open they will be maintained at level 2.

FirePrescribed Fire

Planned Ignitions:

Planned ignitions for fuels management are permitted.

Unplanned ignitions:

Will not be used as prescribed fire in this MA.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Suppression tactics are limited only by the standards for this MA and the management standards for the Forest (such as soil, water, riparian, etc.). Dozers may be used when necessary.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Fish Habitat Improvement		4 acres
2. Regeneration harvest	6 MMBF on	460 acres*
3. Planting		120 acres
4. Natural regeneration		290 acres
5. Site preparation		410 acres
6. Precommercial thinning & release		850 acres
7. Soil Inventory		460 acres
8. Fuel Treatment		280 acres
9. Road Construction		6 miles

* Includes non-interchangeable component.

Projected - Second Decade - Average annual

1. Fish Habitat Improvement		4 acres
2. Regeneration harvest	6 MMBF on	490 acres
3. Planting		130 acres
4. Natural regeneration		310 acres
5. Site preparation		450 acres
6. Precommercial thinning		870 acres
7. Soil Inventory		490 acres
8. Fuel Treatment		290 acres
9. Road Construction		6 miles

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Wildlife and fish	C-1 through C-9, F-1 through F-3
Range	D-1, D-2
Timber	E-1 through E-8
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 18

45,100 ACRES

A. DESCRIPTION

This MA occurs on areas of slopes in excess of 40% where timber productivity is moderate to high, and on the following habitat types:

subalpine fir/menziesia (ABLA/MEFE)	Douglas-fir/pinegrass (PSME/CARU)
subalpine fir/beargrass (ABLA/XETE)	Douglas-fir/kinnikinnick (PSME/ARUV)
subalpine fir/alder (ABLA/ALSI)	Douglas-fir/snowberry/
subalpine fir/queencup beadlilly/	wheatgrass (PSME/SYAL/AGSP)
menziesia (ABLA/CLUN/MEFE)	Douglas-fir/twinflower/
grand fir/beargrass (ABGR/XETE)	pinegrass (PSME/LIBO/CARU)
	mountain hemlock/menziesia (TSME/MEFE)

This MA is distinguished by the difficulty in establishing coniferous regeneration after timber harvest. Some parcels of this MA have been harvested in the past and are presently understocked. Heavy shrub cover is usually characteristic of a harvested area. Most wildlife species occur in this MA but it is not critical to their existence or population goals. The MA is often good summer range for big game. 17,200 acres are on grizzly situations 1 and 2.

B. GOALS

Maintain existing vegetation until techniques and practices are available to insure that timber can be harvested and the area regenerated within 5 years of harvest. Maintain viable populations of existing native wildlife species. Reassign to an MA suitable for timber production when techniques are available to insure regeneration after timber harvest.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is partial retention in areas of high visual significance, modification in areas of moderate visual significance, and maximum modification in areas of low visual significance.
2. The ROS class varies from semi-primitive non-motorized to roaded natural.
3. Existing trails will be maintained at level 1.
4. Existing roads or roads used to access other MA's are generally available for motorized recreation and year round ORV use (up to three miles per square mile) unless the access route goes through an MA for which those uses are prohibited or seasonally restricted.

Wildlife and Fish

1. Habitat to support viable populations of presently existing species will be provided.
2. Wildlife habitat effectiveness and security will be maintained by limiting the miles of open road to 3 miles per square mile or less.
3. Cavity habitat will be maintained at 40% of maximum as described in "Cavity Habitat Management Guidelines" (Appendix 16).
4. If roads are constructed they will be located to avoid key habitat components such as wallows, wet meadows, bogs, etc. which may exist as minor inclusions in this MA.
5. Standards and guidelines as specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.
6. Wildlife habitat will generally be managed in a natural condition, but enhancement may occur, with prescribed fire being an acceptable tool.

Range

This MA is normally too steep for domestic livestock grazing.

Timber

1. This MA is presently unsuitable for timber production.
2. Christmas tree sales are permitted.
3. Regeneration harvest on a limited basis may occur to test techniques for establishing regeneration.
4. Salvage harvest may occur to prevent the spread of insects or disease to adjacent MA's.
5. Harvest will not occur on areas of inventoried old-growth or where old-growth retention is needed.
6. Reassign the productive timberland to the suitable timber base when regeneration techniques can be assured and market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit.

Soil, Water, and Air

1. Because of the sensitive nature of this MA and the steep slopes, water quality and soil erosion will be monitored as part of any timber harvest, road construction, or activity which disturbs the surface.
2. Soil and Water Conservation Practices will guide the implementation of any land-disturbing activities.
3. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Oil and gas leases will be issued with standard stipulations.
3. Common minerals may be disposed of where compatible with management of other resources.

Riparian (See Riparian Area, Chapter II).

Facilities

1. Temporary roads will normally not be constructed.
2. When local roads are open they will be maintained at level 2.
3. Roads will be constructed and maintained at the lowest standard necessary for the intended activity at the lowest cost consistent with the other resource standards.

Fire

Prescribed fire

Planned ignitions

Planned ignitions are permitted for fuels management, but it is not yet known whether prescribed fire will insure adequate regeneration.

Unplanned ignitions

Will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season

All wildfires will be controlled.

Noncritical fire season

Normally wildfires will be controlled, but if an analysis of time-of-year, and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Suppression tactics are limited only by the other resource standards in this MA.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

1. Fuel Treatment 180 acres

Projected - Second Decade - Average annual

1. Fuel Treatment 190 acres

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-5, A-7
Wildlife and fish	C-1 through C-9
Range	D-2
Timber	E-4, E-5
Minerals	G-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 19

71,050 ACRES

A. DESCRIPTION

This MA occurs on steep slopes and breaklands over 60%. Timber productivity ranges from moderate to high. Many different species of wildlife may use this MA, but it is not known to be essential to any species. The soil is usually erodible or the land unstable due to the steepness. Existing roads cross this MA infrequently. There are 35,400 acres in grizzly situations 1 and 2.

B. GOALS

Insure soil stability and water quality by maintaining the vegetation in a healthy condition and by minimizing surface disturbance. Reassign the productive timberlands to the suitable timber base when logging techniques are developed to insure that site conditions can be maintained. Maintain viable populations of existing native wildlife species.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is partial retention in areas of high visual significance, modification in areas of moderate visual significance, and maximum modification in areas of low visual significance.
2. ORV use is not permitted except on existing open roads.
3. Any existing trails will be maintained at level 1.
4. The ROS class is predominantly roaded-natural and semi-primitive motorized, but some semi-primitive non-motorized opportunity occurs.

Wildlife and Fish

1. Maintain wildlife habitat in a natural condition, but enhancement may occur, with prescribed fire being an acceptable tool.
2. If a project involving vegetative disturbance does occur, the wildlife standards for the closest adjacent MA will be applied.
3. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.

Range

1. This MA is not used for domestic livestock grazing.

Timber

1. This MA is not suitable for timber production using conventional harvest systems.
2. Salvage harvest may occur to prevent the spread of insects and disease to adjacent MA's only by using systems that suspend the logs enough to insure soil stability.
3. Timber harvest and silvicultural activities for timber production are not anticipated, but may occur on a limited basis to test techniques for harvesting while protecting the soil and water resource. If harvest occurs, vegetation to protect the soil will be established.
4. Reassign the productive timberland to the suitable timber base when timber harvest techniques are developed to insure site protection and market conditions are such that the harvest of timber from this MA will contribute to the Net Public Benefit.

Soil, Air, and Water

1. Because of the sensitive nature of this MA and the steep slopes, water quality and soil erosion will be monitored as part of any activity which disturbs the surface.
2. Soil and Water Conservation Practices will guide the implementation of any land disturbing activities.
3. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Stipulate No Surface Occupancy for oil and gas leases.
3. Generally, disposal of common minerals will not be permitted.

Riparian (See Riparian Area, Chapter II)Facilities

1. Road construction is not anticipated in this MA, but, new roads are not prohibited if a location can be discovered that will protect the soil and water resource.
2. Local roads will normally be maintained at level 1 (closed).
3. This MA is classified as a corridor avoidance area (See Appendix 15).

FirePrescribed Fire

Planned Ignitions:

Planned ignitions are not expected to occur, but may be allowed for fuels management provided the goals of soil stability and water quality are met.

Unplanned Ignitions:

Will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

Normally wildfires will be controlled, however, if an analysis of the time of year, and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

Tactics will emphasize the least possible surface disturbance. This MA is normally too steep to safely use dozers. Dozer use requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES**Planned - First Decade - Average annual**

1. Fuel Treatment 280 acres

Projected - Second Decade - Average annual

1. Fuel Treatment 300 acres

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-5, A-7
Wildlife and fish	C-1 through C-9
Range	D-2
Timber	E-3, E-4
Minerals	G-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 20

1,000 ACRES

A. DESCRIPTION

This MA consists of the following Administrative Sites:

Rexford Ranger Station	Trout Creek Ranger Station
Sylvanite Ranger Station	Raven Work Center
Murphy Lake Ranger Station	Fairview Guard Station
Troy Ranger Station	Noxon Bunkhouse
Libby Ranger Station	Ant Flat Work Center
Canoe Gulch Ranger Station	Upper Ford Work Center

B. GOALS

The goal of this MA is to maintain sites for the administration of the Kootenai National Forest in a safe and efficient manner.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. Preserve and protect the historical values of significant sites.
2. Maintain a pleasing visual appearance. A prescribed VQO is not applicable.
3. The ROS class is rural.

Range

Grazing of domestic animals is limited to administrative stock.

Timber

1. No programmed harvest. Vegetation removal may be appropriate for safety or appearance.
2. Intensive insect or disease treatment, such as spraying individual trees, may occur to protect the appearance of sites in this MA.

Riparian (See Riparian Area, Chapter II).

Minerals and Geology

1. Sites not already withdrawn from mineral entry for locatable minerals will be recommended for withdrawal.
2. Stipulate No Surface Occupancy for oil and gas leases.
3. Generally, disposal of common minerals will not be permitted.

Lands

1. Acquire or lease land for administrative sites as needed.
2. Administrative sites which are no longer needed and which have lost their National Forest character need not be retained.

Facilities

1. Management of all administrative sites will require approved site plans.
2. Management of Ant Flat, Raven, and Upper Ford will be guided by historical studies.
3. This MA is classified as a corridor avoidance area (See Appendix 15).

FirePrescribed Fire

Planned Ignitions:

Planned ignitions are acceptable.

Unplanned Ignitions:

Unplanned ignitions will not be used as prescribed fire in this MA.

Wildfire (Applies to all National Forest lands.)

All wildfires will be controlled.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

Nothing Planned

Projected - Second Decade

Nothing Projected

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-7
Range	D-2
Human & Comm Dev.	H-3, H-4
Protection	P-1

The procedures outlines in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 21

12,320 ACRES

GENERAL DESCRIPTION AND INTRODUCTION

Management Area 21 consists of areas of special interest because of unique, unusual, or important flora, fauna, geological, recreational, cultural, or historical attributes which are of public interest and require protection or special management. This MA consists of the following specific sites. Each site is part of a basic group which will be managed similarly. Management guidance for each group as well as for individual sites is provided below. The sites are as follows:

I. RESEARCH NATURAL AREA (RNA) CANDIDATES

(1,940 acres in MA-21; 1,580 acres in MA-8)

	<u>MA-21 AREA</u>	<u>OTHER MA's</u>
1. Big Creek	190 Acres	
2. Hoskins Lake	300 Acres	
3. Norman Mountain	0 Acres	This entire area is included in the Cabinet Mountains Recommended wilderness additions (MA-8). (Total Area = 1200 acres)
4. Parmenter	60 Acres	
5. Pete Creek Meadows	120 Acres	
6. Ross Creek Cedars	340 Acres	An additional 380 acres are within the recommended Scotchman Wilderness Area (MA-8) (Total Area = 720 acres)
7. Ulm Peak	690 Acres	
8. Wolf/Weigel	240 Acres	

In addition to the sites listed above, the Kootenai National Forest was assigned four aquatic types for representation in Research Natural Areas. The four sites are all within the existing Cabinet Mountains Wilderness Area:

1. Type III stream - Falls creek
2. Average production potential lake - Wanless lake
3. Low production potential lake - Snowshoe lake
4. Lake without fish - Bramlet lake

The standards and guidelines for MA-7 will apply to these aquatic types.

II. CULTURAL RESOURCE AREAS (900 acres)

- | | |
|--|-----------|
| 1. Boyd Hill Cemetery | 90 Acres |
| 2. Bull River Guard Station | 110 Acres |
| 3. Kootenai Falls Cultural Resource District | 250 Acres |
| 4. Yahk Historic Mining Area | 450 Acres |

III. SCENIC AREAS (4,720 acres)

- | | | |
|----------------------|-------------|------------------------------------|
| 1. Northwest Peaks | 4,420 Acres | |
| 2. Ross Creek Cedars | 190 Acres | (this area is adjacent to the RNA) |
| 3. Wood Creek Larch | 110 Acres | |

IV. GEOLOGIC AREAS (1,530 acres)

- | | |
|-------------------------|-----------|
| 1. Devils Gap | 850 Acres |
| 2. Rexford Hoodoos | 90 Acres |
| 3. Star Creek Canyon | 80 Acres |
| 4. Sunday Creek Falls | 20 Acres |
| 5. Ten Mile Talus | 350 Acres |
| 6. West Fork Yaak Falls | 140 Acres |

V. BOTANICAL AREAS (40 acres)

- | | |
|---------------------------|----------|
| 1. Berray Mountain Cedars | 40 Acres |
|---------------------------|----------|

VI. OTHER (3,230 acres)

- | | |
|---------------------------------------|-------------|
| 1. Upper Big Creek Riparian Ecosystem | 3,230 Acres |
|---------------------------------------|-------------|

I. RESEARCH NATURAL AREA (RNA) CANDIDATES
(1,940 acres plus 1,580 acres in MA-8)

A. DESCRIPTION

These areas are recommended for RNA status. Research Natural Areas are for non-manipulative research, observation, and study. They also may assist in carrying out provisions of special acts such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act.

1. Big Creek: located on the Rexford Ranger District near the mouth of Big Creek, adjacent to the west side of Koocanusa Reservoir and the Forest Development Road. The habitat type is Douglas fir/dwarf huckleberry which is rare on this National Forest.
2. Hoskins Lake: located on the Yaak Ranger District between Bunker Creek and Vinal Creek approximately two miles Southeast of the Upper Ford Administrative Site. It is a productive lake with surrounding vegetation of Engelmann spruce/queencup beedlily.
3. Norman Mountain: located on the Libby Ranger District and is a Douglas fir/pinegrass vegetative association located adjacent to and northwest of the Parmenter candidate area. It is located totally within the recommended addition to the Cabinet Mountain Wilderness Area. (RNA's may be located within wilderness areas.)
4. Parmenter: located on the Libby Ranger District and is a cottonwood stand located approximately 4 miles southeast of Libby in Parmenter Creek. It is adjacent to the Norman Mountain RNA candidate.
5. Pete Creek Meadows: an area on the Yaak Ranger District near the West Fork of the Yaak River and just north of Pete Creek cabin. It is the headwaters area for Pete Creek and is a sedge meadow with subalpine fir and woodrush vegetation.
6. Ross Creek Cedars: located on the Troy Ranger District and is a stand of mature western red cedar. It is adjacent to and partially within the Ross Creek Scenic Area (see Appendix 21 for a map).
7. Ulm Peak: located on the Cabinet Ranger District and the Idaho/Montana state line forms the southwest boundary. The vegetation type is mature mountain hemlock. It is adjacent to the proposed Shoshone Research Natural Area on the Idaho Panhandle National Forest in Idaho.
8. Wolf/Weigel: located on the Fisher River Ranger District at the confluence of Wolf Creek and Weigel Creek. The vegetative type is sedge and waterlily with cottonwood.

MA-21 RNA

B. GOALS

1. Preserve a wide spectrum of pristine representative areas that typify important forest, shrubland, grassland, alpine, aquatic, geological, and similar natural situations for research, study, observation, monitoring, and those educational activities that maintain unmodified conditions.
2. Preserve and maintain genetic diversity.
3. Protect against serious environmental disruptions.
4. Serve as reference areas for the study of succession.
5. Provide onsite and extension educational activities.
6. Serve as baseline areas for measuring long-term ecological changes.
7. Serve as control areas for manipulative research.
8. Monitor effects of resource management techniques and practices.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA. These areas will be managed to preserve their suitability for RNA status pending establishment. Specific management direction will be incorporated as Forest Plan amendments upon establishment.

Recreation

1. Site-specific action plans will be prepared for each area when they are officially designated RNA's. Developed or concentrated recreation will not be encouraged except for the portion of Ross Creek including the parking area and picnic site.
2. The ROS class varies but it is predominantly semi-primitive non-motorized.
3. ORV use will normally not be allowed except on existing roads. ORV use may be allowed on trails where the trail provides for ORV use on both sides of the RNA.
4. The VQO is retention.

Range

Livestock grazing is not permitted.

Timber

1. RNA's are not suitable for timber production.
2. Timber harvest will not occur.
3. Intensive management techniques such as spraying for insect or disease treatments are not permitted.

Minerals and Geology

1. Each area will be withdrawn when it is officially designated an RNA.
2. Disposal of common minerals is prohibited.
3. Stipulate No Surface Occupancy for oil and gas leases.

Lands

1. No rights-of-way, easements, or cost-share agreements.
2. Special uses such as snow courses which do not affect the goal of this MA may be allowed.

Facilities

1. New roads are not permitted.
2. New trails could be constructed if there are no reasonable alternatives. None are expected at this time.
3. RNA's are classified as corridor avoidance areas (see appendix 15).

FirePrescribed Fire

Planned Ignitions:

1. May be used only after the historic fire frequency has been developed and the planned ignition replicates that historic interval.
2. Any planned ignition must maintain the vegetative type for which the RNA was established.

Unplanned Ignitions:

Will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

1. Wildfire will be controlled unless the activities associated with control are more detrimental to the goals for the RNA than the total effect of a contain or confine strategy.
2. The selection of a strategy will be based first on preservation of the RNA, and then on cost effectiveness.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. Use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

- | | |
|-------------------------------------|----------|
| 1. Prescribed Fire (Big Creek Area) | 95 Acres |
|-------------------------------------|----------|

Projected - Second Decade - Average annual

- | | |
|-------------------------------------|----------|
| 1. Prescribed Fire (Big Creek Area) | 95 acres |
|-------------------------------------|----------|

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-2, A-5, A-7
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

II. CULTURAL RESOURCE AREAS (900 acres)

A. DESCRIPTION

These are areas that comprise the cultural resource foundation of our nation, including buildings, sites, areas, architecture, memorials, and objects having scientific, historic, or social values. They are also areas that contain or comprise an irreplaceable resource relating to past human life.

Cultural resource areas contain cultural values that are nonrenewable. The resources are evidence of the past, are usually fragile, and can be obliterated by relatively minor modifications of the ground surface. Cultural areas and resources are elements of world-wide patterns and processes.

1. Boyd Hill Cemetery: located in the Yaak Valley north of the East Fork of the Yaak River along Highway 92. The historic site consists of 31 graves, ranging in time from 1917 to 1979 and it is surrounded by a fence. An official permit was issued in 1954 which involved giving the cemetery its name. The name came from its first occupant, an early prospector who died in 1917.
2. Bull River Guard Station: located off the Bull River Highway #56 at the confluence of the Bull River and the East Fork. This administrative site was withdrawn in 1907 and the main building was built in 1908 by Granville Gorden and Ben Saint. Gorden was the first ranger for the Noxon Ranger Station of the Cabinet National Forest and Saint later replaced him, serving from 1910 to 1920. During that time a little community grew up around the station. A school was built a quarter of a mile south of the station, and the teacher was boarded at the station. It is the oldest standing administrative site on the Kootenai National Forest, has easy access and is in good condition.
3. Kootenai Falls Cultural Resource District: located along the north and south banks of the Kootenai River in the center of the Kootenai National Forest. The District contains a diverse set of historic period resources that represent such activities as; railroading, a Chinese settlement, homesteading and placer mining. These resources have the potential for expanding our understanding of the various developmental stages of historic period human interaction in this part of Northwestern Montana. In general, the prehistoric data that may be derived from the district should provide important explanations about the cultural adaptive techniques over a period of some 8,000 years. (Lahern 1981)
4. Yahk Historic Mining Area: is a mining community that represents the technology of hard-rock mining and stamp milling, as well as the lifestyle of the northwestern miner. The mining camp was established in the 1890's and was revitalized in 1910 and in the 1930's. There are 195 features at the site including stamp mills, adits, assay offices, business offices, and homes.

There are additional areas of the Kootenai National Forest, particularly areas of archeological or historical value which are not included in this MA, and are not identified on public maps. These areas could be destroyed by public use, and protection of the sites cannot be guaranteed if full public disclosure occurs.

B. GOALS

1. Prevent loss or damage of cultural resources.
2. Provide for evaluation, scientific study, interpretive services, or other appropriate uses including nomination to the National Register of Historic Places.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Cultural Resources

1. Site specific action plans to include interpretation will be prepared for each site consistent with the standards established in this Forest Plan.

Recreation

1. The VQO is retention, except where the VQO is affected by the cultural resource, such as buildings. The intent is to retain or improve the existing visual quality.
2. The ROS class varies from roaded-natural to semi-primitive, non-motorized.
3. ORV use is not permitted.

Range

Livestock grazing may be permitted if there is no affect to the cultural resources of the site.

Timber

1. Cultural sites are not suitable for timber production.
2. Salvage harvest is not expected but could occur if there is no affect to the cultural resource on the site.
3. Intensive insect or disease treatment, such as spraying individual trees is not expected but could occur to protect the characteristics of the site.

Minerals and Geology

1. Each area will be recommended for withdrawal from entry for locatable minerals (see appendix 13).
2. Stipulate No Surface Occupancy for oil and gas leases.
3. Disposal of common minerals is not permitted.

Lands

No special uses, rights-of-way, easements, or cost-share agreements.

Facilities

1. Existing roads providing public access to the sites may be retained, but new roads are not expected and will be permitted only if there is no affect to the cultural resource.
2. Trails may be constructed, but none are anticipated at this time.
3. This MA is classified as a corridor avoidance area (see appendix 15).

Fire

Prescribed Fire

Planned Ignitions:

May be used to remove fuels only if there is no detrimental affect to the cultural resource.

Unplanned Ignitions:

Will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

1. Wildfire normally will be controlled.
2. If an analysis of the time of year and the expected fire behavior discloses no affect to this, or any other MA, and there is less potential for damage to the cultural resource, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. If there is the threat of loss of the cultural resource, tactics to prevent that loss will be used.
3. The use of dozers is not anticipated but they may be used to prevent damage to the cultural resources.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None Planned

Projected - Second Decade

None Projected.

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-5, A-7
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

III. SCENIC AREAS (4,720 acres)

A. DESCRIPTION

Northwest Peaks: located in the northwest corner of the Forest on the Yaak Ranger District with part of the Scenic Area on the Idaho Panhandle National Forest. The area is a high ridgeline setting with rough topography. Elevations range up to 7,000' at Northwest Peak. There are several small alpine lakes. The trees are subalpine fir, alpine larch, and whitebark pine, and none of the area is suitable for timber production. The area is grizzly situation I.

Ross Creek: located on the west side of the Forest on the Troy Ranger District on both sides of Ross Creek. The area is located to include a stand of the largest western red cedar trees on the Kootenai National Forest. A trail is located through the area near the stream. There is an adjacent developed recreation site which includes a parking lot and picnic tables. See Appendix 21 for a map showing the relationship of the Scotchman Peaks Recommended Wilderness Area, the Scenic Area, the Proposed RNA and the developed recreation site (MA-6).

Wood Creek Larch: located on the north end of the Forest on the Yaak Ranger District. The area includes an intact stand of large, old-growth western larch. It has a rolling, glaciated landscape and lies on both sides of Wood Creek.

B. GOALS

All areas will be managed to preserve the characteristics that make them scenic.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is retention
2. The ROS class for Northwest Peaks is primitive. The ROS class for Ross Creek and Wood Creek Larch is semi-primitive motorized.
3. ORV use is not permitted.

Range

Livestock grazing is not permitted

Timber

1. None of the areas are suitable for timber production.
2. Salvage harvest is not permitted unless a single-tree selection is needed to correct a safety hazard.
3. Intensive treatment such as individual tree spraying or other activities may occur, especially in Ross Creek, to protect the scenic character of the area.

Minerals and Geology

1. The riparian portion of Ross Creek will be analyzed for withdrawal from entry for locatable minerals. Criteria to be considered during analysis for withdrawal are included in appendix 13.
2. Stipulate No Surface Occupancy for oil and gas leases.
3. Disposal of common minerals will not be permitted.

Lands

1. No rights-of-way, easements, or cost-share agreements are allowed.
2. Special uses, such as snow courses, which do not affect the goal of this MA may be allowed.

Facilities

1. New roads are not permitted. The existing road into Ross Creek may be reconstructed and improved for safety.
2. New trails may be constructed.
3. All areas are classified as corridor avoidance areas (see appendix 15).

FirePrescribed Fire

Planned Ignitions:

1. Could be used for hazard reduction, but none is planned or anticipated. No activities requiring hazard reduction are anticipated.
2. May be used for wildlife habitat improvement provided there is no affect on the scenic quality and goal for these areas.

Unplanned Ignitions:

Will not be used as prescribed fire.

MA-21 SA

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

1. Wildfires will normally be controlled.
2. If an analysis of the time of year, and the expected fire behavior discloses no affect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. Use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None planned.

Projected - Second Decade

None projected

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-4, A-7
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

IV. GEOLOGIC AREAS (1,530 acres)

A. DESCRIPTION

Devil's Gap: located near the southwest edge of the Forest on the Cabinet Ranger District near the confluence of Devil Gap Creek and Marten Creek. The area contains very steep (100%+) sidewalls with cliffs, and prominent outcrops of rock. The vegetation is sparse.

Rexford Hoodoos: located on the Rexford Ranger District northeast across the bay from the Rexford Bench Campground. It is near where the Tobacco River flows into Lake Koocanusa. The "hoodoos" are developing in dense glacial till within a drumlin formation. The drumlin was eroded by water action of the Tobacco River. The area can be viewed from an overlook on the south side of the Tobacco River Bay accessed from Rexford Bench Campground.

Star Creek Canyon: located on the Troy Ranger District across the Kootenai River from the Yaak River campground, near the mouth of Star Creek. The canyon is difficult to access on foot. It has 100%+ sideslopes, areas of slide rock, and cliffs. There is little vegetation in the canyon itself. Vegetative types include Douglas fir on the north side and cedar/hemlock/clintonia on the south side. There are a series of waterfalls of up to 40' in the canyon. There is no fish passage through the canyon. The area is not grizzly habitat.

Sunday Creek Falls: on the east side of the Forest on the Fortine Ranger District. The area is actually a series of waterfalls on Sunday Creek just above road #3734. There is a picnic table near the road and a trail to the falls. The area supports a lot of recreational use for picnics, hiking, and swimming on a day use basis. Areas of timber harvest surround the site. The area is not grizzly habitat.

Ten Mile Talus: located on the Rexford Ranger District on the topographic divide between Tenmile Creek and Pinkham Creek. There is a canyon caused by a fault with sideslopes that have been glacially scoured. The lower slopes contain large amounts of talus. There is sparse vegetation; mostly a fescue type.

West Fork Yaak Falls: located on the Yaak Ranger District in the northwest corner of the Forest near the confluence of the West Fork and the main Yaak River. The area contains two waterfalls within a mile above Forest Highway #92. The area is heavily used for hiking and for picnics.

All of the areas are delineated with natural features such as topographic slope breaks and hydrologic divides. Four of the areas involve stream bottoms and all four have waterfalls. The other area (Ten Mile Talus) is located on a topographic divide and contains a large area of talus. Most of the areas have shallow soil with lots of exposed bedrock. The influence of faulting in shaping the landscape is demonstrated in all areas. Most of the areas are sparsely vegetated or open grown. The only wet habitat types are in the bottoms.

The southerly aspects, except cliffs and oversteepened slopes, provide winter habitat for wildlife. There are fish in most of the streams but the falls are migration barriers.

All of the areas have access to their boundaries. Sunday Creek Falls and the West Fork of the Yaak falls are frequently visited. Ten Mile Talus has a road running through it. Star Canyon and Devils Gap are accessible but the terrain makes hiking extremely difficult, even dangerous in some spots.

B. GOAL

Manage and protect the geologic areas and preserve those unique or unusual characteristics and interpret those characteristics for the public. Provide safe recreation experiences, if possible, that can take advantage of the scenic, geologic, or riparian values.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is retention.
2. The ROS class is semi-primitive non-motorized except Ten Mile Talus which is roaded-natural.
3. Trail construction is permitted to access unique features, or link to other trail systems.
4. ORV use is normally not permitted.
5. Vistas will be planned and vegetation may be manipulated to open other viewing points.

Wildlife and Fish

1. Habitat manipulation for wildlife may occur provided that there are no adverse affects to the goal of this MA.
2. Any activity will insure maintenance or improvement of existing fisheries.

Range

Livestock grazing is permitted in the Ten Mile Talus area but not in the rest of the geologic areas.

Timber

1. This MA is not suitable for timber production.
2. Timber harvest is not permitted except to open vistas or remove safety hazards.
3. Intensive insect or disease treatment such as spraying individual trees may occur to protect the characteristics of the site.

Minerals and Geology

1. Refer to Forest Standards for locatable minerals. Seasonal restrictions will occur.
2. Surface occupancy for oil and gas purposes is generally not permitted. Existing roads may be used on a case-by-case basis.
3. Disposal of common minerals is not permitted.

Lands

1. No rights-of-way, easements, or cost-share agreements.
2. Special-uses such as snow courses may be allowed if they do not affect the goals of this MA.

Facilities

1. Roads may be constructed to enhance the recreation use or interpretation of these sites. None are planned.
2. Roads may be permitted for mineral activities where construction is justified on the basis of mineral showings or data, and where it is the next logical step in the development of the mineral resource, provided that there is no effect on the goal of this MA.
3. Geologic areas are classified as corridor avoidance areas.

FirePrescribed Fire

Planned Ignitions:

Although none is planned or anticipated it may be used for wildlife habitat or activity fuels provided that its use does not adversely affect the goals for geologic areas.

Unplanned Ignitions:

Will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no affect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest lands whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize preservation of the geologic interest, visual preservation, and recreation use of the area.
2. The use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None planned.

Projected - Second Decade

None projected

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-5, A-7
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

V. BOTANICAL AREAS (40 acres)

A. DESCRIPTION

Berray Cedars is located in the Cabinet Ranger District in the South Fork of the Bull River. It is a mature stand of western red cedars at mid-elevation northeast of Berray Mountain.

B. GOAL

Manage and protect the botanical area and preserve those unique or unusual characteristics and interpret those characteristics for the public. Provide safe recreational experiences, if possible, that can take advantage of the botanical values.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is retention.
2. The ROS class is roaded-natural.
3. Trail construction is permitted to access unique features.
4. ORV use is normally not permitted.

Range

Livestock grazing is not permitted.

Timber

1. This MA is not suitable for timber production.
2. Timber harvest is not permitted.
3. Intensive insect or disease treatment such as spraying individual trees may occur to protect the botanical character of the area.

Minerals and Geology

1. Refer to Forest Standards for locatable minerals. Seasonal restrictions will occur.
2. Surface occupancy for oil and gas purposes is generally not permitted. Existing roads may be used on a case-by-case basis.
3. Disposal of common minerals is not permitted.

MA-21 BOT

Lands

No special uses, rights-of-way, easements, or cost-share agreements.

Facilities

1. New roads are not permitted.
2. New trails may be constructed.
3. The area is classified as a corridor avoidance area (see appendix 15).

FirePrescribed Fire

Planned Ignitions:

1. May be used only after the historic fire frequency has been developed and the planned ignition replicates that historic interval.
2. Any planned ignition must maintain the vegetative type for which the botanical area was developed.

Unplanned Ignitions:

Will not be used as prescribed fire.

WildfireSuppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year and expected fire behavior discloses no affect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics:

1. Tactics will emphasize preservation of the botanical interest of the area.
2. The use of dozers requires Forest Supervisor approval.

MA-21 BOT

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None planned.

Projected - Second Decade

None projected

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-2, A-7
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

VI. BIG CREEK RIPARIAN ECOSYSTEM (3,230 acres)

A. DESCRIPTION

This area is located on the Rexford Ranger District along the East and West branches of the South Fork of Big Creek. It is a low-gradient stream with associated riparian vegetative types. There is a trail system in the bottom of both drainages but it has not been maintained for many years. Most of the area is bounded on the upper side by existing or proposed roads.

The 1910 and 1919 wildfires left a nearly pure stand of lodgepole pine with a few scattered individuals of other species. The lodgepole is presently deteriorating and other species will eventually occupy the site.

The area varies from 4,400' to 5,400'. It is summer and fall wildlife range and grizzly habitat. Cutthroat and rainbow trout from Lake Koocanusa use both stream branches for spawning.

B. GOAL

Maintain and enhance the existing riparian ecosystem to provide wildlife, fish, and recreation benefits.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this Plan applies to this MA.

Recreation

1. The VQO is retention. Some short-term activities such as trail head construction may reduce limited areas to modification.
2. The ROS is semi-primitive non-motorized.
3. Dispersed sites for camping or picnics are permitted although none are planned.
4. New trails are permitted although none are presently planned.
5. ORV use is not permitted.

Wildlife and Fish

1. As the lodgepole pine dies insure that streams maintain fish passage.
2. Encourage tree and shrub species diversity, and old-growth timber development.
3. If fuels build up, they should be abated with prescribed fire rather than mechanical means for forage and soil protection.
4. Maintain and protect existing grassy meadows and ponds.

Range

Livestock grazing is not permitted.

Timber

1. This area is not suitable for timber production.
2. Salvage harvest may be used on an infrequent basis to:
 - a. Prevent fuel accumulations.
 - b. Remove fish barriers.
 - c. Create desired species and age class mixtures as determined by wildlife and fisheries needs.
 - d. Public safety.
 - e. Creation of dispersed sites.
3. No salvage is permitted in old-growth stands.
4. Harvest will be only by cable or aerial systems.
5. If any activity occurs, the season of use will be adjusted or operations restricted to minimize conflicts with wildlife or fisheries.

Soil, Water, and Air

1. All activities will be designed to limit soil impact because the soils in Big Creek are especially susceptible to erosion and compaction.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Minerals and Geology

1. Road construction is not permitted for exploration.
2. The season of use will be adjusted or operations restricted to minimize conflicts with wildlife or fisheries.
3. Disposal of common minerals is not permitted.

Lands

No special-uses, rights-of-way, easements, or cost-share agreements.

Facilities

1. No roads or skid trails will be constructed.
2. Trails may be constructed but none are planned.
3. This site is classified as a corridor avoidance area.

FirePrescribed Fire

Planned Ignitions:

May be used for hazard reduction or removal of any activity fuels.

Unplanned Ignitions:

Will not be used as prescribed fire.

Wildfire**Suppression Strategy:****Critical Fire Season:**

All wildfires will be controlled.

Noncritical Fire Season:

If an analysis of the time of year, and the expected fire behavior discloses no effects to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics:

1. Suppression tactics are limited only by the standards for this area, and the Management Standards for the Forest.
2. Because of the soil types the use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES**Planned - First Decade**

None planned.

Projected - Second Decade

None projected.

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-7
Wildlife and fish	C-1 through C-10
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 23

1,690 ACRES

A. DESCRIPTION

This MA is composed entirely of the existing electric transmission corridor on the south end of the Forest which crosses along the south boundary of the Cabinet Mountains Wilderness Area. There is a low-standard access road providing repair and inspection access for the entire length. Vegetation varies from shrubs to small conifers. All acres are in grizzly situations 1 and 2.

B. GOALS

Provide for the transmission of electricity in a safe and efficient manner. Protect the adjacent wilderness character, contribute to the diversity of surrounding wildlife habitat, and provide as much security as possible for the grizzly bear.

C. STANDARDS

1. These standards will also apply to any future corridors which may be located and approved.
2. The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is maximum modification.
2. The ROS class is predominantly rural.
3. Over-snow vehicles are allowed when conflicts with big game can be avoided.

Wildlife and Fish

1. Vegetation control will be coordinated with wildlife use to provide forage for winter range at the lower elevations.
2. Security for wildlife will be provided by regulating access along the corridor. Regulation may include seasonal closures to all motorized vehicles but powerline maintenance personnel.
3. Any activity in this MA will be required to leave no trash or other grizzly attractant. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.
4. Controls will be determined site specifically, but any herbicide used may not enter any water course.

Range

Grazing domestic livestock is permitted on the portions where grazing is also permitted on the adjacent MA.

Timber

1. This MA is not suitable for timber production.
2. Culture and harvest of Christmas trees or other products which can safely be grown and harvested under the powerline is permitted.
3. Harvest units in adjacent MA's should be planned to add visual diversity to the corridor edges.

Soil, Water, and Air

1. Soil and Water Conservation Practices will guide the implementation and mitigation of all land disturbing activities.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.
3. Public motorized access may be restricted because of the need to control erosion on steep grades.

Minerals and Geology

1. Refer to Forest Standards for locatable minerals. Seasonal restrictions, may occur.
2. Seasonal restrictions may be required for oil and gas leases and geophysical activities.
3. Generally, disposal of common minerals will not be permitted.

Facilities

1. The powerline access roads will be open to maintenance crews at all times.
2. Public access may be restricted based on the access restrictions of adjacent MA's.
3. Open roads will be maintained at level 2 or better.
4. Because of some steep grades on access roads, erosion control measures including structures, drainage dips, etc. will be inspected annually and constructed or maintained to prevent soil loss.

FirePrescribed Fire

Planned Ignitions:

Planned ignitions for disposal of activity fuels or wildlife habitat enhancement are permitted.

Unplanned Ignitions:

Unplanned ignitions as prescribed fire are not permitted.

Wildfire

All seasons:

All wildfires will be controlled.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None planned.

Projected - Second Decade

None projected.

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-5, A-7
Range	D-1, D-2
Human & Comm Dev.	H-3, H-4
Facilities	L-1, L-2

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 24

23,115 ACRES

A. DESCRIPTION

This MA usually occurs in small parcels at mid to high elevations and has relatively little productive capacity for many of the surface resources on the Forest. The MA is moderate to steep, usually rocky with thin soils, and often occurs on glacially-scoured ridgetops, walls, or talus slopes. This MA usually exists as inclusions within larger MA's that are productive for timber, T & E species, other wildlife, or recreation.

B. GOALS

Manage for site protection, primarily, and for any wildlife resources that may be inherent.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is partial retention in areas of high visual significance, modification in areas of moderate visual significance and maximum modification in areas of low visual significance.
2. ORV use is not permitted.
3. ROS class is predominantly semi-primitive nonmotorized, and semi-primitive motorized.

Range

Domestic livestock grazing is not permitted.

Timber

1. This MA is not suitable for timber production.
2. Timber harvest is permissible on a case-by-case basis.

Wildlife and Fish

1. Wildlife habitat will generally be managed in a natural condition, but enhancement may occur, using prescribed fire as an acceptable tool.
2. Standards and Guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.

Soil, Water, and Air

1. Insure soil and water stability and water quality by minimizing any surface disturbance on sensitive soils.
2. Soil erosion monitoring will occur with any ground disturbing activity.
3. Soil and Water Conservation Practices will guide the implementation of any land-disturbing activities.
4. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Lands

No special uses, rights-of-way, easements, or cost-share agreements are foreseen. If they occur, they will be handled on a case-by-case basis.

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Generally, disposal of common minerals will not be permitted.

Facilities

1. This MA requires no roads, however the most efficient route, or even the only route to an adjacent MA may be through this MA. Roads may be constructed only if a suitable route can be located consistent with all the standards of this MA.
2. Local roads will be closed (level 1) unless this is inconsistent with management of adjacent MA's.

FirePrescribed Fire

Planned Ignitions:

Will not usually be used in this MA.

Unplanned Ignitions:

Will not be used as prescribed fire.

Wildfire (Applies only to National Forest lands protected by the Kootenai National Forest. For National Forest lands protected by the State of Montana see "Standards" Chapter II.)

Suppression Strategy:

Critical Fire Season:

All wildfires will be controlled.

Noncritical Fire Season:

1. Wildfires will normally be controlled.
2. If an analysis of the time of year and the expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics: (Applies to all Kootenai National Forest land whether protected by the National Forest or the State of Montana.)

1. Tactics will emphasize the least possible disturbance.
2. Use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None planned.

Projected - Second Decade

None projected.

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-3, A-7
Range	D-2
Human & Comm Dev.	H-3, H-4
Facilities	L-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 29

26,290 ACRES

A. DESCRIPTION

This MA consists of two roadless and undeveloped areas, Trout Creek and Cataract Creek. Both are in Sanders county on the Cabinet Ranger District. Both are inventoried roadless areas and complete descriptions of both areas can be found in Appendix C of the Final EIS for this Forest Plan.

The Trout Creek area is located on the southern boundary of the Forest adjacent to the Idaho Panhandle National Forest. It is part of the 1910 burn. Timber productivity varies from low to medium with a few inclusions of highly productive land along the stream bottoms. The elevation ranges from 2,600' to 6,500' and the area is widely known for the large number of elk it supports. A portion of the area has been identified as having high mineral potential.

The Cataract Creek area is located on the southern boundary of the Forest adjacent to the Lolo National Forest. Like Trout Creek it is part of the 1910 burn. Timber productivity is medium to low with a few areas that are highly productive. Elevations range from 2,700' to 7,000'. The area is grizzly situations 1 and 2, and most species of big game can also be found. There are no existing roads.

B. GOALS

Manage the MA in a natural condition free from the evidence of man, for non-motorized and roadless recreation. Maintain and enhance the habitat for big game to provide roadless hunting opportunities. Maintain the visual quality of the area. Within grizzly situations 1 and 2 provide habitat and security to contribute to the eventual recovery of the species.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is retention.
2. The ROS class is predominantly primitive. Some semi-primitive non-motorized and semi-primitive motorized opportunities occur adjacent to existing roads and trailheads.
3. Trails will be closed to all motorized vehicles.
4. ORV use is not permitted.
5. Trails will be maintained at level 1 or 2.

Wildlife and Fish

1. Wildlife habitat will be managed in a natural condition. Habitat enhancement may occur using prescribed fire.
 2. Any activity that conflicts with grizzly bear management in Situation 1 and 2 lands will be modified or prohibited. Standards and guidelines specified in Appendix 8 (Grizzly Management Situation Guidelines) will be applied for all activities on grizzly habitat.
 3. Any habitat enhancement activity must maintain or enhance cavity-dependent habitat.
 4. Old-growth stands are rare in this MA and will be protected.
 5. Isolated enclaves of pure-strain trout species will be identified and preserved.
- .

Range

1. Grazing of domestic livestock is not permitted.
2. Recreational pack stock grazing will be allowed except in areas of overuse and at popular and heavily-used sites.

Riparian (See Riparian Area, Chapter II.)Timber

1. This MA is unsuitable for timber production.
 2. Timber harvest will not occur.
 3. Establish vegetation necessary to protect the soil, but reforestation for timber harvest is not applicable.
- .

Soil, Water, and Air

1. All site rehabilitation projects will be done in a manner that protects the primitive values, using only native species for revegetation.
2. Comply with the Smoke Management Plan published by the Air Quality Bureau of the Montana Department of Health and Environmental Sciences and administered by the Montana State Airshed Group.

Minerals and Geology

1. Refer to Forest Standards for locatable minerals. Seasonal restrictions may occur.
2. No surface occupancy for oil and gas leases and geophysical activities.
3. Generally, disposal of common minerals will not be permitted.

Lands

1. No cost-share agreements are permitted.
2. Rights-of-way, and easements will normally not be permitted, but each will be examined on a case-by-case basis. To be allowed they must be scheduled and located so that there is no conflict with recreation use, grizzly, or other wildlife.

Facilities

1. No new roads will be constructed.
2. New trails will be constructed if use on existing trails is so great that resource damage is occurring, or if additional recreation demand can be accommodated by providing more trails. No new trails will be built in grizzly situations 1 and 2 if they conflict with grizzly recovery goals.
3. Trails will be maintained at level 1 or 2.
4. This MA is classified as a corridor avoidance area (See Appendix 15).

FirePrescribed Fire

Planned Ignitions:

Planned ignitions may be used for wildlife habitat enhancement or fuels reduction.

Unplanned Ignitions:

1. May be used in this MA to perpetuate the natural ecological process, provide habitat diversity for wildlife and prevent a buildup of fuels which could lead to catastrophic fire in the future.
2. At any time the fire must involve only this MA and/or adjacent ones for which the use of unplanned ignitions for prescribed fire has been approved.
3. The expected life cycle effects of the fire must not adversely affect the goals or standards of this or any other MA.
4. A decision flow-chart will be prepared as part of the Fire Management Action Plan to conform to specific requirements of life and property, air quality, monitoring and managing resources, site, weather, expected fire behavior, and fuel types necessary for declaring an unplanned ignition a prescribed fire.

WildfireSuppression Strategy:

Critical Fire Season:

All wildfires will normally be controlled, however, an analysis including evaluation of expected fire behavior, time of year, and location with respect to private land and adjacent MA's may lead to a contain or confine strategy.

Noncritical Fire Season:

If an analysis of time of year and expected fire behavior discloses no effect to this or any other MA, and if it is more cost effective to do so, a contain or confine strategy will be used.

Suppression Tactics:

1. Tactics will emphasize the least possible disturbance or evidence of human presence.
2. Mechanized equipment will generally not be used.
3. Use of dozers requires Forest Supervisor approval.

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade - Average annual

- | | |
|--------------------------------------|-----------|
| 1. Trail Construction/Reconstruction | 0.4 miles |
| 2. Wildlife Habitat Improvement | 140 acres |
| 3. Fish Habitat Improvement | 6 acres |
| 4. Fuel Treatment | 106 acres |

Projected - Second Decade - Average annual

- | | |
|--------------------------------------|-----------|
| 1. Trail Construction/Reconstruction | 0.4 miles |
| 2. Wildlife Habitat Improvement | 140 acres |
| 3. Fish Habitat Improvement | 6 acres |
| 4. Fuel Treatment | 110 acres |

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-1, A-2, A-7
Wildlife and fish	C-1 through C-10
Range	D-2
Minerals	G-1
Human & Comm Dev.	H-3, H-4
Facilities	L-1
Protection	P-1

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT AREA 30

36,680 ACRES

A. DESCRIPTION

This MA consists of the surface of major lakes large enough so that the water oriented activities are not necessarily associated with the adjacent MA's. Most of the area is Lake Koocanusa, a reservoir formed behind Libby Dam. During the winter months the level of the reservoir is lowered as power is generated and in preparation for the spring runoff. The drawdown area, the area between high pool and low pool, is characterized by generally steep slopes, some benches, and no vegetation. The area between high and low water on all other water bodies is considered a riparian area.

B. GOALS

Provide for and manage water-oriented recreation activities including swimming, fishing, pleasure boating, and water skiing. Manage the drawdown area to protect the soil, water quality, fisheries, wildlife, and cultural resources.

C. STANDARDS

The Forest-wide management direction included in Chapter II of this plan applies to this MA.

Recreation

1. The VQO is not applicable. The nature of the drawdown area does not lend itself to visual management.
2. ORV use is permitted in the drawdown area provided there is no conflict with soil protection, water quality, or protection of cultural sites.
3. If demand for developed recreation sites exceeds supply, private concessionaires will be sought for development.
4. The ROS class is associated with adjacent MA's and is predominantly roaded-natural.

Wildlife and Fish

1. Activities will be scheduled to prevent conflict with wildlife use in adjacent MA's, particularly winter range use around the reservoir.
2. Activities will be conducted to prevent siltation in the lake or in the streams that provide spawning habitat for both resident and migratory fish.

Range

There is no opportunity for domestic livestock grazing.

Timber

1. Not suitable for timber production.
2. Landing areas for timber harvest on adjacent MA's are permitted if there is no conflict with soil protection, water quality, cultural site protection, or recreation use.
3. Debris removed from the reservoir will be made available for salvage or firewood.

Soil

Any land disturbing activities in the drawdown area will be guided by Soil and Water Conservation Practices.

Water

Overnight boat use is permitted unless water quality standards are violated.

Minerals and Geology

1. Refer to Forest standards for locatable minerals. Seasonal restrictions may occur.
2. Stipulate no surface occupancy for oil and gas leases.
3. Disposal of common minerals may be permitted in the drawdown area if there are no conflicts with other resources.

Lands

Special uses, rights-of-way, easements, or cost-share agreements may be authorized on a case-by-case basis.

Facilities

1. No permanent roads are anticipated.
2. Boat launch sites are permitted.
3. This MA is classified as a corridor avoidance area (See Appendix 15).

D. SCHEDULE OF MANAGEMENT PRACTICES

Planned - First Decade

None planned.

Projected - Second Decade

None projected.

E. MONITORING AND EVALUATION REQUIREMENTS

The specific monitoring requirements from Chapter IV that are applicable to this MA are:

Recreation	A-5, A-7
Wildlife and fish	C-10
Range	D-2

The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

KOOTENAI NATIONAL FOREST

FOREST PLAN

CHAPTER IV - IMPLEMENTATION

IV. Implementation

A. Introduction

Implementation of the Kootenai National Forest Plan requires moving from an existing management program, with a budget and "targets" for accomplishment, to a new management program with a budget, goals, and objectives that provide a different way of addressing the issues and concerns people have voiced about Forest management. This Forest Plan establishes the direction for the Kootenai National Forest for the next 10 to 15 years, when used in conjunction with Forest Service Manuals and Handbooks and the Northern Region Guide.

The remainder of this chapter explains how management of the Kootenai National Forest moves from the Current Direction and Existing Situation to the Forest Plan, all described in the EIS. The following sections describe aspects of Implementation that are influenced by previous management activities and objectives; the relationship between project planning and this Forest Plan; the goals of, and requirements for monitoring and evaluation; and the circumstances which could require the plan to be amended or revised.

B. Influence of Past Management on Future Options

Chapter III defines management direction for specific areas of the Forest. In some instances, this direction represents a change from current management direction. Where no previous management activities have occurred, the prescriptions of this Forest Plan can be put into effect from a neutral point. However, in areas where management activities have occurred to meet objectives other than those now specified, a transition period may be required to bring management fully into line with this Plan.

In addition to specifying management direction for areas of the Forest, this Plan schedules management activities. In some situations, previous management activities influence the scheduling of future activities.

C. Project Planning

The Forest Plan serves as the single land management plan for the Kootenai National Forest. All other land management plans are replaced by the direction in this Forest Plan.

Similarly, this Forest Plan directs the management of all resources on the Kootenai National Forest. All previous resource management plans are replaced by this document. Resource management objectives are displayed in Chapter II, and schedules of resource management practices for each management area are displayed in Chapter III.

Several documents designed to give further guidance to management activities have been or will be developed "under the umbrella" of this Forest Plan. They are:

- Annual Forest Travel Plan
- Landownership Adjustment Plan (Appendix 9)
- Area Transportation Development Plans
- Cabinet Mountains Wilderness Action Plan
- Fire Management Action Plans

The management direction provided by this Forest Plan comprises the sideboards within which project planning and activities take place. It defines management area goals and management standards that guide project activities toward achieving a desired future condition for the management areas and, collectively, for the Forest. It specifies a schedule for project activities (management practices). It provides guidance concerning potential land type and habitat type constraints, including assumptions about the appropriate vegetation management practices for timber sale projects. On-the-ground project analysis validates or invalidates the appropriateness of those assumptions.

Within this guidance, the projects are developed to most efficiently and effectively accomplish the management goals and objectives. All NEPA requirements will be complied with in all projects.

Project environmental analyses provide an essential source of information for Forest Plan monitoring. First, as project analyses are completed, new or emerging public issues or management concerns may be identified. Second, the management direction designed to facilitate achievement of the management area goals are validated by the project analyses. Third, the site specific data collected for project environmental analyses serve as a check on the correctness of the land designation. All of the information included in the project environmental analysis is used in the monitoring process to determine when changes should be made in the Forest Plan.

As part of project planning, site-specific water quality effects will be evaluated and control measures designed to ensure that the project will meet Forest water quality goals; projects that will not meet State water quality standards will be redesigned, rescheduled, or dropped.

If it is determined during project design that the best way to meet the management area goals of the Forest Plan conflicts with the Forest Plan standards, the Forest Supervisor may approve a variance to that standard for the project; such variances and the rationale for the changes must be described in the project's documentation and effected by means of a project specific amendment to the Forest Plan. There will be no deviation from standards established for threatened and endangered species conservation and protection unless a biological evaluation concludes that such a deviation would have no effect on the recovery of the species and there has been consultation with the Fish and Wildlife Service.

D. Monitoring and Evaluation

Monitoring and evaluation comprises the management control system for the Forest Plan. It will provide the decisionmaker and the public with information on the progress and results of implementing the Forest Plan.

Monitoring and evaluation entails comparing the end-results being achieved to those projected in the Plan. Outputs, and environmental effects, both experienced and projected, will be considered. In other words, are we doing what we said we were going to do and is what's happening what we expected to happen?

To do this, a comparison will be made, on a sample basis, of overall progress in implementing the Plan as well as whether the overall relationships on which the Plan is based have changed over time. When changes occur, they will be evaluated as to their significance, and appropriate amendments or revisions made if needed.

The goals for monitoring and evaluating this Forest Plan are to determine:

- How well the Forest is meeting its planned goals and objectives;
- If existing and emerging public issues and management concerns are being adequately addressed;
- How closely the Forest Plan's management standards are being followed;
- If outputs and services are being provided as projected;
- If the effects of implementing the Forest Plan are occurring as predicted, including significant changes in the productivity of the land;
- If the dollar and manpower costs of implementing the Forest Plan are as predicted;
- If implementing the Forest Plan is affecting the land, resources, and communities adjacent to or near the Forest;
- If activities on nearby lands managed by other Federal or other governmental agencies, or under the jurisdiction of local governments, is affecting management of the Forest;
- If research is needed to support the management of the Forest, beyond that identified in Chapter II of the Forest Plan; and
- If there is a need to amend or revise the Forest Plan.

The monitoring requirements for this Forest Plan are outlined in Table IV-1, Forest Plan Monitoring Requirements. These requirements address the items to be monitored, the data sources, expected precision and reliability, frequency of measurements, reporting period, and the acceptable variability. Most of the monitoring items are applicable to specific Management Areas; a listing of applicable monitoring items is included in the direction for each Management Area (Chapter III). Other monitoring items are more applicable to broad areas or are Forest-wide in nature and will be evaluated from such sources as the data base, Forest Attainment Reports, public involvement processes, and non-Forest-Service sources.

Evaluation of data gathered during monitoring will be guided by the Decision Flow Diagram detailed in Figure IV-2. As indicated in the diagram, the results of this evaluation lead to decisions on further action of the following types:

- continuing the management practice;
- referring the problem to the appropriate line officer for improvement of the application of the management practice;
- modifying the management prescription as a Plan amendment;
- modifying the land designation as a Plan amendment;
- revising the schedule of outputs;
- revising the cost/unit output; or
- initiating revision of the Plan.

The document resulting from the use of the Decision Flow Diagram constitutes the evaluation report. As applicable, the following will be included in each evaluation report;

- A quantitative estimate of performance comparing outputs and services with those projected by the Forest Plan.;
- Documentation of measured effects, including any change in productivity of the land;
- Unit costs associated with carrying out the planned activities as compared with unit costs estimated during Forest Plan development;
- Recommendations for changes;
- A list of needs for continuing evaluation of management systems and for alternative methods of management;
- A list of additional research needed to support the management of the Forest; and

- Identification of additional monitoring needs to facilitate achievement of the monitoring goals.

E. Amendment and Revision

The Forest Supervisor may amend the Forest Plan. Based on an analysis of the objectives, standards, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the Plan. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

A Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It also may be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly or when changes in RPA policies, goals, or objectives would have a significant effect on Forest level programs. In the monitoring and evaluation process the interdisciplinary team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of the Forest Plan. The Forest Supervisor shall review the conditions on the land covered by the plan at least every 5 years to determine whether conditions or demands of the public have changed significantly.

TABLE IV-1

MONITORING AND EVALUATION REQUIREMENTS

IV-6

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY MEASUREMENT (5)	REPORTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
A - 1	RECREATION 36 CFR 219 .12(K)(1)	Measure trends in roadless area use	Dispersed use in wilderness & non- wilderness areas	1 RIM data 2 Interviews	Moderate	Low	Sample four times a year; once in each season	5 years	+ 20% from the pre- dicted trends of RVD's by type of use (motor- ized or roadless)
A - 2	RECREATION 36 CFR 219 .12(K)(2)	Determine wheth- er areas are being overused	Site conditions in roadless and semi- primitive motorized recreation areas and trails	LAC/Code-a- site (or sim- ilar form), and photos	Moderate	Moderate	Biannual	5 years	Site deterioration sufficient to damage soil & water resource, permanently affect the sites' ability to re- cover, become a safety hazard, or detract from the recreation experience
A - 3	RECREATION 36 CFR 219 .12(K)(1)	Measure the ef- fectiveness of visual resource management pro- gram	VQO acres where treatment meet obj- ectives	Project EA's	Moderate	Moderate	Annual	5 years	Over 10% of acres do not meet VQO category
A - 4	RECREATION 36 CFR 219 .12(K)(1)	Measure trends in Developed Site use	Developed recrea- tion	1 Occupancy data kept by Hosts 2 Fee collec- tion data 3 Spot checks of sites	High	High	Annual	5 years	+ 20% from predicted RVD's
A - 5	RECREATION 36 CFR 219 .12(K)(2)	Affects of ORV use.	1. Environmental effects of ORV use to: a. soil & water b. wildlife 2. Amount of ORV use 3. Conflict, if any, with other users.	1. Observation 2. Interviews 3. Surveys	Moderate	Low	Annual	5 years	Same as A-2

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NPMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected.

(6) Period for which data is collected prior to analysis and reporting.

Table IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-7

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY MEASUREMENT (5)	REPORTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
A - 6	RECREATION 36 CFR 219 .12(K)(1)	Acres and dis- tribution of the roadless resource.	1. Location of acti- vities. (usually timber sales).	1. Project EA 2. District staff.	high	high	annual	5 years	1. \pm 5% of acres 2. \pm 5% distribution by district.
A - 7	ARCHEOLOGY 26 CFR 219 .12(K)(1) AND 36 CFR 800	Monitor com- pliance with 36 CFR 800	Management impacts on cultural res- ources	1 Surveys/ inventories 2 Nomination 3 Enhancement 4 Evaluation 5 Site stab- ilization 6 Performance standards	High	High	Annual	5 years	More than 10% varia- bility from standards
C - 1	WILDLIFE 36 CFR 219 .12(K)(1)	Maintain habitat capable of sup- porting 68% of max potential elk population: 5500 End Dec 1 6550 End Dec 2 8000 End Dec 3	Elk habitat capa- bility as % of potential.	1 Stand Exams 2 Annual trav- el plan. 3 Elk habitat guidelines 4 Project EA's 5 Habitat transects for sample projects	Moderate	Moderate	Annual	5 Years	Any Downward Trend
C - 2	WILDLIFE 36 CFR 219 .12(K)(1)	Maintain the trend of ach- ieving 8,000 elk after 30 years	Numbers of elk as a big game indicator species	1 Habitat transects 2 MDPW&P cen- sus and har- vest results	Moderate	Low	Annual	5 Years	Any Downward Trend
C - 3	WILDLIFE	Provide habitat capable of main- taining or enhancing other big-game popu- lations	Habitat capability for big game other than elk (bighorn sheep, mtn goat, moose, whitetail deer, mule deer, black bear, and mtn lion)	1 Project EA's 2 MDPW&P re- ports, sur- veys, & har- vest surveys 3 Personal observations	Moderate	Low	Annual	5 Years	Downward population trend, or noticeable decrease in habitat capability

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NFMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

TABLE IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-8

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY OF MEASUREMENT (5)	REPORTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
C - 4	WILDLIFE 36 CFR 219 .12(K)(1)	Maintain viable population of old growth dependent species (> 40% of potential)	Population levels of old growth dependent species	1 Population transects 2 Personal observations	Moderate	Low	Annual	5 Years	Any reduction approaching minimum viable population levels (40% of potential population)
C - 5	WILDLIFE 36 CFR 219 .12(K)(2)	Maintain habitat capable of supporting viable populations of old growth dependent species (10% old growth in each drainage)	Old growth habitat amount and condition	1 Timber stand data base 2 Old growth data base 3 Spot surveys 4 Project EA's	High	Moderate	Annual	2 Years	Reduction below 10% in a drainage which was previously over minimum; or any reduction in a drainage previously under minimum
C - 6	WILDLIFE 36 CFR 219 .12(K)(2)	Maintain habitat capable of supporting viable populations of cavity nestors (> 40% of potential)	Cavity habitat condition and amount	1 Stand exams 2 Spot surveys 3 EA's for a sample of projects	Moderate	Moderate	Annual	5 Years	Any reduction in habitat capability approaching 40% of potential
C - 7	WILDLIFE 36 CFR 219 .12(K)(2)	Provide habitat capable of supporting recovered populations of T&E species, and cooperate in recovery operations	Kootenai N.F. contribution to T&E species recovery (grizzly bear, bald eagle, and gray wolf)	1 Habitat maps 2 Cumulative effects analysis 3 Habitat improvement accomplishment reports 4 Recovery plans 5 Population and habitat research	High	Moderate	Annual	Annual	Any downward population trend. Any forest wide decrease in habitat quantity or quality. Failure to meet Kootenai N.F. recovery plan goals

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NPMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

TABLE IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-9

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY OF MEASUREMENT (5)	REPRTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
C - 8	WILDLIFE 36 CPR 219 .12(K)(1)	Maintain indi- cator species above minimum viable popula- tion levels for the Forest as a whole (see Appendix 12)	Habitat for indicat- or species & pop- ulation trends	1 Spot surveys 2 Stand exams 3 Timber stand data base	Moderate	Moderate	Annual	5 Years	Any reduction ap- proaching minimum hab- itat needed for viable population levels (40% of potential populations)
C - 9	RIPARIAN 36 CPR 219 .12(K)(1)	Insure that the intent of ripar- ian management goals are met	Riparian habitat condition	1 Mapping from project EA's 2 Information gathered from M&E Items C-10, P-1, & P-2	High	High	Annual	5 Years	Variability limits listed in M&E Items C-10, P-1, & P-2
C - 10	FISHERIES 36 CPR 219 .12(K)(1)	To assure chang- es in fish hab- itat and numbers do not exceed those predicted	Fish habitat and spawning habitat (on the following representative streams in conjun- ction with M&E Items F-1 & F-2: Bristow Crk MA-15 Sunday Crk MA 12,13 Red Top Crk MA 12,13 Rock Crk MA 2 Granite Crk MA 2,8 Flower Crk MA 8 Big Crk MA 3	1 Stream sur- veys 2 Core samples 3 Stream temp- erature sam- ples 4 Debris re- cruitment analysis 5 Redd counts 6 Embeddedness samples	High	Moderate	Annual	2 Years	+10% change in Redd #s +2 degrees stream temp from normal +10% change in sedi- ment +10% change in embed- dedness +20% change in debris accumulation
D - 1	RANGE	To see if Plan objectives are being met	AUM's permitted	1 Range allot- ment permits 2 PRAMIS rep- orts 3 Allotment plans 4 Spot checks	High	High	Annual	Annual	+20% of anticipated AUM's

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NPMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

TABLE IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-10

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY OF MEASUREMENT (5)	REPORTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
D - 2	RANGE 36 CPR 219 .12(K)(2)	To identify changes in nox- ious weed infes- tations	Acres infested with noxious weeds	1 Spot surveys 2 Public input 3 County sur- vey data	Moderate	High	Annual	Annual	10% increase in number of acres infested; 10% increase in den- sity of existing infestations A change in the div- ersity of noxious weed species
E - 1	TIMBER 36 CPR 219 .12(K)(1)	To see if Plan objectives are being met	Regulated and unreg- ulated sell volume	1 Cut and sold report 2 Chief's re- port	High	High	Quarterly	Annual	+5% deviation after 5 years (Regulated Vol) +10% deviation after 5 years (Unregulated Vol)
E - 2	TIMBER 36 CPR 219 .12(K)(1)	To see if Plan objectives are being met	Acres harvested by Management Area	Timber stand data base	High	High	Annual	Annual	+10% by MA after 5 years
E - 3	TIMBER 36 CPR 219 .12(K)(511)	To track ground verification of MA boundaries	Documented adjust- ments to MA bound- aries	EA's for timber sales	High	High	Annual	Annual	+5,000 acre cumulative total change in any MA with programmed timber harvest after 5 years
E - 4	TIMBER 36 CPR 219 .12(K)(1)	To validate Plan yield tables	Growth trends by productivity class (MIXCON I, MIXCON II and LPP)	1 Timber stand data base 2 Permanent growth plots 3 Stand exams for thinning	High	Moderate	Annual	5 Years	+10% of predicted volume by produc- tivity class
E - 5	TIMBER 36 CPR 219 .12(K)(51)	To track Plan targets and to insure NFMA re- quirements are met	Acres of reforesta- tion and survival rates	Timber stand data base	High	High	Annual	5 Years	+10% deviation from predicted regenera- tion acres >10% of stands are not certified regen- erated within 5 yrs of regeneration harvest
E - 6	TIMBER 36 CPR 219 .12(K)(2)	To see if Plan targets are be- ing met	Acres of timber stand improvement	Timber stand data base	High	High	Annual	5 Years	+20% of predicted acres accomplished

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NFMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

TABLE IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-11

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY OF MEASUREMENT (5)	REPORTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
E - 7	TIMBER 36 CFR 219 .12(K)(2) .12(K)(3)	To track acres with programmed harvest where entry has been deferred because of economics or other resource conflicts such as Water Quality, Grizzly Bear, Mining, etc.	Programmed harvest acres deferred from entry because of economics or other resource conflicts by MA	Project EA's	Moderate	Moderate	Annual	Annual	>10,000 acres cumulative change by MA after 5 years
E - 8	TIMBER 36 CFR 219 .12(K)(5)(ii)	Evaluation of Maximum size limits for harvest areas.	1. Cutting unit size by forest type, MA, & District.	Project EA's	high	high	Annual	2 years	Variation in trends of other resources beyond the natural variation that can be determined
F - 1	SOIL & WATER 36 CFR 219 .12(K)(1) .12(K)(2) .7(f)	To determine if Regional and project Soil & Water Conservation Practices are adequate to meet State Standards	1 Turbidity 2 Stream temperature 3 Total suspended solids 4 Streamflow	One sale/District/year, or 5% to 10% of Forest sales	High	High	Quarterly	Annual	Failure to meet State standards
P - 2	SOIL & WATER 36 CFR 219 .12(K)(1) .7(f)	Sediment impacts on fishery habitat	1 Bedload movement 2 Suspended solids 3 Streamflow	Monitoring of the 7 sample streams listed in M&E Item C-10	Moderate	Moderate	Annual	Annual	20% increase in bedload and suspended solids
P - 3	SOIL & WATER 36 CFR 219 .12(K)(2) .7(f)	To determine the cumulative level of water yield increases and the resultant affect on stream channels	Water yield	1 Recording guages 2 Crest guages 3 Channel surveys 4 Kooetnal Water Yield Analysis Procedure	High	Moderate	Annual	Annual	20% increase in channel stability rating 20% of watersheds exceed hydrologic guidelines

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NFMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

TABLE IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-12

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY OF MEASUREMENT (5)	REPRTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
P - 4	SOIL & WATER 36 CFR 219 .12(K)(2)	To determine changes in site quality (espec- ially on soils with a loess surface)	Soil compaction; surface displace- ment; and site quality	Transects in sample harv- est units on one sale/Dist- rict/year	Moderate	Moderate	Annual	5 Years	>15% decrease in site productivity
G - 1	MINERALS 36 CFR 219 .12(K)(2) .7(f)	To monitor the effects of min- eral activity on other re- source suita- bilities	Acres of MA changed because of mineral activity	1 EA's 2 Mineral Op- erating Plan 3 Lease app- lications	High	High	Annual	5 Years	>10,000 acres cumula- tive change in any MA after 5 years
II - 1	HUMAN AND COMMUNITY DEVELOPMENT, EMPLOYMENT, AND BUDGET 36 CFR 219 .7(P) .12(K)(1)	To determine the effects of Plan implemen- tation on the local economy	Change in local economy	1 Chamber of Commerce surveys 2 Industry reports 3 Employment statistics 4 25% fund distribution 5 Census data	Moderate	Low	Annual	5 Years	Further action will depend on the signifi- cance of Forest activ- ities and will most likely be reflected in changes after the first planning period (10 to 15 years)
II - 2	HUMAN AND COMMUNITY DEVELOPMENT, EMPLOYMENT, AND BUDGET 36 CFR 219 .7(f)	To determine if there are local or Forest wide issues that were not considered in the Forest Plan, and if data is suffic- ient to assess the new issues	Emerging issues	1 Inform and involve ef- forts 2 EA respon- ses	Moderate	Moderate	Annual	Annual	Issues surfaced that were not included in, or analyzed for af- fect by the Plan

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

(2) General subject area and NPMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

TABLE IV-1

MONITORING AND EVALUATION PLAN (continued)

IV-13

MONITOR- ING ITEM MIH (1)	SUBJECT AND REG (2)	MONITORING OBJECTIVE	ACTIONS, EFFECTS, OR RESOURCES TO BE MEASURED	DATA SOURCE	EXPECTED PRECISION (3)	EXPECTED RELIABILITY (4)	FREQUENCY OF MEASUREMENT (5)	REPORTING PERIOD (6)	VARIABILITY WHICH WILL INITIATE FURTHER ACTION
H - 3	HUMAN AND COMMUNITY DEVELOPMENT, EMPLOYMENT, AND BUDGET 36 CFR 219 .12(K)(3)	To determine if the costs of producing out- puts that were used in the Plan continue to be valid	Cost of producing outputs	1 MAR's 2 MAT reports	High	Moderate	Annual	Annual	+10% deviation from the cost data used to cal- culate PNV in this Plan
H - 4	HUMAN AND COMMUNITY DEVELOPMENT, EMPLOYMENT, AND BUDGET 36 CFR 219 .7(r)	To determine the effect of devia- tions in budget levels	Budget levels and their effects on Plan implementation	Final Budget Advice	High	High	Annual	Annual	+10% deviation, by funding item, from the predicted levels in this Plan
L - 1	FACILITIES 36 CFR 219 .12(K)(1)	To see if the the road closure objectives of this Plan are being met	Miles of road closed	1 Transporta- tion Infor- mation Sys- tem (TIS) 2 Annual tra- vel plan 3 Spot checks	High	High	Annual	5 Years	+20% of the propor- tion of open to closed roads, as described in this plan, by the end of the first decade
L - 2	FACILITIES 36 CFR 219 .12(K)(1)	To determine if the road den- sities predic- ted in this Plan continue to be valid	Road density	EA's	High	High	Annual	5 Years	Any increase in road density over that pre- dicted in this Plan
P - 1	PROTECTION 36 CFR 219 .12(K)(5iv)	Determine level of insect & dis- ease organisms following mgmt. activities.	Health of residual stand and surroun- ding stands.	Stand exam and annual aerial detect- ion surveys.	moderate	moderate	annual	2 years	Insect and disease levels increase bey- ond normal levels.

(1) Management Information Handbook code letter.

(4) The degree that monitoring can be expected to reflect the total Forest situation.

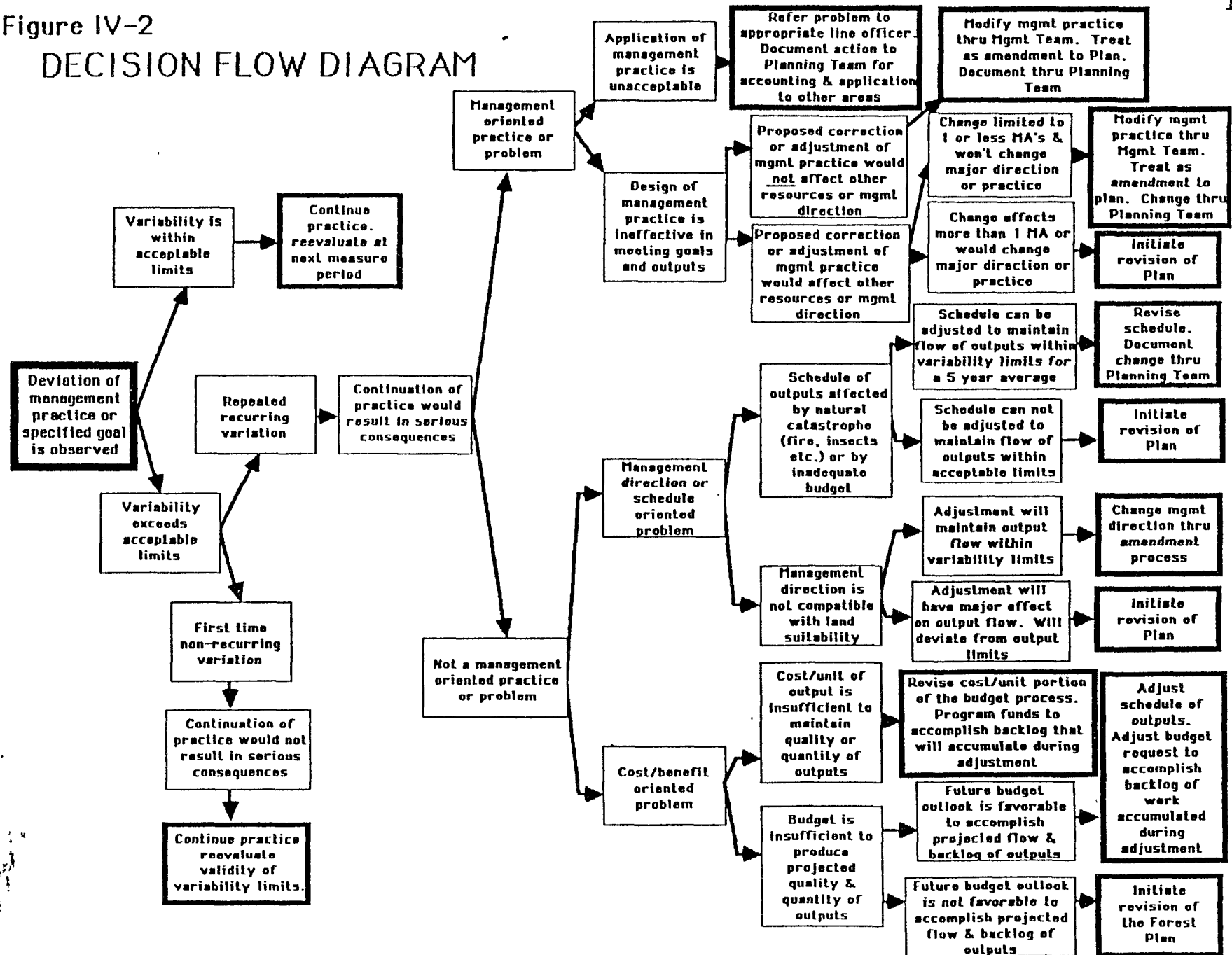
(2) General subject area and NFMA regulation.

(5) Sampling frequency and sample size where appropriate.

(3) The exactness or accuracy with which the data will be collected. (6) Period for which data is collected prior to analysis and reporting.

Figure IV-2

DECISION FLOW DIAGRAM



KOOTENAI NATIONAL FOREST

FOREST PLAN

CHAPTER V - ANALYSIS of the MANAGEMENT SITUATION (Summary)

V. SUMMARY OF THE ANALYSIS OF THE MANAGEMENT SITUATION

The Analysis of the Management Situation (AMS) is the fourth step of the ten step planning process. The purpose of the AMS is to determine the demand for various resources from the Kootenai National Forest and to determine the potential to satisfy that demand. The information presented in this summary can be found in more detail in the Final EIS for the Kootenai Forest Plan.

A. Timber

Demand:

The supply requirements for timber from the Kootenai National Forest is related to mill capacity, and to the national demand for forest products. Mill capacity within the five-county market area (Lincoln, Sanders, and Flathead counties in Montana and Boundary and Bonner counties in Idaho) is estimated to be 801 MMBf annually. The two-county submarket area (Lincoln and Sanders county, Montana) mill capacity is estimated to be 260 MMBf. The total harvest within the submarket area has averaged 346 MMBf annually (1970 - 1979). Annual harvest from the Kootenai National Forest for the same time period has been 187 MMBf annually. Local mills account for approximately 1.02% of the national market. Table V-1 identifies the range of regulated timber harvest volumes (live green and recently dead volume) from the suitable timber lands.

Table V-1 Average Annual Timber Harvest by Decade (MMBf)
(live green and recently dead timber only)

<u>Alternative or Resource Potential</u>	<u>Decade</u>				
	<u>1985- 1994</u>	<u>1995- 2004</u>	<u>2005- 2014</u>	<u>2015- 2024</u>	<u>2024- 2034</u>
Maximum Potential	255	245	264	316	345
Minimum Level	80	0	0	0	0
Current Direction	150	152	157	143	162
Final Plan	202	230	227	213	234

B. Facilities

1. As of January, 1986, there were approximately 6,200 miles of road (3,940 miles of local roads and 2,260 miles of arterial and collector roads) in place on the Kootenai National Forest. The amount of new road required varies directly by the amount of suitable land available for timber harvest (See Tables V-2 and V-3).
2. Road restrictions, either year-long or seasonal, are done in order to minimize the cost of maintaining a road after a project has been completed, to protect the recreation values of an area or to protect the wildlife values during seasons of use. There are currently 1,600 miles of road on the Kootenai National Forest that are restricted either seasonally or year-long. Table V-4 identifies the range of restricted roads.

Table V-2

Average Annual Road Construction by Decade (Miles)*

<u>Alternative or Resource Potential</u>	<u>Decade</u>				
	<u>1985- 1994</u>	<u>1995- 2004</u>	<u>2005- 2014</u>	<u>2015- 2024</u>	<u>2025- 2034</u>
Maximum Potential	310	259	187	0	0
Minimum Level	1	0	0	0	0
Current Direction	185	157	138	22	3
Final Plan	237	249	37	3	0

* The road construction mileages are calculated from 1978 which does not include the 1,400 miles of road which have been built since that period up to 1/1/86.

Table V-3 Total Roads Constructed by the Year 2030

<u>Alternative or Resource Potential</u>	<u>Miles</u>
Maximum Potential	12,360
Minimum level	6,200
Current Direction	9,840
Final Plan	10,050

Table V-4 Total Roads Restricted

<u>Alternative or Resource Potential</u>	<u>Miles</u>
Maximum Potential	6,080
Minimum Level	450
Current Direction	4,590
Final Plan	5,730

C. Recreation

1. Recreation demand is expected to vary directly with the population in the market area and adjoining metropolitan areas (Spokane, WA).
2. Developed recreation opportunities do not vary by alternative, and are considered to be adequate, Forestwide, at least through the fifth decade. (Localized facility shortages could occur in highly desirable locations.) Semi-primitive motorized recreation and roaded recreation opportunities vary by the amount of developed management areas on the Forest. They are adequate to meet anticipated demand. The forms of roadless recreation vary by alternative: Semiprimitive nonmotorized recreation occurs on roadless areas excluding wilderness (Table V-5). Primitive recreation occurs, for this analysis, in wilderness areas (Table V-6).

Demand:

The demand for semiprimitive nonmotorized recreation is expected to increase from 61,000 RVD's in the first decade to 87,000 RVD's in the fifth decade. The demand for primitive recreation is expected to increase from 18,000 RVD's in the first decade to 25,000 RVD's in the fifth decade.

Table V-5

Roadless-Nonwilderness Areas

<u>Alternative or Resource Potential</u>	<u>Acres</u>
Maximum Potential	364,900
Minimum Level	378,400
Current Direction	250,200
Final Plan	314,100

Table V-6

Wilderness Recommendations

<u>Alternative or Resource Potential</u>	<u>Acres</u>
Maximum Potential	403,700
Minimum Level	0
Current Direction	62,900
Final Plan	78,500

D. Wildlife and FishWildlife

Even though all species of wildlife are important and are managed, elk were chosen as the indicator species of big game. Table V-7 represents the potential population based on the level and amount of habitat management. The elk population in 1983 is estimated to be approximately 5,500.

Table V-7

Elk Population by the Fifth Decade

<u>Alternative or Resource Potential</u>	<u>Number of Elk</u>
Maximum Potential	9,900
Minimum Level	7,200
Final Plan	7,700

Fish

In 1980, the catchable trout population on the Kootenai National Forest was estimated to be approximately 1,016,000 fish. The population includes the resident fish which inhabit the lakes, streams, and reservoirs year-long, and the migratory fish that move from the lakes and reservoirs into the streams to spawn. Planted trout and lake trout are not included in this estimate. Recent information concerning kokanee salmon populations in Koocanusa Reservoir indicate the present kokanee population is fluctuating, and fluctuations will occur until the reservoir situation stabilizes. The number of fish is primarily dependent on the miles of road constructed and the resulting sediment. Table V-8 displays estimated populations.

Table V-8 Catchable Trout by the Fifth Decade

<u>Alternative or Resource Potential</u>	<u>Number of Trout</u>
Maximum Potential	1,101,000
Current Direction	985,000
Minimum	961,000
Final Plan	972,000

E. Grazing

Demand for forage for domestic livestock has decreased steadily (40%) over the last ten years. All alternatives exceed the anticipated demand for the entire life of the plan.

F. Treaty Rights

The Flathead/Kootenai-Salish Indian Tribes have treaty rights which allow hunting and fishing on the entire Kootenai National Forest. In addition, certain sites are still in use by Native Americans exercising their rights under the Indian Religious Freedom Act.

G. Minerals, and Oil and Gas

Over the years the Forest has supported many small mines and a few large ones. These have produced lead, zinc, copper, silver, gold, tungsten, barite, vermiculite, and building stone. Most of these mines have been inactive for many years, but the few mines in production today contribute substantially to the nation's mineral wealth.

Principal among the currently producing mines on the Forest are ASARCO's Troy mine south of the town of Troy, and W.R. Grace's Zonolite Mine just northeast of Libby. The Troy mine, which produces silver and copper, is currently the nation's biggest silver producer. The Zonolite Mine is the largest producer of vermiculite in the world.

As the historic and contemporary mining activity might suggest, considerable portions of the Forest have a high potential for mineral production. The southwest quarter of the Forest has many areas that are considered to have high potential for silver-copper production. Several known deposits are currently being evaluated through exploratory drilling to estimate production potential. Additional silver-copper deposits are actively being sought by several companies.

The Forest is currently processing proposals submitted by ASARCO and U.S. Borax for the installation of major silver-copper mines. These mines would be located in the southern portion of the Cabinet Mountains. The annual production from these mines are estimated to be similar to that of the Troy mine and are expected to be in production for 24 to 29 years.

Interest in the oil and gas potential of the Kootenai is relatively new. This interest has been spurred by discovery of large oil and gas fields in the geologic province known as the Western Overthrust Belt. Although the Kootenai lies within the Overthrust Belt, it is unknown at this time whether or not the local geology is suitable for oil and gas discoveries.

Because of the geologic unknowns involved, the probability of finding oil and gas is difficult to assess. Historically the area has been considered unfavorable for finding oil and gas, but new geologic insights and preliminary seismic data have looked quite favorable to some in the petroleum industry. On the other hand, others in the industry remain skeptical about the area's potential. It may take several years of exploration before a reliable assessment can be made of the Forest's oil and gas potential. For the time being, the Forest considers the potential for oil and gas to be moderate across the entire Forest.

KOOTENAI NATIONAL FOREST

FOREST PLAN

CHAPTER VI - GLOSSARY

VI. GLOSSARY

ACRE EQUIVALENT: A unit of habitat related to fish or wildlife habitat improvement projects. Acre equivalents are based on the acres of habitat that are influenced by an acre of habitat actually modified by the project.

ACRE-FOOT: A measure of water or sediment volume equal to the amount which would cover an area of 1 acre to a depth of 1 foot (325,851 gallons or 43,560 cubic feet).

ACTIVITY: A measure, course of action, or treatment that is undertaken to directly or indirectly produce, enhance, or maintain forest and range land outputs or achieve administrative or environmental quality objectives.

ADMINISTRATIVE FACILITIES: Those facilities, such as Ranger Stations, work centers and cabins, which are used by the Forest Service in the management of the National Forest.

AIRSHED: Basic geographic units in which air quality is managed.

AIR QUALITY: Refers to standards for various classes of land as designated by the clean air act, P.L. 88-206: Jan. 1978.

Class I Lands: Wilderness

Class II Lands: National Monuments, Primitive areas, Preserves, Recreation areas, Wildlife refuges, Lakeshores, Seashores

Class III Lands: All other lands

AFFECTED ENVIRONMENT: The biological and physical environment that will or may be changed by actions proposed and the relationship of people to that environment.

ALLOWABLE SALE QUANTITY: The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the plan. This quantity is usually expressed on an annual basis as the "average annual allowable sale quantity."

ALTERNATIVE: A combination of management prescriptions applied in specific amounts and locations to achieve a desired management emphasis as expressed in goals and objectives. One of several policies, plans, or projects proposed for decisionmaking. An alternative need not substitute for another in all respects.

AMENITY VALUES: Resource use for which market values (or proxy values) are not or cannot be established.

ANALYSIS AREA: One or more capability areas combined for the purpose of analysis in formulating alternatives and estimating various impacts and effects.

ANALYSIS OF THE MANAGEMENT SITUATION: A determination of the ability of the planning area to supply goods and services in response to society's demand for those goods and services.

ANIMAL-UNIT MONTH (AUM): The quantity of forage required by the equivalent of a 1,000 pound mature cow for one month.

ANNUAL FOREST PROGRAM: The summary or aggregation of all projects for a given year that, for a given level of funding, make up an integrated (multi-functional) course of action on a Forest planning area.

APPROPRIATE SUPPRESSION RESPONSE: The planned strategy for suppression action (in terms of kind, amount, and timing) on a wildfire which most efficiently meets fire management direction under current and expected burning conditions. The response may range from a strategy of prompt control to one of containment or confinement.

AQUATIC ECOSYSTEM: A stream channel, lake or estuary bed, the water itself, and the biotic communities that occur therein.

ARTERIAL ROADS: Roads comprising the basic access network for National Forest System administrative and management activities. These roads serve all resources to a substantial extent, and maintenance is not normally determined by the activities of any one resource. They provide service to large land areas and usually connect with public highways or other Forest arterial roads to form an integrated network of primary travel routes. The location and standards are often determined by a demand for maximum mobility and travel efficiency rather than by a specific resource management service. Usually they are developed and operated for long-term land and resource management purposes and constant service.

AUM: See Animal-Unit Month.

AVERAGE ANNUAL CUT: The volume of timber harvested in a decade, divided by 10.

BASE SALE SCHEDULE: A timber sale schedule formulated on the basis that the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade, and this planned sale and harvest for any decade is not greater than the long-term sustained yield capacity.

BENEFIT-COST RATIO: Measure of economic efficiency, computed by dividing total discounted primary benefits by total discounted economic costs.

BEST MANAGEMENT PRACTICES (BMP'S): The set of practices in the Forest Plan which, when applied during implementation of a project, ensures that water related beneficial uses are protected and that State water quality standards are met. BMP's can take several forms. Some are defined by State regulation or memoranda of understanding between the Forest Service and the States. Others are defined by the Forest interdisciplinary planning team for application Forest-wide. Both of these kinds of BMP's are included in the Forest Plan as Forest-wide standards. A third kind are identified by the interdisciplinary team for application to specific management areas; these are included as Management Area standards in the appropriate management areas. A fourth kind, project-level BMP's are based on site-specific evaluation, and represent the most effective and practicable means of accomplishing the water quality and other goals of the specific area involved in the project. These project-level BMP's are outlined in the Soil and Water Conservation Practices Handbook (FSM 2509.22) and are required.

BIG GAME: Those species of large mammals normally managed as a sport hunting resource.

BIG GAME SUMMER RANGE: Land used by big game during the summer and fall months.

BIOLOGICAL GROWTH POTENTIAL: The average net growth attainable in a fully stocked natural forest stand.

BIG GAME WINTER RANGE: The area available to and used by big game through the winter season.

BOARD FOOT: A unit of measurement represented by a board one foot square and one inch thick.

BROADCAST BURN: Allowing a controlled fire to burn over a designated area within well-defined boundaries, for reduction of fuel hazard, as a silvicultural treatment, or both.

BOARD FOOT/CUBIC FOOT CONVERSION: The mathematical ratio of the board feet contained in one cubic foot of timber. This ratio varies with tree species, diameter, height and form factors.

BROWSE: Twigs, leaves, and young shoots of trees and shrubs on which animals feed; in particular, those shrubs which are utilized by big game animals for food.

CANOPY: The more or less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth.

CAPABILITY: The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of management practices, such as silviculture or protection from fires, insects, and disease.

CAPABILITY AREA: A geographic delineation used to describe characteristics of the land and resources in integrated Forest planning. Capability areas may be synonymous with ecological land units, ecosystems or land response units.

CAPITAL INVESTMENT: Investment in facilities such as roads and structures with specially-appropriated funds.

CARRYING CAPACITY: The limit of an ecosystem's ability to sustain use:

Recreation - the amount of recreation use an area can sustain without deterioration of site quality.

Wildlife - the maximum number of animals an area can support during a given period of the year.

Range - the maximum stocking rate possible without damaging the vegetation or related resources. Carrying capacity may vary from year-to-year on the same area due to fluctuating forage production.

CAVITY: A hollow in a tree that is used by birds or mammals for roosting and reproduction.

CAVITY-DEPENDENT SPECIES: Those species of wildlife which rely on dead or unsound wood in which to develop holes for nesting, resting, or other important life functions. Included in this group are those species which do not develop holes or cavities themselves, but that use holes or cavities abandoned by other species.

CFR: Code of Federal Regulations.

CLEARCUTTING: Harvesting of all trees in one cut. It prepares the area for a new, even-aged stand. The area harvested may be a patch, stand, or strip large enough to be mapped or recorded as a separate age class in planning. Regeneration is obtained through natural seeding, or through planting or direct seeding.

CLIMAX PLANT: The final or stable biotic community in a developmental series.

CMAI: See Culmination of Mean Annual Increment.

COEFFICIENT (COST, VALUE, YIELD): The numeric units used to include costs, values, and outputs in the analysis model used in the formulation of the Forest Plan.

COLLECTOR ROADS: Roads constructed to serve two or more elements but which do not fit into the other two road categories (arterial or local). Construction costs of these facilities are prorated to the respective element served. These roads serve smaller land areas and are usually connected to a Forest arterial or public highway. They collect traffic from local Forest roads or terminal facilities. The location and standard are influenced by both long-term multi-resource service needs and travel efficiency. Forest collector roads are operated for constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

COMMERCIAL TIMBER SALES: The selling of timber from National Forest lands for the economic gain of the party removing and marketing the trees.

COMMODITIES: Resources with commercial value; all resource products which are articles of commerce, such as timber, range forage and minerals.

COMMON MATERIALS: See Minerals, Common Variety

COMPENSATION: In the context of a threatened or endangered species, this relates to replacement in kind for habitat elements that may be temporarily or permanently removed from that species use.

CONFINE: To limit fire spread within a predetermined area principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.

CONSTRAINT: A confinement or restriction on the range of permissible choices.

CONTAIN: To surround a fire, and any spot fires therefrom, with control lines as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.

CONTROL: To complete the control line around a fire, any spot fires therefrom, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that are immediate threats to the control line, until the line can reasonably be expected to hold under foreseeable conditions.

CORD: A unit of gross volume measurement for stacked roundwood based on external dimensions; generally implying a stack measuring four feet by four feet vertical cross-section and eight feet long, containing 128 stacked cubic feet of wood.

CORRIDOR: A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries.

COST: The negative or adverse effects or expenditures resulting from an action. Costs may be monetary, social, physical or environmental in nature.

COST EFFICIENCY: The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs, including environmental, economic, or social impacts, are not assigned monetary values but are achieved at specific levels in the least cost manner. Cost efficiency is usually measured using present net value, although use of benefit-cost ratios and rates of return may be appropriate.

COST-SHARE: Refers to the process of cooperating in the joint development of a road system. The document executed through this process, called "Road Right-of-Way Construction and Use Agreement," specifies the terms of developing the transportation system for a specified land area.

COVER/FORAGE RATIO: The ratio of tree cover (usually conifer types) to foraging areas (natural openings, clearcuts, etc.)

CRITICAL FIRE SEASON: See Fire Season

CRITICAL HABITAT: Specific areas within the geographical area occupied by the species on which are found those physical and biological features: (1) essential to the conservation of the species, and (2) which may require special management considerations or protection. Critical habitat shall not include the entire geographic area which can be occupied by the threatened and endangered species.

CUBIC FOOT: The amount of wood volume equivalent to a cube 1 foot by 1 foot by 1 foot.

CULMINATION OF MEAN ANNUAL INCREMENT (CMAI): The point at which the volume increment for a tree or stand of trees has achieved it's highest mean value. Mean annual increment is based on expected growth according to the management intensities and utilization standards assumed in the Forest Plan. The CMAI is calculated by dividing the attained growth (volume) by it's corresponding age.

CULTURAL RESOURCES: The physical remains of human activity (artifacts, ruins, burial mounds, petroglyphs, etc.) and conceptual content or context (as a setting for legendary, historic, or prehistoric events, as a sacred area of native peoples, etc.) of an area of prehistoric or historic occupation.

CUTTING CYCLE: For a crop or stand, the planned interval of time between the beginning of one cutting period and the beginning of the succeeding cutting period.

DEMAND: The amount of output that users are willing to take at a specific price, time period, and conditions of sale.

DEVELOPED RECREATION: Recreation that occurs where improvements enhance recreation opportunities and accommodate intensive recreation activities in a defined area.

DEVELOPED RECREATION SITES: Relatively small, distinctly defined area where facilities are provided for concentrated public use, i.e., campgrounds, picnic areas and swimming areas.

DISPERSED RECREATION: That portion of outdoor recreation use which occurred outside of developed sites in the unroaded and roaded Forest environment i.e., hunting, backpacking and berry picking.

DIVERSITY: The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

ECONOMICS: The study of how limited resources, goods, and services are allocated among competing uses.

ECOSYSTEM: A complete, interacting system of organisms considered together with their environment (for example; a marsh, a watershed, or a lake.)

EDAPHIC: The influence of soils on living organisms, particularly plants, including man's use of the land for plant growth.

EFFECTS: Physical, biological, social and economic results (expected or experienced) resulting from achievement of outputs. Effects can be direct, indirect and cumulative.

EFFICIENCY (ECONOMIC): The usefulness of inputs (costs) to produce outputs effects when all costs and benefits that can be identified and valued are included in the computations. Economic efficiency is usually measured using present net value, though use of benefit-cost ratios and rates-of-return may sometimes be appropriate.

ELK HIDING COVER: Vegetation, primarily trees, capable of hiding 90 percent of an elk seen from a distance of 200 feet or less.

ELK SECURITY COVER (EFFECTIVE ELK SECURITY COVER): Elk hiding cover modified by open roads. The greater the density of open roads within an area, the less effective is the hiding cover in providing security for elk.

ENDANGERED SPECIES: Any species, plant or animal, which is in danger of extinction throughout all or a significant portion of its' range. Endangered species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act.

ENVIRONMENTAL ANALYSIS: An analysis of alternative actions and their predictable short and long-term environmental effects which include physical, biological, economic, social, and environmental design factors and their interactions.

ENVIRONMENTAL ASSESSMENT: A concise public document for which a Federal agency is responsible that serves to: (1) Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact; (2) Aid an agency's compliance with the National Environmental Policy Act when no environmental impact statement is necessary; (3) Facilitate preparation of an environmental impact statement when one is necessary.

ENVIRONMENTAL IMPACT STATEMENT, DRAFT (DEIS): A detailed written statement as required by Sec. 102(2)(C) of the National Environmental Policy Act (NEPA).

ENVIRONMENTAL IMPACT STATEMENT, FINAL (FEIS): The final version of the public document required by NEPA (see above).

EPHEMERAL STREAMS: Streams that flow only as a direct response to rainfall or snowmelt events. They have no baseflow.

EROSION: The group of processes whereby earthy or rocky material is worn away by natural sources such as wind, water or ice and removed from any part of the earth's surface.

EVEN-AGED MANAGEMENT: The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Managed even-aged Forests are characterized by a distribution of the stands of varying ages (and, therefore, tree sizes) throughout the Forest area. The difference in age between trees forming the main canopy level of the stand does not usually exceed 20 percent of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time that a stand has reached the desired age or size for regeneration and is harvested. Clearcut, shelterwood, or seed tree cutting methods produce even-aged stands.

EXTRACTIVE USE: Use of natural resources that removes them from their natural setting.

FIRE MANAGEMENT DIRECTION: Fire management standards, guidelines, and practices based upon land and resource management objectives. Fire management direction is used to define the kind, level, and timing of fire protection and use activities, including the appropriate suppression strategies, which efficiently meet management objectives for each management area for the range of expected fire behavior conditions.

FIRE SEASON: Critical Fire Season is when the Energy Release Component (ERC) exceeds 39 for the past four days and the Burning Index (BI) is 30 or greater, or the 1,000 hour time lag fuel moisture is below 16 percent. Noncritical Fire Season is when the ERC is less than 39 for the past four days and the BI is less than 30, and the 1,000 hour time lag fuel moisture is equal to or greater than 16 percent.

FLOOD PLAIN: The lowland and relatively flat area adjoining inland waters, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

FORAGE: All browse and nonwoody plants available to livestock or wildlife for feed.

FOREST LAND: Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for non-forest use. Lands developed for non-forest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width, and adjoining road clearing and powerline clearing of any width. The term "occupied" when used to define forest land, will be measured by canopy cover of live forest trees at maturity. The minimum area for classification of forest land will be 1 acre or greater. Unimproved roads, trails, stream and clearings in forest areas are classified as forest if they are less than 120 feet in width.

FOREST SUPERVISOR: The official responsible for administering the National Forest System lands in a Forest Service Administrative unit, which may consist of one or more National Forests or all the Forests within a State.

FOREST SYSTEM ROAD: A road wholly or partly within or adjacent to and serving the National Forest System and which is necessary for the protection, administration and utilization of the National Forest System and the use and development of it's resources.

FOREST-WIDE MANAGEMENT GUIDELINES: An indication or outline of policy or conduct dealing with the basic management of the Forest. Forest-wide management guidelines apply to all areas of the Forest regardless of the other management prescriptions applied.

FSH: Forest Service Handbook.

FSM: Forest Service Manual.

FUELS: Include both living plants; dead, woody vegetative materials; and other vegetative materials which are capable of burning.

FUELS MANAGEMENT: Manipulation or reduction of fuels to meet Forest protection and management objectives while preserving and enhancing environmental quality.

FUELS TREATMENT: The rearrangement or disposal of natural or activity fuels to reduce the fire hazard.

GAME SPECIES: Any species of wildlife or fish for which seasons and bag limits have been prescribed, and which are normally harvested by hunters, trappers, and fisherman under State or Federal laws, codes, and regulations.

GOAL: A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed.

GOODS AND SERVICES: The various outputs, including on-site uses, produced by forest and rangeland resources.

HABITAT TYPE: An aggregation of all land areas potentially capable of producing similar plant communities at climax.

HIDING COVER: Trees of sufficient size and density to conceal animals from view at 300 feet.

INDICATOR SPECIES: Species identified in a planning process that are used to monitor the effects of planned management activities on viable populations of wildlife and fish including those that are socially or economically important.

INDIRECT EFFECTS: Secondary effects which occur in locations other than the initial action or significantly later in time.

INSTREAM FLOWS: The minimum water volume (cubic feet per second) in each stream necessary to meet seasonal streamflow requirements for maintaining aquatic ecosystems, visual quality, recreational opportunities and other uses.

INTEGRATED PEST MANAGEMENT: A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed. The information considered in selecting appropriate strategies includes the impact of the unregulated pest population on various resource values, alternative regulatory tactics and strategies, and benefit/cost estimates for these alternative strategies. Regulatory strategies are based on sound silvicultural practices and ecology of the pest-host system and consist of a combination of tactics such as timber stand improvement plus selective use of pesticides. A basic principle in the choice of strategy is that it be ecologically compatible or acceptable.

INTERDISCIPLINARY (ID) TEAM: A group of individuals with different training assembled to solve a problem or perform a task. The team is assembled out of recognition that no one scientific discipline is sufficiently broad to adequately solve the problem. Through interaction, participants bring different points of view to bear on the problem.

INTERAGENCY GUIDELINES: A document which was developed in the Yellowstone grizzly bear ecosystem and which identifies important, specific management measures regarding the conduct of multiple use activities in grizzly bear habitat and parameters for identifying the sensitivity of grizzly bear habitat to human activities. Previously known as the "Yellowstone Guidelines".

INTERMEDIATE HARVEST: Any removal of trees from a stand between the time of its formation and the regeneration cut. Most commonly applied intermediate cuttings are release, thinning, improvement, and salvage.

INTERMITTENT STREAM: A stream which flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow.

INVENTORY DATA: Recorded measurements, facts, evidence, or observations on Forest resources such as soil, water, timber, wildlife, range, geology, minerals, and recreation which was used to determine the capability and opportunity of the Forest to be managed for those resources.

LAND EXCHANGE: The conveyance of non-Federal Land or interests to the United States in exchange for National Forest System land or interests in land.

LANDTYPE: An inventory map unit with relatively uniform potential for a defined set of land uses. Properties of soils, landform, natural vegetation and bedrock are commonly components of landtype delineation used to evaluate potentials and limitations for land use.

LANDTYPE GROUP: A logical grouping of landtypes that facilitate planning.

LEASABLE MINERALS: See Minerals, Leasable.

LISTED SPECIES: This refers to species recognized as threatened or endangered under the Federal Endangered Species Act of 1973.

LOCAL ROADS: Roads constructed and maintained for, and frequented by, the activities of a given resource element. Some uses may be made by other element activities, but normally maintenance is not affected by such use. These roads connect terminal facilities with Forest collector or Forest arterial roads or public highways. The location and standard, usually are determined by the requirement of a specific resource activity rather than by travel efficiency. Forest local roads may be developed and operated for constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

LOCATABLE MINERALS: See Minerals, Locatable.

LONG-TERM SUSTAINED-YIELD TIMBER CAPACITY: The highest uniform wood yield from lands being managed for timber production that may be sustained under a specified management intensity consistent with multiple-use objectives.

M: Thousand

MA: See Management Area

MAUM: Thousand Animal Unit Months.

MBF: Thousand Board Feet

MM: Million

MMBF: Million Board feet

MMCF: Million Cubic feet

MANAGEMENT ACTION: Any activity undertaken as part of the administration of the Forest.

MANAGEMENT AREA (MA): An aggregation of capability areas which have common management direction and may be noncontiguous in the Forest. Consists of a grouping of capability areas selected through evaluation procedures and used to locate decisions and resolve issues and concerns.

MANAGEMENT CONCERN: An issue, problem, or a condition which constrains the range of management practices identified by the Forest Service in the planning process.

MANAGEMENT DIRECTION: A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

MANAGEMENT INTENSITY: A management practice or combination of management practices and associated costs designed to obtain different levels of goods and services.

MANAGEMENT PRACTICE: A specific activity, measure, course of action, or treatment.

MANAGEMENT PRESCRIPTION: Management practices and intensity selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

MATURE TIMBER: Individual trees or stands of trees that in general are at their maximum rate in terms of the physiological processes expressed as height, diameter, and volume growth.

MAXIMUM MODIFICATION: A visual quality objective that permits human activity to dominate the landscape. Such activity, however, should appear as a natural occurrence when viewed as background.

MEAN ANNUAL INCREMENT (MAI): The total volume increase in a tree or stand of trees up to a given age, divided by that age.

MINERAL ENTRY: The filing of a mining claim on Federal land to obtain the right to mine any locatable minerals it may contain. Also the filing for a mill site on Federal land for the purpose of processing off-site locatable minerals.

MINERAL WITHDRAWAL: A formal designation by the Secretary of Interior which precludes entry or disposal of mineral commodities under the mining and/or mineral leasing laws.

MINERAL EXPLORATION: The search for valuable minerals.

MINERAL PRODUCTION: The extraction of mineral deposits.

MINERALS, COMMON VARIETY: Deposits of sand, stone, gravel, etc. of widespread occurrence and not having distinct or special value. These deposits are used generally for construction and decorative purposes and are disposed of under the Materials Act of 1947.

MINERALS, LEASABLE: Those minerals which are disposed of under authority of the various mineral leasing acts. Minerals include coal, oil, gas, phosphate, sodium, potassium, oil shale, sulfur (in Louisiana and New Mexico), and geothermal steam.

MINERALS, LOCATABLE: Those minerals which are disposed of under the general mining laws. Included are minerals such as gold, silver, lead, zinc and copper which are not classed as leasable or salable.

MINIMUM MANAGEMENT REQUIREMENTS: Standards for resource protection, vegetative manipulation, silviculturist practices, even-aged management, riparian areas, soil and water and diversity, to be met in accomplishing National Forest System goals and objectives (see 36 CFR 219.27).

MINING CLAIMS: A geographic area of the public lands held under the general mining laws in which the right of exclusive possession is vested in the locator of a valuable mineral deposit. Includes lode claims, placer claims, mill sites and tunnel sites.

MITIGATE: To lessen the severity.

MITIGATION: Avoiding or minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact by preservation and maintenance operations during the life of the action.

MODIFICATION (VQO): See Visual Quality Objective (VQO).

MONITORING AND EVALUATION: The periodic evaluation on a sample basis of Forest Plan management practices to determine how well objectives have been met and how closely management standards have been applied.

MOUNTAIN PINE BEETLE: A species of Bark Beetle that spends the major portion of their life cycle in a tree's cambium layer. Through a combination of the insect feeding on the cambium layer and the introduction of fungi which stop the resin flow, the tree is girdled and killed.

MULTIPLE USE: The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

NET PUBLIC BENEFITS: An expression used to signify the overall long-term value to the nation of all outputs and positive effects (benefits) less all associated inputs and negative effects (costs) whether they can be quantitatively valued or not. Net public benefits are measured by both quantitative and qualitative criteria rather than a single measure or index. The maximization of net public benefits to be derived from the management of units of the National Forest System is consistent with the principles of multiple use and sustained yield.

NET VALUE CHANGE (Also Net Resource Value Change.): The sum of the changes in resource values on a land area that results from increases (benefits) and decreases (damages) in resource outputs as a consequence of fire.

NONCRITICAL FIRE SEASON: See Fire Season.

NON-INTERCHANGEABLE VOLUME: Older dead timber harvested from suitable timberland.

NONSTOCKED: A stand of trees or aggregation of stands that have a stocking level below the minimum specified for meeting the prescribed management objectives.

NO-SURFACE OCCUPANCY (NSO) STIPULATION: A mineral lease clause which, if attached to a mineral lease, prohibits the lessee from constructing roads, well pads or otherwise occupying the land surface unless, upon site-specific review, it is determined by the authorized officer that the requirements of the stipulation can be modified if other less stringent mitigation is determined to be sufficient to protect the other resources.

OBJECTIVE: A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

OFF-ROAD VEHICLE: Any vehicle capable of being operated off an established road or trail such as motorbikes, 4-wheel drives, and snowmobiles.

OLD-GROWTH TIMBER: A distinct successional stage in the development of a timber stand that has special significance for wildlife, generally characterized by: (1) large diameter trees (often exceeding 20" dbh) with a relatively dense, often multilayer canopy, (2) the presence of large, standing, dead or dying trees, (3) down and dead trees, (4) stand decadence associated with the presence of various fungi and heartrots, (5) an average age often in excess of 200 years and (6) a basal area ranging from 150 to 400 square feet per acre.

OPTIMUM: The greatest level of production that is consistent with other resource requirements as constrained by environmental, social and economically sound conditions.

OUTPUT: A good, service, or on-site use that is produced from forest and rangeland resources. Definitions of Forest and rangeland output definitions, codes and units measure are contained in the Management Information Handbook (FSH 1309.11). Examples are: X06-Softwood Sawtimber Production - MBF; X80-Increased Water Yield - Acre Feet; W01-Primitive Recreation Use - RVD's.

OVERMATURE TIMBER: Individual trees or stands of trees that in general are past their maximum rate in terms of the physiological processes expressed as height, diameter and volume growth.

OVERSTORY: That uppermost canopy of the forest when there is more than one level of vegetation.

OVERTHRUST BELT: A complex geologic feature, extending from Alaska to Mexico which resulted from compressional stresses within the earth, and which is characterized by abundant thrust faults. This zone passes through and includes all of western Montana.

PARTIAL RETENTION (VQO): See Visual Quality Objective (VQO).

PATENTED MINING CLAIMS: A patent is a document which conveys title to land. When patented, a mining claim becomes private property and is land over which the United States has no property rights, except as may be reserved in the patent. After a mining claim is patented, the owner does not have to comply with requirements of the General Mining Law or implementing regulations.

PERENNIAL STREAMS: Streams that flow continuously throughout most most.

PLAN OF OPERATIONS: A written plan describing mining and mineral processing activities that will likely cause a significant surface disturbance. The plan is prepared by those engaged in activities, such as prospecting, exploration or mining, in the National Forest. This plan must be approved by a Forest Officer.

PLANNED IGNITIONS: Fires started by a scheduled, deliberate management action.

PLANNING AREA: The area of the National Forest System covered by a Regional Guide or Forest Plan.

PLANNING CRITERIA: Standards, tests, rules, and guidelines by which the planning process is conducted and upon which judgments and decisions are based.

PLANNING HORIZON: The overall time period considered in the planning process that spans all activities covered in the analysis or plan and all future conditions and effects of proposed actions which would influence the planning decisions.

PLANNING PERIOD: One decade. The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

PLANNING RECORDS: Documents and files that contain detailed information and decisions made in developing the Forest Plan. Available at the Forest Supervisor's Office.

POLETIMBER TREES: Live trees of commercial species at least five inches in diameter at breast height but smaller than sawtimber size, and of good form and vigor.

POLICY: A guiding principle upon which is based a specific decision or set of decisions.

PRECOMMERCIAL THINNING: The selective felling, deadening, or removal of trees in a young stand primarily to accelerate diameter increment on the remaining stems, maintain a specific stocking or stand density range, and improve the vigor and quality of the trees that remain.

PRESCRIBED BURNING: The intentional application of fire to wildland fuels in either their natural or modified state under such conditions as allow the fire to be confined to a predetermined area and at the same time to produce the intensity of heat and rate of spread required to further certain planned objectives (i.e., silviculture, wildlife management, etc.).

PRESCRIBED FIRE: A wildland fire burning under preplanned specified conditions to accomplish specific planned objectives. It may result from either a planned or unplanned ignition.

PRESENT NET VALUE (PNV): The difference between the discounted value (benefits) of all outputs to which monetary values or established market prices are assigned and the total discounted costs of managing the planning area.

PRESERVATION (VQO): See Visual Quality Objectives (VQO).

PRIMITIVE RECREATION SETTING: A classification of the recreation opportunity spectrum that characterizes an essentially unmodified natural environment of a size or remoteness that provide significant opportunity for isolation from the signs and sounds of man and a feeling of vastness of scale. Visitors have opportunity to be part of the natural environment, encounter a high degree of challenge and use a maximum of outdoor skills but have minimum opportunity for social interaction.

PRIMITIVE ROADS: Roads that came into existence with little regard for grade or drainage control, or were abandoned facilities from some prior use. They are sometimes created merely by repeated driving over an area. Such roads are rarely, if ever, maintained and then only by users. These roads are single lane, usually with native surfacing, and sometimes passable with four-wheel drive vehicles only, especially in wet weather.

PUBLIC ACCESS: Usually refers to a road or trail route over which a public agency claims a right-of-way available for public use.

PUBLIC ISSUE: A subject or question of widespread public interest relating to management of the National Forest System.

RANGER DISTRICT: Administrative subdivision of the Forest supervised by a District Ranger.

REAL DOLLAR VALUE: A monetary value which compensates for the effects of inflation.

RECEIPTS: Money collected from timber stumpage, livestock grazing, campgrounds, special use permits, and oil and gas lease rentals and royalties, and returned to the federal treasury.

RECEIPT SHARES: The portion of receipts derived from Forest Service resource management that is distributed to State and county governments, such as the Forest Service 25 percent fund payments.

RECREATION CAPACITY: The number of people that can take advantage of a recreation opportunity at any one time without substantially diminishing the quality of the experience sought after.

RECREATION EXPERIENCE LEVEL: A concept used in recreation management to delineate the range of opportunities for satisfying basic recreation needs of people. A scale of five experience levels ranging from "primitive" to "highly developed" is planned for the National Forest System.

RECREATION OPPORTUNITIES: The combination of recreation settings, activities, and experiences provided by the Forest.

RECREATION OPPORTUNITY SPECTRUM: A system for planning and managing recreation resources that recognizes recreation activity opportunities, recreation settings, and recreation experiences along a spectrum or continuum.

RESPONSIBLE LINE OFFICER: The Forest Service employee who has the authority to select and/or carry out a specific planning action.

ROS CLASSES: Recreation Opportunity Spectrums which are identified as follows:
Primitive (PRIM) - Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other area users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Motorized use within the area is not permitted.

Semi-Primitive Non-Motorized (SPNM) - Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is not permitted.

Semi-Primitive Motorized (SPM) - Area is characterized by a predominantly natural or natural-appearing environment of moderate-large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized use is permitted.

Roaded Natural Appearing (RNA) - Area is characterized by predominantly natural appearing environment with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in the construction standards and design of facilities.

Rural (R) - Area is characterized by substantially modified natural environment. Resource modification and utilization practices are primarily to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of man are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided far away from developed sites. Facilities for intensified motorized use and parking are available.

RECREATION TYPES: The different recreation types identified as follows:
Developed Recreation - The type of recreation that occurs where modifications

(improvements) enhance recreation opportunities and accommodate intensive recreation activities in a defined area.

Dispersed Recreation - That type of recreation use related to and in conjunction with roads and trails that requires few if any improvements and may occur over a wide area. Activities tend to be day-use oriented and include hunting, fishing, berry picking, off-road vehicle use, hiking, horseback riding, picnicking, camping, viewing scenery, snowmobiling, and many others.

RECREATION DAY (RVD): One visitor day equals 12 hours (one person for 12 hours, or 12 people for 1 hour, or any combination thereof).

REFORESTATION: The renewal of forest cover by seeding, planting, and natural means.

REGENERATION: The renewal of a tree crop, whether by natural or artificial means. This term may also refer to the crop itself.

REGIONAL FORESTER REGULATIONS: The official responsible for administering a single Region of the Forest Service. Refers to the Code of Federal Regulations for implementing the National Forest Management Act, 36 CFR, Part 219.

RESOURCE ELEMENT: A collection of activities from the various operating programs required to accomplish the Forest Service mission and which fulfill statutory or Executive requirements. There are seven resource elements: Recreation, Wilderness, Wildlife and Fish, Range, Timber, Water, and Minerals.

RESEARCH NATURAL AREA: An area in as near a natural condition as possible, which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and aquatic features. The area is set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes; commercial and general public use is not allowed.

RETENTION (VQO): See Visual Quality Objectives (VQO).

RIGHT-OF-WAY: Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project facility passing over, upon, under, or through such land.

RIPARIAN AREAS: Areas with distinctive resource values and characteristics that are comprised of an aquatic ecosystem and adjacent upland areas that have direct relationships with the aquatic system. This includes floodplains, wetlands, and all areas within a horizontal distance of approximately 100 feet from the normal high water line of a stream channel, or from the shoreline of a standing body of water.

RIPARIAN ECOSYSTEM: A transition between the aquatic ecosystem and the adjacent upland terrestrial ecosystem. It is identified by soil characteristics and by distinctive vegetative communities that require free or unbounded water.

ROAD MAINTENANCE LEVELS: Road maintenance levels are as follows:

Level 1 - Basic custodial care as required to protect the road investment and to see that damage to adjacent land and resources is held to a minimum. The road is not normally open to traffic.

Level 2 - Same basic maintenance as Level 1 plus logging out, brushing out, and restoring the road prism as necessary to provide passage. Route markers and regulation signs are in place and useable. Road is open for limited passage of traffic, which is usually administrative use, permitted use, and/or specialized traffic.

Level 3 - Road is maintained for safe and moderately convenient travel suitable for passenger cars. Road is open for public travel, but has low traffic volumes except during short periods of time (e.g. hunting season).

Level 4 - At this level, more consideration is given to the comfort of the user. Road is usually surfaced with aggregate or is paved and is open for public travel.

Level 5 - Safety and comfort are important considerations for these roads which are open to public traffic and generally receive fairly heavy use (100 Average Daily Traffic or more). Roads have an aggregate surface or are paved.

ROADED-NATURAL APPEARING RECREATION SETTING: A classification on the recreation opportunity spectrum where timber harvest or other surface use practices are evident. Motorized vehicles are permitted on all or parts of the road system.

ROADLESS AREA REVIEW AND EVALUATION (RARE) II: A comprehensive process, instituted in June 1977, to identify roadless and undeveloped land areas in the National Forest System and to develop alternatives for both wilderness and other resource management.

ROTATION: The planned number of years between the formation or generation of trees and their harvest at a specified stage of maturity.

RURAL RECREATION SETTING: A classification on the recreation opportunity spectrum that is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high.

SALE SCHEDULE: The quantity of timber planned for sale by time period from an area of suitable land covered by a forest plan. The first period, usually a decade, of the selected sale schedule provides the allowable sale quantity. Future periods are shown to establish that long-term sustained yield will be achieved and maintained.

SALVAGE HARVEST: The cutting of trees that are dead, dying, or deteriorating (e.g., because they are overmature or materially damaged by fire, wind, insects, fungi, or other injurious agencies) before they lose their commercial value as sawtimber.

SAWTIMBER: Trees containing at least one 8-foot piece with a 5.6 inch diameter, inside bark, at the small end and meeting regional specifications for freedom from defect. Softwood trees must be at least 8 inches in diameter at breast height (DBH) for all species except Lodgepole Pine which is 7 inches DBH

SCENIC EASEMENT: A legal interest in the land of another which allows the easement holder specified uses or rights without actual ownership of the land; in this case, control of the use of land adjacent to public highways, parks, and rivers. It may provide something attractive to look at within the easement.

area, an open area to look through to see something attractive beyond the easement itself, or a screen to block out an unsightly view beyond the easement area.

SEDIMENT: Solid material, both mineral and organic, that is in suspension, being transported, or has been moved from its site of origin by air, water, gravity, or ice.

SEED-TREE CUTTING: The removal in one cut of most of the mature trees from an area, leaving only a small number of desirable trees to provide seed for regeneration.

SEEDLING/SAPLING: A size category for forest stands in which trees less than 5 inches in diameter are the predominant vegetation.

SELECTION CUTTING: The annual or periodic removal of trees as part of an uneven-age silvicultural system. Cutting can involve individual trees or small groups of trees to meet a predetermined goal of size and species composition in the remaining stand.

SEMI-PRIMITIVE RECREATION SETTING: A classification on the recreation opportunity spectrum that characterizes a predominately natural or natural appearing environment of a moderate to large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum onsite controls and restrictions may be present, but are subtle.

SENSITIVE SPECIES: Those plant or animal species which are susceptible or vulnerable to activity impacts or habitat alterations.

SERIAL: A biotic community which is developmental; a transitory stage in an ecologic succession.

SHELTERWOOD CUTTING: The removal of a stand of trees through a series of cuttings designed to establish a new crop with seed and protection provided by a portion of the stand.

SILVICULTURAL SYSTEM: A management process whereby forests are tended, harvested, and replaced, resulting in a forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop and provide for regeneration and according to the type of Forest thereby produced.

SITE PREPARATION: A general term for a variety of activities that remove competing vegetation, slash, and other debris that may inhibit the reforestation effort.

SLASH: The residue left on the ground after felling and other silvicultural operations and/or accumulating there as a result of storm, fire, girdling, or poisoning of trees.

SNAG: A standing dead tree usually greater than 5 feet in height and 6 inches in diameter at breast height.

SPECIAL USE PERMIT: A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest land for some special purpose.

STAGNATION: A condition where plant growth is markedly reduced or even arrested through, e.g., competition, state of the soil, or disease.

STAND: A community of trees or other vegetative growth occupying a specific area and sufficiently uniform in composition (species), age, spatial arrangement, and conditions as to be distinguishable from the other growth on adjoining lands, so forming a silvicultural or management entity.

STIPULATIONS: Requirements that are part of the terms of a mineral lease. Some stipulations are standard on all Federal leases. Other stipulations may be applied to the lease at the discretion of the surface management agency to protect valuable surface resources and uses.

STOCKING: A measure of timber stand density as it relates to the optimum or desired density to achieve a given management objective.

STREAM ORDER: A measure of the position of a stream in the hierarchy of tributaries. (Stream as referenced here refers to perennial streams.)

First-order streams - are unbranched streams, that is they have no tributaries.

Second-order streams - are formed by the confluence of two or more first-order streams. They are considered second-order until they join another second-order or larger stream.

Third-order streams - are formed by the confluence of two or more second-order streams. They are considered third-order until they join another third-order or larger stream.

SUCCESSIONAL STAGE: A phase in the gradual supplanting of one community of plants by another.

SUITABILITY: The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone. A unit of land may be suitable for a variety of individual or combined management practices.

SUITABLE FOREST LAND: Forest land (as defined in CFR 219.3 and 219.14) for which technology is available that will ensure timber production without irreversible resource damage to soils, productivity, or watershed conditions; for which there is reasonable assurance that such lands can be adequately restocked (as provided in CFR 219.14); and for which there is management direction that indicates that timber production is an appropriate use of that area.

SUPPLY: The amount of an output that producers are willing to provide at a specific price, time period, and conditions of sale.

SUPPRESSION (FIRE SUPPRESSION): Any act taken to slow, stop, or extinguish a fire. Examples of activities include fireline construction, backfiring, and application of water or chemical fire retardants.

SUSTAINED-YIELD OF PRODUCTS AND SERVICES: The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest System without impairment of the productivity of the land.

SYSTEM ROADS: See Forest System Road.

TARGET: A quantifiable output assigned to the Forest.

TEMPORARY ROADS: Those roads needed only for the purchaser or permittee's use. The Forest Service and the purchaser or permittee must agree to the location and clearing widths. Temporary roads are used for a single, short-term use, e.g. to haul timber from landings to Forest development roads, access to build water developments, etc.

THERMAL COVER: Cover used by animals to ameliorate chilling effects of weather; for elk, a stand of coniferous trees 40 feet or taller with an average crown closure of 70 percent or more.

THREATENED AND ENDANGERED SPECIES (T & E): Any species, plant or animal, which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its' range. Threatened species are identified by the Secretary of the Interior in accordance with the 1973 Endangered Species Act.

TIMBER: A general term for the major woody growth of vegetation in a forest area.

TIMBER BASE: The lands within the Forest that are suitable for timber production.

TIMBER PRODUCTION: The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use.

TIMBER STAND IMPROVEMENT (TSI): All noncommercial intermediate cuttings and other treatments to improve composition, condition, and growth of a timberstand.

TRAILHEAD: The parking, signing, and other facilities available at the terminus of a trail.

TRANSITORY RANGE: Land that is suitable for grazing use for a period of time. For example, on particular disturbed lands, grass may cover the area for a period of time before being replaced by trees or shrubs not suitable for forage.

TREE OPENING: An opening in the Forest cover created by the application of even-aged silvicultural practices. The Northern Regional Guide established size limitations and guidelines to determine when cut areas are no longer considered openings.

UNDERSTORY: The trees and other woody species which grow under a more or less continuous cover of branches and foliage formed collectively by the upper portion of adjacent trees and other woody growth.

UNEVEN-AGED MANAGEMENT: The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting is usually regulated by specifying the number or proportion of trees of particular sizes to retain within each area, thereby maintaining a planned distribution of size classes. Cutting methods that develop and maintain uneven-aged stands are described as follows:

Individual Tree Selection Cutting - The removal of selected trees from specified size and age classes over the entire stand area in order to meet a predetermined goal of size or age distribution and species composition in the remaining stand.

Group Selection Cutting - The removal of small groups of trees to meet a predetermined goal of size distribution and species in the remaining stand.

UNPLANNED IGNITION: A fire started at random by either natural or human causes, or a deliberate incendiary fire.

UNREGULATED HARVEST: This harvest is not charged against the allowable sale quantity. It includes occasional volumes removed that were not recognized in calculations of the allowable sale quantity, such as cull or dead material and noncommercial species and products. It also includes all volume removed from unsuitable areas. Harvests from unsuitable areas will be programmed as needed to meet multiple use objectives other than timber production and for improvement of administrative sites.

UNSUITABLE TIMBER LAND: Lands not selected for timber production in Step II and III of the suitability analysis during the development of the Forest Plan due to: (1) the multiple-use objectives for the alternative preclude timber production, (2) other management objectives for the alternative limit timber production activities to the point where management requirements set forth in 36 CFR 219.27 cannot be met, and (3) the lands are not cost-efficient over the planning horizon in meeting forest objectives that include timber production. Land not appropriate for timber production shall be designated as unsuitable in the Forest Plan.

UTILIZATION STANDARDS: Standards guiding the use and removal of timber. They are measured in terms of diameter at breast height (d.b.h.) and top of the tree inside the bark (top d.i.b.) and the percentages of "soundness" of the wood.

VIEWING SIGNIFICANCE: Areas of visual quality described as follows:

High Viewing Significance - Includes those forest lands that are easily viewed from primary through-highways (year-long), and primary recreation areas including high-use water bodies, vista points, communities, permanent residential areas, summer homes, and major trail corridors.

Moderate Viewing Significance - Includes those forest lands readily visible from major secondary roads, trails, streams, water bodies, secondary recreation areas, and other areas of public use.

Low Viewing Significance - Lands that have a high visual absorption capability, or lands that are viewed from local and collector roads.

VISUAL QUALITY OBJECTIVE (VQO): A desired (inventoried) level of scenic quality and diversity of natural features based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations of the characteristic landscape described as follows:

Preservation - In general, human activities are not detectable to the visitor.

Retention - Human activities are not evident to the casual Forest visitor.

Partial Retention - Human activities may be evident, but must remain subordinate to the characteristic landscape.

Modification - Human activity may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in middle-ground or background.

Maximum Modification - Human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

Enhancement: A short-term management alternative which is done with the express purpose of increasing positive visual variety where little variety now exists.

WALLOW: A depression, pool of water, or wet area produced or utilized by elk or moose during the breeding season.

WATERSHED BASIN: Land area which collects and discharges its surface water through one outlet.

WATER YIELD: The measured output of the Forest's streams.

WATER YIELD INCREASE: Additional water released to the Forest streams as a result of Forest management activities.

WET AREAS: Sites, often occurring at the heads of drainages, such as wet sedge meadows, bogs, or seeps. They are often referred to as "moist sites" and are very important components of elk summer range. Sites near water are important because the forage they produce is highly nutritious and heavily utilized by elk.

WETLANDS: Those areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include marshes, bogs, sloughs, potholes, river overflows, mud flats, wet meadows, seeps, and springs.

WILDERNESS: Federal land retaining its primeval character and influence without permanent improvements or human habitation as defined under the 1964 Wilderness Act. It is protected and managed so as to preserve its natural conditions which: (1) generally appear to have been affected primarily by forces of nature with the imprint of man's activity substantially unnoticeable, (2) has outstanding opportunities for solitude or a primitive and confined type of recreation, (3) has at least 5,000 acres or is of sufficient size to make practical its preservation, enjoyment, and use in an unimpaired condition, and (4) may contain features of scientific, educational, scenic, or historical value as well as ecologic and geologic interest.

WILDERNESS STUDY: An analysis to determine an area's appropriateness, cost, and benefits for addition to the National Wilderness Preservation System.

WILDFIRE: Any wildland fire not designated and managed as a prescribed fire within an approved prescription.

WINDOW: A term used to describe an area of land, usually short and narrow, that might be suitable as a transmission line corridor if constraints are not too limiting. Constraints may be physical, such as a river crossing, or environmental, such as designation of the area for primitive recreation. Six such windows were identified on the Kootenai Forest by the Bonneville Power Administration.

WITHDRAWAL: An order removing specific land areas from availability for certain uses.

YARDING: The operation of hauling timber from the stump to a collecting point.