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 shomn 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,
Bull River Guard Station,
Kootenai Falls Cultural Resource District,
Yahk Historic Mining Area.

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

Northwest Peaks,
Wood Creek Larch.
Ross Creek,

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

Devil's Gap	Sunday Creek Falls
Rexford Hoodoos	Ten Mile Talus
Star Creek Canyon	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 1987-1996	PROJECTED Average Annual Units 1997-2006	2007-2016	2017-2026	2027-2036
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

Data Requirements	Accomplishment Schedule
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 todays 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. <u>Soil and Water</u>

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 wallows, 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