United States Department of Agriculture

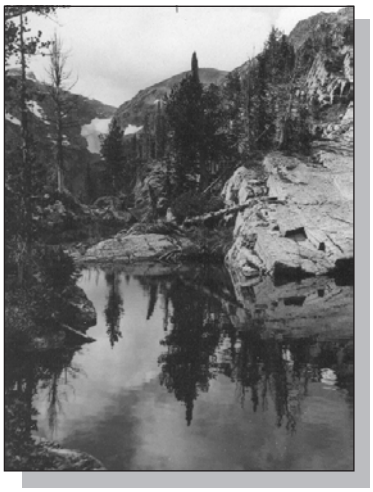
Forest Service

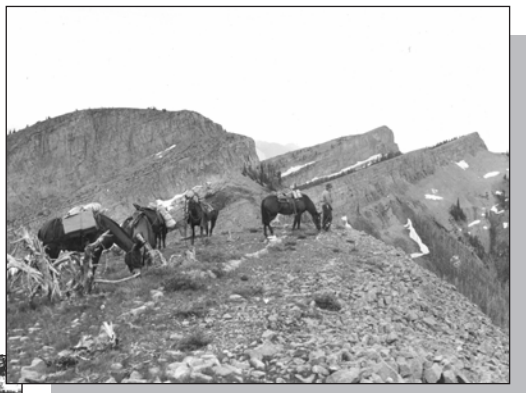
Northern Region

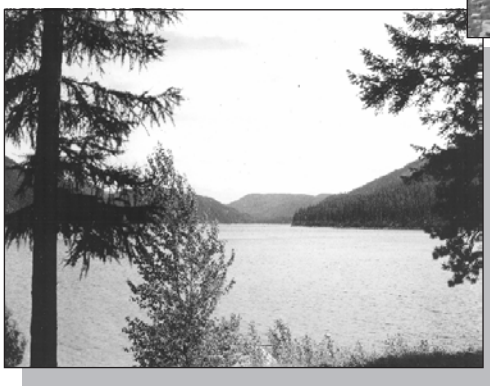
2006

Proposed Land Management Plan

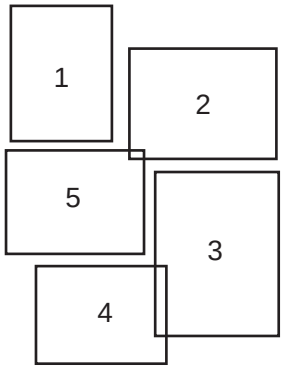
Flathead National Forest







Cover photos by KD Swan, Forest Service photographer, 1911 - 1947, courtesy of the USDA Forest Service Northern Region.



1. Surprise Lake, Mission Mountains, Flathead NF, 8/1928.

2. Mrs. KD Swan and photographer's pack outfit on Pagoda Peak Ridge, Bob Marshall Wilderness, 7/1946.

3. Swan River near Salmon Prairie, Flathead NF, 1938.

4. Holland Lake, Flathead NF, 1936.

5. Tally Lake, Flathead NF, 7/1938.

Proposed Land Management Plan

Flathead National Forest

April 2006

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This Proposed Forest Land Management Plan for the Flathead National Forest describes our proposed framework for guiding on-the-ground projects and activities. We encourage your comments on all aspects of the plan; however, the accompanying document titled, "Guidelines for Providing Effective Comments" may help you focus your review and comments.

The comment period will end 90 days after publication of the legal notice announcing the Proposed Plan's availability for review. The legal notice for the Flathead National Forest will be posted in the Daily Interlake, the newspaper of record. We will also hold public meetings during the comment period. Dates, times, and locations of public meetings will be announced in the newspaper of record and posted on the Western Montana Forest Planning Zone web site at: www.fs.fed.us/r1/wmpz/.

Written comments should be submitted to:

Proposed Land Management Plan
Lolo National Forest
Fort Missoula, Building 24
Missoula, MT 59804
E-mail: wmpz@fs.fed.us

For more information, please visit our web-site at: www.fs.fed.us/r1/wmpz/

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Introduction

Purpose of this Land Management Plan

The purpose of the Flathead National Forest Land Management Plan (hereinafter referred to as "Plan" or "land management plan") is to provide overall strategic guidance for the sustainable management of the Flathead National Forest by guiding relevant resource management programs, practices, uses, and projects. This Plan sets the overall context for informed decision making by evaluating and addressing social, economic, and ecological considerations relevant to management of the forest. In particular, the Plan:

- Is strategic in nature. This Plan does not include decisions with on-the-ground effects that can be meaningfully evaluated through a site-specific NEPA process. Those decisions are made later, only after more detailed analysis and further public involvement occurs.
- Describes the desired conditions of National Forest System (NFS) lands and resources.
- Identifies the strategies to maintain or achieve those conditions.
- Identifies land areas as generally suitable or unsuitable for various uses.
- Identifies the guidelines for projects and activities.
- Identifies areas with special or unique characteristics.
- Was developed through public involvement and collaboration, which started at the earliest stages of plan development and will continue through plan completion, project planning, and monitoring
- Emphasizes the role of best available science. New knowledge and information can be analyzed and added to this Plan at any time.
- Contributes to social, economic, and ecological sustainability. This Plan aspires to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

This Plan emphasizes an adaptive management approach which includes a collaborative public process and results in a dynamic document that can be improved at any time. Such an informed and adaptive guide to land stewardship allows the Forest Supervisor to better utilize resources and

manage ecosystems. The adaptive management cycle includes (1) plan development, (2) plan implementation, (3) plan monitoring, inventory and assessment, and (4) plan review and evaluation. The findings of plan review and evaluation reveal any needs to change the Plan, which begins the adaptive cycle again.

Special Note to Reviewers of this Proposed Plan

While the monitoring program is not a plan component, it is a critical part of the adaptive management cycle. It is sufficiently important that the 2005 Planning Rule explicitly requires public involvement in development of the monitoring program. The final, Proposed Land Management Plan will include monitoring questions that guide development of the monitoring program. As part of your comments on this Proposed Plan, we would like your feedback as to the kinds of monitoring questions you think we should use to assess our progress toward the desired conditions. Monitoring questions should address whether management within the plan area maintains or makes progress toward the desired conditions. The most helpful input you can give us would be your answers to the following questions:

Which of the desired conditions do you think are most important to monitor?

Why do you think these desired conditions are especially important to monitor?

Plan Components

The format of this Plan is different than plans issued in the first round of agency planning that occurred after the passage of the National Forest Management Act (NFMA). This Plan is designed to better communicate the concepts of strategic guidance and adaptive management for the Flathead National Forest. There is an important distinction between "plan components" and other sections of the Plan. No changes can be made to plan components without amending the Plan through an appropriate National Environmental Policy Act (NEPA) process, including public involvement. Other plan sections, which contain information about the plan components or provide background on program emphases or forest conditions, can be changed without formally amending this Plan. Plan components are highlighted to make it clear which sections of this Plan cannot be changed without going through a formal amendment process.

There are five plan components:

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

Desired Conditions: The social, economic, and ecological attributes toward which management of the land and resources of the plan area is to be directed. In some cases the desired conditions already exist and our intention is to maintain them. In other cases, they may be achievable in the relatively near future, while in some cases the desired conditions may only be achievable over a long period of time.

Objectives: Concise projections of measurable, time-specific intended outcomes. Objectives are the means of measuring progress toward achieving or maintaining desired conditions.

Suitability of Areas: National Forest System lands are classified as "generally suitable" or "generally not suitable" for various uses. Management areas are used in this Plan to identify the general suitability of lands for different uses and activities.

Special Areas: Lands within the National Forest System that receive special management consideration because of their unique or special characteristics, for example, research natural areas, botanical areas, or national historic trails.

Guidelines: Technical guidance for designing projects and activities.

During plan implementation, projects and activities must be consistent with the land management plan (36 CFR 219.8(b)). Consistency with the plan is achieved by being consistent with the plan components in the following ways:

Desired conditions and objectives (36 CFR 219.7(a)(2)(i) and (ii)) - Most projects and activities are developed specifically to achieve or maintain one or more of the desired conditions and objectives of the plan. It should not be expected that each project or activity will contribute to all desired conditions or objectives in every instance, but only to a selected subset. Furthermore, some projects and activities may not be clearly related to a specific social, economic, or ecological desired condition or objective of the plan (for example, facility maintenance may be proposed without a corresponding desired condition or objective for that proposal), so it also should not be expected that in every instance, a project can clearly point to a specific desired condition as the reason the project was proposed.

To be consistent with the plan, a project or activity can:

- Maintain or achieve one or more desired conditions or objectives,
- Be neutral to relevant desired conditions or objectives, or
- Have negative short-term effects, but beneficial long-term effects on one or more desired conditions or objectives.

To the extent practicable, documentation for projects and activities will identify which desired conditions and objectives are being addressed, and whether these conditions and objectives are being advanced, not affected, or temporarily slowed. Project documentation is not required to speak to all the available opportunities to meet or work toward desired conditions in a project area, but will instead focus on the specific social, economic, or ecological conditions that prompted the need for the proposal.

Guidelines (36 CFR 219.7(a)(2)(iii)) - To be consistent with guidelines, a project or activity will apply relevant guidelines, unless there is a documented reason to adjust the guideline for a specific project or activity. If adjustment would be neutral with regard to the relevant social, economic, or ecological condition or would be a more appropriate way to achieve or maintain desired conditions and objectives, the Responsible Official will describe the proposed adjustment and explain the relationship to desired conditions and objectives in the project-level environmental analysis and decision documents. In such cases, a land management plan amendment generally is not required.

Suitability of areas (36 CFR 219.7(a)(2)(iv)) – The plan identifies areas that are generally suitable for a variety of multiple-uses (36 CFR 219.12(a)). These identifications show where these uses are compatible or incompatible with the area's desired conditions. The actual suitability for a particular use, even if an area is identified as generally suitable for a use, will not be determined until a project or activity is authorized. Moreover, it is not possible to anticipate every project or activity that could be proposed throughout the unit, throughout the life of a plan. An approved project or activity is considered to be consistent with the plan if the project or activity is consistent with the general suitability identification and is consistent with other relevant plan components. If the project or activity is not consistent with this identification, the Responsible Official should amend the plan.

Special area guidance (36 CFR 219.7(a)(2)(v)) - Special areas may have different management direction that represents their unique or special characteristics. For example, a botanical area may have desired conditions that differ from the larger landscape surrounding that special area. Project consistency for a special area would be determined in the same manner as

consistency with other desired conditions, suitability identifications, and guidelines as discussed previously, but specific to that area.

Other Important Concepts

In addition to the Plan itself, adaptive management also relies on a number of other important concepts. The following topics are all integral to this planning process and are further addressed in a separate collection of supporting documentation called the "Plan Set of Documents":

Assessments: The current social, economic, and ecological conditions and trends, and substantial changes from referenced conditions and trends are assessed, analyzed and used in this Plan. Assessments are contained in the Plan Set of Documents.

Sustainability: "Sustainability" means meeting the needs of the present generation without compromising the ability of future generations to meet their needs. Sustainability is composed of desirable social, economic, and ecological conditions or trends interacting at varying spatial and temporal scales embodying the principles of multiple-use and sustained-yield.

The overall goal for social and economic sustainability for the Flathead National Forest is to contribute to sustaining cultural, social, and economic systems within the plan area. The overall goal for ecological sustainability for the Forest is to provide a framework to contribute to sustaining native ecological systems by providing ecological conditions to support diversity of native plant and animal species in the plan area. This Plan provides for these sustainability goals.

Role of Science: The Forest Service has a long history of science-based decision making. The use of science in planning provides the Responsible Official with knowledge, methods, and expert review in order to make an informed decision. To ensure the Flathead National Forest's land management planning decisions take into account the best available science as well as other information and factors, the Forest Supervisor must:

- Document how the best available science was taken into account in the planning process within the context of the issues.
- Evaluate and disclose substantial uncertainties in that science.
- Evaluate and disclose substantial risks associated with plan components based on that science.
- Document that the science was appropriately interpreted and applied.

To ascertain the best available science, the Forest has worked with scientists and other professional peers in federal and state agencies, research institutions, and other agencies and organizations. Examples include but are not limited to:

- U.S.F.S. Inventory and Monitoring Institute
- U.S.F.S. Forest Management Service Center
- Mason, Bruce and Girard, Consulting Foresters
- U.S.F.S. Rocky Mountain Research Station
- Montana Natural Heritage Program
- Confederated Salish and Kootenai Tribes
- U.S. Geological Survey
- Glacier National Park
- Montana Department of Natural Resources and Conservation
- Montana Department of Fish, Wildlife, and Parks
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- NatureServe Database
- Montana Natural Heritage Program

We will continue to work with these and other entities between publication of the proposed Plan and final Plan. It is not until the final publication of the Flathead National Forest Land Management Plan that the Forest Supervisor must document how science was taken into account.

Ecological Diversity: The NFMA requires that land management plans provide for diversity of plant and animal communities. According to NFMA, diversity is based on the suitability and capability of the specific land area. With an ecosystem approach, this Plan will provide the framework for maintaining and restoring desired conditions for plant and animal species. When necessary, additional provisions for federally listed threatened or endangered species, species of concern, and species of interest will be included.

Timber Management Analysis: The NFMA and the 2005 Planning Rule require timber management analyses such as identification of land's suitability for timber harvest or timber production, and an estimate of the quantity of timber that can be removed annually in perpetuity on a sustained yield basis.

Procedural Points

Changes Between the Proposed and Final Plan: Based on analysis of public comments and the incorporation of any new information, changes will occur between the proposed and final versions of this Plan.

NEPA Compliance: Under the 2005 Planning Rule, land management plans are not required to have an accompanying environmental impact statement (EIS) or environmental assessment (EA). A plan, plan amendment, or plan revision may be categorically excluded (CE) from documentation in an EIS or EA. Projects implemented to achieve plan objectives will continue to be documented in EISs, EAs, or CEs.

Transition from the 1982 Planning Rule to the 2005 Planning Rule: Because the Flathead National Forest had started revision of its land management plan before January 2005, we were not required to stop the process and start over when the new planning rule came into effect. Consequently, some of our supporting documentation, while it is fully adequate, is in a different format than that specified by the 2005 rule. For example, our Analysis of the Management Situation (AMS) documents conditions and trends that, under the 2005 rule, would be found in the Comprehensive Evaluation Report (CER). (36 CFR 219.14(e))

Final Authority on Travel Management: While this plan does include desired conditions, objectives, general suitability, and guidelines relevant to access and travel management, decisions regarding where and when motorized use is allowed are made at the site-specific, project level. This plan may express desired conditions or general suitability that differ from current access and travel management; however, current access and travel management will remain in place until such time as the Forest has completed site-specific NEPA documentation and public involvement to determine which, if any, changes to current management would be made. The Forest Visitor's Map and special orders reflect current travel management.

Decisions Made in the Previous Forest Plan: In general, decisions made in the previous Forest Plan, such as resource management standards, will no longer be binding unless they have been explicitly carried forward by inclusion in this Proposed Plan. It is our intent that all necessary and effective resource protections in the old Plan have been carried forward in one or more of the components of this Proposed Plan; however, the strategies we propose to use for accomplishing those protections may have changed.

Plan Organization

This Plan is organized into this Introduction, three chapters entitled Vision, Strategy, and Design Criteria, and a Glossary of terms. Each chapter includes one or more plan components, plus additional information to help the reader understand the guidance included in plan components.

Chapter 1—Vision

This chapter describes the vision for the future of the Flathead National Forest through **desired conditions** that reflect the Forest's uniqueness on a national and regional level. It includes the desired conditions plan component.

Chapter 2—Strategy

Chapter 2 describes how the Forest intends to move toward the desired conditions. It includes a discussion of program emphases and the **objectives**, **suitability of areas**, and **special areas** plan components. While the program emphasis section is not a plan component, it describes the general framework for project planning on the Flathead National Forest.

Chapter 3—Design Criteria

Design criteria are the sideboards that guide our management activities. They ensure the protection of resources as we implement projects to help us move toward the desired conditions. This chapter includes the **guidelines** plan component. In addition to plan guidelines, the design criteria chapter also points the way to other existing direction outside this Plan. Management direction found in public laws, regulations, Forest Service manuals and handbooks is generally not repeated in this Plan.

Glossary

The Glossary defines terms used in this Plan that may not be familiar to the reader. In most cases, the entries are short definitions; however, in other instances, entries are expanded in order to clarify more complex concepts, such as "riparian conservation areas" or "multiple use purposes."

Relationship to Other Strategic Guidance

The Forest Service has defined a five-level strategic planning framework: Mission, Vision, Strategies, Tactics, and Projects. Several of these five levels are directly related to the 2005 Planning Rule's plan components. This connection is made through this Plan's Vision, Strategy, and Design Criteria. The following table demonstrates the linkage between the Forest Service's strategic planning framework and the 2005 Planning Rule's plan components.

Table 1: Strategic planning framework.

Forest Service's Strategic Planning Framework	Flathead Forest's Plan Format	2005 Rule Plan Components
Mission	Precedes the Plan	Not applicable
Vision	Vision (Chapter 1)	Desired Conditions
Strategies	Strategy (Chapter 2)	Objectives Suitable Uses Special Areas
Tactics	Design Criteria (Chapter 3)	Guidelines
Projects	Follow the Plan	Not applicable

Environmental Management System

The 2005 Planning Rule requires the Forest Service to establish an environmental management system (EMS) for each unit of the National Forest System. While not a part of the plan itself, the Flathead National Forest EMS will be an important successor to this Plan, aiding in its implementation.

What is an EMS?

An EMS is a system to manage environmental impacts. It focuses on how to improve our everyday work to reduce impacts to the environment. The expected outcome is a continual improvement of our management.

EMS identifies the major activities, products or services conducted on the Forest, and their associated impacts on the environment. The Forest Supervisor selects the activities, environmental impacts, and objectives deemed most important, and these become the focus of the EMS. EMS implementation reflects accepted quality management principles based on a "Plan, Do, Check, Act" model. The EMS is intended to help the Forest prevent adverse environmental impacts by planning carefully, implementing our work on the ground with appropriate controls in

place, monitoring the effectiveness of our controls, and adjusting our management to continually reduce undesirable environmental impacts.

The Flathead National Forest will develop an EMS using an international standard known as ISO 14001. The standard has 17 requirements, including an independent audit to assure that the system is working. More information about EMS and ISO 14001 is available on the Forest Service website at: www.fs.fed.us/emc/nepa/ems.

Why an EMS?

A basic framework for the Flathead National Forest's Land Management Plan is sustainability. EMS uses independent audits to display to the public how we conduct selected activities, measure the results, and improve our performance in meeting our commitments to the environment and to sustainability.

It is a more transparent way of improving our management. We will document our procedures for accomplishing certain activities, check our work performance, and make adjustments to improve our performance. The responsibility for implementing the EMS falls to all our employees, as well as contractors and permittees. Implementing our EMS includes helping visitors understand and reduce the impacts of their activities on the land. The following benefits of EMS should accrue quickly: (1) We will adjust for changing circumstances or to improve performance; (2) We will account for performance through required audits and assure the results of these audits are visible to the whole organization and the public; and (3) We will communicate with every employee so we all know our environmental commitments and what we are supposed to do to improve our management.

About the Flathead National Forest

The Flathead National Forest is located in the northern Rocky Mountains amidst the mountains and valleys of western Montana and includes about 2.3 million acres of public land. It includes portions of Flathead, Lake, Lewis and Clark, Lincoln, Missoula, and Powell counties. The Forest has five ranger districts which include: Swan Lake, Hungry Horse, Glacier View, Tally Lake, and Spotted Bear. The Forest Supervisor's office is located in Kalispell, Montana.

The Flathead National Forest is the gateway to national and world destinations, such as Glacier National Park, the Bob Marshall Wilderness Complex, Big Mountain Ski Resort, and Canada. The Flathead National Forest complements these areas by providing high quality recreation settings and experiences, motorized and non-motorized travel opportunities, or primitive settings and experiences.

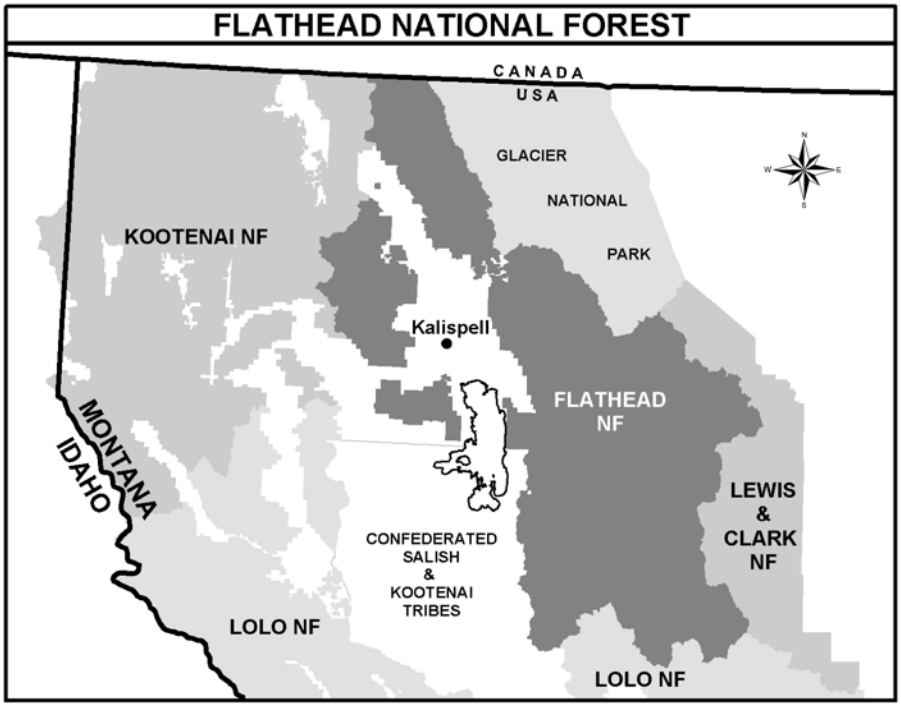


Figure 1: Vicinity Map of the Flathead National Forest.

Encircled by other national forests and Glacier National Park, the Flathead National Forest is the true heart of the northern Rocky Mountain wild ecosystem. Large designated wilderness areas, such as the Bob Marshall Wilderness Complex and the Mission Mountains Wilderness, in concert with other special areas such as wild and scenic river systems, the Jewel Basin Hiking Area, and other undeveloped backcountry areas, provide habitat strongholds for federally-listed species, such as grizzly bears, gray wolf, Canada lynx, and bull trout. The Northern Continental Divide Ecosystem Recovery Zone for grizzly bears covers most of the Flathead National Forest. In addition, more than 200 species of birds have been recorded.

The diversity of life on the Flathead is striking. Twenty to sixty inches of annual precipitation create a wide variety of plant life, from lush groves of cedars cloaked in moss to lone whitebark pines clinging to the tops of windswept mountain ridges. Dense forests occupy about 89 percent of the Flathead lands. Dominant tree species include Engelmann spruce, subalpine fir, lodgepole pine, Douglas-fir, and western larch. Traces of grand fir, western white pine, ponderosa pine, and aspen also occur. Likewise, the landforms themselves vary greatly, from the magnificent peaks of the Mission Range with their craggy reaches of bare rock to the more rounded, glacial landforms of the Swan valley and Salish Mountains.

Water is abundant on the Flathead Forest. Rivers, streams, lakes, reservoirs, glacial potholes, fens, and bogs are common across the Forest. Over 200 miles of wild and scenic rivers have been congressionally designated on the north, middle, and south forks of the Flathead River. Nearly three dozen lakes lie within the Jewel Basin Hiking Area which provides exceptional scenic vistas of the Flathead valley and the Swan Range. Flathead National Forest streams flow into the Swan, Stillwater, and the three forks of the Flathead River. They eventually flow into Flathead Lake, the largest freshwater lake west of the Great Lakes. The Flathead National Forest provides high quality habitat for bull trout, cutthroat trout; and other important fish, amphibian, and aquatic species. The combinations of high quality terrestrial and aquatic habitats offer outstanding hunting and fishing opportunities

Recreation opportunities abound in any season. Hiking, horseback riding, boating, white-water rafting, hunting, fishing, camping, driving for pleasure, skiing, and snowmobiling are just a few of the recreational activities that occur on the Flathead National Forest. About 3,500 miles of system roads and 2,100 miles of system trails provide a mixture of motorized and non-motorized travel opportunities on the Forest for resource management and public use.

The Flathead Forest has productive forest lands that contribute to the local and regional supply of forest products and is an important contributor to the local economy. Managing vegetation composition and structure, including fuels, using modern harvesting techniques contributes to people's livelihoods and enriches their lives.

Changes and Trends

Much has changed since the adoption of the original Plan. The Flathead National Forest has monitored changing conditions across the Forest, which guides us in preparing this Plan. The public has helped us identify concerns about these changes on: access and travel management, vegetation, biodiversity and ecosystem integrity, inventoried roadless area management, and recreation. This section describes the most pressing types of change we currently face in managing the Flathead National Forest and offers a few examples of each.

Demographic Changes

Over the last 10 to 15 years, Flathead County has been among the fastest growing populations in Montana. Population increase and other demographic changes greatly affect land management. Demographic change has caused: a greater demand for recreation opportunities, an increase in private land developments adjacent to

National Forest System lands, and a growing number of people with a range of personal values and different levels of natural resource experience taking part in land management issues.

Economic Changes

Local communities and the Forest have experienced much economic change in the past two decades. Examples are: the decrease in forest product manufacturing jobs, the increase in service-oriented businesses, and the decline in the Forest budget and reduced numbers of employees to carry out land management activities.

Technological Changes

Changes in technology can prompt new demands or create new options for managing the land. An example of this is the production of more efficient helicopters that offer new possibilities in logging. Examples of new demands are cellular and electronic company requests to place towers on National Forest System lands and new capabilities in recreational equipment like mountain bikes, off-highway vehicles (OHVs), and global positioning systems (GPS) that allow people to experience the outdoors in new ways.

Ecological Changes

Natural resources are dynamic and some of the trends we are experiencing include: changes in forest, grassland, and shrubland vegetation composition and structure, an increase in invasive species populations, increasing fragmentation of wildlife habitat, and increases in threatened and endangered species. Watersheds have also been impacted with a resultant decline in aquatic habitat and species. Recent large fires on the Flathead National Forest have changed the species composition and structure of the vegetation, particularly in the South Fork and North Fork Flathead River drainages.

Summary

Change in the world is inevitable. Sometimes changes progress at a steady, predictable, slow pace, such as growing forests from young trees to complex old growth structures. Other times changes happen rapidly, such as the death of trees during a severe fire. People and their ideas change too. Sometimes people change in response to changes in their environment. Other times, people cause their environment to change.

The Flathead National Forest considers people to be an integral part of the forest environment. Forest managers are committed to balancing the need to conserve and sustain natural resources with providing for people's desire for products and services now and in the future. It is appropriate that forest management direction changes in response to changes in people and their environment. The following chapters describe the Flathead National Forest's **vision** for the future, its **strategy** for achieving the vision, and the **design criteria** that will guide projects and activities across the Forest.

Chapter 1: Vision

Introduction

Our vision for future management of the Flathead National Forest is an integration of input from the public comments we received, Forest Service mission statement, national Forest Service goals, Flathead National Forest goals, recent changes and trends affecting the Flathead National Forest, and best science. This vision is expressed through the desired conditions.

Desired Conditions

Desired conditions describe the ecological, economic, and social conditions that we expect to exist in the future. This Plan presents three types of desired conditions: "forest-wide," "geographic areas," and "management areas."

Forest-wide desired conditions apply across the landscape. Each forest-wide desired condition contributes to the achievement of agency and forest-wide goals. This is the most general level of desired conditions.

Geographic area desired conditions are specific to an area or place, such as a river basin or valley, and reflect community values and local conditions within the area. They do not substitute for or repeat forest-wide desired conditions. The Flathead National Forest is divided into six geographic areas (see map of the Flathead National Forest geographic areas on page 48 of this chapter). These desired conditions allow us to focus on specific circumstances in specific geographic locations.

Management area desired conditions are indications of what future conditions would typically be desired in each management area. They help clarify the general suitability of various parts of the forest for different activities and management practices (management area desired conditions are part of the "suitability of areas" component in Chapter 2). For example, in an area identified as generally suitable for non-motorized use, the desired condition might be to maintain dispersed recreation sites at a primitive level. These desired conditions help us clarify what outcomes might be expected in land areas with different general suitability descriptions.

In some cases, our desired condition matches the current condition so our goal is to maintain what we have. But in other cases, we need to work toward meeting the desired conditions, and success in achieving them can only be measured over the long-term.

The Forest may need to make adjustments in the desired conditions if monitoring results indicate they are not achievable in the long-term or if there is an imbalance in what the Forest is accomplishing. Budget levels are an important factor in moving towards the desired conditions. The objectives in Chapter 2 identify what the Forest believes it can accomplish over the next 10 to 15 years. Desired conditions are aspirations; they are not final decisions or commitments to action.

Forest-Wide Desired Conditions Component

The Flathead National Forest intends to move toward these forest-wide desired conditions over the next 10 to 15 years although they may not all be achieved for many decades. Some desired conditions may be very difficult to achieve, but it is important to move toward them over time. The desired conditions are described here as they relate to the Flathead National Forest.

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

Soils, Watersheds, and Aquatic Resources

Background

Lands within the Flathead National Forest supply high quality water that supports a variety of uses throughout the Flathead basin. Watersheds and aquatic ecosystems have changed from historic conditions. Current conditions and trends indicate:

- A steady decline in bull trout and westslope cutthroat trout numbers during the past several decades.
- About 30 percent of watersheds within the Flathead National Forest have strong, stable populations of bull trout. The majority of these watersheds are in the South Fork Geographic Area.
- Major threats to bull trout and westslope cutthroat trout include the presence of non-native species, roads[1], and passage barriers.
- Continued expansion of non-native lake trout and associated competition with bull trout.

[1] Not all roads or road segments are considered threats to bull trout or westslope cutthroat trout habitat. This is in reference to specific roads or road segments that directly impact aquatic habitats.

- About 80 percent of inventoried road culverts[1] are partial barriers to native fish migration during some part of the year.
- Several stream reaches are listed as impaired by the State of Montana under the Clean Water Act. Many of these stream segments include important bull trout spawning habitat.

During the last several years, the Flathead National Forest has been working to restore soil, watershed, and aquatic habitat conditions by implementing best management practices, removing excess roads, improving road conditions (reducing sediment), removing fish migration barriers, implementing riparian conservation strategies, and implementing threatened and endangered species conservation strategies. Much of this work has been implemented as part of Total Maximum Daily Load (TMDL) plans in cooperation with the State of Montana.

Forest-Wide Desired Conditions

a. Soil organic matter (in the soil and on the surface), soil physical conditions, and coarse woody material would be at levels that maintain ecological systems, soil productivity, soil hydrologic function, and hillslope stability. Soils would have adequate physical, biological, and chemical properties to support desired vegetative growth and nutrient cycling within historic disturbance regimes.

b. Stream channels access their floodplains regularly. These seasonal flows recharge riparian aquifers and provide late-season stream flows and cold water temperatures. Channels transport water, sediment, and woody material over time, while maintaining their dimensions (bankfull width, depth, and entrenchment ratios; slope and sinuosity). Stream channels and floodplains are ever-changing, but they are resilient to disturbance. The water balance between streams and their watersheds allow for a natural frequency and magnitude of base flows and flood flows.

c. Water quality meets or exceeds applicable state standards and supports native amphibians and diverse invertebrate communities.

d. Lands that contribute to public water systems (source water protection areas) are in a condition that contributes to consistent delivery of clean water for municipal use.

e. Bull trout and westslope cutthroat trout populations are strong, self-sustaining, genetically pure, well-distributed, and well-connected

[1] These culverts are within potential or occupied native fish habitat.

forming metapopulations that can expand and endure natural disturbances.

f. On Flathead National Forest lands, impacts of lake trout on bull trout are absent or minimal.

g. Riparian conservation areas (RCAs) would provide:

- Woody material that would provide for quality fish habitat and channel stability.
- Vegetative conditions that would effectively trap and store sediment.
- Vegetation and stream channel conditions that would be sufficient to route water and sediment during flood events, regulate water table elevations, and provide for natural ranges of water temperature.
- Terrestrial and aquatic habitats that would provide for ecosystem diversity and support species diversity.

h. Disturbance processes, such as fires and floods, would play an important role in maintaining and restoring vegetative conditions in (RCAs).

i. Sediment deposits from over-bank floods allow floodplain development and the propagation of flood-dependent riparian plant species.

j. Instream habitat features, such as stream temperature, pool frequency, large woody material, bank stability, and width/depth ratios, would be within reference ranges[1].

k. Instream flows would be sufficient to provide for channel maintenance, water quality, aquatic habitat, and riparian vegetation.

l. Aquatic habitats and species would provide high quality recreational fisheries.

[1]Reference ranges of instream habitat features are described in the Plan Set of Documents.

Vegetative Composition, Size Class, and Structure1

Background

Maintenance of diverse vegetation, such as species, size, densities, diversity, and patterns, is essential to ecological sustainability. The Flathead National Forest has quite a diversity of vegetation types due to its geography, geology, elevation, and climate. The diversity ranges from warm, moist and dry valley bottoms to cold, steep, non-forested ecosystems. Disturbance processes that affect these ecosystems result in a pattern of live, dead, and dying vegetation across the landscape.

Current conditions and trends in plant communities indicate that changes from historical conditions affect vegetation and its ability to recover after disturbance. These changes have been caused by many factors, including fire suppression, introduction of invasive plant species, timber harvesting, non-native diseases, and human development.

- An analysis of western Montana shows: for the Flathead National Forest portion of the Flathead Valley Ecological Section[2] and the Northern Rockies Ecological Section, the greatest departure of existing condition from historic condition is an increase in shade tolerant species. Subsequently, shade intolerant species except Douglas-fir are underrepresented across the landscape. Seedling/sapling size class is under-represented and medium size class is over-represented across the landscape from historic levels with some variation due to recent wildfires.
- Although about 72 percent of the forest is within the historical fire regime and over half is stand replacement fire regime, landscapes have become more homogeneous in species composition and structure. There has been a decline in fire adapted tree species associated with mixed-severity fires, such as western white pine, western larch, ponderosa pine and whitebark pine. Ecosystems that once experienced mixed-severity fire regimes are now experiencing stand replacement fires.

[1] Species composition and size class are derived from multiple sources: Forest Inventory and Analysis (FIA), Region One Vegetation Map (R1VMP), SIMPPLLE model, 1930 inventory interpretation, (Losensky, Berglund), Hessburg, and historical records (Lieberg, Ayers).
[2] Ecological Sections are units of a land classification system that identifies areas of similar biological and physical potentials. Nesser, John A.; Ford, Gary L.; Maynard, C. Lee; Page-Dumroese, Deborah S. 1997, Ecological Units of the Northern Region: Subsections. USDA Forest Service, Intermountain Research Station, General Technical Report INT-GTR-369.

- Due to fires, insects, and disease, snags have increased across the landscape.
- Due to fire suppression, increases in surface, ladder, and aerial fuel loading have occurred across all vegetation types.
- The increase in the density of shade tolerant trees may have the potential to increase the spread of root disease.
- There is a continuing decline of whitebark pine and western white pine due to blister rust, mountain pine beetle, and fire exclusion. Numerous fires and storms have killed or blown down trees, increasing fuels and brood sites for insects. Since 1990, there has been a steady increase in the number of acres with trees that have been killed by: Douglas-fir beetle, western balsam bark beetle, and mountain pine beetle. Recently, wood borers have increased, killing western larch.
- Land susceptible to invasive plant establishment and spread is associated with disturbance and vegetation type. For example, orange and yellow hawkweed, new invaders, have become established and spread within the last ten to fifteen years. These two species pose a high level of risk to alter habitats on a half million acres of the forest. In contrast, other invasive species such as spotted knapweed are currently widespread but have low risk to establish, spread, and alter over 680,000 forested communities, but may have high risk on 33,000 acres of grasslands or other open canopy communities.

Forest-Wide Desired Conditions

Forest-Wide Desired Conditions Plan Component

a. Species Composition: Table 2, shown below by forested vegetation and non-forested vegetation types, displays the desired condition for species composition.

Table 2: Species composition desired condition.

Dominance Type	Desired Condition Forest-Wide	Existing Condition	Need for Change
Forested Vegetative types[1]			
Ponderosa pine (PP)	3 to 4%	1%	Increase 2 to 3%
Douglas-fir (DF) on dry vegetation types	Less than 1%	8%	Decrease by 7%
Shade intolerant mixed species (PP, western larch, LP, DF) on moist, wet sites	28 to 56%	33%	Maintain or increase by 23%
Lodgepole pine (LP)	7 to 15%	16%	Decrease 1 to 9%
Shade tolerant western red cedar, grand fir, western hemlock (TGCH)	Less than 1%	1%	Maintain
Shade tolerant spruce, subalpine fir, mountain hemlock (TASH)	27 to 53%	41%	Maintain or decrease by 14%
Non-forested Vegetation Type[2]			
Upland mixed hardwoods (e.g., aspen, birch, alder)	1 to 3%	2%	Maintain existing
Riparian hardwoods (e.g., cottonwood, dogwood, willow)	Less than 1%	0	Increase up to 1%
Upland grasses and forbs (e.g., elk sedge, pinegrass, forbs)	2 to 4%	3%	Maintain existing
Mixed mesic shrubs (e.g., snowberry, menziesii, huckleberry)	Less than 1%	Less than 1%	Maintain existing

[1] Approximately 2 million acres. Species composition and size class derived from multiple sources: Forest Inventory and Analysis (FIA), Region 1 Vegetation Map (R1 VMP), SIMPPLLE model, 1930 inventory interpretation (Losensky, Berglund), historic records (Lieberg, Ayers).

[2] Approximately 300,000 acres which includes water, rock and scree.

b. Size Class: The following table displays the desired condition for size class.

Table 3: Vegetation size class desired condition.

Size Class	Desired Condition Forest-Wide	Existing Condition	Need for Change
Seedling/Sapling 0-4.9"dbh	24 to 35%	9%	Increase by 15 to 26%
Small 5" to 9.9" dbh	17 to 35%	23%	Maintain existing or increase by 12%
Medium 10" to 14.9" dbh	10 to 19%	36%	Decrease 17 to 26%
Large 15" and greater	16 to 32%	33%	Decrease 1 to 17%

c. A diversity of composition, and structure in grassland, shrubland and forest communities would provide for long-term ecosystem function.

d. Where mixed species occur, the amount of ponderosa pine, western larch, blister-rust resistant western white pine, and whitebark pine would increase.

e. Old growth forest composition, structure, and pattern exist on the landscape consistent with native succession and disturbance regimes.

f. Snags and down woody material would be present in amounts that are consistent with historic disturbance and succession[1].

g. Disturbance processes, including fire, insects, and pathogens would play a more natural role in the landscape and contribute to functioning ecosystems, particularly in backcountry and wilderness areas.

h. Fire would play an increasing role where appropriate and desirable, but would be suppressed where necessary to protect life, resources, and property.

i. Where wildlands interface with urban and rural areas, risk of epidemic levels of mountain pine beetle, root disease, and large-scale, stand replacement fires would be low.

[1] See Vegetation Management Practices in the Plan Set of Documents.

Forest-Wide Desired Conditions Plan Component

j. In the Wildland Urban Interface, fire behavior of wildland fires would be low-intensity surface fires with limited crownfire potential which would reduce risk to structures and would provide for firefighter and public safety.

k. The net infested area[1] containing plants known as Category 2[2] invasive plants would be reduced by 50 to 75 percent.

l. The net infested area containing plants known as Category 1 invasive plants would be reduced by 50 percent.

Air Quality

Background

The Clean Air Act and subsequent amendments give federal land managers the responsibility to protect Air Quality Related Values in Class 1 areas and to protect human health and basic resource values in all areas. The Bob Marshall and Mission Mountains wilderness areas are classified as Class 1 attainment areas where very little deterioration of air quality is allowed. All other areas on the Flathead National Forest are classified as Class 2, where only moderate deterioration of air quality is allowed. The Great Bear Wilderness airshed is Class 2, but it is managed as Class 1. Columbia Falls, Kalispell, and Whitefish, are the closest non-attainment areas that fail to meet national ambient air quality standards for PM10 during some portion of the year; although virtually all land management activities on the Flathead Forest occur outside the non-attainment boundaries. The greatest potential to affect air quality would be from smoke (wildfires, prescribed fires) and road dust.

Forest-Wide Desired Conditions Plan Component

Forest-Wide Desired Conditions

- The use of fire, timber harvesting, and integrated pest management to restore healthy ecosystems would be accomplished while remaining within national and state air quality standards.

[1] The value for Net Infested Area is derived from estimating the actual or percentage of land occupied by invasive plants within a constantly defined gross area (Field Guide – Invasive Plant Inventory, Monitoring and Mapping National Protocol).

[2] Weed categories established by the State of Montana based on establishment: Category 1 = Widespread Invaders, 3rd priority; Category 2 = New Invaders, 2nd priority; Category 3 = Potential Invaders, 1st priority.

Wildlife and Plant Species Diversity

Background

Large scale assessments of landscape condition and trends within the Interior Columbia River basin have identified at least three major causes for changes in forested habitat conditions since early European settlement. These include: wildfire exclusion, intensive timber harvesting, and development of roads. Some habitat factors and risks to wildlife and plants include:

- An increasingly fragmented landscape and uncharacteristic vegetation structures.
- A reduction or degradation of habitats for many forest-associated wildlife and plant species.
- Land development, increased human activity, and competition from invasive plant species which compromises plant diversity, habitat quality, and connectivity.

Scaling down analysis to the Flathead National Forest scale, about 67 percent of the Forest is designated wilderness and inventoried roadless areas. The Flathead National Forest has very large areas of habitat that are relatively undisturbed by humans. These, and similar habitats on adjacent ownerships, are extremely valuable for wildlife, especially wide ranging carnivores. The occurrence of large undeveloped habitat areas are one reason that nearly all the terrestrial and aquatic species, present on the Flathead National Forest when Lewis and Clark journeyed through Montana 200 years ago, persist today. Large wild areas and a full suite of native species on the forest are nationally important and even merit global importance. As the population of western Montana continues to grow, there is ever increasing pressure on the remaining open space and on the quality and diversity of native habitat.

The Flathead National Forest is uniquely positioned within a complex of wilderness areas and borders Glacier National Park and a remote portion of British Columbia. This location, among some of the largest wild areas in the United States, enhances its importance as a connector of remote habitat needed by some wildlife.

The Flathead National Forest is known for its wetlands, fens, vernal pools, and riparian areas. The threatened plant, water howellia, is found in the Swan valley. Threatened and endangered species, species of concern, and species of interest are associated with these and other unique habitats.

Forest-Wide Desired Conditions

a. The Flathead National Forest would continue to have diverse native plant, animal, and fish populations that persist over time using the coarse filter/fine filter strategies outlined in Chapter 2.

b. Unique features such as wallows, seeps, and licks would continue to provide natural habitat elements for plants and wildlife and remain well-represented across the landscape.

c. Riparian conservation areas, as described in the Glossary, would provide suitable habitat for aquatic and terrestrial plants and animals.

d. Species listed under the Endangered Species Act (ESA) would trend toward recovery or be delisted.

e. Motorized access management within the recovery zone would promote recovery of grizzly bears.

f. A variety of wildlife conservation education programs and media would be used to promote conservation practices for threatened and endangered species and species of concern.

g. Habitat for species of concern and species of interest would remain healthy within ecosystem capabilities.

h. Species of concern and species of interest would have effective conservation strategies.

i. Active raptor nests would be protected during the nesting season.

j. Montana Fish, Wildlife, and Parks big game plans and the multi-agency elk strategy would be considered in order to support the security and habitat quality needed by big game species.

k. Maintain or improve white-tailed deer and elk winter range unless incompatible with human safety and property protection.

l. Big game winter range would provide sustainable thermal cover, forage, and browse, and human disturbance would be regulated to reduce physiological stress on wintering herds of deer and elk.

m. Connectivity areas would allow and encourage movement of desired animals and plants across the Forest and adjacent lands.

n. Invasive species or diseases would not spread to new habitats.

o. Hunting, fishing, and wildlife viewing opportunities would continue to provide economic and aesthetic benefits to local communities and forest visitors.

p. Human food and attractants would be stored to prevent human conflict with wildlife.

q. Traditional plant and animal resources would continue to be available for Tribal use.

r. Research natural areas, special interest areas, and experimental forests would provide high quality habitat and opportunities for research and education.

Forest Products

Background

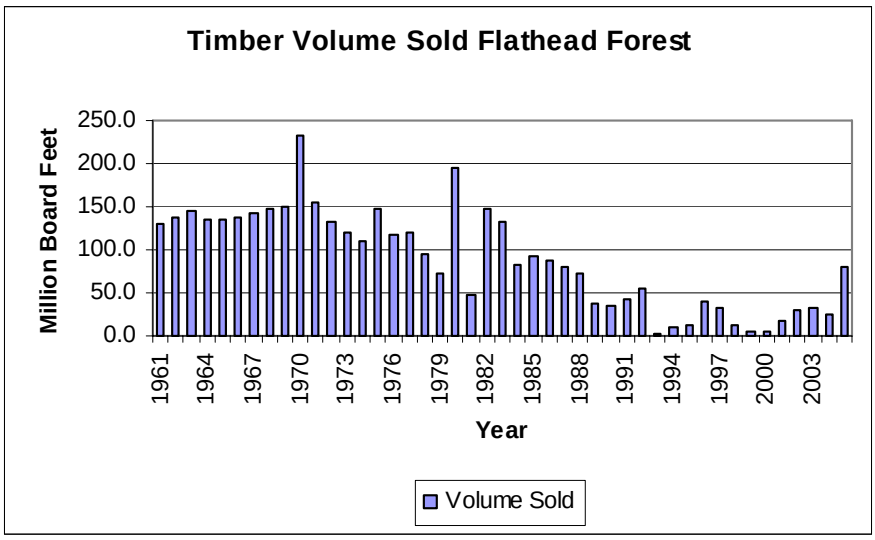
The Flathead National Forest has a long history of providing forest products to meet local and national needs. For more than a century, the Flathead valley was the center of a flourishing forest products industry that created jobs and products that were a dominant feature of the local economy. This continued for a period following World War II, when the Flathead National Forest contributed forest products to an expanding national economy. Beginning in the early 1970s, new natural resource laws, increasing foreign imports, and declining budgets had the following effects:

- A decline in the forest timber outputs, from an average of about 150 MMBF1 in the 1970s to less than 10 MMBF in the late 1990s. The harvest level has varied with salvage logging offerings, but has averaged more than 25 MMBF in recent years.
- A decline in the forest products industry, loss of jobs in this sector, and an associated decline in the contribution to the economic stability of communities. Other factors, such as increased mechanization and efficiency, also contributed to the loss of jobs in the forest products industry.

[1] MMBF = Million board feet

Figure 2, shown below, illustrates the trend in timber volume sold by the Flathead National Forest from 1961 through 2005[1].

Figure 2: Timber Volume Sold on the Flathead National Forest.



Expansion of local tourism and the retail economy is increasing the economic diversity in the Flathead valley, although the forest products industry is still an important sector.

The Flathead National Forest has always been a place where local residents and Tribes could harvest miscellaneous forest products, such as firewood, berries, or mushrooms. These uses of the national forest provide an important connection between people and their forest.

Forest-Wide Desired Conditions Plan Component

Forest-Wide Desired Conditions

a. Land classified as "suitable for timber production" would have a regularly scheduled timber harvest program that provides benefits to people while achieving ecosystem health and sustainability.

b. Land classified as "not suitable for regularly scheduled timber production," but where timber harvesting could occur for other multiple-use purposes, would have an irregular, unscheduled timber harvest program that achieves ecosystem health and sustainability while providing benefits to people.

[1] The volume sold in 2005 reflects the salvage of burned timber from the 2003 fires. Also, the large amount of timber volume sold in 1970 is a reflection of a strong market and the sale of several years' worth of previously unsold timber sale offerings.

c. Burned areas of land suitable for regularly scheduled timber production would be reforested with native tree species adapted to the site and restored to their productive capability.

d. Forests would provide commercial forest products, achieve vegetation objectives, and create forests that are more similar to historical forest conditions as described in the vegetation section of plan components.

e. A stable and sustainable supply of forest products, known as the Timber Sale Program Quantity (TSPQ), would contribute to a local, stable, and diverse forest products industry.

f. The Flathead National Forest would have a program of vegetation management in which timber sales are a tool to achieve desired conditions not to exceed the long-term sustained yield capacity (forest-wide) of:

- 54 MMCF[1] (270 MMBF[2]) per decade from lands suitable for timber production.
- 12 MMCF (58 MMBF) per decade from other lands.

g. Small diameter forest biomass would provide a variety of forest products such as hog fuel, fuel chips, pulp, small diameter roundwood, and firewood.

h. Non-timber forest products, such as berries, and mushrooms, would continue to be available for gathering in sustainable amounts for the general public, commercial and Tribal use.

i. There would be areas closed to commercial and mechanized harvest.

National Forest System Lands

Background

Management of National Forest System lands on the Flathead National Forest is important to protect the public's estate interest in its national forest. Surveying and posting the national forest boundary, maintaining posted property lines, and defending public lands from trespass or encroachment are activities that maintain the integrity of the National Forest System. About 1,022 miles of property boundary lines have been surveyed, marked, and posted, out of 1,430 total miles (71 percent complete). Approximately 610 miles of non-property boundaries, such as wilderness boundaries, have been identified as needing to be surveyed and posted.

[1] MMCF = Million cubic feet
[2] MMBF = Million board feet

Land ownership adjustments are one of the tools used to simplify and improve management of National Forest System lands. The acquisition, protection, and management of road and trail rights-of-way also ensure public access to National Forest System land. The Flathead National Forest has completed 32 land exchanges involving 12,110 acres of federal land in exchange for 9,771 acres of non-federal land since 1982. These land adjustments have provided a variety of benefits relative to management of the Forest. Since 1999, the Forest has purchased about 7,194 acres of land from Plum Creek Timber Company in the Swan valley with Land and Water Conservation Funds and continues to purchase Plum Creek Timber Company lands to improve grizzly bear habitat linkage.

Special use permits authorize the occupancy and use of National Forest System land by private individuals or companies for a wide variety of activities, such as roads, utility corridors, communication sites, and other private or commercial uses, that cannot be accommodated on private land. The Flathead National Forest currently administers about 400 non-recreation special use permits annually. This number is increasing as the population of the Flathead valley increases and the public requests more services.

Forest-Wide Desired Conditions

a. Land ownership adjustments, through purchase, exchange, or other authority, would simplify and improve national forest management.

b. Existing road and trail easements that allow access to National Forest System land would be maintained and additional easements would be acquired as necessary.

c. Utility corridors and communication sites would use existing facilities, sites, and corridors unless new sites can provide better social, economic, and ecological benefits.

d. Utility corridors and communication sites would be sized to fit the intended use and obsolete or unused facilities would not be present on the landscape.

e. National Forest System property lines adjacent to private land and boundaries of special areas such as designated wilderness lands would be clearly marked where inadvertent trespass and encroachment is most likely.

f. Conservation easements would be managed to standard, and opportunities would be explored for purchasing additional easements to maintain and protect wild and scenic river values.

Livestock Grazing

Background

Historically, the Flathead valley had a small amount of cattle and sheep grazing. Ranches were located on the valley floor and lower foothills of the Flathead valley. Some ranches had grazing permits on national forest land. This arrangement allowed ranchers to move the livestock off their ranches during the summer months so they could produce a hay crop.

Capable and suitable rangelands are limited on the Flathead National Forest because the steep, mountainous, forested terrain is not conducive to intensive livestock grazing. The majority of the livestock grazing on the Forest occurs on transitory range created by timber harvests. The key to managing livestock is to meet established forage utilization criteria, provide periods of rest from season-long grazing, and protect riparian conservation areas.

Livestock grazing on the Flathead National Forest probably peaked in the mid-1950s. Since that time, grazing use has steadily declined for the following reasons:

- Reduced timber harvesting and subsequent plant succession decreased the amount of available transitory range.
- Sale and subdivision of ranches and land adjacent to grazing allotments caused them to become vacant or made them inoperable.
- Grazing conflicts with wildlife and riparian habitat caused the Forest Service to eliminate or reduce grazing.
- Actual grazing use has declined over the last 15 years.

FW Desired Conditions Plan Component

Forest-Wide Desired Conditions

a. Livestock grazing opportunities for cattle and horses would be maintained at current levels on active grazing allotments.

b. Recreation pack and saddle stock grazing areas would not show signs of resource damage.

Minerals and Geology

Background

The first reports of mineralization in western Montana date from the mid to late-1850s when gold placers were reported. Within the Flathead National Forest, there have been only a limited number of exploration and small to moderate-sized mining operations. None of these sites have ever experienced any meaningful history of production. The Flathead National Forest is rated as having a low to very low potential for the occurrence and development of hardrock/locatable minerals. According to the Montana Bureau of Mines and Geology, approximately 63 mine sites lie within the borders of the Flathead National Forest. Most of these mine sites are small or were never developed and there does not appear to be any serious water quality issues associated with sites on the Forest.

While there have been no economic discoveries of oil and gas resources west of the Continental Divide in western Montana, the areas underlying and immediately adjacent to the west flanks of the Glacier Park and the Swan ranges have a high potential for the occurrence of oil and gas resources. The Flathead National Forest has 385 leases covering 742,780 acres which were suspended in 1985 following the Connor vs. Burford lawsuit and court decision.

Starting in the late 1920s, lignite and sub-bituminous coal were produced about eight miles south of Polebridge, Montana at the North Fork Mine. The mine was most active between 1936 and 1942 and then closed at the beginning of World War II. There is very little evidence to suggest that the coal resources in the North Fork valley occur in sufficient volume and at a depth favorable to constitute a logical mining unit for either underground and/or surface mining methods. There is no evidence of coal bed methane occurrence, but until further testing is done, it cannot be ruled out.

There is no potential for geothermal development on the Flathead National Forest.

High quality construction mineral materials of all types are present, including alluvial gravels, crusher feed, building stone, decorative stone, and riprap.

Geologically, portions of the Flathead National Forest lend themselves to the formation of caves and karsts. Although some of these formations exist, they are not widely known or advertised; this is in accordance with federal laws.

Forest-Wide Desired Conditions

a. The Flathead National Forest would contribute to the nation's supply of mineral and energy resources while continuing to sustain the land's productivity for other uses and its capability to sustain ecosystems.

b. Locatable mineral exploration would meet regulatory timeframes and requirements.

c. Abandoned mines would not present a hazard to people or the environment.

d. The Flathead National Forest would have an oil and gas leasing decision that resolves the status of suspended oil and gas leases.

e. Mineral materials would be available to support forest resource management such as road surfacing or protective rip-rap. Limited personal use, such as landscape rock, would continue to be available.

f. Caves would not show evidence of human use such as permanent or temporary markers, climbing aids, caches, or other user-built facilities.

Heritage Resources

Background

The Flathead National Forest encompasses an area with a long and rich historic and pre-historic heritage record. The earliest evidence of human occupation in the Flathead valley occurs after the last ice age, about 10,000 years ago.

Members of the Salish, Pend d'Oreille, and Kootenai Tribes commonly used and permanently occupied this area. Many other American Indian groups, including the Blackfeet Tribe, traveled through and briefly used the Flathead valley.

Western Montana received some of the earliest European explorers in the Northwest. Shortly after the explorers, the fur trade arrived. David Thompson, a fur trader for the British Northwest Company, came to the Flathead valley in 1809. Trappers and traders traveled along the Flathead River in the 1820s and 1830s. The first settlers arrived in the Flathead valley in the 1850s. Most were former employees from the Hudson's Bay Company and made their living raising cattle, sheep, or trading with American Indians.

By the 1880s, the natural resources of the land were attracting settlers to the area to pursue farming, ranching, and logging. Many settlements were established in the Flathead valley during this period. The construction of

railroads around the turn of the century played an important role in the settlement and development of the Flathead valley.

The newly formed Forest Service also played a major role in the history of the Flathead valley. In the early 1900s, its responsibilities included building trail and road systems, overseeing timber harvesting, livestock grazing, mining activities, and suppressing forest fires. The historic district at Spotted Bear and patrol cabins in the Bob Marshall and Great Bear wildernesses are examples of early Forest Service history that have been protected and are eligible for listing on the National Register of Historic Places.

The Forest Service is responsible for identifying and protecting heritage resources on National Forest System land. The Flathead National Forest has an active heritage resource program that is focused on identifying, protecting, and interpreting the most significant heritage properties. Three historic properties located on the Flathead National Forest are listed on the National Register of Historic Places. Numerous other historic and prehistoric properties have been identified on the Flathead National Forest. The evaluation, protection, and interpretation of these properties are important responsibilities for the Flathead National Forest.

Forest Wide Desired Conditions Plan Component

Forest-Wide Desired Conditions

a. Important remnants of historic and prehistoric properties, such as early campsites and old cabins, would be identified, protected, and interpreted as appropriate to preserve their heritage value.

b. Eligible heritage properties would be listed on the National Register of Historic Places, including historic facilities in the Bob Marshall and Great Bear wildernesses.

c. Interpretive displays, visitor contacts, or brochures would be available to help national forest visitors and employees understand and appreciate the heritage resources associated with the Flathead National Forest.

Developed and Dispersed Recreation

Background

Developed and dispersed recreation encompasses a broad and diverse range of activities. On the 2.3 million acres of the Flathead National Forest, there is a variety of dispersed recreation opportunities, including motorized and non-motorized travel, hiking, hunting, fishing, camping, Nordic skiing, downhill skiing, snowmobiling, driving for pleasure, white water boating, and other water and lake related opportunities.

Demographic and population studies show that visitation to the forest and adjacent public land will continue to grow. The Flathead valley and surrounding areas continue to experience high growth and development. With the increasing numbers of recreationists, the Flathead National Forest faces the task of managing the land in a way that offers the widest spectrum of opportunities possible while minimizing conflict between different user groups and effects on ecosystems. Despite the increasing need, funding for managing recreation resources has been inadequate to meet public expectations. This situation will most likely continue in the future.

New or extreme recreation activities have appeared in the last 15 years such as specialized mountain biking, mountain skateboards, paintballing, specialized hunting areas, trail running, hang gliding, skate skiing, snowboarding, and use of personal flying craft. Based on past and present recreation trends in inventions, it is likely the new and creative recreation activities and equipment will be discovered or invented and take place on the Flathead National Forest.

The evaluation, authorization, and administration of recreation special uses of National Forest System lands ensure that the public interest is being served. Recreation special use permits authorize the occupancy and use of national forest land by private individuals or companies for a wide variety of recreation activities, such as outfitter and guides, recreation events, summer homes, and other private or commercial recreation uses.

Forest-Wide Desired Conditions

a. Large areas of designated wilderness and backcountry would offer primitive settings and experiences, while non–wilderness areas of the Forest would provide a broader range of settings, experiences, and services.

b. There would be a sustainable level of developed and dispersed recreation opportunities while providing for the safety of users, minimizing environmental impacts, and contributing to the economic benefit to the surrounding communities.

c. Developed recreation sites would be located where they can best serve and accommodate a growing demand for facilities.

d. Forest vegetation in developed sites would be diverse (species, size, and age) and complement recreational activities and visual quality.

e. Developed and dispersed recreation sites or activities would have minimal resource impacts and social conflicts.

f. Forest users would be knowledgeable about primitive skills and low impact techniques, such as “Tread Lightly” and “Leave No Trace.”

g. New and existing recreation special use authorizations and permits would serve the public interest, meet national standards, and complement the recreation settings and experiences.

h. Outfitters and guides would provide high quality public services while assuring public health and safety, protecting resources, avoiding degradation of social settings, and minimizing conflicts with other users.

i. The Flathead National Forest would continue the existing recreation residence special-use program.

j. The Flathead National Forest would provide existing and additional cabin rental opportunities that are clean, safe, and compatible with other resources.

k. Opportunities for disabled hunters would continue to be available on the Forest.

Designated Wilderness

Background

The Flathead National Forest contains over a million acres of designated wilderness, which accounts for about 47 percent of the forest. These wilderness lands provide hiking, hunting, fishing, and horseback riding at the primitive end of the spectrum. Table 4 below provides information on designated wilderness areas on the Forest.

Management responsibility for the Bob Marshall Wilderness Complex (BMWC)[1] is shared with adjoining forests. Management direction for the BMWC was developed through a public "limits of acceptable change" process and implemented in April of 1987. The plan, as amended, continues to provide sound direction.

[1] The Bob Marshall Wilderness Complex (BMWC) is comprised of the Bob Marshall, Great Bear, and Scapegoat wilderness areas on the Flathead, Lolo, Lewis and Clark, and Helena national forests.

Table 4: Designated wilderness on the Flathead National Forest.

Name of Designated Wilderness	Total Acres	Acres within the Flathead National Forest[1]	Percent within the Flathead National Forest	National Forests or Governments with Shared Wilderness Management
Bob Marshall	1,011,603	712,334	70%	Lewis & Clark, Lolo, Helena
Great Bear	288,099	288,099	100%	None
Mission Mountains	168,137	76,220	45%	Confederated Salish and Kootenai Tribes

Use of the BMWC is considered moderately low compared to other units in the National Wilderness Preservation System. The BMWC contains almost one-half of the Flathead Wild and Scenic River System, providing a unique opportunity for river recreation in a wilderness setting. Recent studies show that day visits and trips of short duration are increasing and that extended stays are in decline. Impacts are expected to increase in areas near trailheads with resource and social impacts declining further from trailheads.

Management of the Mission Mountain Wilderness (MMW) is coordinated with the Confederated Salish and Kootenai Tribes (CSKT). A management plan for the MMW implemented in 1978 continues to provide direction. This designated wilderness has limited access with hikers representing the majority of visitors. Day use is concentrated at three areas on the eastern boundary. A good inventory of site conditions has been completed, but indicators and standards have not been established. Access on the west side of the MMW is through the Flathead Indian Reservation and private land. There is potential for impacts to increase at trailheads and those areas and lakes that are easily accessible.

With an increasing number of recreationists, the Flathead National Forest faces the task of managing its designated wilderness areas in ways that offer a spectrum of primitive opportunities, while minimizing effects to the wilderness ecosystem. This task is further complicated as funding to manage the increasing demand is on the decline.

[1] Acres of designated wilderness shown in the table may not match the acre numbers in the existing forest plan or land status reports. This is due to changes in mapping technology and accuracy. The "official" designated wilderness acreage is 1,069, 933 acres. The actual boundaries of designated wilderness areas have not changed.

Forest-Wide Desired Conditions

a. The Flathead National Forest would provide high quality wilderness recreation settings while use and impacts would be consistent with the values defined in the 1964 Wilderness Act.

b. Opportunity classes would be consistent with limits of acceptable change (LAC) guidelines.

c. There would be opportunities for more diverse (non-traditional) use of designated wilderness areas, such as snowshoeing, winter camping or dog sled use, while maintaining their integrity and value.

d. Wildland fire use and management ignited fire would mimic natural fire processes in designated and recommended wilderness areas.

e. Wilderness would contain native plant and animal communities free of invasive species.

f. Wilderness users would be knowledgeable about and demonstrate an appreciation for wilderness values.

g. Wilderness areas would have adequate guidance to protect opportunities for solitude or primitive unconfined recreation as well as preventing degradation of the resource.

h. Large areas of wilderness would offer primitive settings and experiences as well as conserve the ecosystems on which many species of wildlife and fish depend.

i. Facilities in designated wilderness would generally not occur except when they prevent resource degradation, have historical value and/or are critical to the safety of employees.

j. Professional outfitters and guides provide an example of wilderness ethics and knowledge by an active role in promoting good wilderness stewardship and applying practices such as “Leave No Trace” and being good hosts for all wilderness users.

Access and Travel Management

Background

The Flathead National Forest has about 3,400 miles of system roads and 2,100 miles of system trails that were constructed to support forest management activities, such as fire suppression, timber harvesting, mining,

and recreation. Much of the trail system has been in existence since the early 1900s. Later, as motorized transportation became common, many of the trails were abandoned or replaced by roads. The bulk of the road system was constructed in the decades following World War II when demand for building materials was high and the Flathead National Forest had a large timber sale program.

In the last few decades, funding has not been sufficient to maintain all forest roads and trails to national standards. Generally, the limited funding received has been focused on maintaining higher standard roads that integrate multiple resource needs. Where maintenance requirements are not accomplished:

- It has been difficult to meet federal safety requirements.
- User convenience has decreased.
- Risk of damage to water quality and aquatic habitat has increased on some roads.

With population growth there has been an increase in demand on forest roads as primary access routes to residential developments. Use of much of the road system has shifted from resource extraction to recreation and residential access, with requirements for higher safety standards. Protection of wildlife habitat and lack of maintenance funding has limited motorized travel.

Trail maintenance is generally focused on high-use trails. Overall, fewer trails are being maintained to standard. Recreation use and the demand for motorized and non-motorized access have increased. Advances in performance and technology have resulted in increased use during summer and winter by off-highway vehicles (OHVs), mountain bikes, and snowmobiles.

Forest-Wide Desired Conditions

a. The transportation system would provide reasonable and legal access for resource management and recreation while protecting other important resources.

b. Open roads and trails would provide for user safety and be maintained to the appropriate service level.

c. Roads with high residential access needs would be managed by the appropriate local, state, or federal agency.

d. All roads, trails, and areas open to motorized vehicles would be shown on a map which is readily available to the public.

e. Motorized use would only occur on designated roads, trails, or areas.

f. The transportation system would not encroach onto streams and riparian areas in ways that impact channel function or geometry. Sediment delivery from the transportation system does not measurably impact pool frequency, pool habitat, or salmonid spawning habitats.

g. Roads, trails, and their use would have minimal impacts on resources including threatened and endangered species, species of concern, species of interest, heritage sites, watersheds, and fish habitat.

h. Roads in long-term storage pose minimal risk to water quality and aquatic ecosystems. Cross drains, ditches, culverts, and other structures have a minimal risk of failure, and they provide adequate drainage that prevents accelerated surface runoff, erosion, and sediment delivery to streams.

i. Snowmobile opportunities would be provided across the Forest as identified on the over-snow vehicle use map.

j. Air taxi services operating on the Flathead National Forest would have a special use permit authorizing such activity.

k. High-quality loop trails would exist for motorized and non-motorized users.

Partnerships

Background

In recent years, the use of partnerships and agreements on the Flathead National Forest has increased. This trend and associated funding has helped offset the effects of declining budgets. Partnerships benefit a wide range of programs and activities, and have been especially important in the areas of recreation, fuels reduction, wildlife and fisheries habitat improvement, watershed restoration, invasive species, conservation education, and cultural heritage. As this trend continues, it is anticipated that partnerships will become an increasingly important tool in the accomplishment of work on the Flathead National Forest.

Forest-Wide Desired Conditions

a. Partnerships with federal and non-federal entities would help achieve desired conditions and improve overall resource management. Partnerships would be important in fostering productive relationships with a knowledgeable and supportive constituency and local communities, and in accomplishing projects that are in the Flathead National Forest and public interest.

b. Federal, state, local and Tribal agencies and private landowners would be partners in the development and execution of coordinated resource management plans and projects.

c. The Flathead National Forest and potential partners would have an expressed mutual interest in, benefit from, and understanding of a common purpose(s) that helps achieve their respective missions.

d. Partnerships and projects would be widely recognized by the public as beneficial to resource management, and as an appropriate and efficient use of Forest Service cooperative efforts and funding.

e. Partnership arrangements would be transparent to the public and free of real or apparent conflicts of interest, or endorsement of commercial products, services, or entities.

American Indian Rights and Interests

Background

American Indian Tribes are sovereign nations. They are government entities with which the Forest Service establishes and maintains government-to-government relationships. Through treaties, Tribes have reserved rights and privileges for their Tribal members on off-reservation lands ceded to the U.S. Government. The Forest Service now manages some of those off-reservation lands ceded in the treaties. Therefore, the agency has certain legal responsibilities to American Indian Tribes. These legal responsibilities are clarified in statutes, executive orders, and case law enacted and interpreted for the protection and benefit of federally recognized American Indian Tribes1. In meeting these responsibilities, we consult with Tribes whenever our proposed policies or management actions may affect their interests.

While federal laws apply to all federally recognized American Indian Tribes, each Tribe is different and is recognized as a separate and unique government. There are differences in treaty rights from one Tribe to another, significant cultural differences between Tribes, and there are differences in the historic relationships between Tribes and the lands on and near their current reservations. In some cases, several Tribes may each have legitimate interests in the same lands because they each may have occupied or otherwise used those lands during different historic periods. These factors and others combine to make each Forest Service-Tribal consultation relationship unique.

[1] Some of the major statutes, executive orders, and case law determinations are referenced in the document, *Forest Land and Resource Management Plans: American Indian Rights and Interests*, found in the Plan Set of Documents.

Because of the treaty rights of American Indian Tribes, Tribal members retain rights to use national forest lands in ways that are not allowed to the general public. On some occasions, access or use by the general public may be temporarily denied to allow American Indian people to exercise their treaty rights in privacy and solitude. When such uses or temporary closures occur, the participating Tribal members are typically required to verify their membership in a federally recognized Tribe.

Forest-Wide Desired Conditions Plan Component

Forest-Wide Desired Conditions

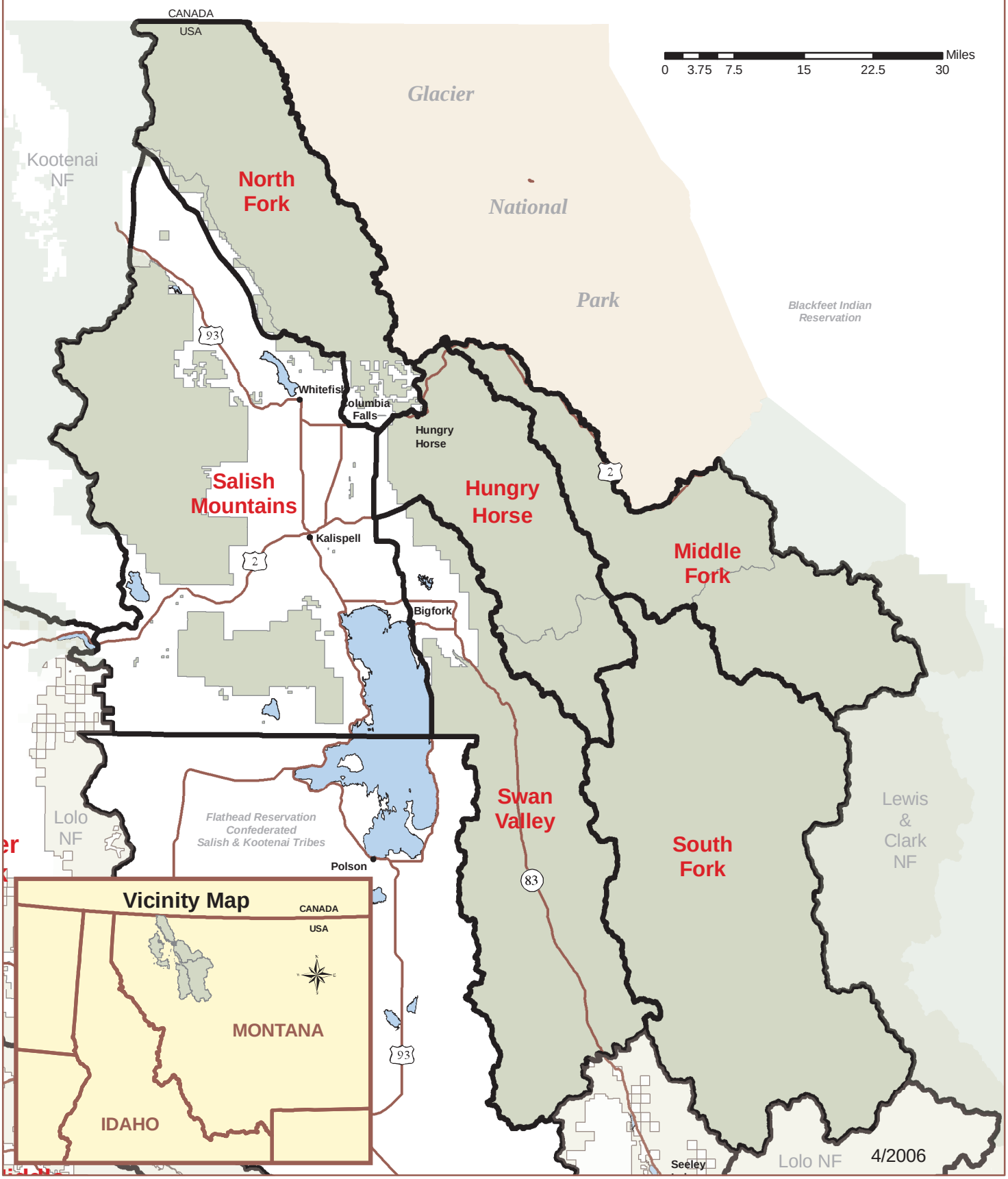
a. All line officers and other employees directly involved in forest management decisions and activities would understand their federal government trustee responsibilities. The employees would also understand the importance of American Indian treaty rights and interests in forest management.

b. This understanding would be incorporated in forest management activities, including our public information programs.

c. The Flathead National Forest would have a Memorandum of Understanding with any interested Tribe that has treaty rights on National Forest System lands.

Flathead National Forest
Geographic Areas

Figure 3



Geographic Area Desired Conditions Component

Introduction

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

While the forest-wide desired conditions indicate broad trends which we would expect to see over the next 10 to 15 years, we recognize that individual places across the Flathead National Forest have their own unique characteristics and conditions. These places, referred to as "geographic areas," define a landscape that people associate with on the Forest. Identifying these areas gives us the opportunity to fine-tune our forest-wide management to better respond to more local conditions and situations. The Flathead National Forest has been divided into the following six geographic areas (see vicinity map available at the end of this introduction):

- Hungry Horse
- Middle Fork Flathead
- North Fork Flathead
- Salish Mountains
- South Fork Flathead
- Swan Valley

Geographic Areas

Each geographic area description provides the following:

Geographic area map shows management areas (defined in Chapter 2), and acres of each, location of unique features, primary population centers, and major rivers and roads.

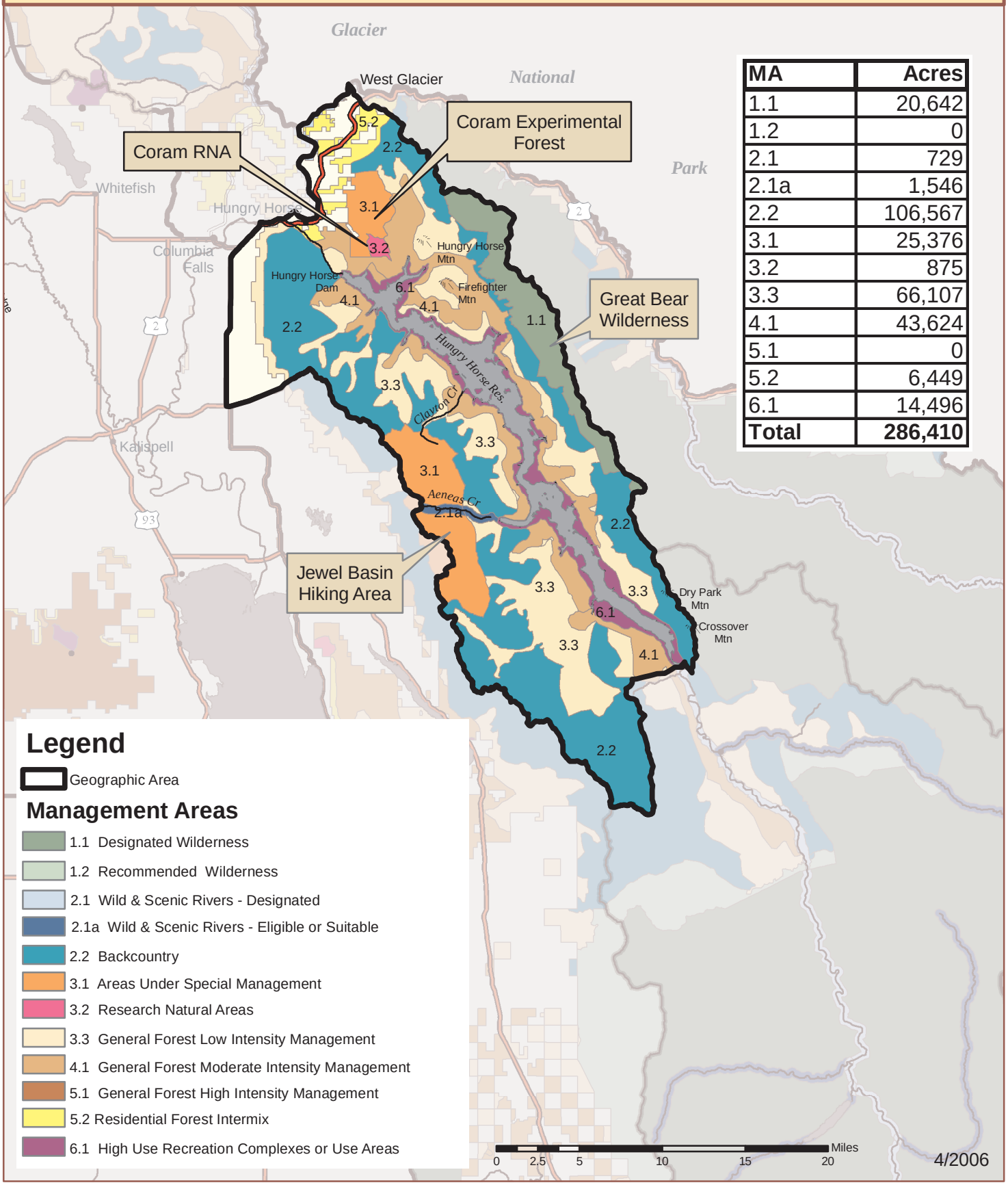
Unique characteristics and general overview provides a brief characterization of the area such as landscape features, primary land uses and ownership patterns, resource and recreational uses, and an indication of social and economic factors.

Geographic area desired conditions describe what we want to achieve in specific geographic areas that are not necessarily covered by forest-wide desired conditions. While all resources have been considered, the only desired conditions specified here are those that are not adequately addressed by forest-wide desired conditions.

Flathead National Forest

Hungry Horse Geographic Area

Figure 4



MA	Acres
1.1	20,642
1.2	0
2.1	729
2.1a	1,546
2.2	106,567
3.1	25,376
3.2	875
3.3	66,107
4.1	43,624
5.1	0
5.2	6,449
6.1	14,496
Total	**286,410**

Hungry Horse Geographic Area

Unique Characteristics

- Hungry Horse Dam and Reservoir on the South Fork Flathead River. The dam impounds a reservoir, which is 35 miles long and covers over 23,000 acres.
- There is a popular 110-mile-long driving loop around the Hungry Horse Reservoir that provides access to areas of the reservoir.
- The area has a high quality fishery with a healthy bull trout population.
- The 15,000 acre Jewel Basin Hiking Area, designated in 1970, contains 38 miles of hiking trails without motorized, mechanized, or stock use.
- The Coram Experimental Forest has been set aside for forest/ecological research purposes. This 8,000-acre area also contains a Research Natural Area (RNA). Coram Experimental Forest and RNA has been designated as a Biosphere Reserve within the United Nations Education, Scientific and Cultural Organization (UNESCO) Man and Biosphere Program.

General Overview

This geographic area provides for a wide variety of recreational opportunities, from the primitive experiences in the wilderness to driving for pleasure on the open loop roads that surround the Hungry Horse Reservoir. Approximately 46 percent of the geographic area is within designated/recommended wilderness or other primitive settings. Fifty-four percent of the geographic area offers opportunities for higher intensities of resource management.

Lands on the west side of the Hungry Horse Reservoir are some of the most productive timber lands on the Flathead National Forest. The crest of the Swan Range runs north-south and provides limited motorized recreation in a semi-primitive setting.

The section of Highway 2 between Hungry Horse and West Glacier provides the gateway to Glacier National Park. This corridor has high use during the summer. There is a growing number of sub-divisions and developments occurring along this corridor.

Aeneas Creek has been found eligible for further study for potential designation into the Wild and Scenic River System[1].

[1] Information on the outstanding remarkable value (ORV), for which the river was found eligible and its potential classification, is in the Plan Set of Documents.

Desired Conditions

Watershed, Fisheries, and Aquatic Habitat

- Non-native fish (primarily rainbow trout and brook trout) and hybridized fish are absent in high mountain lakes. These lakes would only contain native fish species such as bull trout and westslope cutthroat trout. Handkerchief Lake would contain the only non-native fish population (artic grayling).
- Above Hungry Horse Dam, human-created fish migration barriers would not exist within the South Fork watershed.
- Angling opportunities for bull trout and westslope cutthroat trout in the South Fork Flathead River and Hungry Horse Reservoir would exist.

Wildlife and Plant Species Diversity

- Elk habitat would be sufficient to maintain thriving herds. Priority winter range areas would include Firefighter/Hungry Horse Mountains and the Dry Park/Crossover Mountain, and other areas identified through coordination with Montana Fish, Wildlife, and Parks (MT FWP). Periodic habitat improvement projects would be developed to insure that suitable conditions persist.
- Known active bald eagle nesting site(s) along the Hungry Horse Reservoir would persist and the population would expand to other areas in the South Fork Flathead River drainage.

Fire

- The use of wildland fire and appropriate management response including suppression is an available tool across the entire geographic area. This will help maintain and/or enhance ecological function to the extent that fuel and weather conditions permit an acceptable risk to recreation and other resource values.

Developed and Dispersed Recreation

Jewel Basin Hiking Area

- The Jewel Basin Hiking Area would continue as a hiking-only area.
- Camp Misery and Clayton Creek would continue to be the primary access points into the Jewel Basin Hiking Area, with Wheeler and Graves Creek as secondary access.
- Historic institutional outfitting and guiding use would be authorized under special use permits. New commercial and institutional uses would not be entertained. Recreation events would not occur.

Hungry Horse Reservoir Area

- The north end of the Hungry Horse reservoir has more recreational development and use than the south end of the reservoir.
- New developed or dispersed recreation sites would be limited, and existing sites would be expanded or reconstructed before new development.
- The loop road around the Hungry Horse Reservoir has numerous vistas to view the reservoir and surrounding landscape and allows for passenger vehicles to travel in a moderate degree of user comfort and conveniences.

Access and Travel Management

- Portions of this geographic area are within backcountry management areas (MA 2.2) which provides primarily non-motorized recreation opportunities. However, the following motorized trails currently exist, are suitable, and still provide a semi-primitive recreation experience (table 5 below).

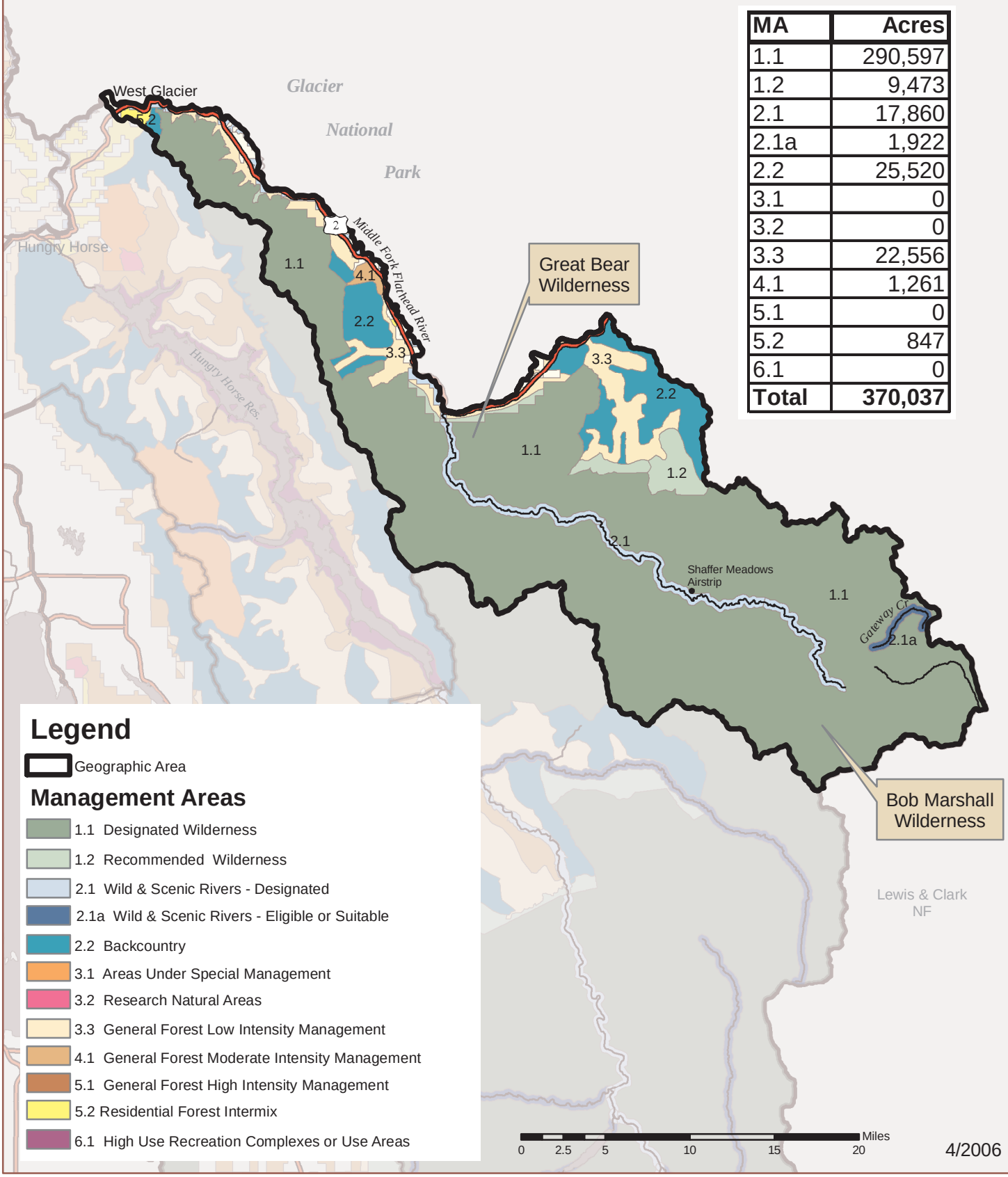
Table 5: Motorized trails in the Hungry Horse GA MA 2.2.

Trail Name and Number	Type of Use Allowed
Alpine #7 from Posy Cr #74 south to Bunker Alpine Connector Trail #101A	Motorcycle
Columbia Mountain #51	Motorcycle
Hemler Creek Trail #20	Motorcycle
Doris Ridge #52	Motorcycle and a section for OHV use
Hemler Trail #20	Motorcycle
Quintonkon Cr #72 from the jct. of Rd 381C to jct. of Alpine #7	Motorcycle
Doris Creek #295	Motorcycle
Jimmie Ridge #297	Motorcycle
Alpine #7 from Columbia Mountain #51	Motorcycle

- MA 2.2 lands within this geographic area may also have additional existing motorized road and trail routes that may or may not be suitable with the overall direction of MA 2.2. These routes would be evaluated later, when site-specific travel management planning is done.

Flathead National Forest
Middle Fork Geographic Area

Figure 5



MA	Acres
1.1	290,597
1.2	9,473
2.1	17,860
2.1a	1,922
2.2	25,520
3.1	0
3.2	0
3.3	22,556
4.1	1,261
5.1	0
5.2	847
6.1	0
Total	**370,037**

Middle Fork Flathead Geographic Area

Unique Characteristics

- Over 75 percent of the geographic area is in the Great Bear Wilderness and Bob Marshall Wilderness, and is part of the Bob Marshall Wilderness Complex (BMWC).
- The Shaffer Meadows Airstrip is the only open airstrip within the BMWC.
- The area has a high quality fishery with a healthy bull trout population.
- The Middle Fork Flathead River, a designated Wild and Scenic River, is a free-flowing river which originates in the Bob Marshall Wilderness. The river provides a wide range of floating experiences.
- The area has some of the highest densities of grizzly bears in the lower 48 states and is key grizzly bear habitat.
- The Nyaak Flats floodplain on the Middle Fork hosts a globally significant research effort by the University of Montana.
- The State Highway 2 corridor is an important transportation, communication, and utility corridor.
- The Schafer Meadows Ranger Station are seasonally operating historical facilities. These, along with several backcountry guard stations, and an intricate trail system for hiking, backpacking, horseback riding, and wilderness management, offer a view and preservation of a lifestyle from the past.

General Overview

The Great Bear Wilderness and a portion of the Bob Marshall Wilderness, make up the vast majority of this geographic area and contain world-class wilderness and wild and scenic rivers. This area is largely wild and undeveloped due to the Bob Marshall Wilderness and Badger Two Medicine area to the south and east, Glacier National Park to the north, and the vast steep terrain. This area is popular for recreational use. It is a focal point for hiking, horseback riding, hunting, fishing, and for river float trips on the Wild and Scenic Middle Fork Flathead River.

Approximately 93 percent of the geographic area is within designated/recommended wilderness or other primitive settings. Seven percent of the geographic area offers opportunities for higher intensities or resource management.

The Montana State Highway 2 corridor, on the northern boundary of this geographic area, is a busy area separating Glacier National Park on the north and the Great Bear Wilderness to the south. This corridor includes heavy recreational use on the Middle Fork River, heavy recreational and general traffic on the state highway, the Burlington Northern-Santa Fe railroad line, a natural gas line, electrical transmission lines, and other utility and communications facilities.

Gateway Creek has been found eligible for further study for potential designation to the Wild and Scenic River System[1].

The Nyaak Flats floodplain, located on the Middle Fork River on private land, national forest land, and within Glacier National Park, is one of the most studied floodplains in the world. It is the focus of continuing research by the University of Montana.

Desired Conditions

Watershed, Fisheries, and Aquatic Habitat

- Bear Creek, Granite Creek, Lodgepole Creek, Morrison Creek, Dolly Varden Creek, Shafer Creek, Clack Creek, Bowl Creek, Strawberry Creek, and Long Creek provide high quality bull trout habitat and production. Native fish production, stream channel conditions and water quality are in excellent condition.
- Adfluvial populations of bull trout and westslope cutthroat trout remain steady or improve despite changed ecological conditions in Flathead Lake. Cooperative efforts reduce non-native fish within the Flathead River System.
- Non-native fish (primarily rainbow trout and brook trout) and hybridized fish are absent in high mountain lakes and very scarce in the lower river system.

Fire

- The use of wildland fire and appropriate management response including suppression is an available tool across the entire geographic area. This will help maintain and/or enhance ecological function to the extent that fuel and weather conditions permit an acceptable risk to recreation and other resource values.

[1] Information on the outstanding remarkable value (ORV), for which the river was found eligible and its potential classification is in the Plan Set of Documents.

Wilderness

- Work centers and guard stations within the wilderness would continue to be used for wilderness management and help interpret the history of wilderness management.
- Impacts from recreational use would be managed by the Bob Marshall Wilderness Complex Wilderness Plan "Limits of Acceptable Change" (LAC).

Wild and Scenic Rivers

- The Middle Fork of the Flathead would be managed per the Flathead River Wild and Scenic River Recreation Direction. Commercial outfitted river use, at levels determined in the River Recreation Direction, would continue to be a key element in providing public access to the river.
- Recreational river use, such as rafting or kayaking, on the Middle Fork is compatible with streamside angling.

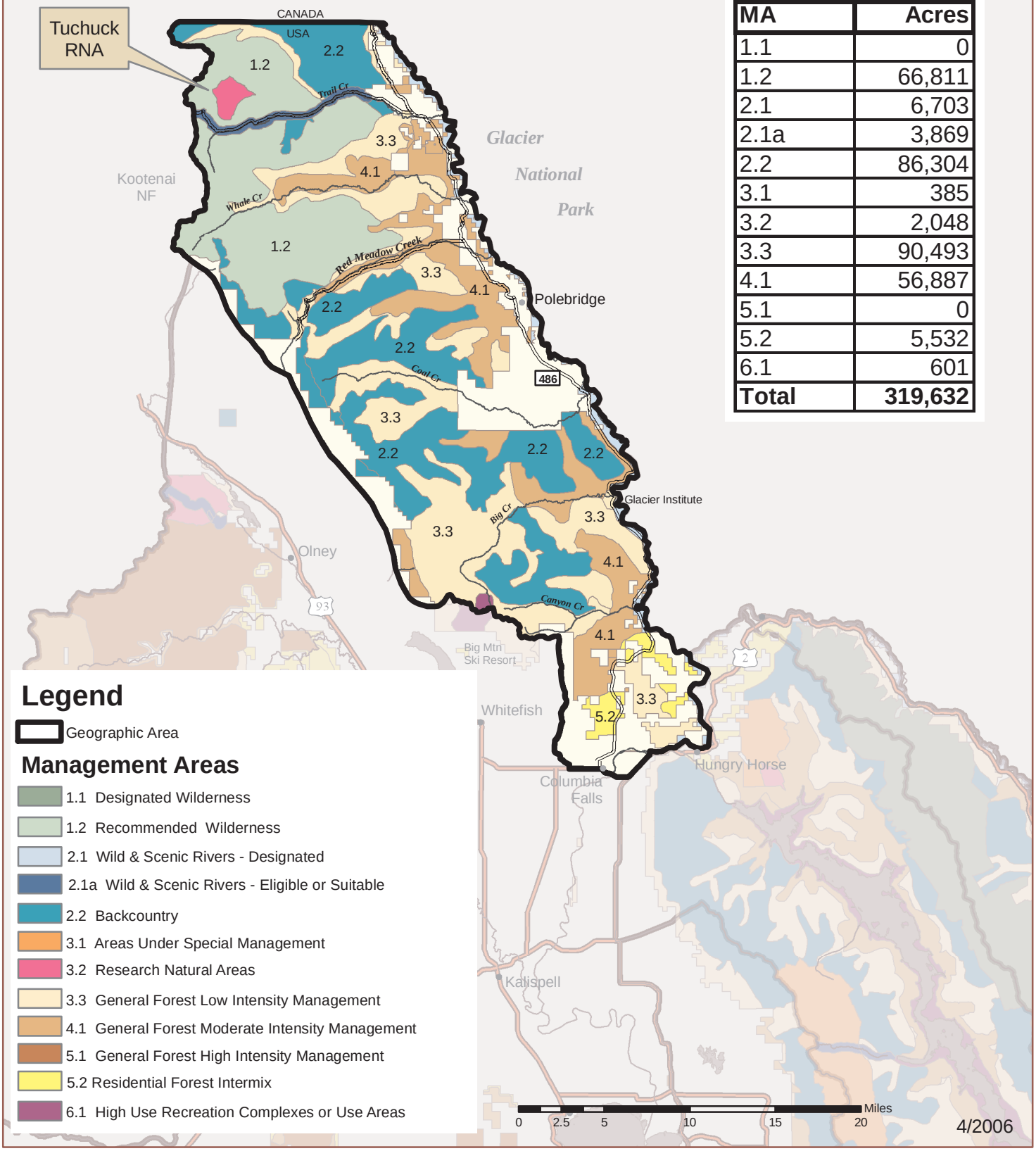
Access and Travel Management

- Trailheads and other recreation facilities would provide for user safety and public information and education.
- The area provides opportunities for winter motorized use consistent with the winter motorized recreation map, located in the Plan Set of Documents.
- The Shaffer Meadows Airstrip would continue to provide public and administrative access for small aircraft at current use levels.

Flathead National Forest

North Fork Geographic Area

Figure 6



MA	Acres
1.1	0
1.2	66,811
2.1	6,703
2.1a	3,869
2.2	86,304
3.1	385
3.2	2,048
3.3	90,493
4.1	56,887
5.1	0
5.2	5,532
6.1	601
Total	**319,632**

North Fork Flathead Geographic Area

Unique Characteristics

- The North Fork Flathead River is a free-flowing, designated Wild and Scenic River that originates in Canada and is co-managed with Glacier National Park.
- Contains seven significant wetland complexes; some of the least impacted wetlands in the Flathead River watersheds.
- The Big Creek Work Center is currently occupied by Glacier Institute, which provides quality environmental education in cooperation with the Forest Service and other resource management agencies.
- The area has some of the highest densities of grizzly bears in the lower 48 states and is key grizzly bear habitat.
- Shares a border with Glacier National Park and an international border with Canada.
- Tuchuck RNA which is a reference habitat for a subalpine larch/subalpine fir habitat type.

General Overview

All of the National Forest System Lands are on the west side of the North Fork Flathead River. Land on the east side of the river is managed by Glacier National Park. The combination of numerous inventoried roadless areas and its proximity to Glacier National Park make this geographic area a wild and undeveloped place. Fire has played a major role in the area since 1910, and its effects are clearly visible.

Approximately 52 percent of the geographic area is within designated/recommended wilderness or other primitive settings. Forty-eight percent of the geographic area offers opportunities for higher intensities of resource management activities.

The North Fork valley bottom is a large portion of private lands that are being subdivided. More and more people are building homes here with the unintended effects of habitat fragmentation and loss of wildness and potential effects on grizzly bear and wolf. Significant amounts of industrial private and state lands occur on the western, southern, and eastern perimeters of the area. The small community of Polebridge is within the geographic area. Other nearby communities include Hungry Horse and Columbia Falls.

Yakinikak, Trail, and Nokio creeks have been found eligible for further study for potential designation into the Wild and Scenic River System[1].

Desired Conditions

Watershed, Fisheries, and Aquatic Habitat

- Trail Creek, Whale Creek, Red Meadow Creek, Coal Creek, and Big Creek provide high quality bull trout habitat and production.
- Watershed conditions are improved in Coal Creek and Big Creek based upon recommendations in the Total Maximum Daily Load (TMDL) Watershed Restoration Plan.
- Adfluvial populations of bull trout and westslope cutthroat trout remain steady or improve despite changed ecological conditions in Flathead Lake.

Wildlife and Plant Species Diversity

- Mud Lake, Teepee Lake, and Hay Creek Wetland Complexes, which possess significant wetland and botanical values, would be evaluated for "Special Interest Area" designation.

Access and Travel Management

- Red Meadow and Trail Creek roads would continue to provide access to the North Fork for a variety of uses including recreation opportunities and escape routes in the event of large wildfires.
- Portions of this geographic area are within backcountry management areas (MA 2.2) which provides primarily non-motorized recreation opportunities. However, the following motorized trails currently exist, are suitable, and still provide a semi-primitive recreation experience (table 6 below).

Table 6: Motorized trails in the North Fork Flathead GA MA 2.2.

Trail Name and Number	Type of Use Allowed
Cyclone Lookout #40	Motorcycle
Coal Ridge #14	Motorcycle
Moran Creek Trail #2	Motorcycle

[1] Information on the outstanding remarkable value (ORV), for which the river was found eligible and its potential classification, is in the Plan Set of Documents.

GA Desired Conditions Plan Component

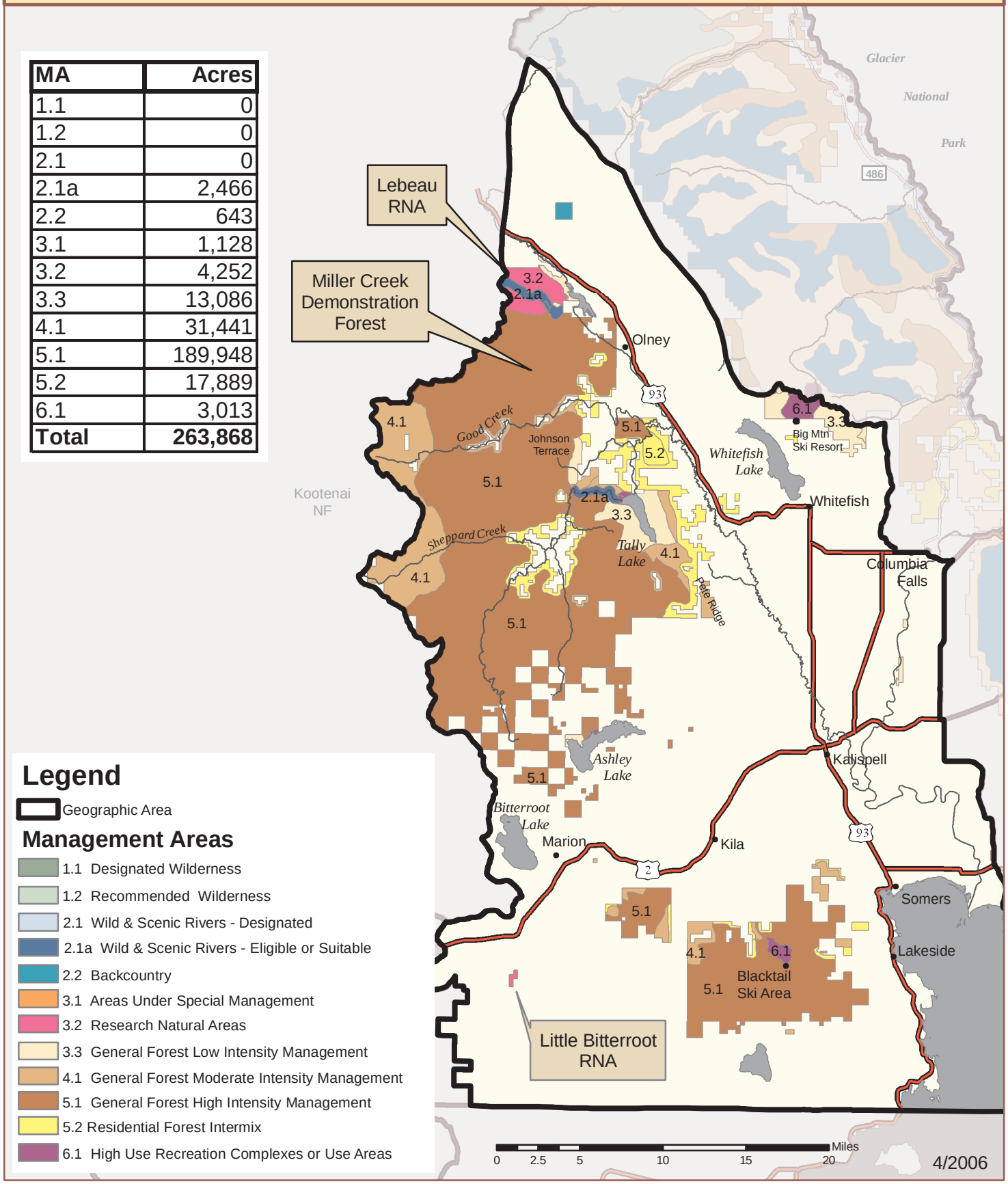
- MA 2.2 lands within this geographic area may also have additional existing motorized road and trail routes that may or may not be suitable with the overall direction of MA 2.2. These routes would be evaluated later, when site-specific travel management planning is done.
- Groomed snowmobile routes would continue to provide recreation opportunities and access to the groomed trails on Big Mountain and to the Montana state lands to the west.

Flathead National Forest

Figure 7

Salish Mountains Geographic Area

MA	Acres
1.1	0
1.2	0
2.1	0
2.1a	2,466
2.2	643
3.1	1,128
3.2	4,252
3.3	13,086
4.1	31,441
5.1	189,948
5.2	17,889
6.1	3,013
Total	**263,868**



Legend

- Geographic Area

Management Areas

- 1.1 Designated Wilderness
- 1.2 Recommended Wilderness
- 2.1 Wild & Scenic Rivers - Designated
- 2.1a Wild & Scenic Rivers - Eligible or Suitable
- 2.2 Backcountry
- 3.1 Areas Under Special Management
- 3.2 Research Natural Areas
- 3.3 General Forest Low Intensity Management
- 4.1 General Forest Moderate Intensity Management
- 5.1 General Forest High Intensity Management
- 5.2 Residential Forest Intermix
- 6.1 High Use Recreation Complexes or Use Areas

Salish Mountains Geographic Area

Unique Characteristics

- Many large lakes such as Tally Lake, Little Bitterroot Lake, Upper and Lower Stillwater lakes, Ashley Lake, and Whitefish Lake, provide a variety of water-based recreational opportunities.
- Big Mountain and Blacktail ski areas are popular destinations for both local residents and tourists from around the region.
- The Pete Ridge area is one of the most important white-tailed deer winter ranges in Montana.
- Lebeau and Little Bitterroot RNAs and Johnson Terrace are unique topographic features that harbor a diversity of plants unique among the forested landscape.
- Seven ecologically significant wetland complexes with a diversity of plants and features.
- The Miller Creek Demonstration Forest is an important active fire research area on the Flathead National Forest.

General Overview

The Salish Mountain Geographic Area includes most of the Tally Lake Ranger District and a portion of the Swan Lake Ranger District. These lands have a network of roads to access private ownership and federal lands that have been managed primarily for timber production during the last several decades. Elevation is relatively low compared to the rest of the forest and is unique because of the rolling nature of the topography. Other large forested areas adjacent to this geographic area include the Stillwater State Forest, Kootenai National Forest, and a checkerboard of industrial-managed forest lands. Communities near this area include Whitefish, Kalispell, Olney, Lakeside, Marion, Kila and Somers.

Approximately three percent of this geographic area is within designated/recommended wilderness or other primitive settings. Ninety-seven percent of the geographic area offers opportunities for higher intensities of resource management activities.

The major use of National Forest System lands in this geographic area has been timber management and recreation. This area is roaded, allowing easy access to the rolling terrain. Popular recreation activities include hiking, hunting, mountain biking, motorized trail riding, horseback riding, and winter recreation.

Within the Miller Creek drainage, 6,000 acres have been identified as a "demonstration forest." Management objectives for the area have historically been to maximize growth and yield.

Lebeau and Logan creeks have been found eligible for further study for potential designation into the Wild and Scenic River System[1].

Desired Conditions

Watershed, Fisheries, and Aquatic Habitat

- Both Good Creek and Sheppard Creek continue to support a stable population of genetically pure cutthroat trout. These populations would be protected by barriers that would prevent invasion of non-native fish species.
- For the headwaters of Sheppard and Good creeks, moderate levels of dispersed recreation would exist.

Wildlife and Plant Species Diversity

- Suitable cover and foraging areas for wintering deer and elk would persist, particularly in the Pete Ridge area.
- The scenic, geological, botanical, and ephemeral special characteristics of Johnson Terrace, a proposed Special Interest Area, would be protected.

Developed and Dispersed Recreation

- Campgrounds on the Tally Lake Ranger District area would be expanded and/or reconstructed as needed to accommodate an increase in use and to protect resources. Vegetation management plans for campgrounds exist would be up-to-date.
- The Blacktail and Round Meadows cross country ski areas would be continue to operate on the existing system of roads and trails.

Big Mountain Resort

- Facilities at the ski area would be expanded and/or reconstructed for both summer and winter recreation.
- In the summer, recreation opportunities would be concentrated on south facing slopes. Use would be very restricted on the north slope and Hellroaring Basin in order to limit grizzly bear and human interactions.

[1] Information on the outstanding remarkable value (ORV), for which the river was found eligible and its potential classification is in the Plan Set of Documents.

GA Desired Conditions Plan Component

Blacktail Mountain Ski Area

- Facilities at the ski area would be developed in accordance with the approved portions of the Master Development Plan for both winter and summer operations.

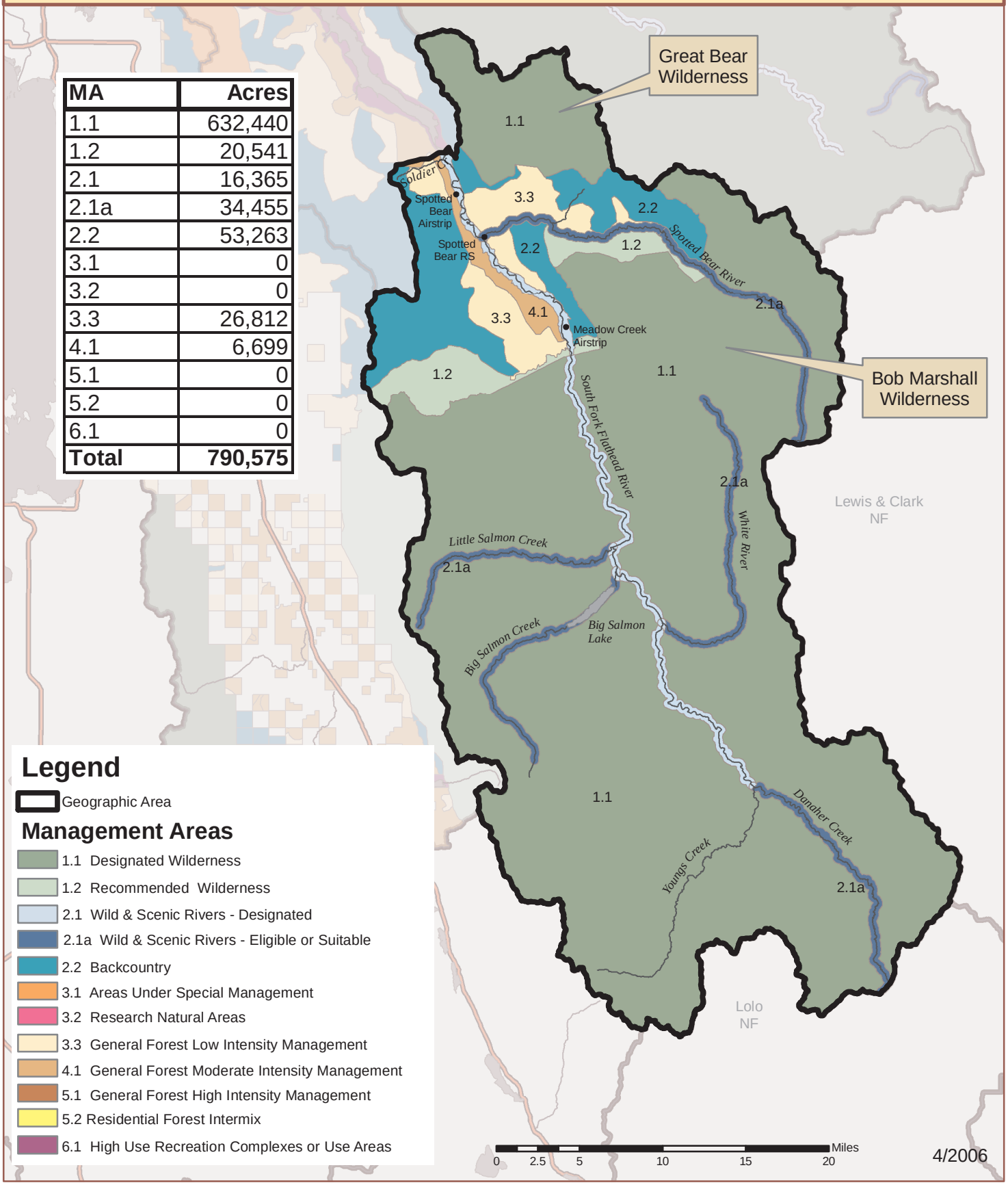
Access and Travel Management

- Management and possible expansion of the Wild Bill National Off-highway Vehicle (OHV) trail would be consistent with environmental considerations for the area.

Flathead National Forest
South Fork Geographic Area

Figure 8

MA	Acres
1.1	632,440
1.2	20,541
2.1	16,365
2.1a	34,455
2.2	53,263
3.1	0
3.2	0
3.3	26,812
4.1	6,699
5.1	0
5.2	0
6.1	0
Total	**790,575**



South Fork Flathead Geographic Area

Unique Characteristics

- The Bob Marshall Wilderness and a portion of the Great Bear Wilderness, part of the Bob Marshall Wilderness Complex, make up the majority of this geographic area and contain world-class backcountry.
- The South Fork of the Flathead River, from Young's Creek to the Hungry Horse Reservoir, is a designated Wild and Scenic River.
- Two airstrips, Meadow Creek and Spotted Bear, are within the Wild and Scenic River Corridor.
- Bent Flat and Trail Creek, two significant, high quality fens located along the Spotted Bear River, harbor numerous rare wetland plant species.
- The Spotted Bear Ranger Station, Schafer Meadows Ranger Station, and Big Prairie Ranger Station are seasonally operating historical facilities. These, along with several backcountry guard stations, forty miles of operational historic phone line, and an intricate trail system for hiking, backpacking, horseback riding, and wilderness management, offer a view and preservation of a lifestyle from the past.

General Overview

The Bob Marshall Wilderness and Great Bear Wilderness comprise the majority of this geographic area. The Bob Marshall Wilderness Complex (BMWC) includes lands on the Flathead, Lewis and Clark, Lolo, and Helena national forests. The BMWC is part of one of the largest remaining wildland areas in the lower 48 states and is entirely in National Forest System lands ownership. This area is popular for recreational use. It is a focal point for hiking, horseback riding, hunting, fishing, and for river float trips on the Wild and Scenic South Fork of the Flathead River. Many of the visitors to the wilderness utilize outfitter services given the vastness and remoteness.

This geographic area is in the heart of the South Fork of the Flathead River within the Swan Mountains and contains world-class backcountry. This vast undeveloped area provides outstanding habitats for native fish and wildlife species such as grizzly bears, gray wolves, and bull trout. This wilderness area also contains some cultural elements including historic facilities, trails, and historic phone lines.

Approximately 96 percent of the geographic area is within designated/recommended wilderness or other primitive settings which are managed for the unique wilderness/backcountry characteristics. Four percent of the geographic area offers opportunities for higher intensities of resource management activities.

Spotted Bear River, Little Salmon Creek, Big Salomon Creek, Danaher Creek, and the White River in the South Fork Geographic Area have been found eligible for further study for potential designation to the Wild and Scenic River System[1].

Desired Conditions

Wildlife and Plant Species Diversity

- Habitat viability would be maintained to support existing wolf packs.

Fire

- The use of wildland fire and appropriate management response including suppression is an available tool across the entire geographic area. This will help maintain and/or enhance ecological function to the extent that fuel and weather conditions permit an acceptable risk to recreation and other resource values.

Wilderness

- Two airstrips, Meadow Creek and Spotted Bear, located within the South Fork River Wild and Scenic River Designation, would continue to provide air-based recreational opportunities.
- Ranger stations and guard stations within the wilderness would continue to contribute to management efforts in the wilderness and help interpret the rich history of wilderness management.
- Impacts from recreational use would be managed by the Bob Marshall Wilderness Complex Wilderness Plan "Limits of Acceptable Change" (LAC).
- The South Fork of the Flathead River would be managed per the Flathead River Wild and Scenic River Recreation Direction and the Bob Marshall Wilderness Complex Plan.

[1] Information on the outstanding remarkable value (ORV), for which the river was found eligible and its potential classification, is in the Plan Set of Documents.

Access and Travel Management

- Portions of this geographic area are within backcountry management areas (MA 2.2) which provide primarily non-motorized recreation opportunities. However, the following motorized trails currently exist, are suitable, and still provide a semi-primitive recreation experience (table 6).

Table 7: Motorized trails in the South Fork Flathead GA MA 2.2.

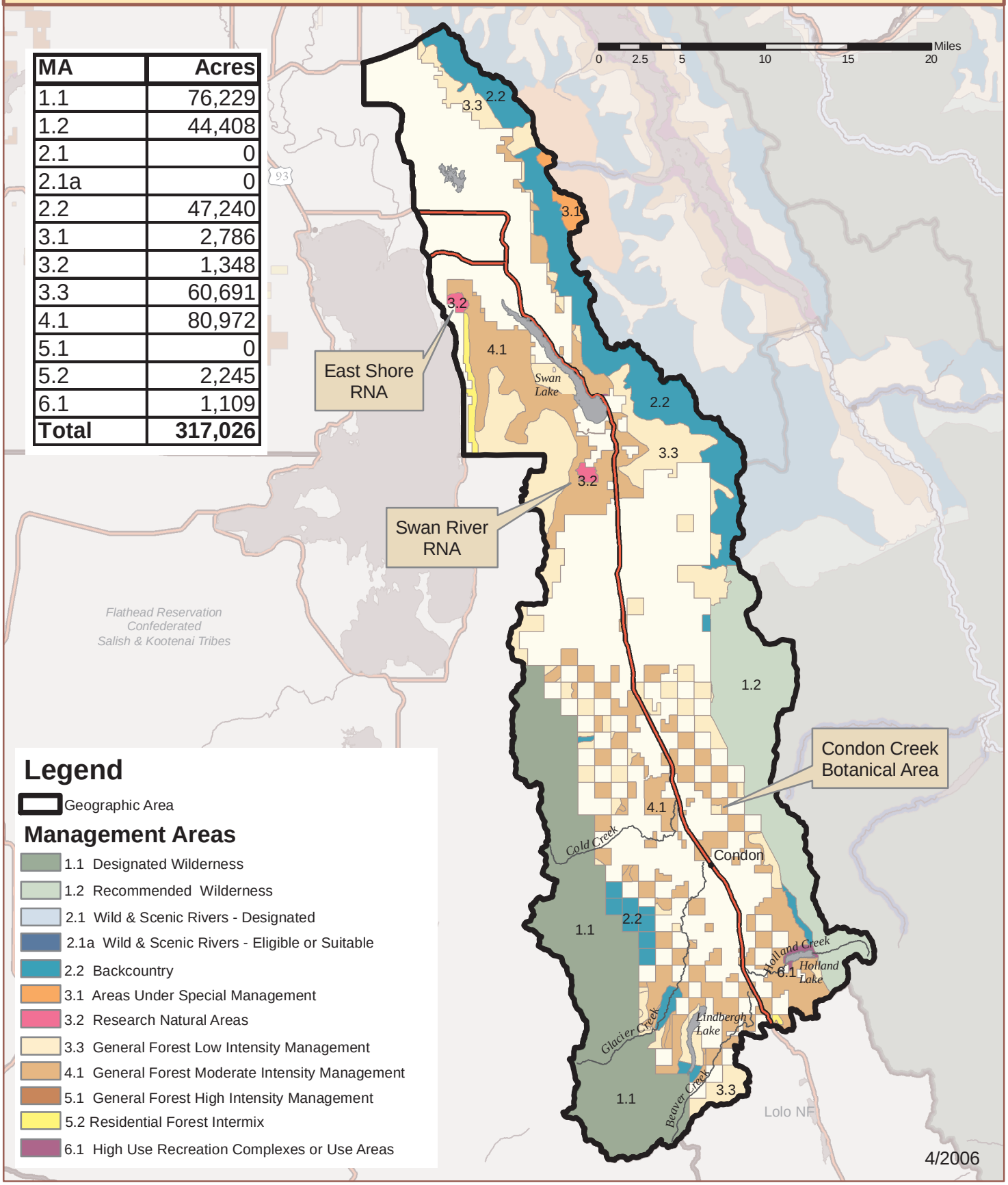
Route Name and Number	Type of Use Allowed
Bruce Creek Road #2827 to the junction with Meadow Creek Road #2826 to Trail #82	Motorcycle
Alpine #7 from the junction with Bunker Alpine Connector Trail #101A south to Gorge Creek Trail #218.	Motorcycle
Bruce Creek Trail #82 to the junction with Road #2827 to Bunker Creek Trail #101	Motorcycle
Bunker Creek Trail #101 from the junction with Trail #82 to Bunker-Alpine Connector Trail #101A	Motorcycle
Bunker Alpine Connector Trail #101A from the junction with 101 to the Alpine #7 trail.	Motorcycle

- MA 2.2 lands within this geographic area may also have additional existing motorized road and trail routes that may or may not be suitable with the overall direction of MA 2.2. These routes would be evaluated later, when site-specific travel management planning is done.
- Trailheads and other recreation facilities would provide for user safety and public information and education.

Flathead National Forest
Swan Valley Geographic Area

Figure 9

MA	Acres
1.1	76,229
1.2	44,408
2.1	0
2.1a	0
2.2	47,240
3.1	2,786
3.2	1,348
3.3	60,691
4.1	80,972
5.1	0
5.2	2,245
6.1	1,109
Total	**317,026**



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Swan Valley Geographic Area

Unique Characteristics

- Bob Marshall Wilderness Complex and the Mission Mountain Wilderness.
- Swan, Holland, and Lindbergh lakes.
- The most extensive, floristically diverse concentration of peatlands (fens) on the Flathead National Forest occurs on the valley floor of this geographic area.
- Swan River Research Natural Area that is managed in partnership with the Nature Conservancy to preserve rare aquatic habitats.
- The East Shore Research Natural Area (RNA) has a long-standing special-use permit which serves the communities of Shievers Creek and Woods Bay.
- Condon Creek Botanical Area supports a significant concentration of water howellia; a federally-listed, threatened plant that depends on seasonally drying ponds.

General Overview

Much of the National Forest System lands on the valley bottom are in checkerboard ownership with federal, state, and private lands. A major use in the Swan valley area over the past decades has been timber production. Private lands near the river bottom are increasingly being subdivided and developed into residences.

This geographic area links two wilderness areas, the Bob Marshall Wilderness Complex and the Mission Mountains Wilderness and is an important connectivity zone for many species of wildlife including grizzly bears. The Swan Valley Grizzly Bear Conservation Agreement and Plan direction set grizzly bear guidelines for the Swan valley. The Swan Valley Grizzly Bear guidelines were mutually established between the Flathead National Forest, Swan River State Forest, Plum Creek Timber Company, and the U. S. Fish and Wildlife Service.

Approximately 53 percent of the geographic area is within designated/recommended wilderness or other primitive settings. Forty-seven percent of the geographic area offers opportunities for higher intensities of resource management activities.

Desired Conditions

Watershed, Fisheries, and Aquatic Habitat

- Approximately ten genetically pure or nearly pure cutthroat trout population strongholds are in the Swan valley. These cutthroat trout strongholds are located upstream of natural or man-made barriers that provide sufficient habitat to maintain populations. Non-native fish upstream of these barriers are absent or very scarce.
- Active restoration watersheds contain no barriers that block bull trout migration.
- Non-native lake trout are absent in Swan Lake and all streams.

Wildlife and Plant Species Diversity

- Continue to maintain existing grizzly bear corridors in the upper Swan valley to maintain the connectivity between sub-populations in the Mission Mountain and Bob Marshall wilderness areas.
- Ecologically high-valued lands in the Swan valley would be protected through purchase and conservation easements.

Access and Travel Management

- Portions of this geographic area are within backcountry management areas (MA 2.2) which provide primarily non-motorized recreation opportunities. However, the following motorized trails currently exist, are suitable, and still provide a semi-primitive recreation experience (table 7).

Table 8: Motorized trails in the Swan Valley GA MA 2.2.

Trail Name and Number	Type of Use Allowed
Strawberry Lake Trail #5 to junction w/Alpine Trail #7	Motorcycle
Alpine #7 from Strawberry Lake Trail jct North	Motorcycle
Wire Trail #78 to junction with Alpine Trail #7	Motorcycle
Alpine #7 from junction with Trail #101 (Crevice Lake) north to Sixmile Mountain.	Motorcycle
Sixmile Trail #10	Motorcycle
Peterson Creek Trail #293	Motorcycle
Sixmile Sidehill Trail #27	Motorcycle
Hemler Creek Trail #20	Motorcycle

GA Desired Conditions Plan Component

- MA 2.2 lands within this geographic area may also have additional existing motorized road and trail routes that may or may not be suitable with the overall direction of MA 2.2. These routes would be evaluated later, when site-specific travel management planning is done.
- Continue to manage access relative to grizzly bear under the Swan Valley Conservation Agreement and Plan direction.

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Chapter 2: Strategy

Introduction

This chapter describes how we plan to move the Forest toward the desired conditions. It includes the following four sections:

Program Emphases: General approach to management in each program area.

Objectives Component: Objectives are measurable and time-specific accomplishments.

Suitability of Areas Component: This section describes general land use suitability for each management area.

Special Areas Component: This includes areas whose physical, biological, or social circumstances warrant placing them under special management, with unique guidance that is consistent with this Plan.

Program Emphases

Program emphases are not plan components and can be revised without further analysis or public involvement. Their purpose is to set the general context and framework for project-level planning. They will help determine how and where projects and activities will be proposed. Details of design and implementation will be largely determined by application of science and professional experience at the project level. Our management strategy is built around three broad elements:

- Achieving Ecosystem Health and Sustainability.
- Providing Multiple Benefits to People.
- Understanding and Incorporating American Indian Rights and Interests.

There is one strategy that is applied across all program areas. To be realistic about what can be accomplished, the outcomes identified in our objectives are based on anticipated budgets for the foreseeable future. If funding levels are significantly higher than expected, we would revise our objectives upward; however, at this time we do not want to set objectives that we are not reasonably certain we can meet.

Soils, Watersheds, and Aquatic Ecosystems

Purpose of Program: To maintain or restore watersheds and productive soils that provide clean water, sustainable populations of native aquatic species, and multiple benefits to people.

Our strategy for aquatic ecosystem diversity and species diversity involves a two-tiered approach. First, in a coarse filter approach, aquatic ecosystems are managed toward reference conditions, which are approximated by conditions found in watersheds that have experienced minimal human disturbances. The assumption is that managing toward reference conditions would provide the necessary habitats to support the native aquatic species that have evolved here. Due to cultural and ecological changes, the Flathead National Forest cannot be managed to exactly mimic reference conditions, but managing aquatic ecosystems within this context would provide suitable aquatic habitats for native species. A primary mechanism of the coarse filter is the designation of "riparian conservation areas" (RCAs). These are areas along streams, lakes, ponds, and other wet areas that have specific protections in the form of guidelines and suitability designations. In addition, "Montana Best Management Practices" and "Soil and Water Conservation Practices" are implemented to protect or restore water quality under the Clean Water Act. These practices are also considered a key element of the coarse filter.

Second, using a fine filter assessment, rare species are evaluated to determine limiting habitats, population influences, and whether they have special habitat needs that may not be provided through ecosystem-level management. Fine filter species are listed in one of the following categories: threatened and endangered species, species of concern, and species of interest. Species identified through the fine filter may need additional protection as specified in conservation strategies for individual species or groups of species. An example of a conservation strategy would be to survey for potential habitats during project planning in order to protect known populations of a fine filter species through project-specific measures.

Bull trout is currently listed as a threatened species under the Endangered Species Act. This species would trend toward recovery and delisting through designed plan components of desired conditions, suitability, objectives, and guidelines.

In aquatic resource planning, we use a multi-scale assessment process to evaluate the needs of fine filter species. On the Flathead National Forest, the focus is on bull trout and westslope cutthroat trout. This process begins at the broadest scale and works down to smaller watershed and sub-watershed scales. This planning tool identifies existing population and habitat conditions, risks, threats, and restoration needs.

One of the key elements of multi-scale assessment is the identification of the highest priority areas for restoration. These priority areas, called "active restoration watersheds," are places where watershed analysis may help us assess site-specific conditions and further prioritize restoration needs. Using this "step-down" approach, we plan to emphasize the following elements in active restoration watersheds:

a. Improving habitat for bull trout and westslope cutthroat trout.

b. Improving water quality by implementing "Montana Best Management Practices" (BMPs) and "Soil and Water Conservation Practices."

c. Restoring water quality and stream habitats by improving watershed scale processes and through direct riparian and in-channel treatments.

d. Reducing aquatic habitat fragmentation through removal of man-made, native fish migration barriers.

e. Working toward the delisting of impaired water bodies in cooperation with Montana Department of Environmental Quality (MDEQ) and Environmental Protection Agency (EPA) through water quality assessment, total maximum daily loads (TMDLs), restoration plans, BMP implementation, and monitoring.

f. Cooperating with private land owners and other land management agencies to improve water quality and restore aquatic ecosystems across multiple ownerships.

We will continually update our restoration priorities as conditions change and new information becomes available. We will take advantage of convenient opportunities to do restoration work in lower priority areas if they arise. For example, post-fire rehabilitation of a newly burned area might create unexpected opportunities to do some restoration work that funding and other resource limitations would not otherwise allow.

We will rely on plan monitoring and on the effectiveness of plan guidance to move toward the desired conditions. This will be an evaluation of our coarse filter/fine filter approach and will help us identify needs for possible plan amendments or other changes in management practices.

Vegetative Composition, Size Class, and Structure

Purpose of Program: To maintain or restore vegetative conditions that are resilient to disturbance.

In terrestrial ecosystems, we employed multi-scale assessments which began at the broadest scale such as Bailey's Ecological Sections or an entire river basin, and worked down to smaller subsections or watershed and sub-watershed scales. Using this approach, we identified historical conditions, existing conditions, risks, and threats. The analysis shows species and size class components that are within, and that have departed from, the historic range of variation.

Our overall strategy is to use vegetation management as a tool to move toward the historic range of variation. The amount of time, money, and uncertainty involved in achieving desired conditions requires that we set project level priorities as to where and how we implement vegetation treatments. Accordingly, our emphasis will be on:

a. Landscapes within the wildland urban interface (WUI) that have experienced altered fire regimes and/or have areas with high fuel loadings.

b. Landscapes that are at a high risk for developing epidemic levels of insect and disease infestation.

c. Areas where we can most effectively help shift the amount and distribution of age classes, size classes, density and species, including old growth, closer to their desired future conditions.

d. Areas treated previously to maintain healthy conditions.

Within these emphasis areas, the strategy would be:

a. Outside the wildland urban interface (WUI), silvicultural prescriptions would be designed so they are compatible with natural disturbance processes, contribute to the historic range of variability (HRV), encourage regeneration of shade intolerant species, and minimize the potential for epidemic outbreaks of insects and disease.

b. Inside the WUI, silvicultural prescriptions would be designed to reduce fuel hazard, address human safety, and consider community fire plans, HRV, and big game winter range.

c. Silvicultural prescriptions would have patch sizes that are consistent with historic fire regimes.

Old Growth, Snags, and Downed Wood

a. Planning and implementation of projects and activities would be guided by applicable elements included in the *Flathead National Forest Reference Guide – Management of Old Forest Conditions, Snags, and Down Woody Debris.*

b. Vegetation management in old growth stands would encourage old growth characteristics or habitat function, unless within the WUI.

c. Silvicultural prescriptions would be designed to increase the resilience of late successional and old growth stands from disturbances that threaten their composition and structure.

Fire

Fire management priorities on all fires are: first, ensure firefighter and public safety; and second, protect property and natural and cultural resources based on the relative values to be protected.

Our management will include both planned application of proven methods, and opportunistic use of naturally occurring events such as fires. We plan to make greater use of both natural and management-ignited fires, taking into consideration fuels, weather conditions, and proximity to high-value resources and structures. In wilderness and backcountry areas, disturbance processes are the primary tool that can help us move toward desired conditions. In areas where timber harvesting is identified as a suitable use, both mechanical methods and disturbance processes would help us move toward desired conditions.

a. Fire planning would be designed to create conditions that emulate the natural range of variation on the landscape. In this context, management prescriptions would provide for the protection and enhancement of big game winter range habitat, whitebark pine restoration, western larch regeneration, and allow fire to play a natural role where appropriate.

Invasive Plants

We use an integrated pest management approach to controlling invasive plants, prioritizing areas based on weed categories, weed ecology of a species, its potential to displace native vegetation within that community, potential for offsite movement of seeds, ecological importance or rarity of a site, and the effectiveness of the control methods for that site. Treatment areas would include:

a. Areas with new invaders.

b. Infested areas categorized as having high risk to alter native plant communities or spread into adjacent sensitive or rare habitats.

c. Areas relatively free of weeds, such as designated wilderness and backcountry areas.

d. Trailheads, trails, and roads that lead to relatively weed-free areas.

e. Invasive plants on National Forest System lands that adjoin or are close to other land ownerships that have active weed control programs.

f. Invasive plants on administrative sites, developed recreation sites, and pastures.

g. Grasslands and big game winter range.

h. Areas where natural or man-caused events have disturbed the soil and vegetation.

Air Quality

Purpose of Program: To contribute to maintaining air quality within state parameters.

The Flathead National Forest will participate with the State of Montana in the air quality regulatory process. Air quality related values (AQRV) will be identified in Class I areas and AQRV inventory and monitoring integrated into wilderness implementation plans.

Wildlife and Plant Species Diversity

Purpose of Program: To provide ecological conditions that support a diversity of native plant and animal species over the long term and that promote recovery of federally listed species.

Our overall strategy is to provide conditions that support the full complement of native wildlife and plant species on the Forest. This strategy involves a two-tiered approach. First, in a coarse filter approach to wildlife and plant conservation, the structure, composition, and disturbance processes of ecosystems that maintain habitat are managed within or toward historic conditions found in the early 1800s. Historic conditions are estimated using computer modeling and reviews of historic records. Due to cultural and ecological changes, the Flathead National Forest cannot be managed to exactly mimic overall conditions found in the 1800s, but managing key ecosystem elements within historic conditions would provide suitable habitat to sustain most species found on the forest. Specifically, we would strive to conserve or restore representative, resilient, and redundant ecosystems as displayed in the vegetative desired condition of Chapter 1.

Second, using a fine filter assessment, rare species are evaluated to determine limiting habitats, population influences, and whether they have special habitat needs that may not be provided through coarse filter ecosystem-level management. Species identified through the fine filter may need additional protection as specified in conservation strategies for individual species or groups of species. An example of a conservation strategy would be to survey for potential habitats during project planning to protect known populations of a fine filter species through project-specific measures.

Here are some examples of plan items that have resulted from our coarse filter/fine filter findings:

a. Road management or removal emphasis would be on roads that affect big game security, native fish habitat, or water quality.

b. Important habitat connectivity areas would be identified and considered during project design and travel management decision making.

c. Food storage orders would be phased-in gradually to allow time for public acceptance and to increase voluntary compliance.

Fine filter species are listed in one of the following categories: threatened and endangered species, species of concern, or species of interest.

The following table shows species on the Flathead National Forest that are listed under the Endangered Species Act:

Table 9: Species listed under the Endangered Species Act.

Common Name	Scientific Name	Status
bald eagle	*Haliaeetus*	Threatened
Canada lynx	*Lynx canadensis*	Threatened
gray wolf	*Canis lupus*	Endangered
grizzly bear	*Ursus arctos horribilis*	Threatened
Spalding's catchfly	*Silene spaldingii*	Threatened
water howellia	*Howellia aquatalis*	Threatened

Guidance provided in the plan components of desired conditions, objectives, and guidelines will help assure that the above listed threatened or endangered species will trend toward recovery and delisting.

In the grizzly bear recovery area, planning and implementation of projects and activities would be guided by applicable elements included in the *Flathead National Forest Reference Guide – Motorized Access Management in the Northern Continental Divide Ecosystem Grizzly Bear Recovery Zone*.

Those species of concern and species of interest that fine filter analysis has indicated may need additional protection are listed in the guidelines component of this plan. All species of concern and species of interest are addressed in the plan set of documents.

As we implement this Plan, we will coordinate with Montana Fish, Wildlife, and Parks and Idaho Fish and Game. We intend to incorporate their plans and multi-agency strategies into our projects and activities. We will work jointly to meet habitat and population goals for a variety of species.

We will rely on plan guidance and monitoring to move toward the desired conditions. Monitoring will provide an evaluation of our coarse filter/fine filter approach and will help us identify needs for possible plan amendments or other changes in management practices.

Forest Products

Purpose of Program: To provide diverse and sustainable outputs of forest products and uses from National Forest System lands, while protecting environmental, historic, cultural, and other social resources.

We will use timber harvesting as both a tool for helping achieve a variety of resource desired conditions and management objectives and a source of products that contribute to the regional economy. Applications of this tool will include:

a. Fire, wind-thrown trees, insects, and disease are common and expected events on the Flathead National Forest; although the frequency and amount of these natural events are highly variable and not predictable in any given year. We expect to salvage or sanitation harvest a portion of the trees that have been, or are in imminent danger of being killed or damaged by fire, wind, insects or disease (especially large-scale events) in a timely and economical manner.

b. Assuring opportunities for personal and Tribal use of non-timber forest products.

c. Using a combination of logging systems to achieve environmental protection criteria, especially to reduce impacts on soil and water resources.

d. Providing small diameter trees from thinning, fuels reduction, and other vegetation management projects for emerging biomass markets.

National Forest System Lands

Purpose of Program: To provide diverse and sustainable outputs of forest products and uses from National Forest System lands, while protecting environmental, historic, cultural, and other social resources.

Our primary strategic tools will be:

a. Adjusting land ownership through purchase, exchange or other authority, to protect resources and improve efficiency of management. The following criteria would be considered when evaluating land adjustments (not in any particular order):

- Acquisition:
  - Lands that can contribute to recovery of threatened or endangered species.
  - Lands important for wildlife connectivity and big game winter range.
  - Lands needed for the protection of important historical or cultural resources.
  - Lands that enhance recreation, public access, and protection of aesthetic values.
  - Lands that contain rivers with potential for Wild and Scenic designation.
  - Other environmentally sensitive lands.
  - Lands that reduce expenses and support more logical and efficient management.
- Conveyance:
  - Lands and administrative buildings adjacent to communities that are chiefly valuable for non-National Forest System uses.
  - Lands with low resource value.
  - Inaccessible, isolated, or intermingled ownership parcels.
  - Lands with long-term special use permits non consistent with national forest purposes and character.
  - Lands not logical and efficient to manage.
  - Lands eligible under the Small Tracts Act.

b. Giving highest priority to National Forest System lands boundary location where trespass is most likely.

c. Identifying areas generally suitable for utility corridors and communication sites.

d. Authorizing and administering appropriate occupancy and use of National Forest System land.

Livestock Grazing

Purpose of Program: To provide diverse and sustainable outputs of forest products and uses from National Forest System lands, while protecting environmental, historic, cultural, and other social resources.

Our general approach to grazing management implements resource management practices to maintain the health of all occupied livestock grazing allotments and rangelands. We will do this by:

a. Assessing and updating allotment management plans to ensure that sustainable stocking levels, forage utilization standards, mitigation measures, and appropriate grazing systems are used and that lands are still suitable for livestock grazing.

b. Eliminating grazing allotments or pastures as they become vacant if there is no demand for livestock forage or if desired vegetation conditions cannot be met.

Minerals and Geology

Purpose of Program: To provide diverse and sustainable outputs of forest products and uses from National Forest System lands, while protecting environmental, historic, cultural, and other social resources.

Our primary strategic tools are:

a. Provide mineral materials such as gravel, rip-rap, and landscape rock for Forest Service, personal, and limited commercial use in accordance with material source development and rehabilitation plans.

b. Managing the exploration, development and reclamation of mineral claims, including the currently suspended oil and gas leases.

c. Identifying, evaluating, mapping, inventorying, and nominating as significant all known cave resources not previously designated as significant.

d. Evaluating and mitigating geologic hazards associated with the location and construction of new facilities before they are approved, designed, and constructed.

e. Managing caves to minimize evidence of human use and to protect cave resources. Partnerships and mutually-supported agreements would be used to specify schedules, party sizes, skills required, equipment, and handling.

Heritage Resources

Purpose of Program: Protect and interpret environmental, historic, cultural and other social resources while providing diverse and sustainable outputs of forest products and uses from National Forest System lands.

The primary elements of our strategy are:

a. Guiding project planning and heritage preservation/interpretation efforts using knowledge and information gained through inventories, site evaluations, Tribal consultation, and other sources.

b. Using partnership arrangements to help preserve and interpret significant heritage resources.

c. Relying on a strong heritage program to fulfill the Forest's legal obligation for public outreach and education about heritage resources.

d. Develop and participate in national, regional, interregional, and interagency programmatic agreements and memoranda with the State Historic Preservation Office, the Advisory Council on Historic Preservation, and other partner agencies and Tribes.

Developed and Dispersed Recreation

Purpose of Program: To provide a wide range of recreation opportunities; these include a range of outdoor experiences and services in less-developed settings that complement more highly developed recreation opportunities offered by the private sector.

As recreation demand continues to grow, there may be situations when we must limit or control site impacts or use in order to sustain a desirable recreation setting and experience. For example, as the demand for backcountry camping opportunities grows, the increasing number of campers can diminish the setting qualities and the experience of solitude and remoteness that users value most. In order to maintain that experience, our strategy is to maintain the desired recreation setting and experience by early detection of overuse and implementation of corrective actions. The following are some examples of the tools we may use for directing, limiting, or restricting user impacts. They are listed in increasing order of restriction.

1. Improving educational and informational messages to accurately describe area amenities and provide visitors with realistic expectations.

2. Informing and educating users about "Leave No Trace" techniques for responsible, non-motorized outdoor activities with minimal impact on public recreational areas.

3. Implementing subtle site hardening techniques to direct use and control impacts.

4. Considering alternatives for managing visitor impacts rather than building or maintaining facilities such as toilets, trailheads, parking areas, access roads, trails, and campsites.

5. Issuing legal orders that restrict certain activities and/or numbers of users.

6. Prohibiting recreational use in an area until the area is rehabilitated and restored.

Increased demand for developed site recreation will be accommodated through the limited expansion of existing areas. We will pay particular attention to dispersed backcountry sites to prevent over-development that could diminish our ability to provide less developed and more secluded recreation settings and associated experiences.

As we design projects, we plan to evaluate any potential changes on recreation settings and experience in a consistent manner by using the recreation opportunity spectrum (ROS). We plan to integrate recreation values into project designs and management decisions, by evaluating potential effects on ROS indicators. Evaluation of these indicators provides a consistent way to measure project effects that may enhance or degrade recreation.

The key component of the ROS framework is the recreation setting. Management of the setting can only influence the likelihood of a particular experience being achieved or maintained. Changing the nature of the ROS indicators (access, remoteness, visual quality, social encounters, visitor management, visitor impacts, and facilities) can greatly affect the type and level of use an area receives.

For scenic integrity, we plan to utilize vegetation management and other activities, including natural disturbance processes, as a means for improving the scenery wherever possible.

Designated Wilderness and Recommended Wilderness

Purpose of Program: To manage our world-class wilderness resources by offering a full range of very primitive recreation experiences while also maintaining the high integrity of this resource for future generations.

Our strategy for designated wilderness is to use the concepts of wilderness "opportunity class" and "limits of acceptable change" as guidance in meeting the intent of the Wilderness Act. In cases where a wilderness jurisdiction is shared by more than one national forest or agency, we will continue to coordinate management activities, usually through a jointly-supported wilderness management plan.

Within recommended wilderness areas, our approach is to protect wilderness values and resources until such time as Congress either designates the area as part of the National Wilderness Preservation System or releases the area from consideration. Land managers will use a variety of visitor management strategies to maintain recommended wilderness values and protect the wilderness resources.

Access and Travel Management

Purpose of Program: To provide a road and trail system that is safe, responsive to public and Forest Service needs, and efficiently managed to minimize adverse ecological effects and aligned with available funding.

Our access and travel management strategy is to focus on road and trail management, road and trail maintenance, and efforts to secure public access to all National Forest System lands. We will:

- Continue to prohibit cross-country, wheeled motorized travel.
- Continue to work with willing partners to secure rights-of-way and complete land exchanges that improve public access to National Forest System lands.
- Designate motorized use on forest roads, trails, or areas by vehicle type and time of year.
- Provide winter over-snow vehicle use as guided by applicable elements included in the *Flathead National Forest Reference Guide – Over-the-Snow Vehicle Use and Management.*

Our maintenance strategy is to efficiently use our resources (financial and otherwise) to maintain the highest priority roads and trails and to begin reducing a significant backlog of deferred maintenance. Specific emphases could include:

a. Storing of infrequently used roads for the long-term.

b. Reducing maintenance levels on low-use roads while maintaining road drainage features.

c. Shifting roads with high residential access needs to non-Forest Service jurisdictions.

d. Improving, closing, or decommissioning roads that have adverse impacts on aquatics, watersheds, and wildlife.

e. Focusing new trail development on loop trails using existing routes whenever feasible.

Partnerships

Purpose of Program: Promote partnerships with local communities, Tribal governments, and other government and non-government entities to improve overall resource management.

We will use partnerships to more effectively and efficiently meet our mutual goals in all resource areas. These partnerships can include local, state, federal, and Tribal governments, communities, organizations, individuals, and/or research institutions.

American Indian Rights and Interests

Purpose of Program: To identify and protect traditional cultural properties, and to recognize and support treaty rights and Tribal values when planning and implementing forest management activities.

Our overall strategy is to be proactive in building relationships and mutual understanding between the Forest Service and Tribal governments. We want to address potential problems before they become serious and find opportunities for cooperation to the mutual benefit of federal and Tribal governments.

To ensure the identification and protection of traditional cultural properties and other sensitive sites, the Forest Service will work in

cooperation with Tribes to take a systematic approach to identifying areas, rather than relying solely on project-by-project site surveys.

We will ensure the consideration of treaty rights and Tribal values in the planning and implementation of forest management activities. Strategies include:

a. Forest Service-Tribal Memoranda of Understanding should address issues of Tribal member access to National Forest System lands for purposes of exercising treaty rights or practicing activities consistent with religious or other ceremonial activities.

b. Memoranda of Understanding should address the proper procedures to follow when working with a particular Tribe to ensure the protection of traditional cultural properties and other sensitive sites.

c. Areas should be identified in which Tribal members could sustainably practice traditional gathering and harvesting activities and/or where culturally sensitive animal and plant species could receive special protection.

Objectives Component

The following objectives are stepping stones of accomplishment that will move us toward the desired conditions described in Chapter 1. They are strongly influenced by current and expected near-future budgets; however, their accomplishment will also be influenced by factors, such as:

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

- Shifts in management priorities brought about by such things as weather events or large natural disturbances that may change resource conditions.
- Delays in project-level planning and decision making that may be beyond Forest control.

Some objectives are marked with a double asterisk (**). These things are highly desirable, but can only be accomplished if we receive additional funding, beyond the level that is anticipated.

Soils, Watersheds, and Aquatic Ecosystems

a. Restore five to seven watersheds to conservation status within ten years of Plan implementation.

b. Improve hydrologic conditions on at least 10 to 20 miles of roads within riparian conservation areas (RCAs) in active restoration watersheds within ten years of Plan implementation.

c. Remove 20 to 40 native fish passage barriers in active restoration watersheds within ten years of Plan implementation.

d. Reduce 20 to 40 sediment sources that are impacting water quality and/or aquatic habitat within ten years of Plan implementation.

Vegetative Composition, Size Class, and Structure

Vegetation and Fire

a. Move toward more disturbance resistant forest and non-forest conditions by using vegetation treatments on 70,000 to 200,000 acres within the planning period. The above acreage would include objectives to use naturally-ignited fire on 50,000 to 200,000 acres,

and within the WUI, reduce fuel loadings and crown fire hazard on 11,000 to 60,000 acres within ten years of plan implementation.

Invasive Plants

b. Upon discovery of new invasive, Category 3[1], plant occurrences, contain the new occurrence within the discovered site to result in no expansion or spread from the new occurrence into new areas.

c. Within ten years of Plan implementation, manage 50 percent of inventoried areas containing plants known as Category 2 species.

d. Within ten years of Plan implementation, manage 25 percent of inventoried areas containing plants known as Category 1 species.

Wildlife and Plant Species Diversity

Threatened and Endangered Plants and Plant Species of Concern and Species of Interest

a. **Designate three to five botanical interest areas.

Big Game

b. **Accomplish at least 10 to 20 habitat improvement projects, such as weed control, access control, or vegetative treatments that improve winter range conditions for big game.

Food Storage

c. To minimize conflicts with wildlife and to reduce bear mortality, enact food storage orders covering all Flathead National Forest lands within ten years of Plan implementation.

d. Ensure that all Flathead National Forest campgrounds, rural administrative facilities, and permitted structures are either equipped with wildlife resistant garbage facilities, or subject to a "pack it in-pack it out" policy within ten years of Plan implementation.

[1] Weed categories established by the State of Montana based on establishment: Category 1 = Widespread Invaders, 3rd priority; Category 2 = New Invaders, 2nd priority; Category 3 = Potential Invaders, 1st priority.

Forest Products

a. Plan, prepare and offer for sale a Total Sale Program Quantity (TSPQ) consisting of the following elements:

- 38 to 47 MMCF[1] (186 to 227 MMBF[2]) per decade from regularly scheduled timber harvests on lands suitable for timber production.
- 11 to 13 MMCF (52 to 64 MMBF) per decade from timber harvests on lands not suitable for timber production, but where timber harvesting may occur for other multiple-use purposes (other lands).
- Approximately 0.7 MMCF (2 to 3 MMBF) per decade of biomass and other small diameter roundwood available for commercial use (volume is included in the estimates above).

b. Annually prepare and offer for sale 1,100 to 1,600 permits for personal or commercial use of non-timber forest products and firewood.

c. Establish, within ten years of Plan implementation and in consultation with Tribal leaders, a minimum of two areas that are closed to commercial or mechanized harvest of non-timber forest products that are important to the Tribe.

National Forest System Lands

a. Survey, mark, and post 35 to 45 miles of national forest and/or administrative boundary lines to keep them visible, protect the investment, and deter encroachment within ten years of Plan implementation.

b. **Grant and/or acquire 10 to 15 right-of-way easements for roads and trails.

c. ** Acquire 4,000 to 6,000 acres of high value resource lands.

[1] MMCF = Million cubic feet
[2] MMBF = Million board feet

Livestock Grazing

a. Ensure that, within ten years of Plan implementation, 50 percent of grazing allotments are meeting or trending toward desired riparian and upland biophysical conditions.

b. Revise allotment management plans for 80 percent of allotments with conditions below the desired condition and where changes in livestock management are necessary to restore an upward trend within ten years of Plan implementation.

Minerals and Geology

a. **Reclaim two or more abandoned mines.

b. **Re-evaluate areas withdrawn from mineral entry and recommend additions, deletions, or changes to withdrawn areas.

Heritage Resources

a. Evaluate and determine eligibility of five to ten heritage sites for the National Register of Historic Places within ten years of Plan implementation.

b. Nominate two heritage sites for the National Register of Historic Places within ten years of Plan implementation.

c. Complete 1,000 acres of Section 110 (non-project) heritage surveys, National Historic Preservation Act on previously unsurveyed National Forest System lands with high potential for heritage resources within ten years of Plan implementation.

Developed and Dispersed Recreation

a. Maintain 80-90 developed recreation sites to national standards, as per recommendations and ranking of the "Recreation Sites Facility Master Plan."

b. Complete at least two visual enhancement projects within ten years of Plan implementation.

Designated Wilderness

a. Within the BMWC, provide 30,000 outfitter and guide service days annually. This would be a mix of traditional outfitted use, institutional outfitted use, and non-traditional outfitted use. On the Flathead National Forest, Great Bear and Bob Marshall wilderness portions are estimated to be 50 to 60 percent of the total service days on an annual basis. Additional days will be provided (in addition to the 30,000 days) for the adjacent recommended wilderness to the existing Bob Marshall and Great Bear wildernesses (e.g., Swan Face)at current use levels within those areas.

b. Bring all air taxi services under special use permit within ten years of Plan implementation.

c. Develop a wilderness education plan for the Mission Mountains Wilderness within ten years of Plan implementation.

Access and Travel Management

Roads

a. Complete 100 to 300 miles of road improvement projects within ten years of Plan implementation.

b. **Maintain 400 to 800 miles of road according to manual/handbook guidance and applicable BMPs.

c. **Reduce the current deferred road maintenance backlog by five percent.

d. Decommission 100 to 500 miles of road within ten years following Plan implementation.

e. **Monitor all maintenance level 1 roads and treat any of the stream crossings that have a high risk of failure.

Trails

f. Maintain 85 percent (1,870 miles) of Flathead National Forest trails and trail structures at a useable level with 25 percent of those useable trails (470 miles) maintained to manual/handbook standard within ten years of Plan implementation.

g. **Develop a web site that provides current information on trail conditions, restrictions, and information regarding trail opportunities on the forest.

h. **Construct 40 to 50 miles of new trails and/or relocate existing trails to address social and/or resource concerns.

American Indian Rights and Interests

Enter into Memoranda of Understanding on key Tribal-Forest Service issues with the Confederated Salish and Kootenai, and other interested Tribes with treaty rights on the Flathead National Forest within ten years of Plan implementation.

Suitability of Areas Component

Introduction

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

For the most part, management areas are used in the Plan to identify the general suitability of lands for different uses and management activities. However, suitability for some uses and activities is better identified in terms of the entire forest, rather than a particular management area. While both forest-wide and management area descriptions are used to identify areas that are generally suitable for different types of management and use, they do not determine what uses and management activities will actually take place at any given time or location. Those decisions will be made later through site-specific analysis of proposed projects and activities.

It is important to understand that the term "generally" means "for the most part" and "what is usually the case" for a particular management area. This is a general prediction of suitability, based upon very broad levels of information and analysis. We incorporated this flexibility because past experiences has taught us that situations arise where rigid interpretation of forest plan guidance is in conflict with good science and professional judgment no matter how carefully we try to anticipate future circumstances. So, "generally suitable" or "generally not suitable" is applied with the understanding that site-specific project analysis will make the final determination of suitability and will include the appropriate documentation.

General Suitability—Forest-Wide

National Forest System lands are generally suitable for a variety of uses, such as outdoor recreation, range, timber, watershed, and enjoyment of wildlife and fish habitat. Topics discussed in this section do not apply to specifically mapped management areas on the Forest, but they do apply anywhere their respective suitability criteria are met. The section following this one, "General Suitability—by Management Areas," helps identify which particular mapped locations within the Forest are best suited for which types of uses. Final determinations on project implementation will be subject to site-specific analysis.

Off-Highway Vehicles

- Flathead National Forest lands are generally suitable for wheeled motorized travel on designated routes.
- Flathead National Forest lands are not suitable for wheeled cross-country motorized travel.

Livestock Grazing

- Primary and transitory rangelands within existing commercial grazing allotments have been identified as capable and generally suitable for commercial livestock grazing by cattle or horses. The Flathead National Forest has 17,330 acres classified as capable rangeland. Of this total, about 494 acres in grazing allotments have been classified as suitable for livestock grazing. There is an un-estimated area of transitory range within these allotments. Nearly all of the grazing on the Flathead Forest occurs on transitory range created by timber harvest or fire. A map of the rangeland classification is available in the Plan Set of Documents.

Winter Range

Areas designated on the winter range map in the Plan Set of Documents are:

- Suitable for vegetation management for the purpose of improving habitat conditions.
- Suitable for the use of access control to help meet big game management objectives.

Utility Corridors and Commercial Communication Sites

- Existing communication sites and major utility corridors have been identified as generally suitable for such uses. A map of these sites and corridors is available in the Plan Set of Documents.

Riparian Conservation Areas

- Riparian conservation areas (RCAs) are generally suitable for activities that improve, restore, or maintain aquatic and riparian ecosystem desired conditions.

Timber Suitability

The timber suitability map (figure 10) displays areas where timber harvest could occur. These lands are designated as:

- Lands generally suitable for timber production. These are lands where timber production is compatible with desired condition and objectives. Timber harvest will occur on a regulated, scheduled basis.
- Other lands where timber harvest is an appropriate tool to achieve desired conditions. These lands are not suitable for timber production. Timber harvest may occur, but is not scheduled or regulated. Timber harvest is compatible with desired conditions and may occur for purposes other than timber production.

The following table summarizes the timber suitability classification.

Table 10: Timber suitability classification.

Classification	Acres
Suitable for Timber Production	328,328
Other Lands	660,159
Responsible Official determines harvest is not appropriate as a tool to achieve desired condition (plan guideline)1	91,600
Responsible Official determines harvest is appropriate as a tool to achieve desired condition	568,559

The Forest has 896,887 acres where timber harvest could be used as a tool to achieve desired conditions. This represents approximately 38 percent of the Flathead National Forest. Of those lands, approximately 328,328 acres are generally suitable for timber production. This represents 14 percent of the Flathead National Forest. Biological and physical aspects of timber suitability will be reviewed at a smaller, site-specific scale during project implementation and may deviate from this analysis without a plan amendment.

[1] Management Areas 1.2, 2.1 wild segments outside designated wilderness, 3.1 (Jewel Basin and botanical areas), and 3.2.

Figure 10: Timber Suitability Map.

Click here to view the timber suitability map.
Map size: 5.55mb.

General Suitability—by Management Areas

General suitability of areas is identified for each management area (MA). The degree of human influence on the landscape tends to increase from the level of least impact (MA 1.1, Designated Wilderness) to the level of greatest impact (MA 6.1, High Use Areas).

Plan Components

Desired Conditions
Objectives
Suitability
Special Areas
Guidelines

Each management area is characterized by:

- Desired conditions that give a sense of the type and extent of human influence that a forest visitor could expect.
- A general idea of the kinds of uses and activities suitable in that management area.

Management Area Designations

The following graph displays the total number of Forest acres allocated to each management area.

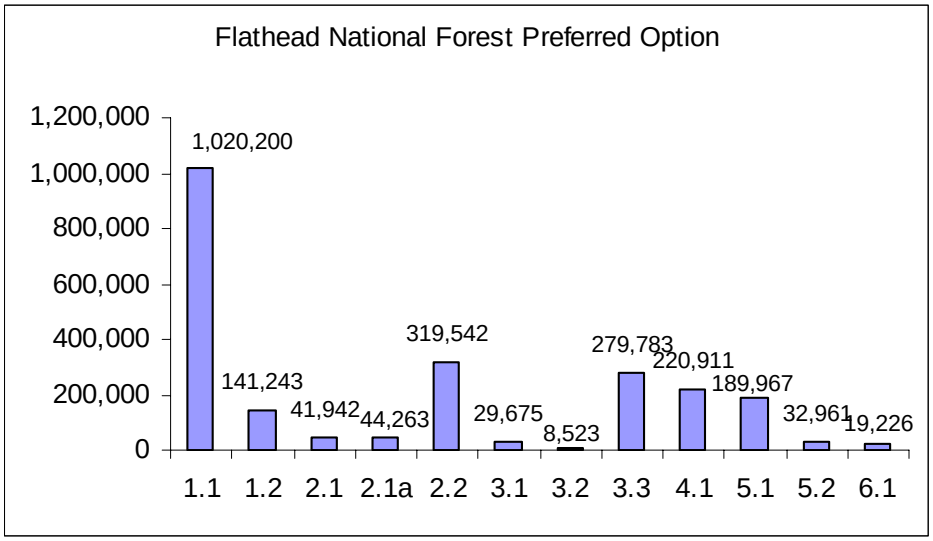

Figure 11. Bar graph of MA acres across the Flathead National Forest.

Management Area Designations and timber suitability for harvest and production

The following table displays the total number of Forest acres allocated to each management area and to generally suitable for timber harvest and generally suitable for timber production.

Table 11: Management areas, acres, and percent of the Forest generally suitable for timber harvest and timber production.

MA	Management Area Designation	Acres	Percent	Acres generally suitable for timber harvest	Acres generally suitable for timber production
1.1	Designated Wilderness[1]	1,020,200	43.4	0	0
1.2	Recommended Wilderness	141,243	6.0	0	0
2.1	Wild and Scenic Rivers - Designated	41,942	1.8	23,691	0
2.1a	Wild and Scenic Rivers – Eligible or Suitable	44,263	1.9		0
2.2	Backcountry	319,542	13.6	194,541	0
3.1	Areas under Special Management (Jewel Basin Hiking Area and Coram Experimental Forest)	29,675	1.3	6,375	0
3.2	Research Natural Areas	8,523	0.4	0	0
3.3	General Forest Low Intensity Management	279,783	11.9	242,410	0
4.1	General Forest Moderate Intensity Management	220,911	9.4	41,039	161,089
5.1	General Forest High Intensity Management	189,967	8.1	15,284	167,239
5.2	Residential Forest Intermix	32,961	1.4	30,024	0
6.1	High Use Recreation Complexes or Use Areas	19,226	0.8	15,196	0
Total		**2,348,237**	**100.0**	**568,560**	**328,328**

[1] The officially designated Wilderness on the Flathead National Forest totals 1,069,933 acres which is about 45 percent of the total Forest. This figure includes some designated and eligible wild and scenic rivers which are located within designated Wilderness. In the table above, the acres of these areas are shown separately and not included in the wilderness acres to avoid double counting them.

1.1 Designated Wilderness

Desired Conditions

- National Wilderness Preservation System lands designated by Congress would be managed to protect and perpetuate their natural state.
- Settings for primitive and unconfined recreation that allow opportunities for solitude and self-reliance.
- Natural processes and conditions would be only minimally affected by human use, and impacts from visitation would not detract from the natural setting.
- Ecological processes such as natural succession, fire, insects, and disease would function with a minimum of human influence.

Suitability

Generally:

Recreation

- Designated wilderness areas are not suitable for tethering and grazing of recreational stock within 100 feet of lakeshores.
- Designated wilderness areas are suitable for the construction of temporary structures when needed to provide for human safety (for example, when avoiding conflicts with bears).
- Designated wilderness areas are suitable for the construction of permanent trails and associated structures necessary for safe foot and stock travel.

Forest Products and Fire

- Designated wilderness areas are not suitable for regularly scheduled timber production, timber harvesting, salvage logging, or the commercial use of non-timber forest products.
- Designated wilderness areas are suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- These areas are not suitable for commercial communication sites or utility corridors, although the Forest Service may have small radio repeater sites to assist in wilderness administration.
- These areas are suitable for the preservation of historic administrative structures and facilities and associated infrastructure.

Access and Travel Management

- These areas are not suitable for motorized or mechanized use or travel (including such devices as hang gliders, carts, or bicycles), except in emergency or other special situations.

1.2 Recommended Wilderness

Suitability of Areas Plan Component

Desired Conditions

- These lands would be recommended to Congress for inclusion in the National Wilderness Preservation System.
- These lands would retain their wilderness characteristics.
- They would offer settings for primitive and unconfined recreation opportunities for solitude and self-reliance.
- Natural processes and conditions would be only minimally affected by human use, and impacts from visitation would not detract from the natural setting.
- Ecological processes such as natural succession, fire, insects, and disease would be allowed to function with a minimum of human influence.

Suitability

Generally:

Recreation

- Recommended wilderness areas are suitable for the construction of temporary structures when needed to provide human safety (for example, when avoiding conflicts with bears).
- Recommended wilderness areas are suitable for the construction of permanent trails and associated structures necessary for safe foot and stock travel.

Forest Products and Fire

- Recommended wilderness areas are not suitable for regularly scheduled timber production or the commercial use of non-timber forest products.
- Recommended wilderness areas are suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- These areas are not suitable for commercial communication sites or utility corridors, although the Forest Service may have small radio repeater sites to assist in wilderness administration.
- These areas are suitable for the preservation of historic administrative structures and facilities and associated infrastructure.

Access and Travel Management

- These areas are not suitable for motorized or mechanized use or travel (including such devices as hang gliders, carts, or bicycles), except in emergency or other special situations.

2.1 Designated, Suitable and Eligible Wild, Scenic and Recreational Rivers

These are river segments that Congress designated under the National Wild and Scenic River System or that the Forest Service has found to be suitable or eligible for congressional designation. Eligible rivers may be studied for possible inclusion in the national system. Wild and scenic rivers, or segments of a river, fall within one of these categories:

- A "wild" river is free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
- A "scenic" river is free of impoundments, with shorelines or watersheds still largely primitive and undeveloped, but accessible in places by roads.
- A "recreational" river is accessible by road or railroad, may have some shoreline development, and may have had an impoundment or diversion in the past.

Desired Conditions

- The free-flowing condition, water quality, and outstandingly remarkable value, that made them eligible for designation or for which they were designated for, are protected and perpetuated.

Suitability of Areas Plan Component

Suitability

Generally:

Forest Products and Fire

- Wild river corridors are not suitable for regularly scheduled timber production or the commercial use of non-timber forest products.
- Scenic and recreational river corridors are not suitable for regularly scheduled timber production; however, timber harvesting or salvage logging for multiple-use purposes and to achieve desired vegetation conditions could occur. These corridors are suitable for the commercial use of non-timber forest products.

- Wild, scenic, and recreational river segments are suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- Wild river segments are not suitable for new commercial communication sites or utility corridors.
- Scenic and recreational river segments are suitable for commercial communication sites or utility corridors.

Access and Travel Management

- Wild river corridors are not suitable for motorized travel.
- Scenic and recreational river corridors are suitable for wheeled motorized travel on designated routes.
- Some scenic and recreational corridors are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area that are identified in the over-snow vehicle use map, are located in the Plan Set of Documents.

In addition to the items specifically addressed above, eligible wild, scenic and recreational rivers are generally suitable for management according to their potential classification as shown in the following table.

Table 12: Potential classification of eligible wild, scenic, and recreational rivers.

Name	Potential Classification
Big Salmon Creek	Wild classification
Spotted Bear River	Wild segment from headwaters to end of Rd 568 (Silvertip Trailhead # 83).Scenic/Recreation segment from Silvertip trailhead to confluence w/SF Flathead River
White River	Wild classification
Danaher River	Wild classification
Little Salmon River	Wild classification
Gateway Creek	Wild classification
Yakinikak Creek Trail Creek Nokio Creek	Wild classification segment from headwater to Trail Creek Scenic/Recreation segment from confluence with Yakinikak Creek to Forest Boundary
Lebeau Creek	Wild segment from headwater to Lebeau RNA boundary Scenic/Recreation segment is from RNA boundary to Forest Boundary
Logan Creek	Recreation classification
Aeneas Creek	Scenic/Recreation classification

2.2 Backcountry Areas

Desired Conditions

- Backcountry areas would provide less developed recreation opportunities.
- Backcountry areas would be natural-appearing, with little evidence of recent, human-caused disturbance.
- These areas would provide opportunities for self-reliance.
- Ecological processes, such as natural succession, fire, and insect and disease activity, would function with minimal human influence.
- Motorized travel would be limited.

Suitability

Generally:

Forest Products and Fire

- Backcountry areas are not suitable for regularly scheduled timber production, although they are suitable for low intensity timber harvesting (including salvage logging) for multiple-use purposes and to achieve desired vegetation conditions.
- Backcountry areas are suitable for helicopter access
- These areas are suitable for commercial use of non-timber forest products.
- Backcountry areas are suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- Backcountry areas are not suitable for commercial communication sites or utility corridors, although the Forest Service may have small radio repeater sites to assist in administration.

Access and Travel Management

Differences in suitability for motorized travel are reflected below.

- Backcountry areas are not suitable for motorized travel except in emergency situations. However, the Chapter 1 geographic area desired conditions identify and describe several existing motorized routes that are suitable for continued motorized use in the summer. In addition, some areas are suitable for winter motorized use. Specific routes and areas suitable for motorized use by snowmobiles in portions of the management area are identified in the over-snow vehicle use map in the Plan Set of Documents.

3.1 Areas Under Special Management

Jewel Basin Hiking Area

Background

The 15,000-acre Jewel Basin Hiking Area was designated in 1970 as a hiking-only area providing a unique recreation experience without motorized, mechanized, or stock use. The area is popular due to its accessibility from the valley floor, interconnected trail systems, high elevation experiences, ecological values, and abundant lakes and streams.

Desired Conditions

- The area would be designated as a national recreation area to showcase its unique recreation experience.
- The area would provide a quiet recreation experience without motorized, mechanized, or stock use.
- A management plan that guides future management would be in place. It would address increased use, protection of resources, and desired recreation experience.
- The area would provide high elevation hiking recreation in a pristine setting.
- Camp Misery and Clayton Creek would be the primary access points into the Jewel Basin Hiking Area with Wheeler Creek and Graves Creek as secondary accesses.

Suitability

The Jewel Basin Hiking Area would generally be:

Recreation

- Suitable for outfitting and guiding at existing use levels. It is not suitable for new commercial or institutional uses.
- Suitable for summer and winter recreation opportunities and experiences without pack-stock or motorized vehicles.

Forest Products and Fire

- Not suitable for regulated timber production or the commercial use of non-timber forest products.
- Suitable for wildland fire use, both natural ignition and management ignited, as a tool for helping to restore and maintain recreation settings consistent with national recreation area objectives.

Other Uses and Activities

- Not suitable for livestock use.
- Not suitable for new commercial communication sites or utility corridors.
- Suitable for other uses as long as they are consistent with the designated purpose.
- Suitable for a few rustic facilities to provide comfort, interpretation, and/or resource protection.

Access and Travel Management

- Not suitable for motorized or mechanized vehicle use.
- Not suitable for horseback travel.

Coram Experimental Forest

Background

The 8,000-acre Coram Experimental Forest was established in 1932 for forest/ecological research purposes. Research studies began in the late 1940s focusing on the influence of even-aged harvest methods. Past research on this experimental forest has covered a wide array of subjects ranging from timber production to soil and water, wildlife, understory and overstory vegetative development, young stand management, artificial and natural regeneration techniques, and social aspects of forest management. More information about the relationship of the Coram Experimental Forest to the Coram Research Natural Area and the United Nations Biosphere Reserve are located in the Hungry Horse geographic area section in Chapter 1.

Desired Conditions

- The Coram Experimental Forest would serve as a demonstration area for researchers, educators, forest managers, and the public.
- Re-measurement and evaluation of long-term studies would continue as would the collection of baseline hydrology and climate information.
- Areas would be provided for studies that would answer future management questions.

Suitability

The Coram Experimental Forest would generally be:

Forest Products and Fire

- Not suitable for regulated timber production or the commercial use of non-forest timber products.
- Suitable for timber harvesting or salvage logging for multiple-use purposes (including research) and to achieve desired vegetation conditions.
- Suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- Not suitable for new commercial communication sites or utility corridors.
- Suitable for a few facilities to provide comfort or interpretation that support the research program.

Access and Travel Management

- Suitable for wheeled motorized use on designated roads and trails.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.
- These areas are suitable for cross-country over-snow vehicle use as identified on the over-snow vehicle use map.

3.2 Research Natural Areas

Research Natural Areas (RNAs) are part of a network of representative forest, shrubland, grassland, alpine, and wetland habitats; riparian systems; geologic formations; wildlife habitats; or aquatic communities where each has special characteristics of scientific importance. RNAs serve as reference areas for evaluating the range of natural variation and the impact of management in similar environments. They protect representative or key elements of biological diversity at the genetic, species, population, community or ecosystem scales. RNAs serve as areas for the study of ecosystems and ecological processes including succession and they provide a baseline for measuring ecological change. RNAs also support educational activities.

Suitability of Areas Plan Component

Desired Conditions

Research Natural Areas would:

- Serve as reference areas for evaluating the range of natural variability and the impacts of management in similar environments.
- Maintain representative or key elements of biological diversity at the genetic, species, population, community, or ecosystem levels.
- Serve as areas for the study of ecosystems and ecological processes including succession.
- Support educational activities.
- Be baseline areas for measuring ecological change.

Suitability

Generally:

Forest Products and Fire

- RNAs are not suitable for regularly scheduled timber production or the commercial use of non-timber forest products.
- These areas are suitable for management activities that restore conditions that the RNA was designated to represent.
- RNAs are suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- RNAs are not suitable for commercial communication sites or utility corridors.
- These areas are generally suitable for the observation and study of undisturbed, unique habitats and non-manipulative research.
- RNAs are suitable for other uses that are consistent with the designated purpose for that area.

Access and Travel Management

- RNAs are not suitable for additional summer motorized travel except in emergency situations. Existing motorized routes could remain open and other existing valid access rights would be allowed to continue.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.

3.3 General Forest Low Intensity Management

Suitability of Areas Plan Component

Desired Conditions

- Low intensity, mixed-use areas would have a combination of fish and wildlife habitat, an assortment of recreational opportunities, and a variety of other goods and services.
- These areas are generally suitable for managing vegetation at low intensities, although initial entries in areas with moderate to high fuels may be managed more intensively to reduce the hazard.
- Management in these areas emphasizes ecosystem management goals using a wide variety of methods.

Suitability

Generally:

Forest Products and Fire

- These areas are not suitable for regularly scheduled timber production, although timber harvesting or salvage logging could occur.
- These areas are suitable for the commercial use of non-timber forest products.
- These areas are suitable for wildland fire use, prescribed burning, and fire suppression.

Other Uses and Activities

- These areas are suitable for commercial communication sites or utility corridors.

Access and Travel Management

- These areas are suitable for wheeled motorized travel on designated roads and trails.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.

4.1 General Forest Moderate Intensity Management

Suitability of Areas Plan Component

Desired Conditions

- Landscapes would be characterized by a modified natural environment.
- Vegetation management activities, roads and evidence of other developments are apparent.
- Developed and dispersed recreation facilities may be present for comfort and convenience.
- Concentration of users is moderate and there is often evidence of other users.

Suitability

Generally:

Recreation

- These areas are suitable for moderate dispersed recreation use and developed facilities that are designed to provide a rustic level of comfort, convenience, and interpretation.

Forest Products and Fire

- These areas are suitable for regularly scheduled timber production and salvage logging.
- These areas are suitable for the commercial use of non-timber forest products.
- These areas are suitable for prescribed burning and fire suppression. They are generally not suitable for wildland fire use.

Other Uses and Activities

- These areas are suitable for commercial communication sites or utility corridors.

Access and Travel Management

- These areas are suitable for wheeled motorized travel on designated roads and trails.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.

5.1 General Forest High Intensity Management

Suitability of Areas Plan Component

Desired Conditions

- Landscapes would be characterized by a substantially modified environment. Landscapes appear managed. Forest activities would be readily apparent.
- High intensity, mixed use areas would provide a variety of forest products. This could include commercial and non-commercial forest products and uses, forage production, a diversity of fish and wildlife habitats, minerals development, and a natural visual quality setting with high evidence of human management activities.
- Developed facilities may be present for comfort and convenience, sights and sounds of human development are very evident.
- These areas would be characterized by coniferous forests where the potential to grow timber is high and regularly scheduled harvests of commercial timber are feasible.
- Roads would provide management access and motorized recreational opportunities, including access to higher use dispersed recreation sites. Some designated trails would provide a motorized recreation experience. Closed roads and trails would sometimes provide non-motorized and mechanized recreation opportunities.

Suitability

Generally:

Recreation

- These areas are suitable for high levels of dispersed recreation use, and developed facilities that are designed for user comfort, convenience, and interpretation.

Forest Products and Fire

- These areas are suitable for regularly scheduled timber production and salvage logging.
- These areas are suitable for the commercial use of non-timber forest products.
- These areas are suitable for prescribed burning and fire suppression. They are generally not suitable for wildland fire use.

Other Uses and Activities

- These areas are suitable for commercial communication sites or utility corridors.

Access and Travel Management

- These areas are suitable for wheeled motorized travel on designated roads and trails.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.

5.2: Residential and Forest Intermix

These areas are characterized by public lands intermingled with private lands where private use and developed residential use adjoins National Forest System lands.

Desired Conditions

- The scenery would reflect moderate intensity management where human influence is evident.
- Evidence of forest activities may be readily apparent up-close.
- Developed facilities may be present for comfort and convenience, sites and sounds of human development are evident.
- Numerous open roads provide access to private land, and to roaded recreational and motorized opportunities on designated roads and trails. Motorized transportation is common.
- Some closed roads may provide non-motorized and mechanized recreation settings and associated opportunities if access through private land is available.
- Dispersed recreation activities requiring overnight stays are not common.
- Access to existing high use areas would be available.
- Sights and sounds of people would predominate.

Suitability

Generally:

Forest Products and Fire

- These areas are not suitable for regularly scheduled timber production, although timber harvesting or salvage logging could occur.
- These areas are suitable for the commercial use of non-timber forest products.
- These areas are suitable for prescribed burning and fire suppression. They are generally not suitable for wildland fire use.

Other Uses and Activities

- These areas are suitable for commercial communication sites or utility corridors.

Suitability of Areas Plan Component

Access and Travel Management

- These areas are suitable for wheeled motorized travel on designated roads and trails.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.

6.1 High Use Recreation Complexes or Use Areas

Desired Conditions

- An array of recreational opportunities and experiences in a forested environment would exist. Examples include:
    - Four-season sports area.
    - Hiking trail system with a developed trailhead facility.
    - Developed campground.
    - Lake or reservoir with developed and dispersed recreation opportunities.
    - Groomed snowmobile trail system with associated trailhead facilities.
- Recreation experiences would be the attraction, and other natural resources would be complementary to the recreation setting and experience.
- Areas would have an attractive element, such as a reservoir, skiing terrain, campground, or trail system, that encouraged public use.
- Surrounding terrain would also be included in the management area to ensure an attractive setting for the recreational development and to provide for future expansion.
- The visual quality of the setting would reflect planned, high intensity management on the immediate site with moderate to high intensity management of surrounding areas.

Suitability

Generally:

Recreation

- These areas are suitable for developed recreation opportunities with multiple facilities designed for use by large numbers of users. Facilities may be designed for user comfort and convenience and could be highly refined.

Forest Products and Fire

- These areas are not suitable for regularly scheduled timber production, although timber harvesting or salvage logging could occur.
- These areas are not suitable for the commercial use of non-timber forest products.
- These areas are generally not suitable for wildland fire use.

Access and Travel Management

- These areas are suitable for wheeled motorized use on designated roads and trails.
- Some areas are suitable for winter motorized use. Specific routes, and areas suitable for motorized use by snowmobiles in portions of the management area are identified on the over-snow vehicle use map in the Plan Set of Documents.

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Special Areas Component

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

The areas listed in the following table have unique or special characteristics and are formally designated either by statute or administrative action. Management direction for individual areas can be found in: Chapters 1-3 of this Plan, the Forest Service handbooks and manuals, and in individual area management plans. For example, MA 1.2 has additional guidance for research natural areas, and the Forest Service Manual 2320 contains additional management guidance for National Wilderness Preservation System lands.

Special areas that do not already have explicit management guidance elsewhere in this Plan, in their underlying statute or other designation document, or in Forest Service manuals or handbooks, should be managed in accordance with plan component guidance for the lands which surround them. A "Special Areas Component" map is available in the Plan Set of Documents.

A list of the special areas for the Flathead National Forest begins on the next page.

Table 13: Special Areas of the Flathead National Forest. [1] (This table continues to page 123).

Special Areas Plan Component				
Special Area	**Designation Authority**	**Additional Guidance**	**Currently Designated**	**Recommended Designation**
Statutorily Designated Areas				
National Recreation Area	Responsible Official recommends, Congressional act designates	FSM 2371	Recreation Area authorized by 36 CFR 294, approved by Regional Forester	**National Recreation Area** • Jewel Basin Hiking Area
National Trails **Historic** **Scenic**	National Trails System Act of October 2, 1968 Responsible Official recommends, Congressional act designates	FSM 2353.4	**Scenic** Continental Divide Trail • Bowl Cr Trail #324 • Sun River Pass Trail #116 • Strawberry Creek Trail #161 • Badger Pass Cutoff Trail #147	No changes
Wild and Scenic River (WSR)	Wild and Scenic Rivers Act Responsible Official recommends, Congressional act designates	FSM 1924 FSM 2354, FSH 2409.12 MA 2.1	• Middle Fork Flathead • North Fork Flathead • South Fork Flathead	**Eligible For Further Study** [2] • Big Salmon • Spotted Bear • White River • Danaher • Little Salmon • Gateway • Yakinikak/ Trail/ Nokio • Le Beau • Logan

[1] A map of the special areas is in the Plan Set of Documents.
[2] This recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. The Congress has reserved the authority to make final decisions on designation of rivers as part of the National Wild and Scenic Rivers System.

Special Areas Plan Component				
Special Area	**Designation Authority**	**Additional Guidance**	**Currently Designated**	**Recommended Designation**
				• Aeneas
Wilderness	Wilderness Act of September 3, 1964 Responsible Official recommends, Congressional act designates	FSM 1923 FSM 2320 FSH 2409.19 MA 1.1	• Bob Marshall • Great Bear • Mission Mountains	**Recommended Wilderness** [1] • South Fork Flathead • Middle Fork Flathead • Swan Front • North Fork • Limestone Addition • Alcove Addition
Responsible Official Designated Areas				
Botanical Areas	Responsible Official designates	FSM 2372	• Condon Creek	**Recommended Botanical Areas** • Teepee Lake Complex • Johnson Terrace • Bent Flat Fen • Trail Creek Fen
Administratively Designated Areas				
Experimental Forest/Range	Responsible Official recommends with concurrence of Station Director, Chief designates	FSM 4062	• Coram	No Changes

[1] This recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. The Congress has reserved the authority to make final decisions on wilderness designation.

Special Areas Plan Component				
Special Area	**Designation Authority**	**Additional Guidance**	**Currently Designated**	**Recommended Designation**
National Recreation Trails	Responsible Official recommends, Regional Forester designates	36 CFR 290 FSM 2353.4	• Blacktail Wild Bill OHV Trail • Danny On Memorial • Elk Mountain • Holland Falls • Lupine Lake • Ralph Thayer • Smokey Range/ Whitefish Divide	No changes
National Register of Historic Places	National Historic Preservation Act of October 15, 1966 (as amended) Archeological Resources Protection Act Responsible Official and State Historic Preservation Officer recommend, Secretary of Interior designates	36 CFR 60 36 CFR 296 36 CFR 800 Secretary of Interior Standards and Guidelines for Archeological and Historical Preservation	• Hornet Peak Lookout • Wurtz Homestead • Stone House	• Bob Marshall /Great Bear Wilderness Historic District
Research Natural Areas	Responsible Official recommends, Regional Forester designates with concurrence of Station Directors	FSM 4063 MA 3.2	• Coram • East Shore • Le Beau • Little Bitterroot • Swan River • Tuchuck	• Nyaak Flats

Special Areas Plan Component				
Special Area	**Designation Authority**	**Additional Guidance**	**Currently Designated**	**Recommended Designation**
Scenic Byway Forest Service	Responsible Official recommends, Chief designates	None		• Northern Continental Divide Scenic Loop
Research Demonstration Forest	Memorandum of Agreement between Forest Supervisor and Research Station Director	None	• Miller Creek	No changes

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Chapter 3: Design Criteria

Guidelines Component

Guidelines provide technical specifications and guidance for project and activity decision-making to help achieve desired conditions and objectives. Guidelines are not commitments or final decisions approving projects or activities.

Plan Components

Desired Conditions
Objectives
Suitability of Areas
Special Areas
Guidelines

A project or activity will apply relevant guidelines, unless there is a documented reason to adjust the guideline. If adjustment would be neutral with regard to the relevant social, economic, or ecological condition or would be a more appropriate way to achieve desired conditions and objectives, the Responsible Official will describe the proposed adjustment and explain the relationship to desired conditions and objectives in the project-level environmental analysis and decision documents.,

Soils, Watersheds, and Aquatic Ecosystems

Guidelines Plan Component

a. When riparian conservation areas (RCAs) are intact and functioning at desired condition, then management activities should maintain or improve that condition.

b. When RCAs are not intact and functioning at desired condition, then management activities should include restoration components that exceed full compensation for project effects to promote a trend toward desired conditions.

c. Management activities in RCAs should not result in long-term degradation to aquatic conditions. Limited short-term effects from activities in the RCAs may be acceptable when they support long-term benefits to the RCAs and aquatic resources.

d. Soil and snow should not be sidecast into surface water.

e. New, replacement, and reconstructed crossing sites (culverts, bridges and other stream crossings) should be designed to:

- Accommodate 100-year floods including associated bedloads and debris.

- Prevent diversion of stream flow out of the channels.
- Provide and maintain fish passage up to bankfull discharge.

f. On roads being put into long-term storage crossing locations should provide fish passage.

g. Grazing management should prevent trampling of native fish redds by livestock.

h. Minimum impact suppression tactics should be used within RCAs.

i. Trees felled in RCAs for safety concerns should be left on-site.

j. When drafting water from streams, pumps should be screened to prevent entrainment[1] of fish and aquatic organisms.

k. Project proposals larger than 1,000 acres that are located within active restoration watersheds should include aquatic restoration elements or contribute to long-term improvement of watershed and aquatic ecosystem conditions (prescribed fire and wildland fire use are excluded).

l. New stream diversions and associated ditches should be screened to prevent loss of fish and other aquatic organisms.

m. When designing projects that may affect movement or migration of fish, develop measures to prevent new introductions of non-native fish.

Vegetative Composition, Size Class, and Structure

a. Revegetation projects should favor native seed mixes; use locally collected seed if possible.

b. Fire suppression strategies should be designed to minimize impacts on resources.

Wildlife and Plant Species Diversity

a. Project activities should not occur within one mile of known active dens or rendezvous sites of wolves between April 15 and June 30.

[1] Screens are needed on pumps to prevent fish or other aquatic organisms from being sucked into them.

b. All special use permits and operating plans should specify sanitation measures to reduce wildlife conflicts and minimize bear mortality.

c. The following table displays the wildlife species of interest and project guidelines for each species or group of species that require management above what is provided with existing direction for ecosystem diversity.

Table 14: Animal species of interest with guidelines specific to a group or species.

Common name	Species scientific name	Guideline
common loon	*Gavia immer*	Continue to cooperate in educating the public on how to avoid disturbing nesting loons.
peregrine falcon	*Falco peregrinus*	Continue with cooperative monitoring.
Townsend's big-eared bat	*Corynorhinus townsendii*	Survey mines, caves and structures for hibernacula or nurseries before implementing projects. Protect occupied sites.
Rocky Mountain elk white-tailed deer	*Cervus elaphus Odocoileus virginianus*	Work with the state towards meeting population objectives using vegetation and access management.

d. The following table displays the wildlife species of concern and project guidelines for each species or group of species that require management above what is provided with existing direction for ecosystem diversity.

Table 15: Animal species of concern with guidelines specific to a group of species,

Common name	Species scientific name	Guidelines
alpine mountainsnail carinate mountainsnail lake disc	*Oreohelix alpina* *Oreohelix elrodi* *Discus brunsoni*	Survey suitable habitat that may be impacted by a project if that project is within 20 miles of a known dry mollusk population. Occupied habitat should be protected by a 50-meter buffer zone or some other appropriate mitigation.

e. The current Interagency Grizzly Bear Committee guidelines should guide project planning and implementation.

f. The over-snow vehicle use map would be used for consistency for motorized access and road closures in big game winter range habitat.

g. In the Emery Creek winter range and calving areas, motorized access restrictions from December 1 to July 1 should be applied as necessary to prevent disturbance to big game.

h. During facilities planning, new facilities (or expansion of existing facilities) in important wildlife connectivity areas should be avoided. Expansion and/or improvement of existing facilities should be favored over the construction of new ones.

i. When designing projects in important wildlife connectivity areas, consider lynx conservation agreements and grizzly bear Memorandum of Understanding regarding connectivity.

j. In occupied grizzly bear habitat where traffic safety is not an issue, a vegetative screen should be maintained when brushing roads.

k. The Lynx Conservation Assessment and Strategy (LCAS) is being followed. Dialogue with US Fish and Wildlife Service continues, to determine the best ways to incorporate the science with respect to the Canada lynx into Forest Service management.

l. During project planning, applicable elements of the Montana Bald Eagle Management Plan should be incorporated.

m. Water howellia: Incorporate Flathead Conservation Strategy prescriptions which are located on page 17-19 of the conservation strategy.

n. For Spalding's catchfly (Silene spaldingii), incorporate recommendations for grazing, invasive plant management and prescribed fire in the Montana Natural Heritage Program Conservation Strategy, pages 41-42.

o. For plant species of concern and species of interest:

- Minimize and/or mitigate impacts to plant species of concern and species of interest from ground disturbance, grazing, recreation use, and herbicide application. Short-term impacts may be considered when outweighed by long-term benefits to species of concern and species of interest populations and their habitats.

- Prevent invasive plant introduction and spread at known sites for all species of concern and species of interest plants.
- Minimize and/or mitigate impacts to plants from rock climbing routes for species of concern and species of interest associated with (1) canyon walls, crevices, rock outcrops, and slides and (2) vernally moist cliffs and mossy talus slopes. Short-term impacts may be considered when outweighed by long-term benefits to species of concern and species of interest populations and their habitats.

p. Short-term impacts in riparian conservation areas (RCAs) may be considered when long-term benefits to species of concern or species of interest populations and their habitats would result.

q. In RCAs, adverse impacts on species of concern or species of interest should be avoided or mitigated.

r. The RCA widths described in the Glossary would apply except where site-specific analysis supports modification.

Forest Products

a. Vegetation management projects should be designed to integrate forest health, fuels, and timber management objectives.

b. Timber harvesting or salvage logging should not be considered appropriate tools to achieve desired conditions on other lands classified as suitable for timber harvesting in the following management areas:

- MA 1.2 – Recommended Wilderness
- MA 2.1 – Wild River Segments (outside designated wilderness)
- MA 3.1 – Jewel Basin Hiking Area and botanical areas
- MA 3.2 – Research Natural Areas

National Forest System Lands

a. Newly acquired lands should be assigned a management area designation that is similar to or compatible with surrounding management areas.

b. Existing communication sites and facilities should be utilized to the fullest practical extent before approving new facilities and locations.

c. Obsolete or unused communication facilities should be removed from National Forest System land.

d. New utilities (such as power lines, telephone lines, or gas lines) should be co-located within existing corridors whenever feasible, or within existing rights-of-way (including road rights-of-way) and follow major transportation routes.

Livestock Grazing

a. Allotments should be closed where: (1) tree regeneration in old harvest units or burned areas eliminates the transitory forage base for domestic livestock or (2) no management option can maintain progress towards desired condition or Plan objectives.

b. Domestic livestock grazing should not be allowed in developed campgrounds unless specifically permitted.

c. Allotments should include the following utilization guidelines to maintain stable soil and vegetation conditions and arrest any downward ecological trend until the completion of an updated site-specific grazing prescription. These guidelines would apply to recreational stock use as well.

- Thirty-five percent maximum allowable utilization on palatable and available plant species on big game winter range sites.
- Fifty percent maximum allowable utilization on palatable and available plant species on all other upland and riparian primary, secondary or transitory rangeland sites.
- Invasive plants are not palatable species and are excluded from utilization measurements.

- For continuous season-long grazing, utilization should not exceed 25 percent of palatable and available plant species in riparian areas or 35 percent of palatable and available plant species in upland areas.

d. On allotment pastures that have received substantial broadcast herbicide treatment, grazing should be rested or deferred for at least one season.

e. If allotments or pastures used by cattle are appreciably affected by wildfire they should be rested or deferred from grazing for a period necessary for vegetative recovery.

Minerals and Geology

a. Caving groups should have a Memorandum of Understanding that addresses their use of caves including: caving experience, schedules, party sizes, campsites, length of stay, exploration methods, equipment removal, campsite cleanup, rescue plan, and safety procedures.

b. Caves (including alpine karsts) should not be identified on maps or discussed in brochures without a plan that authorizes such activities.

c. Permanent or semi-permanent reference marking, climbing aids, facilities or caches should not be allowed in or around caves (including alpine karsts) or climbing faces.

Heritage Resources

The programmatic agreements between Region One (northern region office) of the Forest Service, the Montana State Historic Preservation Office, and the Advisory Council on Historic Preservation should be followed.

Developed and Dispersed Recreation

a. When issuing and re-issuing permits for recreation residences, recreation resorts, outfitter and guide operations, ski areas, and recreation events, permit conditions should include food storage requirements and protection requirements for bears.

b. Dispersed and developed recreation use or occupancy should be adjusted if they are impacting water quality, riparian areas, aquatic ecosystems (including instream habitat features), or other resource

values. Where adjustment measures, such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures, are not effective in reducing resource impacts, applicable practices or site occupancy should be eliminated.

c. In developed campgrounds located within a riparian conservation area (RCA), trees may be felled and removed if they pose a safety risk.

d. In dispersed recreation sites located within an RCA, trees may be felled if they pose a safety risk. Trees may be left in streams or on-site if they are not deemed an attractive nuisance.

Designated Wilderness

- Wilderness party sizes should be limited to the following:
    - Bob Marshall Wilderness Complex: 15 persons, 35 stock
    - Mission Mountains Wilderness: 8 persons, 8 stock.

Access and Travel Management

a. When roads are closed to wheeled vehicular traffic and converted to maintenance level 1, all stream crossing structures should be evaluated and treated[1], if necessary, to minimize or avoid the potential for failure.

b. If a road is planned to be converted to a trail and crossing structures are needed for trail use (winter or summer), they should be evaluated and treated[1], if necessary, to minimize or avoid the potential for a crossing failure.

c. As soon as access use is completed on temporary roads, they should be stabilized and closed to motorized traffic and treated for invasive plants.

d. When constructing, reconstructing, or maintaining trail systems, the motorized vehicle maximum width (the distance from the outside of the left tire to the outside of the right tire or maximum tire width for a motorcycle) should fit within the existing trail or road tread or road profile.

[1] Treatments at stream crossings may include construction of overflow channels, vegetation removal, structure modification, etc.

Guidelines
Plan Component

e. Following vegetation management activities in areas with potential for off-highway vehicle (OHV) use, skid trails should be blocked or obliterated to prevent illegal use. Skid trails should also be treated for invasive plants.

f. When decommissioning roads that are used as winter motorized routes, consider designing stream crossings that provide for over-snow use.

Other Design Criteria

The Plan Set of Documents contains a wide variety of other guidance for project and activity decision-making. This guidance may be in the form of laws, regulations, policy, Memoranda of Understanding, Flathead Forest Reference Guides, conservation strategies, or programmatic agreements.

Glossary

Quick Guide to commonly used acronyms

(Definitions for acronyms follow in the main glossary)

AQRV: Air Quality Related Values

AUM: Animal Unit Month

BMP: Best Management Practices

EMS: Environmental Management System

MMCF: Million Cubic Feet

MMBF: Million Board Feet

OHV: Off-Highway Vehicles or Off-Road Vehicles

ORV: Outstandingly Remarkable Value

RCA: Riparian Conservation Area

RNA: Research Natural Area

ROS: Recreation Opportunity Spectrum

TMDL: Total Maximum Daily Load

TSPQ: Total Sale Program Quantity

WUI: Wildland Urban Interface

Active Restoration Watershed: Watersheds that are a high priority for aquatic restoration. These watersheds generally do not meet desired conditions and have a high potential to move toward desired conditions through aquatic restoration.

Adaptive Management: A dynamic approach to resource management in which the effects of treatments and decisions are continually monitored and used, along with research results, to modify management on a continuing basis to ensure that objectives are being met. The Dictionary of Forestry (Helms 1998)

Air Quality Related Values (AQRV): A scenic, cultural, physical, biological, ecological, or recreational resource which may be affected by a change in air quality as defined by the land manager for federal lands or as

defined by State or Indian governing body for non federal lands within their jurisdiction. AQRV's include those features or properties of a Class I Wilderness that made the area worthy of designation as a wilderness and that would or could be adversely affected by air pollution. AQRVs generally relate to visibility, odor, flora, fauna, soil, water, climate, geological features, and cultural resources. AQRVs will be specific, however, for each wilderness. AQRVs are considered in the context of Class I protection under the Clean Air Act.

Animal Unit Month (AUM): The amount of forage required by one cow and a calf, or the equivalent, for one month.

Appropriate Management Response (AMR): Any specific action suitable to meet Fire Management Unit (FMU) objectives. Typically, the AMR ranges across a spectrum of tactical options (from monitoring to intensive management actions). The AMR is developed by using FMU strategies and objectives identified in the Fire Management Plan.

Bankfull Discharge: The stream flow that fills a channel to the level of its active floodplain. Bankfull discharge generally occurs every one to two years.

Best Management Practices (BMPs): Activities, prohibitions, maintenance procedures, or other management practices used to protect and improve water quality. BMPs may or may not be sufficient to achieve water quality standards and protect beneficial uses.

Biodiversity/Biological Diversity: The variety and abundance of species, their genetic composition, their communities, and the ecosystems and landscapes of which they are a part. As used in this document, biodiversity refers to native biological diversity; therefore, increases in species diversity resulting from the introduction of nonnative species would not constitute an increase in biodiversity.

Biomass: Forest products other than saw logs removed from the landscape to benefit ecosystem management objectives.

Categorical Exclusion (CE): If a proposed action meets the criteria for a category that has already been determined to have no significant effects on the environment, then that action may, in the absence of any extraordinary circumstances, be “categorically excluded” from documentation in an EA or EIS.

Ceded Lands: Areas where a tribe did “cede, relinquish, and convey to the U.S. all their right, title, and interest in the lands and country occupied by them” at treaty signing or when reservations were established. Ceded land references are qualified by the legal definition of original tribal occupancy

issued in 1978 by the U.S. Court of Claims. In effect: "only lands actually owned by a tribe can be ceded to the U.S."

Coarse Filter Approach: A concept of conserving species diversity by providing adequate representation (distribution and abundance) of ecological land units considering the historical range of variability based upon an understanding of the natural disturbance regimes.

Connectivity: The arrangement of habitats that allows organisms and ecological processes to move across the landscape; patches of similar habitats are either close together or linked by corridors of vegetation.

Conservation Strategy: A management scheme or plan to conserve or sustain particular ecosystem elements such as rare species or habitats. An example of a conservation strategy would be to survey for potential habitats during project planning in order to protect known populations of a rare species through project-specific measures.

Conservation Watershed: Watersheds that are at or very close to desired conditions (soils, watersheds, and aquatic ecosystems) to the extent possible, or watersheds where restoration measures have been implemented to allow a trend toward desired conditions over time. All reasonable restoration measures have been implemented on national forest lands to the degree possible. Conservation watersheds are sixth code hydrologic units.

Cultural Resource: 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.

Designated road, trail or area: A National Forest System road, trail or an area on National Forest System land that is designated for motor vehicle use pursuant to 212.51 on a motor vehicle use map.

Designated Wilderness – Any area of land designated by Congress as part of the National Wilderness Preservation System that was established in the Wilderness Act of 1964 (16 U.S.C. 1131-1136).

Desired Condition: The social, economic, and ecological attributes toward which management of the land and resources of the plan area is to be directed. Desired conditions are long-term in nature and aspirational, but are neither commitments nor final decisions approving projects and activities. Desired conditions may be achievable only over a period longer than the 15 years covered by the plan.

Developed Recreation: Outdoor recreation requiring significant capital investment in facilities to handle a concentration of visitors on a relatively small area. Examples are ski areas, resorts, and campgrounds.

Developed Recreation Sites: Relatively small, distinctly defined area where facilities are provided for concentrated public use (e.g., campgrounds, picnic areas, trail heads and swimming areas).

Dispersed Recreation: Outdoor recreation in which visitors are diffused over relatively large areas. Where facilities or developments are provided, they are more for access and protection of the environment than for the comfort or convenience of the people

Disturbance: Any relatively discrete event, either natural or human-induced, that causes a change in the existing condition of an ecological system.

Dominant Vegetation Type (Region 1 Vegetation Council 2003): Dominant vegetation is determined by –

- Single species – Species that makes up at least 60 percent of the canopy cover or weighted basal area.
- Species mix – No single species determination can be made. Type of mix, either tolerant or intolerant, is determined by what species combination makes up 80 percent of the canopy cover or weighted basal area, with each species contributing more than 20 percent to the total.
    - If the mix is tolerant, then label is dependent on composition. TGCH: if grand fir (ABGR), western Redcedar (THPL), and/or western hemlock (TSHE) comprise the plurality of the canopy cover or weighted basal area.
    - TASH: if majority of the canopy cover or weighted basal area is in subalpine fir (ABLA), Engelmann spruce, and/or mountain hemlock (TSME).
    - IMXS: if majority of the canopy cover or weighted basal area is from a combination of any other species than described above.

Downed Wood: Downed wood provides living spaces for a host of organisms and serves as long-term storage sites for moisture, nutrients, and energy (Harmon et.al. 1986). Downed wood consists of fallen trees, large dead branches, and large fragments of wood found on or near the forest floor. Downed wood has been previously called coarse woody debris (CWD).

Ecological Conditions: Components of the biological and physical environment that can affect diversity of plant and animal communities and the productive capacity of ecological systems. These components could include the abundance and distribution of aquatic and terrestrial habitats, roads and other structural developments, human uses, and invasive, exotic species.

Ecological Process: The actions or events that link organisms and their environment, such as predation, mutualism, successional development, nutrient cycling, carbon sequestration, primary productivity, and decay.

Ecological Sustainability: The maintenance or restoration of ecological system composition, structure, and function, which are characteristic of an area over time, including but not limited to ecological processes, biological diversity, and the productive capacity of ecological systems.

Ecosystem: An ecosystem is an interacting system of living organisms and their environment.

Ecosystem Diversity – The variety and relative extent of ecosystem types, including their composition, structure, and processes within all or part of an area of analysis.

Ecosystem Integrity: The capability of supporting and maintaining a balanced integrated, and adaptive community of organisms having species composition, diversity, and functional organization comparable to that of natural habitats of the region (Kerr and Dudley, 1981)

Ecosystem Management: This is a management practice and philosophy aimed at selecting, maintaining, and/or enhancing the ecological integrity of an ecosystem in order to ensure continued ecosystem health while providing resources, products, or non-consumptive values for humans. An integral part of ecosystem management is the maintenance of ecologically significant structure and processes within the ecosystem. The actions taken reflect the management goals and range from protection from human influence through to an increasing intensity of intervention to serve human needs.

Endangered Species: A plant or animal species listed under the Endangered Species Act that is danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA): The preliminary assessment in which we determine whether or not a proposed action is likely to have significant environmental effects, and therefore require preparation of an Environmental Impact Statement (EIS).

Environmental Impact Statement (EIS): The document that discloses the analysis process underlying a proposed action that could have significant effects on the environment.

Environmental Management System (EMS): A globally embraced organizational management practice that allows an organization to strategically address its environmental issues and well as related health and safety matters. EMS implementation reflects accepted quality management principles based on the "Plan, Do, Check, Act," model using a standard process to identify current activities, establish goals, implement plans to meet the goals, determine progress, and make improvements to ensure continual improvement.

Facilities: Those facilities, such as Ranger Stations, work centers, trail heads and cabins, which are used by the Forest Service in the management of the National Forest

Fine Filter Approach – An analysis approach that focuses on individual species (species at risk, species of interest) by which assessments are conducted to evaluate whether sufficient amount and distribution of habitat is provided under the coarse filter strategy.

Fire-Adapted Ecosystem: An arrangement of populations that have made long-term genetic changes in response to the presence of fire in the environment.

Fire Exclusion: The disruption of a characteristic pattern of fire intensity and occurrence (primarily through fire suppression). Also known as wildfire exclusion.

Fire Interval: Time (in years) between two successive fires in a designated area (i.e., the interval between two successive fire occurrences); the size of the area must be clearly specified.

Fire Regime: The fire pattern across the landscape, characterized by occurrence interval and relative intensity. Fire regimes result from a unique combination of climate and vegetation. Fire regimes exist on a continuum from short-interval, low-intensity (stand maintenance) fires to long-interval, high-intensity (stand replacement) fires.

Fire Severity: Degree to which a site has been altered or disrupted by fire; also used to describe the product of fire intensity and residence time (McPherson and others 1990, Agee 1994, Rowe 1983). The effects of fire on resources displayed in terms of benefit or loss.

Fire Suppression: All work and activities connected with control and fire-extinguishing operations, beginning with discovery and continuing until the fire is completely extinguished.

Fish Passage Barrier: A man-made structure that prevents or inhibits the movement of fish. Road culverts are a common fish passage barrier.

Forest Health: The perceived condition of a forest derived from concerns about such factors as age, structure, composition, function, vigor, presence of unusual levels of insects or disease, and resilience to disturbance. Individual and cultural viewpoints, land management objectives, spatial and temporal scales, the relative health of the stands that make up the forest, and the appearance of the forest at a point which influences the perception and interpretation of forest health.

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 uses. 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 power line clearings of any width.

Forest Roads: As defined in Title 23, Section 101 of the United States Code (23U.S.C. 101), any 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 its resources. (FSM 7705)

Fuel: Fuel is comprised of living and dead vegetation that can be ignited. It is often classified as dead or alive and as natural fuels or activity fuels (resulting from human actions, usually from logging operations). Fuel components refer to such items as downed dead woody material by various size classes, litter, duff, herbaceous vegetation, live foliage etc. (Brown 2000).

Fuel Loading: The weight per unit area of fuel, often expressed in tons per acre or tons per hectare. Dead woody fuel loadings are commonly described for small material in diameter classes of 0 to 1/4-, 1/4 to 1-, and 1 to 3-inches and for large material in one class greater than 3 inches (Brown 2000).

Geographic Area: Typically large areas within which people tend to have some commonality in terms of how they relate to the National Forest – where they reside, recreate, take interest in a Forest Service project, or are likely to participate in public land management planning discussions. This is a method by which to organize our public involvement activities in such a way that people who live, or have a special interest in, a given area can focus greater attention on that area when they are giving us planning input.

Goal: A broad, strategic statement that describes the end results of National Forest management that is believed to be achievable in the long-term.

Guideline: Provide information and technical guidance for project and activity decision-making to help achieve desired conditions and objectives. Guidelines are not final decisions approving projects and activities.

Habitat: (a) An area in which a specific plant or animal can naturally live, grow, and reproduce. (b) For wildlife, habitat is the combination of food, water, cover, and space.

Habitat Type: The land area that supports, or has the potential of supporting the same primary climax vegetation.

Historic Range of Variation: Spatial and temporal variation in ecosystem characteristics during a period of time when the influences of European-American settlement were minimal.

Hydrologic Units: A hierarchical mapping and coding system for drainage areas. The hierarchy starts with very large river basins and progresses down to small sub-watersheds.

Impaired Waters: Streams, rivers, or lakes that fail to support applicable water quality standards for associated beneficial uses. Impaired water bodies do not fully meet water quality standards (i.e., do not fully support their designated uses) even though required technology-based controls and best management practices may already be in place.

Institutional Outfitters: Service providers that typically cater to universities, clubs, religious organizations, camps rehabilitation centers, or special interest groups.

Instream Habitat Features: Numeric descriptions of channel conditions and aquatic habitats that reflect reference conditions.

Integrated Pest Management: Uses prevention techniques, early detection, diagnosis and treatment of pest organisms in cooperation and coordination with other agencies and organizations to control or eradicate invasive species. Treatment uses cost effective methods that minimize adverse effects to non-target species. Examples:

- **Cultural:** Silvicultural prescriptions, change of crop species
- **Mechanical:** Fire, cultivation, pruning, trapping
- **Biological:** Use of parasites, predators, or disease
- **Genetic:** Use of resistant species or cultivars
- **Chemical:** Use of insecticides, herbicides, fungicides, etc

Intensity of Management: See Management Intensity.

Invasive Species: Non-native species that are introduced into an area in which they did not evolve, and in which they usually have few or no natural enemies to limit their reproduction and spread. These species can cause environmental harm by significantly changing the ecosystem composition,

structure, or processes, and can cause economic harm or harm to human health.

Inventoried Roadless Area: Undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the Forest Service's Roadless Area Review and Evaluation (RARE II) process, subsequent assessments, or forest planning. Those areas identified in a set of inventoried roadless area maps, contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November, 2000, which are held at the National Headquarters of the Forest Service, or any update, correction, or revision of those maps.

Land Adjustment Plan: A document to guide the long-range (5-10 year), land ownership program and to plan the annual program of work at the regional and forest levels. In this context, land ownership includes purchases and donations of land or interests in land, exchanges, interchanges or transfers with other federal agencies, sales, grants, title claims and reconveyance of land erroneously acquired.

Lands Generally Suitable For Timber Harvest: This includes (1) lands where timber production is compatible with the achievement of desired conditions and objectives established by the plan and (2) other lands where salvage sales or other harvest necessary for multiple-use objectives other than timber production may take place.

Limits of Acceptable Change: Limits of acceptable change are a set of criteria that has been created to protect or restore the conditions necessary to maintain wilderness values that visitors seek. It focuses on limiting change to resources and social encounters that, if overused, would degrade the wilderness experience and resource.

Long-Term Sustained-Yield Timber Capacity: The highest uniform wood yield that may be sustained under specified management intensities consistent with multiple-use objectives after stands have reached desired conditions.

MMBF: Million board feet. Commonly used measurement for timber volume.

MMCF: Million cubic feet. Commonly used measurement for timber volume.

Management Area: An area with similar management objectives and a common management description and suitable uses.

Management-Ignited Fire: See "Prescribed Fire."

Management Intensity

- **High Intensity:** Substantially modified environment, landscapes appear managed. Forest management activities may be dominant up close, but remain subordinate from distant sensitive roads and highways. Highly developed facilities may be present for comfort and convenience, sights and sounds of human development are very evident, social encounters are common and may act as a draw. (MAs 5.1, 5.2, and 6.1)
- **Moderate Intensity:** Mostly natural-appearing environment, landscapes may appear modified as viewed from sensitive roads and trails. Vegetative alterations are done to maintain desired visual, recreation, and ecological characteristics. Rustic developed and dispersed facilities may be present for comfort and convenience. Remoteness is of little relevance, social encounters are common. (MA 4.1)
- **Low Intensity:** Predominantly natural appearing environment, landscapes appear slightly managed. Vegetative alterations may occur, but they tend to be small in size, widely dispersed and visually subordinate. Rustic developed and dispersed facilities are limited. Individuals are slightly removed from sights and sounds of human activity. Remoteness is of little relevance but may be common, social encounters are less common. (MA 3.3, some 3.1)
- **Very Low Intensity:** natural appearing environment, landscapes are dominated by vegetation not obviously modified. Vegetative alterations are primarily sanitation salvage or very small units in size and number, widely dispersed and not evident. No developed facilities are present for visitor comfort; minimal improvements may be present from past dispersed use. Individuals are removed from sights and sounds of human activity. Remoteness is common, social encounters may be minimal. (MA 2.2, some 2.1)

Mechanical Vegetation Treatment: Any activity undertaken to modify the existing condition of the vegetation accomplished with mechanical, heavy equipment instead of by hand with a power saw.

Mechanized Use: Any non-motorized device with (gear supported) wheels, tracks, skids, or floatation, used for personal or materials transport. Examples include but are not limited to a bicycle, game cart, and wheelbarrow.

Metapopulation: A set of partially isolated populations belonging to the same species. The populations are able to exchange individuals and re-colonize sites in which the species has recently become extinct.

Mixed-Severity Fire: Fires occur at an average of 25 to 100 years (Arno 1994). A fire that burns across the landscape leaving a mosaic of burned and unburned vegetation and killing 20 to 80 percent of the overstory trees.

Motor Vehicle: Any vehicle which is self-propelled, other than:

- A vehicle operated on rails
- Any wheelchair or mobility device, including one that is battery powered, that is designed solely for the use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

Motor Vehicle Use Map: A map reflecting designated roads, trails, and areas on administrative unit or a Ranger District of the National Forest System.

Multiple-Use Purposes: In some areas, achieving the resource objectives and desired conditions of vegetation may make it difficult to provide timber products on a planned and reasonably predictable basis, yet timber harvesting may be an important tool to restore or maintain those desired conditions. Examples of the reasons that timber harvest activity could occur on lands where achieving desired conditions or resource objectives is not compatible with timber production may include, but are not limited to:

a. Maintaining or creating desired forest characteristics.

b. Managing experimental forests.

c. Restoring meadow, rangeland, and forest ecosystems being changed by forest succession.

d. Cutting trees to promote the safety of forest users. This includes hazard tree removal in campgrounds, picnic grounds, ski areas, administrative sites, and along roads and trails open to public travel.

e. Timber harvesting to meet habitat requirements for wildlife.

f. Timber harvesting to reduce fuel loading.

Municipal Water Supply: See Public Water System/Supply.

National Environmental Policy Act of 1969 (NEPA): Federal law that requires us to (1) give the public fair and open opportunity to comment on our decision processes, and (2) clearly document the analysis processes we conducted in reaching our decisions. The Forest Service conducts environmental analysis to assess the nature, characteristics, and significance of the effects of a proposed action and alternatives considered. The analysis is documented in an Environmental Impact Statement (EIS), Environmental

Assessment (EA), or categorically excluded if within categories approved for exclusion from documentation.

National Historic Trail: A trail, established by section 5 of the National Historic Trails Act of 1968, that follows as closely as possible and practicable the original trail or route of travel of national historic significance. National historic trails shall have as their purpose the identification and protection of the historic route and its historic remnants and artifacts for public use and enjoyment.

National Recreation Trail: Trails designated by the Regional Forester as part of the National system of trails authorized by the National Trails System Act. National recreation trails provide a variety of outdoor recreation uses.

National Register of Historic Places: The Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include: districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is a part of the U.S. Department of the Interior.

National Wild and Scenic River System: Rivers with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values designated by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition

National Wilderness Preservation System: All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

Native Species: Animals or plants that have historically occupied a given aquatic or terrestrial area.

NatureServe: NatureServe is a non-profit conservation organization that provides the scientific information and tools needed to help guide effective conservation action. NatureServe represents an international network of biological inventories – known as natural heritage programs or conservation data centers – operating in all 50 U.S. states, Canada, Latin America, and the Caribbean.

New Invaders: An invasive species in an area where it was not previously established.

Objectives: Concise projections of measurable, time-specific intended outcomes. The objectives for a plan are the means of measuring progress toward achieving or maintaining desired conditions.

Off-Highway Vehicles or Off-Road Vehicles (OHV): Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain.

Old Growth: This is defined by *Old Growth Types of the Northern Region* (Green et al. 1992, errata corrected 02/05). Tables and descriptions for western Montana are quantified by an identified habitat type, tree size, tree age, trees per acre, and basal area per acre.

Opportunity Class: Opportunity classes represent a spectrum of wilderness experience opportunities within the wilderness area. The classes describe the existing areas where different resources and social conditions are found. They identify management actions that are acceptable within each class.

Other Lands: These are lands where achieving desired conditions or resource objectives is not compatible with timber production, but timber harvests can be used to achieve other multiple-use purposes.

Outstandingly Remarkable Values (ORVs): terms used to describe river related values that are rare and unique or exemplify features that are significant at a comparative regional or national scale. Areas examined to contain ORVs include Scenery, Recreation, Geology, Fish, Wildlife, Prehistory, and History

Over-Snow Vehicle (snowmobile): A motor vehicle that is designed for use over snow and that runs on a track or tracks and/or a ski or skis while in use over snow.

Plan Set of Documents: This is the complete set of documentation supporting conclusions reached in the land management plan and it may include but is not limited to: evaluation reports, documentation of public involvement, the plan including applicable maps, applicable plan improvement documents, applicable NEPA documents if any, the monitoring program for the plan area, and documents relating to the EMS established for the unit. 36 CFR 219.7(a)(1).

Potential Vegetation Group: Groupings of habitat types on the basis of similar moisture or temperature environment.

Prescribed Fire: Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.

Programmatic Agreement (Heritage Resources): A document authorized by 36 CFR 800.13 which implements sections 106 and 110 of the National Historic Preservation Act of 1966, as amended (16 USC 470 f). These agreements describe stipulations for administering cultural resources on National Forest System land.

Public Access: Usually refers to a road or trail route over which a public agency claims right-of-way available for public use.

Public Water System/Supply: A public works system that withdraws water from a well, stream or lake for community or non-community water supplies (municipal use).

Rangeland (range): Land on which vegetation is predominantly grasses, forbs, or shrubs suitable for grazing or browsing. Rangeland may include some forest and barren land.

Range of Variation: Selected ecosystem diversity components such as vegetative composition and structure that existed with historic dominant disturbance regimes. American Indian influences during the reference period are considered part of the range of variation.

Recommended Wilderness: Lands that are recommended to Congress for inclusion into the National Wilderness Preservation System. If approved, they become "designated wilderness."

Recreational Livestock Use: The use of an area by domesticated animals, such as horses and mules, which are used primarily in conjunction with recreation activities.

Recreation Opportunity Spectrum (ROS): The ROS system is a framework that identifies opportunities and experiences the public desires, and it provides guidance for determining if the desired recreation experiences are being maintained or changed. The following represent the spectrum of classes and describes the setting characteristics and the experience characterizations.

Recreation Residence: A house or cabin on national forest land for seasonal recreation use that is not the primary residence of the owner.

Reference Conditions: Stream channel and aquatic habitat conditions that are relatively undisturbed by human activities with 80 to 100 years of fire exclusion and may be similar to historic conditions. Reference conditions generally describe a stable, morphological form, and may be described in the following terms:

- Channel pattern, dimension, and profile.

- Bed and bank materials.
- Bank stability.
- Riparian vegetation.
- Large woody material.
- Pool frequency and residual pool depth.
- Water temperature.

Regularly Scheduled Timber Harvest: A flow of forest products that is planned on a reasonably predictable basis over time to meet desired conditions, multiple-use resource objectives, and is compatible with producing commercial forest products.

Research Natural Area (RNA): An area that illustrates or typifies for research or educational purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance. (36 CFR 1251.23)

Resilience/Resilient: Capability to withstand or recover from disturbance or change.

Responsible Official: The official with the authority and responsibility to oversee the planning process and to approve plans, plan amendments, and plan revisions.

Restoration: Actions that help an ecosystem move toward desired conditions.

Right-of-Way, Rights-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 Conservation Areas (RCAs): RCAs are portions of watersheds where riparian dependent resources receive primary emphasis, and management activities are subject to specific guidelines. The default RCA widths apply along all streams, except where site specific analysis supports modification.

- **Category 1 – Fish bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

- **Category 2 – Permanently flowing non-fish bearing streams:** RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edges of the riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.
- **Category 3 - Ponds, lakes, reservoirs and wetlands greater than 1 acre:** RCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil,-to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.
- **Category 4 – Seasonally flowing or intermittent streams, wetlands less that 1 acre:** This category includes features with high variability in size and site-specific characteristics. At a minimum, the RCAs must include the area from the edges of the stream channel or wetland, to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.
- **Category 5 - Non-forested rangeland ecosystems**: the RCA width for permanent flowing streams in categories 1 and 2 is the extent of the 100 year floodplain.

Riparian Ecosystem: Plant communities contiguous to and affected by surface and subsurface water. Riparian areas are usually transitional between water bodies and uplands.

Road: A motor vehicle travel way over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary (36 CFR 212.1).

Road Decommissioning: activities that result in the stabilization and restoration of unneeded roads to a more natural state.

Road Improvement: Activities that result in an increase of an existing traffic service level, expands its capacity, or changes its original design function.

Road Maintenance: The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Road Obliteration: Completely eliminating the roadbed by restoring natural contours and slopes; a type of decommissioning treatment.

Road Storage (Maintenance Level 1): Roads remain on the Forest transportation system and would be available for use in the long term. Closed to vehicular traffic but may be open or suitable to non-motorized traffic. Basic maintenance is preformed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities.

Rustic: Rustic refers to conditions or facilities that are lacking refinement, polish or sophistication. Simple, plain, rough surface or irregular.

Salvage: Removal of trees, which are dead or in imminent danger of being killed or damaged by injurious agents other than competition between trees, to recover economic value that would otherwise be lost.

Sanitation Harvest: The removal of trees to improve stand health by stopping or reducing actual or anticipated spread of insects and disease.

Scenery Management System: Is a tool for integrating the benefits, values, desires and preferences regarding aesthetics and scenery for all levels of management planning. It provides an overall framework for the inventory, analysis, and management of scenery on National Forest Land.

Snag: A standing, dead tree.

Species of Concern: Species for which the Responsible Official determines that management actions may be necessary to prevent listing under the Endangered Species Act.

Species of Interest: Species for which the Responsible Official determines that management actions may be necessary or desirable to achieve ecological or other multiple-use objectives.

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.

Suitability: Areas of National Forest System lands are classified as “generally suitable,” or “generally not suitable,” for various uses. The classification of suitability is guidance for project and activity decision-making

Sustainability: Satisfying present needs without compromising the ability of future generations to meet their needs.

System Roads (National Forest System Road, Forest Road): A classified forest road under the jurisdiction of the Forest Service. The term "National Forest System roads" is synonymous with the term "forest development roads".

System Trails (National Forest System Trail, Forest Trail): Trails wholly or partly within or adjacent to and serving, the National Forests and other areas administered by the Forest Service that have been included in the Forest Transportation Atlas.

Temporary Road: a road necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road and that is not included in a forest transportation atlas.

Thinning: (a) The cutting down and/or removing of trees from a forest to lessen the chance of a ground fire becoming a crown fire; a method of preparing an area so that a prescribed fire can be more easily controlled. Thinning influences the available amount of fuel and fuel management, and it can indirectly affect fuel moisture content and surface wind speeds. (b) A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.

Threatened Species: -- any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Timber Harvest: The removal of trees for wood fiber utilization and other multiple-use purposes.

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 Sale Program Quantity (TSPQ): The estimated output of timber from the plan area. This estimate is displayed as an average annual cubic foot output for a decade. It includes projected outputs from lands generally suitable for timber harvest. The projected timber outputs reflect past and projected budget levels and organizational capacity to achieve the desired conditions and objectives in the plan.

Total Maximum Daily Load (TMDL): A TMDL is the total amount of a pollutant that a water body may receive from all sources without exceeding water quality standards. A TMDL can also be defined as a reduction in pollutant loading that results in meeting water quality standards

Transportation system (Forest Transportation System): The system of National Forest system roads, National Forest System trails, and airfields on National Forest System lands.

Unconfined Recreation: (MA1.1) Unconfined Recreation is to allow activities to take place without written restrictions or physical constraints.

User created trail (Unauthorized road or trail): A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas.

Water Quality Standard: A provision of state, Tribal, or territorial (or in some cases, federal) law which defines the water quality goals for a waterbody or segment. Standards consist of designated uses, water quality criteria (both numeric and narrative), as well as anti-degradation policies and implementation procedures.

Watershed Restoration: Actions that help a stream, river, or watershed move toward desired conditions. Watershed restoration work may include actions such as fish barrier removal, road obliteration, streambank stabilization, or riparian planting.

Wilderness: See "Designated Wilderness" and "Recommended Wilderness."

Wilderness Study: An analysis to determine an area's appropriateness, cost, and benefits for addition to the National Wilderness Preservation System.

Wildfire: An unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.

Wildland: An area in which development is essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

Wildland Fire: Any non-structure fire that occurs in the wildland. Three distinct types of wildland fire have been defined and include: wildfire, wildland fire use, and prescribed fire.

Wildland Fire Implementation Plan (WFIP): A progressively developed assessment and operational management plan that documents the analysis and describes the appropriate management response for a wildland fire.

Wildland Fire Use: The application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives in pre-defined, designated areas outlined in Fire Management Plans. Operational management is described in the Wildland Fire Implementation Plan (WFIP).

Wildland Urban Interface (WUI): The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. Because of their location, these structures are extremely vulnerable to fire should an ignition occur in the surrounding area.

World-Class: Being of highest caliber in the world.