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

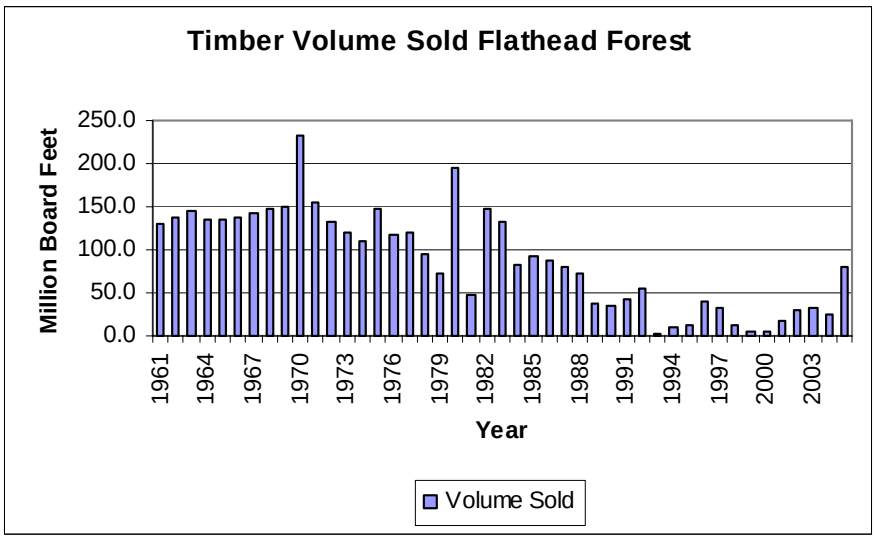
The Flathead National Forest has a long history of providing forest products to meet local and national needs. For more than a century, the Flathead valley was the center of a flourishing forest products industry that created jobs and products that were a dominant feature of the local economy. This continued 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.