

# Chapter 2 Alternatives

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## Key Terms

**Allowable Sale Quantity (ASQ)** - The maximum amount of timber that may be sold over a ten-year planning period from NFS land that is deemed appropriate for timber management.

**Alternative theme** – The overall management approach of an alternative that sets it apart from other alternatives.

**Ecosystem objectives** – Goals for forest vegetation in terms of the species in a stand, diversity of forest types, and age classes. Ecosystem objectives are listed in each Proposed Forest Plan for the Preferred Alternative.

**Guidelines** - Management direction in a Forest Plan. A preferable activity used to reach desired conditions and objectives. Adherence is advisable, rather than mandatory (compare to *Standard*). A project can be authorized if it does not meet an applicable guideline, but the rationale for it must be documented.

**Management Areas (MA)** - A portion of a landscape with similar management objectives and a common management prescription. An area of common management direction that differs from neighboring areas. Both Forests are divided into MAs. The Proposed Forest Plans describe specific direction for each MA in management practices, standards, and guidelines.

**Minimum Management Requirements** – Minimum standards that forest management must meet by law. Minimum management requirements are designed to protect resources and ensure sustainability.

**Natural-appearing** – The existing natural character of the landscape is integrated into management activities, such as harvesting, by matching the size, shape, and extent of management activities to what occurs naturally. The landscape shows few signs of forest management activities, however the effects of naturally occurring disturbances (fire or windstorm) may be noticeable.

**Outcome** – The condition of landscapes resulting from Forest Service policies and plans.

**Outputs** – Goods, services, and uses that the Chippewa or Superior National Forest provide. Outputs are both market and non-market products.

**Preferred Alternative** – The alternative that the Regional Forester currently prefers for implementation.

**Proposed Forest Plans** – The Forest Service proposal for new, revised Forest Plans that accompany this EIS. Two Proposed Forest Plans were developed, one for the Chippewa and one for the Superior National Forest.

**Record of Decision** – The document that publicly and officially discloses the responsible official's decision on which alternative evaluated in the EIS will be implemented.

**Scoping** – Identifying and focusing attention on important matters early in an analysis. The scoping process determines the scope and significance of a proposed action, the level of analysis that is required, the data that is needed, and the level of public participation that is appropriate. Scoping involves soliciting input from the public, internally, and other agencies.

**Standards** - Management direction in a Forest Plan. Binding limitations to be placed on management activities on the Forests. They are designed to meet the desired conditions and objectives. Adherence is mandatory. A project cannot be authorized if it does not meet the minimum in an applicable standard unless the forest plan is amended to modify, remove, or waive the standard.

## 2.1 INTRODUCTION

Alternatives provide a framework for analyzing different ways of meeting the purpose and need and for addressing the issues discussed in Chapter 1.

In Forest Plan revision, each alternative has a different approach to managing natural resources on the two National Forests. The alternative that is selected in the Records of Decision will be a management strategy that guides all natural resource management activities and establishes management direction for the Forests. The Proposed Forest Plans are based on the preferred alternative.

This chapter describes and compares the alternatives considered for the Proposed Forest Plans. The heart of this chapter is to sharply define the differences between the alternatives, especially in how their environmental impacts differ.

This chapter is divided into sections:

- Developing alternatives
  - Process
  - Alternatives considered but eliminated from detailed study
- Elements common to all alternatives
  - Laws, regulations, and policies
  - Landscape Ecosystems
  - Management Areas
- Description of the alternatives considered in detail
- Comparison of the alternatives
  - Activities and outputs
  - Environmental impacts
- Preferred alternative

## 2.2 DEVELOPING ALTERNATIVES

### 2.2.1 Process

In 1997, the Forest Service issued a Notice of Intent (NOI) to revise the current Forest Plans. The NOI informed the public about the formal revision process. An initial proposal of how to change the current Forest Plans was made in the NOI. The Forests solicited comments or suggestions from the public on the proposal for revising the Forest Plans and possible alternatives for addressing the issues associated with the proposal. These public comments helped frame the alternatives and analysis in this Draft EIS.

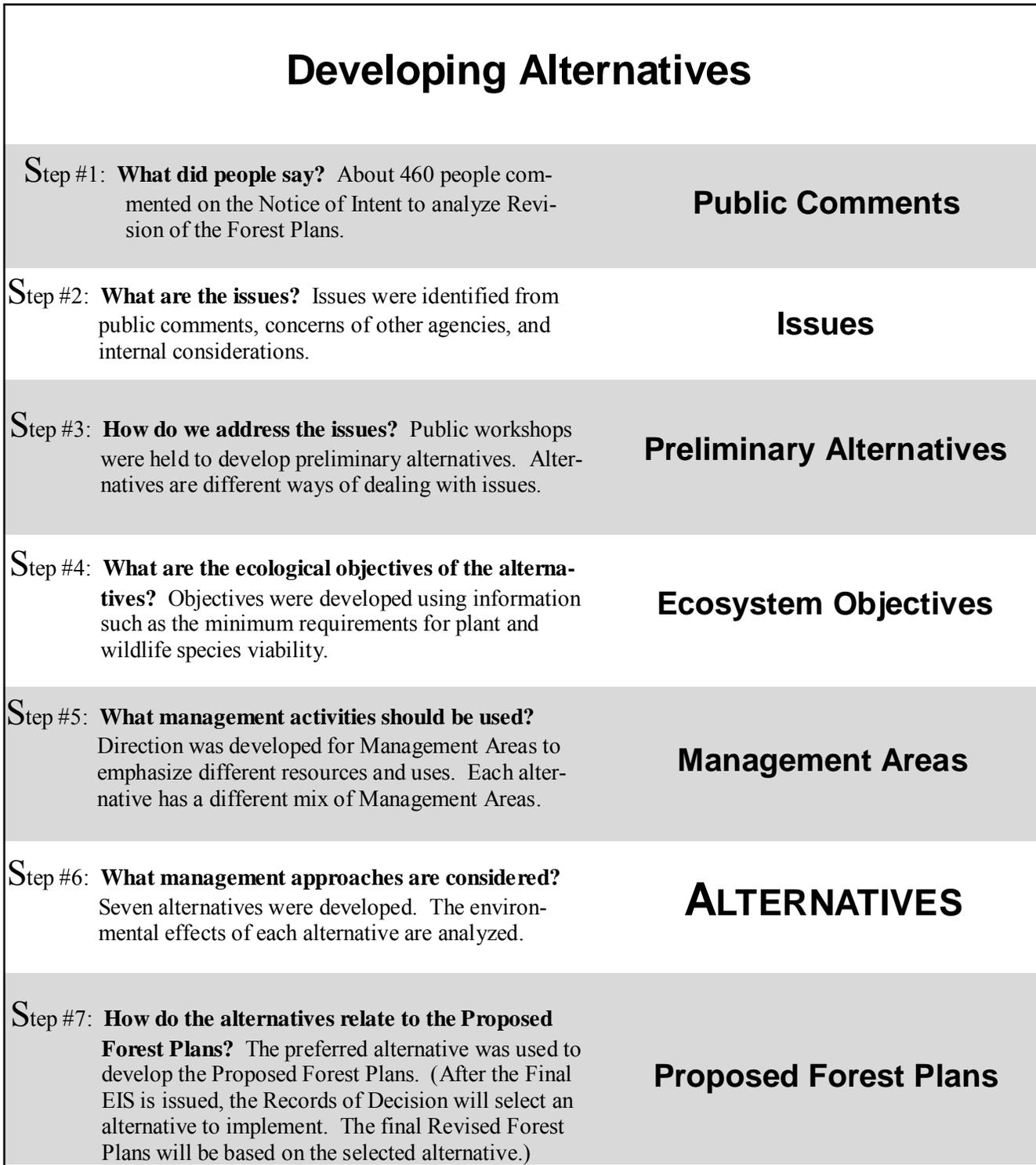
Figure 2-1 illustrates the alternative development process. Scoping and issue development were described in Chapter 1. Appendix A also describes the public involvement process in more detail.

Preliminary themes for alternatives were developed for public and employee workshops in 1998. These themes were designed to address the issues and concerns identified early on in the planning process. Workshop participants further developed the themes, helping the National Forest formulate alternatives. While all alternatives provide a wide range of multiple uses, goods and services, they address the issues in different ways. The result was six alternatives in addition to the No Action Alternative, which would carry forward the emphasis of the current Forest Plans.

All alternatives would respect American Indians' right to hunt, fish, and gather that were retained by treaty.

(MA) was developed, for instance recreation or timber production. For each alternative, MAs were distributed spatially across the two National Forests.

Management emphasis for the management areas



**Figure 2-1. Developing Alternatives for Forest Plan Revision**

The National Forest Management Act requires the development and analysis of a broad range of reasonable alternatives that respond to the issues and concerns identified during the planning process. Alternatives must also address the purpose and need for change. The Chippewa and Superior NFs considered a broad range of reasonable alternatives based on the following criteria:

- Alternatives are distributed between minimum and maximum benchmarks (see Appendix B).
- Alternatives respond to the issues raised during the planning process.
- Alternatives respond to regional management direction.
- A range of outcomes and outputs would be result from the alternatives.

## 2.2.2 Alternatives Eliminated from Detailed Study

Twenty-one alternatives were considered during the initial analysis process. Some of the alternatives considered were developed internally and some were proposed by outside groups. Some of these alternatives had similar themes, so they were combined together. Other alternatives were eliminated from detailed study. The following briefly describes each of the alternatives that were not studied in detail and discusses the reason for their elimination. These alternatives are labeled by their major emphasis.

### Alternatives with Very High Timber Yield

Several alternatives that were submitted emphasized very high levels of timber harvest, in some cases maximizing sustainable timber harvest. These alternatives, as submitted, were eliminated from detailed consideration because they emphasized timber production to such an extent that management for other resources and resource protection would fall below acceptable levels. Examples of this include modeling harvest on all forested acres outside the BWCA Wilderness, rather than just acres suitable for timber management. The National Forest

Management Act, Multiple Use –Sustained Yield Act, Endangered Species Act, and other laws require that national forests be managed for a variety of uses and provide resource protections.

Many aspects of these alternatives were used, along with modifications and were incorporated into Alternative C, which was considered in detail.

### No-harvest Alternative

An alternative was proposed that would essentially eliminate harvesting on the Superior NF, and extremely limit harvesting on the Chippewa NF. The proposal called for a significant amount of restoration of pines and allowed for some harvest treatments in the first decade to provide for such restoration.

This alternative, as submitted, was eliminated from detailed consideration for several reasons. It was not realistically possible to accomplish the levels of restoration within the first decade. In later decades, this alternative did not provide for representation of young age classes on the landscape.

This alternative was modified to provide more active management in the first two decades to facilitate a higher level of ecological restoration. The modified alternative also included a continuation of harvest, albeit at low levels, in decades 3 through 10 to ensure representation of young age classes. The alternative with these modifications was considered in detail as Alternative D.

### Watershed Management Emphasis Alternative

The theme for this alternative is based upon protecting, enhancing, and restoring water, aquatic, riparian, and wetland resources. This alternative was eliminated from further study because it focused emphasis only on the water or wetland portions of the National Forests and provided no management emphasis to the upland, terrestrial portions; therefore, it was not a complete alternative and did not address much of the purpose and need for change and would not respond to many of the issues raised during the planning process.

However, many of the watershed management proposals from this alternative were incorporated into the alternatives considered in detail.

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## 2.3 ELEMENTS COMMON TO ALL ALTERNATIVES

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Seven alternatives were studied in detail. They have a number of things in common.

### 2.3.1 Laws, Regulations, and Policies

All alternatives were designed to comply with applicable laws, regulations, and policies. All the alternatives:

- Meet the minimum management requirements of 36 CFR 219.27. These requirements guide the development, analysis, approval, implementation, monitoring, and evaluation of forest plans, including:
  - Resource protection
  - Vegetative manipulations
  - Silvicultural practices
  - Even-aged management
  - Riparian areas
  - Soil and water protection
  - Diversity
- Recognize the unique status of American Indians and their rights retained by trust and treaty with the United States, including consultation requirements
- Meet, as a minimum, the Minnesota Forest Resource Council site-specific guidelines for forest management
- Continue current management of the Boundary Waters Canoe Area Wilderness on the Superior NF in accordance with wilderness legislation and the Boundary Waters Canoe Area Plan
- All alternatives meet minimum health and safety standards

Fire management plans for each Forest will continue to be developed and updated on a yearly basis.

### 2.3.2 Wild and Scenic Rivers

All alternatives would manage the seven rivers determined eligible in a manner that would protect their free flow, outstanding remarkable values, and classification.

### 2.3.3 Landscape Ecosystems

As we learn more about the land and resources we manage, we try to improve our decision making process. We build on the requirements for national forest management with the best science available. A new component to national forest management in this forest plan revision process is the landscape ecosystem classification. Landscape ecosystems can best be described as the land and vegetation systems that occur naturally on the landscape.

Information on landscape ecosystems is an essential tool in understanding and managing the National Forests within the larger landscape. It helps us to predict how different ecosystems will react to natural disturbances and management treatments, to define desired conditions, and to plan for ecosystem sustainability. All alternatives use the concept of Landscape Ecosystems, except Alternative A. Sections 3.1 and 3.2 in Chapter 3 and Appendix G of this EIS explain landscape ecosystems in more detail.

Landscape ecosystems (LEs) are fixed on the landscape, however desired conditions for vegetation in the LEs do vary by alternative (Appendix G). The following ecosystem objectives have been developed for each LE for each alternative:

- Vegetation composition – Percent of an LE dominated by a forest type
- Age classes – Percent of an LE dominated by an age class
- Species diversity – Percent of an LE dominated by a tree species

Each alternative, except Alternative A, has a goal of a minimum of 10% representation of RNV (see new information discussion in Chapter 1 and Appendix G). This amount is based on the National Forest administered lands within each LE and not all the acres within each LE which would include all ownerships. The National Forest administered lands are usually less than 40% of each of the Landscape Ecosystem acreage within each respective Ecological Section. The jack pine-black spruce LE is 83% National Forest lands, most within the Wilderness.

While LEs are the biological and physical information used in forest planning, Management Areas (management direction for a specific location) are the social information used in planning, such as what human uses are emphasized. While LEs do not vary by alternative, the way Management Areas are layered on top of landscape ecosystems does vary by alternative.

Natural resource managers will use both Management Area direction and knowledge of landscape ecosystems to develop site-level prescriptions.

### 2.3.4 Management Areas

Each alternative has a different mix of management area (MA), or management direction. MAs are also applied to different spatial areas in the different alternatives (Figures 2-2 and 2-3).

Some of the MAs in the revised Forest Plans have not changed from the current Plans. The management direction for the following MAs have not changed substantially from the current Plans:

- Pristine Wilderness
- Primitive Wilderness
- Semi-primitive Non-motorized Wilderness
- Semi-primitive Motorized Wilderness
- Eligible Wild, Scenic, and Recreational Rivers
- Experimental Forest
- Research Natural Areas

MAs were distributed in each alternative to reflect the theme of the alternative. Therefore, the land area of the Forests is allocated to MAs differently in each alternative (Tables 2-1 through 2-7 and Figures 2-2 and 2-3).

The following is a brief description of each MA. Each MA has a different mix of resource uses. The descriptions here only highlight the predominant use in the MA and list the multiple uses of each MA. The emphasis in each area is not an exclusive use. A detailed description and desired condition for each MA can be found in Chapter 3 of the Revised Forest Plans.

### General Forest Emphasis

There are two management areas with a general forest emphasis: General Forest MA and General Forest - Longer Rotation MA. The amount of land in the general forest areas is plentiful in most alternatives because it includes the broadest variety of uses. These areas are managed to maintain ecosystem integrity while providing a variety of sustainable economic and social uses and values. Management emphasizes maintaining a variety of vegetative communities, age classes, and habitats that are appropriate within landscape ecosystems. These areas are also managed for forest products, and occasionally there is a moderate to high level of human interaction on the landscape.

Timber management is one of the primary activities in these MAs. When trees are harvested, they provide commercial pulpwood, sawtimber, and fiber at sustainable levels. Other wood products are also available, such as firewood and boughs. Items that are traditionally gathered, including birch bark and pinecones, are available within these MAs.

Other activities, such as recreation, are also featured in these two MAs. A wide variety of recreation

opportunities is provided. Examples include hunting, recreation motor vehicle use, hiking, camping, and water-based recreation. Some roads and developed recreation facilities are present, such as campgrounds and trails. Higher maintenance level roads that are developed for forest management activities would likely stay open for public use.

Recreational activities occur in natural-appearing forest surroundings that are modified by forest management activities. The visual effects of timber management are often noticeable and may sometimes dominate the landscape. The landscape is diverse with a combination of continuous canopy, open canopy, and areas of young regenerating forest. Openings are shaped to follow natural landforms or features, with sizes typically ranging from 10 to 100 acres and occasionally up to 1,000 acres.

### **General Forest MA**

The range of rotation ages for each forest type is determined by the objectives for landscape ecosystems (see Chapter 3 of the revised Forest Plans). In the General Forest MA, timber harvest occurs at all rotation ages within the range set by the landscape ecosystem objectives.

Forest vegetation communities are managed with practices that mimic ecosystem processes, mainly stand replacement disturbance. A full range of silvicultural practices is used. However, compared to the General Forest - Longer Rotation MA, there is more clearcutting.

Management activities generally create young, even-aged forests. A mosaic of young to mature (1-150 years) trees dominates these areas. Compared to other MAs, there will be the most young forest and the largest sized timber harvest units.

Management-ignited fire is used primarily to prepare sites for regenerating new forests and to reduce woody fuel that could cause wildfires.

### **General Forest - Longer Rotation MA**

In the General Forest - Longer Rotation MA, final harvest occurs more often at extended rotation ages than at minimum rotation ages for some forest types. The range of rotation ages for each forest type is determined by the management objectives for each

landscape ecosystem (see Chapter 2 of the revised Forest Plans).

Forest vegetation communities are managed with practices that mimic both stand replacement disturbance and less severe stand maintenance disturbance. A full range of silvicultural practices is employed. However, compared to the General Forest MA, there is more partial cutting. When clearcutting is used in the General Forest - Longer Rotation MA, it would generally be at an extended rotation age.

Management activities leave both young, even-aged and older, multi-aged forests on the landscape. A mosaic of young to old (1-250 years) trees dominates these areas.

Management-ignited fire is used to mimic natural disturbances on the landscape to maintain vegetation communities. Fire is also used as a tool to prepare sites for regenerating new forests and to reduce woody fuel that could cause wildfires.

Compared to the General Forest MA, forest management activities in the General Forest - Longer Rotation MA would generally be less noticeable to visitors.

## **Recreation and Scenic Emphasis**

Two management areas emphasize recreation and scenic resources:

- Recreation Use in a Scenic Landscape MA
- Eligible Scenic River (Chippewa NF) and Eligible Wild, Scenic, and Recreational River (Superior NF) MAs

Concentrated recreation use is primarily emphasized in these areas. Facilities and access may be highly developed, resulting in a high degree of user interaction. There may be paved roads and buildings. These areas provide many recreational facilities, including day use areas, resorts, visitor centers, trails, and camping at developed campgrounds.

Ecosystems are managed to provide a predominantly natural-appearing landscape that may be slightly modified by forest management activities. These areas emphasize a large tree and old forest character. Management activities, such as road construction, enhance recreation and aesthetic objectives, such as

vistas, and may be noticeable to visitors. Timber harvest, management-ignited fire, tree planting, and other management techniques may be used to meet recreation and scenic resource objectives.

### **Recreation Use in a Scenic Landscape MA**

Low- to high-density recreation occurs in these large geographic areas. Viewsheds are managed for scenic beauty and big-tree character. Generally, these areas offer a natural-appearing forest setting with some facility and trail development and roads for recreation. These areas also provide wildlife habitat to enhance opportunities for watching wildlife.

### **Eligible Scenic River MA (CNF) and Eligible Wild, Scenic, and Recreational Rivers MA (SNF)**

These areas provide for the interim protection of river corridors identified as Wild, Scenic, or Recreational River candidates. Under the interim protection, management works toward maintaining the outstanding values of the river corridors. Areas are managed as a range of settings from primitive to developed recreation areas, depending on the potential river designation.

### **Semi-primitive Recreation Emphasis**

Three management areas emphasize semi-primitive recreation:

- Semi-primitive Non-motorized Recreation MA
- Semi-primitive Motorized Recreation MA
- Semi-primitive Motorized and Non-motorized Recreation MA

These areas provide opportunities for low-density, undeveloped recreation. Examples include: walking, hiking, cross-country skiing, snowshoeing, trail running, canoeing, fishing, and horseback riding. The motorized areas also provide trail-riding opportunities for recreation motor vehicle (RMV) use.

Recreational activities occur in natural-appearing environments that may be slightly modified by forest management activities. Interaction among recreational users is low, but there is often evidence of other users.

Management activities in these areas enhance recreation and scenic objectives and may be occasionally noticeable to visitors. These management activities may include developing primitive campsites, harvesting timber, using management-ignited fire, and planting trees.

Ecosystems are managed to provide a predominantly natural-appearing landscape, generally emphasizing large trees and older forest with a continuous forest canopy.

### **Semi-primitive Motorized Recreation MA**

This MA emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings where motorized use is allowed. Most recreation use occurs on lakes, trails, portages, and low standard roads.

### **Semi-primitive Non-motorized Recreation MA**

This MA emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings where motorized use is not allowed. Most of the non-motorized recreation use occurs on lakes, trails, portages, and low standard roads.

### **Semi-primitive Motorized and Non-motorized Recreation MA**

This MA would only be on the Chippewa National Forest in Alternative D. These areas provide recreational opportunities for either motorized or non-motorized travel. Timber harvest is used to return areas to their native cover types and maintain cover types. Roads are low standard and are available for some RMV use.

### **Conservation and Special Features Emphasis**

Four management areas emphasize conservation and special features:

- Unique Biological MA and Unique Biological, Geological, or Historical Areas MA
- Special Management Complexes MA
- Minimum Management Natural Areas MA
- Riparian Emphasis Areas MA.

Management in these areas focuses on conserving special social or ecological features of the Forest. Management is generally limited but sometimes evident. Timber harvest and other activities may be allowed if needed to achieve the objectives of the area. Recreation and access opportunities, values, and benefits are different in each MA. Recreation activities occur in a range of surroundings from a natural-appearing forest setting with minimal development and human modification to highly developed recreation settings.

### **Unique Biological MA (SNF) and Unique Biological, Aquatic, Geological, or Historical Areas MA (CNF)**

Unique biological, aquatic geological, or historical areas are preserved, including a National Natural Landmark on the Superior National Forest. In some areas, the focus is on interpreting features. Recreation facilities are provided only when needed to interpret or protect the resource. Dispersed recreation occurs but may be discouraged.

### **Special Management Complexes MA**

These areas provide for large areas of contiguous, older forests. Terrestrial and riparian ecosystems are shaped by naturally occurring ecological processes or management actions that mimic those processes. Management activities, such as tree planting and timber harvesting, may be used to maintain, enhance, or restore species composition and forest structure. Dispersed recreation activities generally occur in semi-primitive settings. Some areas may have existing developed campgrounds and trails.

### **Minimum Management Natural Areas MA**

Natural processes shape terrestrial and riparian ecosystems, and fire is the main management tool. Road networks are substantially reduced compared to the current road density. Recreation activities occur in primarily semi-primitive, non-motorized settings. This MA only applies to Alternative D.

### **Riparian Emphasis Areas MA**

This MA emphasizes riparian values and functions. Riparian resources are restored, protected, and enhanced in areas where ecosystem processes are sensitive to degradation. Dispersed recreation

activities occur in semi-primitive settings. There may also be highly developed campgrounds and trails in natural-appearing surroundings that are somewhat modified by forest management activities.

## **Research Emphasis**

Three management areas emphasize research:

- Experimental Forests MA
- Research Natural Areas MA (existing)
- Potential Research Natural Areas MA.

### **Experimental Forests MA**

These areas are formally designated as Experimental Forests. The focus is on researching vegetation management techniques. Timber products are incidental to the primary objective. Generally no developed recreation facilities will be provided. Dispersed recreation use occurs but is generally discouraged.

### **Research Natural Areas MA**

These areas are the existing formally designated Research Natural Areas (RNA). The focus is on preserving and maintaining areas for ecological research, observation, genetic conservation, monitoring, and educational activities. Forests are not managed for timber products, and harvesting is not allowed. No recreation facilities are provided. Dispersed recreation use occurs but is generally discouraged.

### **Potential Research Natural Areas MA**

These areas are recommended to be Research Natural Areas. They will be managed similarly to Research Natural Areas until they are formally designated as Research Natural Areas.

## **Wilderness Emphasis**

Five management areas emphasize wilderness:

- Pristine Wilderness MA
- Primitive Wilderness MA
- Semi-primitive Non-motorized Wilderness MA

- Semi-primitive Motorized Wilderness MA
- Wilderness Study Areas MA

Wilderness MAs are federally designated wilderness or areas that have been recommended for wilderness study designations.

Ecosystems are managed to allow ecological processes such as fire, insects, and disease to operate relatively free from human influence. Diverse landscapes result from naturally occurring succession and natural disturbance. Vegetation is managed only to protect wilderness values or to protect adjacent property from fire or pests.

### **Pristine Wilderness MA**

These areas are non-motorized where activities of contemporary humans are not noticeable. Trails, portages, and campsites are not constructed or maintained. Visitors rarely encounter each other.

### **Primitive Wilderness MA**

These areas are non-motorized and away from main travel routes, but activities of contemporary humans are somewhat noticeable. Campsites have latrines and firegrates. Portages and trails are maintained. Visitors infrequently encounter each other.

### **Semi-primitive Non-motorized Wilderness MA**

These are non-motorized areas near main travel routes. Campsites have latrines and firegrates. Portages and trails are constructed and maintained but are on main travel routes. Visitors encounter each other with moderate frequency.

### **Semi-primitive Motorized Wilderness MA**

Based on the BWCA Act, these are the only places where motorized watercraft are permitted in wilderness. Campsites have latrines and firegrates. Portages and trails are constructed and maintained and are along main travel routes. The frequency of encounters with others is moderate to high.

### **Wilderness Study Areas MA**

These areas are recommended for study as additions to the National Wilderness Preservation System. Wilderness Study Areas would be managed in a way that would allow them to retain their eligibility as wilderness. They would be semi-primitive non-motorized areas, so there would be minimal encounters with others, minimal evidence of human activities, and minimal facilities provided for visitors.

### **Minimum Investment Emphasis MA**

There is management area that emphasizes minimum investment, the Minimum Investment Emphasis MA. These are areas where NFS land is sparse and where Forest Service management and investment are minimal. These areas may be a priority for a land exchange for other ownership. Ecosystems are managed for protecting and maintaining environmental values and protecting public health and safety.

This MA only applies to Alternative A on the Superior NF.

## 2.4 ALTERNATIVES CONSIDERED IN DETAIL

Each alternative will be presented in the following format:

- Theme of the alternative
- How the alternative addresses issues
- Acres in each Management Area

How each management area would be distributed across the two Forests is shown in Figure 2-2 for the Chippewa NF and in Figure 2-3 for the Superior NF. (These two maps are not bound in the Draft EIS document.)

### 2.4.1 Alternative A

#### Theme

Alternative A is the ‘no action’ alternative. In forest plan revision, ‘no action’ means that guidance for the next ten years would generally be the same as the management direction in the amended current Forest Plans. Implementation would also use current science.

Alternative A emphasizes managing the forests to provide timber as well as deer and moose habitat, and developed and undeveloped recreational opportunities in both motorized and non-motorized settings.

This alternative would maintain the existing higher standards roads while decommissioning some of the existing low standard roads. New low standard roads would also be constructed.

#### How Alternative A Addresses the Issues

##### Forest Vegetation

*Forest Age & Composition* Management activities would primarily result in early successional forests, such as aspen-dominated forests. A young forest

condition would be emphasized. Forest age and composition objectives were determined forest-wide for National Forest lands, rather than by LE. This alternative does not use the LE approach.

Standards in the Draft Revised Forest Plans would provide for older forest. Research Natural Areas and other stands that are not scheduled for harvest would also provide old growth on both Forests. Some of the extended rotation stands on the Chippewa and the BWCAW and Shipstead-Newton-Nolan zones on the Superior would also contribute old-growth forest. No Special Management Complexes MAs (SMCs) would be designated in this alternative on either Forest. Standards and guidelines in the revised Forest Plans would protect rare natural resources on a site-by-site basis.

*Forest Spatial Patterns* A variety of forest patch sizes would be provided. Temporary openings resulting from timber management would be limited to 40 acres on the Chippewa National Forest and up to 200 acres in some areas on the Superior National Forest. Revised Forest Plans would address forest patch size with standards and guidelines for wildlife.

##### Wildlife Habitat

This alternative would provide habitat for a wide variety of species. Habitat for deer, ruffed grouse, and moose would be a focus. Outside the BWCAW, this alternative would emphasize habitat for species associated with young to mature (1-60 years) forests that are aspen-dominated, however standards and guidelines would provide for other wildlife species. Threatened, Endangered, and Sensitive species would be protected and maintained. Research Natural Areas (RNA) provide habitat for some rare natural resources.

##### Timber

*Uneven-aged vs. Even-aged Prescriptions* Even-aged management would be emphasized, and clearcutting would be common.

**Timber Supply** Alternative A would emphasize pulpwood production over sawtimber. The allowable sale quantity (ASQ) in first decade would be 70 million boardfeet (MMBF) annually on the Chippewa NF and 100 MMBF annually on the Superior NF. These harvest levels are approximately the same ASQ as the current Forest Plan for the Superior NF and slightly lower than the current Chippewa NF Forest

Plan.

### Fire

Management-ignited fire would be used mainly for fuel reduction and site preparation for reforestation, rather than as a tool to mimic natural disturbance.

**Table 2-1. Distribution of Management Areas in Alternative A**

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	621,899	1,160,990
General Forest - Longer Rotation	0	0
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	3025	11,331
Eligible Scenic Rivers	1,537	NA
Eligible Wild, Scenic, and Recreational River‡	NA	28,457
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	0	39,072
Semi-primitive Non-motorized Recreation	12,365	0
Semi-primitive Non-motorized & Motorized Recreation	0	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	8,105	NA
Unique Biological Areas	NA	514
Special Management Complexes	0	0
Minimum Management Natural Areas	0	0
Riparian Emphasis Areas	0	0
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,172
Potential Research Natural Areas	769	800
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	0	0
<b>Minimum Investment Emphasis</b>		
Minimum Investment	0	47,420
<b>Total*</b>	<b>658,024</b>	<b>2,208,413</b>

‡ On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA.

\* Totals do not exactly match among alternatives due to rounding.

### Water Quality & Aquatic Communities

**Watershed Health** Activities to improve or restore watershed health would not be emphasized and would tend to be site-focused.

### Riparian Areas and Fish Habitat

In riparian areas, timber management would be allowed, and the potential negative effects of harvesting in riparian areas would be limited through mitigation. Mitigation measures would generally be determined during site-level analysis. Fish habitat would be managed using a mitigative approach designed to maintain or protect fish populations.

### Special Designations

No new areas would be recommended for wilderness study designation. One additional RNA on the Superior NF and no additional RNAs on the Chippewa NF would be recommended (listed as a candidate in the current Forest Plan).

### Recreation

**Scenic Quality** Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, scenic integrity would be emphasized in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would be less of an emphasis on scenic integrity in forest management decisions. Most of the

forest appears stratified by a variety of tree ages, resulting in a managed, natural appearance.

#### ***Recreational Opportunities and Forest Settings***

A variety of recreational opportunities would be provided, but activities associated with rivers and lakes would be emphasized. Compared to the other alternatives, more access to recreational opportunities on roads and trails would be provided. There would also be more developed recreation settings with facilities such as campgrounds, picnic areas, and boat launches.

***Recreational Motor Vehicles*** The current trail system would be maintained with some opportunities for additional ATV and snowmobile trails. RMV use on some low maintenance level roads would be allowed. All terrain vehicles (ATV) and snowmobiles would be allowed to travel cross-country on the Superior, but motorized cross-country travel would be prohibited on the Chippewa National Forest.

***Water Access*** Current access sites would generally be maintained. Potential new water access sites would have facilities at a variety of development levels with some emphasis on high development levels such as double-lane drive-down concrete plank ramps.

### **Economic & Social Sustainability**

#### ***Economic Sustainability of Local Communities***

Commodities that reflect the alternative's theme of providing aspen pulpwood and a variety of recreational opportunities are provided in an environmentally acceptable manner to contribute to the economic sustainability of local communities.

The amount of timber volume available to sell increases from what is currently offered, resulting in gains in employment, salary, and payments to counties. Recreation-related contributions to the economies of communities would remain fairly constant with the existing condition.

***Social Sustainability of Local Communities*** As land management continues to emphasize aspen and associated game species social sustainability would continue to evolve following a path similar to the current trends. Management of special places would create conditions that would cause sites that rely on an older forest character to become scarcer. Large-scale culturally and traditionally important areas would continue to be managed intensively, with clearcutting

a common vegetation management tool. The result is a younger forest. Site-level historical and cultural areas would be protected. Access into the Forests via roads would continue to be at a high level, with some road closures and decommissioning expected. Communities would not expect a significant shift in current ties to the National Forests.

## **2.4.2 Alternative B**

### **Theme**

Alternative B emphasizes restoring older, mixed forests and coniferous species. Protecting unique resources is also emphasized more in this alternative than other alternatives.

Timber management and other commercial resource management would be secondary to increasing the amount of older forest.

This alternative would maintain the existing higher standards roads while decommissioning some of the existing low standard roads. Some new low standard roads would also be constructed.

Developed and undeveloped recreational opportunities in a scenic landscape would be emphasized.

### **How Alternative B Addresses the Issues**

#### **Forest Vegetation**

***Forest Age & Composition*** Vegetation communities would be managed for a representation of all forest ages but there would be an emphasis on mature and older forests. Forest age and composition objectives were determined by LE, striving to achieve the upper end of the range of natural variation for the older vegetation growth stages considering only National Forest lands. Old-growth forest areas would be specifically designated. Mixed forests and conifer species would be emphasized.

***Forest Spatial Patterns*** Large, continuous forest patches would be emphasized. There would be more

connectivity among similar habitats compared to the other alternatives. The limit on temporary opening size would be 1,000 acres.

### **Wildlife Habitat**

Provides habitat for a wide variety of species, but emphasizes habitat for species associated with older forest. The focus would be on managing landscape ecosystems, rather than maintaining and creating habitat for single species. Emphasizes maintaining, protecting, and restoring Threatened, Endangered, and Sensitive (Region 9, State and Forest "at risk") species.

### **Timber**

#### *Uneven-aged vs. Even-aged Prescriptions*

The percentage of clearcutting would be substantially reduced compared to the current proportion of harvests that are done with clearcuts, and the percentage of uneven-aged management would increase.

*Timber Supply* Pulpwood would be a dominant forest product, but there would also be an emphasis on sawtimber and specialty forest products. The ASQ would be 38 MMBF on the Chippewa NF and about 51 MMBF on the Superior NF.

### **Fire**

Where feasible based on values at risk, prescribed fire would be a tool for reinstating ecological processes on the landscape. Management-ignited fire would also be used for reducing fuel and preparing site for reforestation.

### **Water Quality & Aquatic Communities**

*Watershed Health* Alternative B places emphasis and priority on activities that improve or restore watershed health. Site-level actions would be based on needs assessed in a whole watershed context.

*Riparian Areas and Fish Habitat* Management in riparian areas would protect and enhance ecosystem functions and would consider the entire watershed when making site-level decisions. In some parts of the riparian area, timber management (including harvest) would only be allowed if it restored or enhanced ecosystem functions. Therefore, this portion of riparian areas would not be in the timber base, reducing the area where the Forests could plan to manage for timber volume. Other types of activities,

such as trails and roads, would be allowed in riparian areas.

Special importance would be given to protecting riparian areas along selected waters within the Riparian Emphasis Area MA.

The Forests would purposefully manage fish habitat by actively protecting and enhancing it. Management would be based on the potential diversity and abundance of aquatic habitat within a watershed context. This would rely heavily on associated management that enhances or restores riparian areas.

### **Special Designations**

Two areas would be recommended for wilderness study designation on the Chippewa National Forest and 12 areas would be recommended on the Superior National Forest. On the Superior National Forest, 41 additional Research Natural Areas would be recommended, and 10 would be recommended on the Chippewa National Forest.

### **Recreation**

*Scenic Quality* Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a very high emphasis on scenic integrity in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would be a high emphasis on scenic integrity in forest management decisions.

*Recreational Opportunities and Forest Settings* Alternative B emphasizes a variety of recreation opportunities in predominately semi-primitive settings. Some of these activities would include hiking, canoeing, backpacking, and some RMV. Recreation would occur in both motorized and non-motorized recreation settings.

Older forest settings would be emphasized. Recreation activities would occur in natural-appearing surroundings that are slightly modified by forest management activities.

Compared to Alternative A, there would be less access to and development of recreational facilities. Therefore, visitors would have more opportunities for experiencing remoteness, independence, closeness to nature, self-reliance with challenge, and risk.

**Recreational Motor Vehicles** The current trail system would be maintained, and there would be comparatively fewer opportunities for additional ATV and snowmobile trails than most other alternatives. RMV use on few low maintenance level and unclassified roads would be allowed, except on

unclassified roads on the Chippewa NF. Cross-country travel with OHVs would be prohibited on both National Forests. Cross-country travel with snowmobiles would be allowed in most MAs on the Superior National Forest but prohibited on the Chippewa.

**Table 2-2. Distribution of Management Areas in Alternative B**

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	0	0
General Forest - Longer Rotation	401,236	618,997
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	4,646	74,637
Eligible Scenic Rivers	1,537	NA
Eligible Wild, Scenic, and Recreational River†	NA	18,888
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	0	0
Semi-primitive Non-motorized Recreation	14,662	262,863
Semi-primitive Non-motorized & Motorized Recreation	0	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	8,105	NA
Unique Biological Areas	NA	514
Special Management Complexes	169,098	354,751
Minimum Management Natural Areas	0	0
Riparian Emphasis Areas	36,108	0
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,172
Potential Research Natural Areas	6,077	44,000
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	6,213	17,481
<b>Minimum Investment Emphasis</b>		
Minimum Investment	NA	0
<b>Total*</b>	<b>658,006</b>	<b>2,208,416</b>

† On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA.\* Totals do not exactly match among alternatives due to rounding.

**Water Access** Current access sites would be generally maintained. Existing highly developed sites on some water bodies that do not meet standards may be modified to a low or moderate level of development when practical.

Potential new water access sites would have facilities at a variety of development levels with an emphasis on low development levels such as carry-in accesses. New drive-down access ramps would not be developed on lakes where use is low.

### **Economic & Social Sustainability**

**Economic Sustainability of Local Communities** Economic resources that reflect the Alternative's theme of growing larger, older pine and hardwood trees; associated wildlife species, and a variety of less developed recreation opportunities are provided in an environmentally sustainable and acceptable manner. The resulting economic trend across the forest's associated communities would reflect a shift from aspen pulpwood, to accommodating larger pine and softwoods and shifting the recreation resources toward less developed opportunities.

The amount of timber volume available to sell remains approximately the same as the level offered by the National Forests in the past few years, resulting in a shift downward in the number of jobs, salary levels, and payments to counties. Recreation-related contributions to the economies of communities would remain fairly

constant with the existing condition.

***Social Sustainability of Local Communities*** As the character of the forest changes to an older, less developed setting, the places that people have found important would also continue to evolve over time. Some special places may already reflect the alternative goal, while other important places that may have relied on a more developed, younger forest setting will change. Large scale culturally and traditionally important areas would be managed less intensively, with much less reliance on clearcutting and significantly more partial harvests. Large areas of the Forests would be in designated specially managed area such as research management areas and special management complexes. Access to the forest would be reduced, as roads and trails are closed to motorized travel, or decommissioned. Social ties to the forests would continue, however, shifts in overall values may occur to reflect different quantities of recreational activities, types of vegetation, and wildlife species.

### 2.4.3 Alternative C

#### Theme

Alternative C emphasizes producing timber and replicating large-scale natural disturbances, such as large fires or large blowdowns. Timber harvest would be the main tool used to create large-scale disturbance. To provide for older trees and wildlife habitat, extended rotations would be used in some situations. Under Alternative C, there would be more large patches of young forest than in Alternative A.

This alternative would maintain the existing higher standards roads while decommissioning some of the existing low standard roads. New low standard roads would also be constructed.

Developed and undeveloped recreational opportunities in both motorized and non-motorized settings would be provided.

## How Alternative C Addresses the Issues

### Forest Vegetation

***Forest Age & Composition*** Early successional species, such as aspen and birch, would be emphasized, although a variety of species would be provided. Vegetation communities would be managed for a representation of all forest ages but with more young forests. Forest age and composition objectives were determined by LE for National Forest lands, striving to achieve at least a 10% representation of each vegetation growth stage shown for the natural range of variation. The percentages were applied to the National Forest lands only. Old-growth would not be formally designated but would be provided through extended rotations, age class objectives and standards and guidelines in the revised Forest Plans. Shipstead-Newton-Nolan and Wilderness would also provide older forest on the Superior National Forest.

***Forest Spatial Patterns*** A variety of forest patch sizes would be provided. The maximum limit on temporary openings would be 1,000 acres. Draft Revised Forest Plans would address forest patch size by standard and guidelines.

### Wildlife Habitat

This alternative would provide habitat for a wide variety of species, with habitat for deer, ruffed grouse, and moose as a focus. Outside the BWCAW, this alternative would emphasize habitat for species associated with young to mature (1-60 years) forests that are aspen-dominated, however standards and guidelines would provide for other wildlife species. Maintains and protects Threatened, Endangered and Sensitive species.

### Timber

***Uneven-aged vs. Even-aged Prescriptions*** Alternative C would emphasize even-aged management, and clearcutting would be common. However, uneven-aged management would also increase from current levels.

***Timber Supply*** Both pulpwood and sawtimber production would be emphasized. In the first decade, ASQ would increase substantially from current levels

to 91 MMBF annually on the Chippewa NF and 150 MMBF annually on the Superior NF. Harvest levels in the first ten years of implementation would be higher than subsequent decades in order to capture volume that would be lost to mortality due to age imbalance in the forest (the alternative would depart from a sustained yield non-declining even flow of

products).

### Fire

Fire would be used mainly for reducing fuel and preparing sites for reforestation, rather than as a tool to mimic natural disturbance.

**Table 2-3. Distribution of Management Areas in Alternative C**

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	569,275	1,155,938
General Forest - Longer Rotation	39,548	52,173
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	1,800	113,877
Eligible Scenic Rivers	1,537	NA
Eligible Wild, Scenic, and Recreational River‡	NA	2,458
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	0	39,071
Semi-primitive Non-motorized Recreation	12,364	0
Semi-primitive Non-motorized & Motorized Recreation	0	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	8,105	NA
Unique Biological Areas	NA	514
Special Management Complexes	0	0
Minimum Management Natural Areas	0	0
Riparian Emphasis Areas	14,287	0
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,172
Potential Research Natural Areas	769	800
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	0	0
<b>Minimum Investment Emphasis</b>		
Minimum Investment	NA	0
<b>Total*</b>	<b>658,009</b>	<b>2,208,412</b>

‡ On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA.

\* Totals do not exactly match among alternatives due to rounding.

### Water Quality & Aquatic Communities

*Watershed Health* Activities to improve or restore watershed health, if done, will tend to be site-focused.

*Riparian Areas* In riparian areas, timber management would be allowed, and the potential negative effects of harvesting in riparian areas would be limited through mitigation. Mitigation measures would generally be determined during site-level analysis.

*Fish Habitat* Fish habitat would be managed using a mitigative approach designed to maintain or protect populations.

### Special Designations

No additional areas would be recommended for wilderness study designation. One additional Research Natural Area on the Superior National Forest and no additional areas on the Chippewa National Forest would be listed (listed as a candidate in the current Forest Plan).

### Recreation

*Scenic Quality* Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a high emphasis on scenic integrity in forest management decisions. On travel ways and other areas that get less use, such as secondary roads, there would be a moderate emphasis on scenic

integrity in forest management decisions.

### *Recreational Opportunities and Forest Settings*

A variety of opportunities would be provided with an emphasis on motorized and developed opportunities, such as campgrounds, picnic areas, and ATV and snowmobile trails. These opportunities would be in natural-appearing surroundings that have been modified by forest management activities. The forest would be characterized by a mosaic of different age classes.

Compared to the current recreation opportunities, visitors would have a moderate amount of opportunities for experiencing remoteness, independence, closeness to nature, self-reliance with challenge, and risk because there would be similar access and development compared to Alternative A.

*Recreational Motor Vehicles* The current trail system would be maintained, and there would be many opportunities for additional ATV and snowmobile trails. RMV use on some low maintenance level roads would be allowed, except on Forest Service unclassified roads on the Chippewa NF.

Cross-county travel with ATVs would not be allowed, except for big game retrieval and for furbearer trapping access in most MAs. Cross-country travel with snowmobiles would be allowed in most MAs on the Superior but prohibited on the Chippewa.

*Water Access* Current access sites would generally be maintained. Potential new water access sites would have facilities at a variety of development levels with an emphasis on high development levels such as double-lane drive-down concrete plank ramps.

## **Economic & Social Sustainability**

### *Economic Sustainability of Local Communities*

Economic resources that reflect the Alternative's theme of providing aspen pulpwood and a variety of recreational opportunities are provided in an environmentally sustainable and acceptable manner to contribute to the economic sustainability and diversity of local communities.

The amount of timber volume available to sell is the most offered by an alternative. The results are increases in employment, salary, and payments to counties. Recreation-related contributions to the

economies of communities would remain fairly constant with the existing condition.

### *Social Sustainability of Local Communities*

Social sustainability would continue to evolve following a path similar to Alternative A as land management emphasizes aspen, associated game species, forest access, and recreational opportunities. Management of special places would create conditions that would cause sites that reflect an older forest character to become more scarce. Large-scale culturally and traditionally important areas would continue to be managed intensively, with clearcutting a common vegetation management tool although there would be some opportunity for partial cutting. Access into the Forest via roads would continue to be at a high level, with some road closures and decommissioning expected. Communities would not expect a significant shift in current ties to the National Forests.

## **2.4.4 Alternative D**

### **Theme**

Alternative D emphasizes semi-primitive, non-motorized recreation, and restoring conifers to create an 'old-tree' character. The highest priorities for restoration would be establishing white pines.

Under this alternative, vegetation management would transition away from timber production toward ecological succession and some restoration. However, timber harvesting would be used in the first two decades as a tool to restore some cover types. After this 20-year period, a low level of timber harvest would be used to maintain a representation of all forest types and ages. The clearcutting harvest method would generally not be used in this alternative.

This alternative would maintain most, but not all of the existing higher standards roads while decommissioning many of the existing low standard roads. Very few new low standard roads would be constructed.

Developed and undeveloped recreational opportunities in a scenic landscape would be emphasized.

## How Alternative D Addresses the Issues

### Forest Vegetation

**Forest Age & Composition** Spruce-fir forests would dominate the landscape. Early-successional species, such as aspen, birch, and jack pine, would be substantially reduced from current levels. Of all the alternatives, Alternative D would provide the greatest percentage of old forest. Minimum Management Natural Areas would provide larger and more connected blocks of old growth compared to all the other alternatives. While older forests would be emphasized, a minimum of National Forest land would be maintained in young age classes. Forest age and composition objectives were determined by LE for National Forest lands, striving to achieve more of the older vegetation growth stages than historically occurred, while maintaining 10% representation of the younger vegetation growth stages shown for the natural range of variation. The percentages were applied to the National Forest lands only.

**Forest Spatial Patterns** Large patches of older forest would dominate the landscape. Patches of young forests would be the result of natural disturbances, management-ignited fire, or harvest for restoration, whereas the other alternatives would create patches from primarily timber harvest.

### Wildlife Habitat

Provides habitat for a variety of species, but emphasizes habitat for species that require older forest and de-emphasizes early successional forest habitat. Emphasizes maintaining, protecting, and restoring Threatened, Endangered, and Sensitive (Region 9, State and Forest "at risk") species.

### Timber

**Uneven-aged vs. Even-aged Prescriptions** In the first two decades, partial cutting would primarily be used generally for restoration, and clearcutting would be not be used. Partial cutting, uneven-aged management, and prescribed fire would be used to maintain vegetative communities.

**Timber Supply** Timber products would not be emphasized. While timber products would be generated through restoration activities, especially in

the first two decades. No ASQ would be set. The volume of timber sold in the first decade would be expected to be about 21 MMBF annually on the Chippewa NF and 37 MMBF annually on the Superior NF. This alternative would depart from sustained yield, non-declining even flow because harvest levels in the first twenty years of implementation would be higher than subsequent decades. This is because harvest levels in the first twenty years would be set to restore conifers and harvest in later decades is minimal to maintain some young age classes on the landscape.

### Fire

Where feasible based on values at risk, prescribed fire would be the primary tool used to reinstate natural processes on the landscape. Fire would be used to maintain fire-dependent ecosystems on large spatial scales in later decades and to create early successional habitat. In the first two decades, fire would also be used to reduce fuel and prepare sites for reforestation. Compared to the other alternatives, more areas would be affected by prescribed fire.

### Water Quality & Aquatic Communities

**Watershed Health** Alternative D places priority on improving or restoring watershed health. Activities that can degrade watershed health would be de-emphasized, such as removing vegetative cover, constructing roads, creating artificial drainages. Site-level actions would be based on needs assessed in a whole watershed context.

**Riparian Areas and Fish Habitat** Management in riparian areas would protect and enhance ecosystem functions and would consider the entire watershed when making site-level decisions. In some parts of the riparian area, timber management (including harvest) would only be allowed if it restored or enhanced ecosystem functions. Therefore, this portion of riparian areas would not be in the timber base, reducing the area where the Forests could plan to manage for timber volume. Other types of activities, such as trails and roads, would be allowed in riparian areas.

The Forests would purposefully manage fish habitat by actively protecting and enhancing it. Management would be based on the potential diversity and abundance of aquatic habitat within a watershed context. This would rely heavily on associated management that enhances or restores riparian areas

## Special Designations

All areas that meet the Forest Roadless Area inventory criteria would be recommended for wilderness study

designations. Two areas would be recommended on the Chippewa National Forest and 30 areas would be recommended on the Superior. On the Superior National Forest, 41 Research Natural Areas would be recommended, and 9 would be recommended on the Chippewa National Forest.

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	0	0
General Forest - Longer Rotation	0	0
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	11,351	569,770
Eligible Scenic Rivers	1,537	NA
Eligible Wild, Scenic, and Recreational River‡	NA	18,278
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	0	0
Semi-primitive Non-motorized Recreation	70,536	86,957
Semi-primitive Non-motorized & Motorized Recreation	221,140	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	8,105	NA
Unique Biological Areas	NA	514
Special Management Complexes	0	0
Minimum Management Natural Areas	323,257	615,762
Riparian Emphasis Areas	0	0
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,172
Potential Research Natural Areas	5,542	39,00
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	6,213	60,534
<b>Minimum Investment Emphasis</b>		
Minimum Investment	NA	0
<b>Total*</b>	<b>658,006</b>	<b>2,208,420</b>

‡ On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA.\* Totals do not exactly match among alternatives due to rounding.

## Recreation

**Scenic Quality** Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a very high emphasis on scenic integrity in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would also be a very high emphasis on scenic integrity in forest management decisions.

**Recreational Opportunities and Forest Settings** Recreation opportunities would primarily be provided in semi-primitive, non-motorized settings, where activities such as hiking, canoeing, and backpacking would be common. The forest would be characterized by its natural-appearing environment unmodified by forest management activities. Visitors would experience remoteness, independence, closeness to nature, self-reliance with challenge and risk because there would be little access and development.

**Recreational Motor Vehicles** No additional RMV trails would be designated. Some existing trails may be closed, resulting in proportionally more non-motorized trails than motorized trails. RMV use on very few low maintenance level roads would be allowed, except on Forest Service unclassified roads. All OHV and snowmobile cross-country travel would be prohibited.

**Water Access** Current access sites would generally be maintained. Existing highly developed sites on some bodies of water that do not meet standards may be modified to a low or

moderate level of development when practical.

On the Chippewa NF, no new water access sites would be constructed. On the Superior NF, potential new water access sites would have facilities at a variety of development levels with an emphasis on low development levels such as carry-in accesses.

New drive-down boat access ramps would not be developed on lakes where use is low.

### **Economic & Social Sustainability**

#### *Economic Sustainability of Local Communities*

Economic resources that reflect the alternative's theme of growing an old forest with associated wildlife species and less developed recreation opportunities would be provided in an environmentally sustainable and acceptable manner. The resulting economic trend across the associated local communities would reflect a shift from aspen pulpwood to partial cutting for two decades and very limited timber harvest thereafter. Shifting recreation resources would focus experiences on less-developed opportunities.

The amount of timber volume available to sell would significantly decline in the first decade and then decline more substantially in later decades. Available timber-related employment, salaries, and payments to counties would decrease significantly. Recreation employment would remain approximately the same over the first decade.

#### *Social Sustainability of Local Communities*

As the character of the forest changes to an old forest with little development, the places that people have found important would also continue to evolve over time. Some special places may already reflect the alternative's goal, while other important places may have relied on a more developed, younger forest. Large-scale culturally and traditionally important areas would be managed during the first decade via partial cuts, and thereafter, little active management would occur. Much of the area would be in specially designated management areas, such as Research Natural Areas and Special Management Complexes.

Access into the Forests via low standard roads would be substantially reduced, as roads and trails would be closed to motorized travel, or decommissioned. Social ties to the Forests would continue, however, shifts in overall values may occur to reflect different management emphases. This alternative would significantly change management emphasis of the

National Forests and therefore the subsequent relationships with local communities.

## **2.4.5 Modified Alternative E**

### **Theme**

Alternative E was modified between the Draft and Final EIS. Changes were made in response to public comments and because of data corrections (see Chapter 1 of the Final EIS for more information). However, the theme of Alternative E has not changed.

Alternative E emphasizes a diverse economic base in local communities. Compared to the other alternatives, the Forests would be managed in a way that provides a variety of economic opportunities. This alternative would promote tourism and its associated revenues by emphasizing resources such as recreational opportunities, scenic landscapes, and diverse wildlife habitats. Alternative E would provide a broad range of recreational opportunities. Timber and other commodity products would also be emphasized.

There would also be a focus on protecting, enhancing, and restoring riparian areas because they are important to recreation and tourism.

Alternative E emphasizes timber harvesting less than Alternatives C and A but more than the other alternatives.

This alternative would maintain the existing higher standards roads while decommissioning some of the existing low standard roads. New low standard roads would also be constructed.

Developed and undeveloped motorized and non-motorized recreational opportunities in a scenic landscape would be emphasized.

## How Modified Alternative E Addresses the Issues

### Forest Vegetation

**Forest Age & Composition** More conifer species would be found compared to the current landscape. Vegetation communities would be managed for an array of forest ages without a particular emphasis on either young or old age classes. Forest age and composition objectives were determined by LE for National Forest lands, striving to achieve more older vegetation growth stages than Alternative C, but less than Alternative G. There would be no specific designations for old-growth forest, but age and composition objectives would ensure some old growth. Older forest would also be provided by stands that are not scheduled for harvest on both Forests and by Shipstead-Newton-Nolan zones and the BWCAW on the Superior.

**Forest Spatial Patterns** A variety of forest patch sizes would be provided. The number of large openings would increase from the current number. The limit on temporary openings would be 1,000 acres. Revised Forest Plans would address forest patch size with long-term objectives for vegetation as well as standards and guidelines.

### Wildlife Habitat

Alternative E emphasizes a full array of habitats and habitat conditions on the landscape. There would be more old forest habitat conditions than under Alternative A and C but less than B, D, F, and G. The focus would be on managing landscape ecosystems, rather than maintaining and creating habitat for single species. Alternative E would emphasize maintaining and protecting Threatened, Endangered, and Sensitive (Region 9 and State) species.

### Timber

**Uneven-aged vs. Even-aged Prescriptions** Both even and uneven-aged management would be used, however the percentage of clearcutting would decrease and the percentage uneven-aged management would increase from the current levels of clearcutting.

**Timber Supply** Pulpwood, sawtimber, and specialty products would all be emphasized. ASQ in the first decade would be 50 MMBF annually on the Chippewa NF and 82 MMBF annually on the Superior NF.

### Fire

Where feasible based on values at risk, prescribed fire would be used as a tool for reinstating ecological processes on a small spatial scale. However, management-ignited fire would mainly be used for reducing fuels and preparing sites for reforestation.

### Water Quality & Aquatic Communities

**Watershed Health** Places emphasis and priority on activities to improve or restore watershed health, with the selection of site-level actions based on needs assessed in a whole watershed context.

**Riparian Areas and Fish Habitat** Management in riparian areas would protect and enhance ecosystem functions and would consider the entire watershed when making site-level decisions. In some parts of the riparian area, timber management (including harvest) would only be allowed if it restored or enhanced ecosystem functions. Therefore, this portion of riparian areas would not be in the timber base, reducing the area where the Forests could plan to manage for timber volume. Other types of activities, such as trails and roads, would be allowed in riparian areas.

Special importance would be given to protecting riparian areas along selected waters with the Riparian Emphasis MA.

The Forests would purposefully manage fish habitat by actively protecting and enhancing it. Management would be based on the potential diversity and abundance of aquatic habitat within a watershed context. This would rely heavily on associated management that enhances or restores riparian areas.

### Special Designations

None of the inventoried Forest Roadless Areas would be recommended for wilderness study designation. Eleven additional Research Natural Areas would be recommended on the Superior and two would be recommended on the Chippewa National Forest.

## Recreation

**Scenic Quality** Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a high emphasis on scenic

integrity in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would be a moderate emphasis on scenic integrity in forest management decisions.

### *Recreational Opportunities and Forest Settings*

Alternative E emphasizes tourism, so recreation would be a high priority in forest management. The widest variety, compared to the other alternatives, of recreation opportunities would be provided with an emphasis on developed opportunities, such as campgrounds, picnic areas, boat landings, and motorized trails. Visitors may or may not encounter others. There would be some opportunity for challenge and risk.

Recreation would occur in predominately natural-appearing surroundings that have been modified by forest management. However, some opportunities would be in semi-primitive settings where management activities would be less evident. The forest would be characterized by a mosaic of different age classes and groupings with inclusions of natural-appearing forest.

**Recreational Motor Vehicles** The current trail system would be maintained, and there would be many opportunities for additional motorized trails. This alternative would have the most potential for additional designated snowmobile and ATV trails. RMV use on some low maintenance level roads would be allowed, except on Forest Service unclassified roads on the Chippewa NF.

Cross-county travel with OHVs would be prohibited. Cross-country travel with snowmobiles would be allowed in most MAs on the Superior but prohibited on the Chippewa.

**Water Access** Current access sites would generally be maintained.

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	347,319	640,443
General Forest - Longer Rotation	191,829	415,478
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	12,469	155,412
Eligible Scenic Rivers	1,537	NA
Eligible Wild, Scenic, and Recreational River†	NA	31,834
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	0	61,018
Semi-primitive Non-motorized Recreation	21,937	4,559
Semi-primitive Non-motorized & Motorized Recreation	0	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	18,026	NA
Unique Biological Areas	NA	2,578
Special Management Complexes	0	0
Minimum Management Natural Areas	0	0
Riparian Emphasis Areas	52,883	17,444
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,184
Potential Research Natural Areas	1,699	19,448
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	0	0
<b>Minimum Investment Emphasis</b>		
Minimum Investment	NA	0
<b>Total*</b>	<b>658,023</b>	<b>2,170,007</b>

† On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA.

\* Totals do not exactly match among alternatives due to rounding.

Potential new water access sites would have facilities at a variety of development levels with some emphasis on high development levels such as double-lane drive-down concrete plank ramps.

### **Economic & Social Sustainability**

#### *Economic Sustainability of Local Communities*

Economic resources that reflect the alternative's theme of providing both pulpwood and sawtimber in addition to a variety of recreational opportunities would be provided for in an environmentally sustainable and acceptable manner that contributes to the economic sustainability and diversity of local communities.

The amount of timber volume available to sell would increase compared to the existing condition, which would be expected to result in increased employment, salary, and payments to counties. The emphasis of recreation-related contributions to the economies of communities would remain fairly constant or somewhat increase from the existing condition.

#### *Social Sustainability of Local Communities*

Resource conditions would be emphasized that promote economic and social sustainability, to the degree that Forest management becomes more diverse as it provides for a range of resources and opportunities. Management of special places would create conditions that would cause sites with a setting that rely on a younger forest character to become scarcer. Large-scale culturally and traditionally important areas would be managed by both clearcutting and partial harvesting. Access into the Forest via roads would continue to be at a high level, with some road closures and decommissioning expected. Social ties of local communities to the National Forests would not shift significantly, except to become more diverse as reflecting more of the range of management emphasis.

## **2.4.6 Alternative F**

### **Theme**

Alternative F emphasizes managing for a vegetative condition that is within the range of natural variability on National Forest System land.

Timber harvest and prescribed fire would be used to mimic natural disturbances. Ecological processes would be maintained or restored by using a variety of timber harvest methods, management-ignited fire, and allowing natural processes to operate. Conifer and northern hardwood forest types would be restored.

Areas that historically experienced high-intensity, stand-replacing events, such as wildfires and large-scale blowdowns, would be intensively managed. However, areas that experienced low-intensity, stand maintenance events, such as surface fires and minor wind throw, would be less intensively managed.

This alternative would maintain the existing higher standards roads while decommissioning some of the existing low standard roads. New low standard roads would also be constructed.

Developed and undeveloped recreational opportunities in both motorized and non-motorized settings would be provided.

### **How Alternative F Addresses the Issues**

#### **Forest Vegetation**

*Forest Age & Composition* Over the long term (100 years), forest composition would begin to approximate the range of natural variability on National Forest lands. Age class distribution would be variable, but would include all age classes. Over the long term, forest age classes would approximate the range of natural variability. The amount of old-growth forest would vary by landscape ecosystem and reflect a level that is within the range of natural variability. Generally, the National Forest lands are less than 40% of the acreage of any one LE. Although this alternative attempts to have the same percentage distribution of vegetation conditions as RNV, the balance of the landowners would have to also manage to achieve this condition before the LE could be described as being within RNV.

*Forest Spatial Patterns* A variety of patch sizes would be provided, with an increase in large patches compared to the current number of large patches. The limit on temporary openings would be 1,000 acres. revised Forest Plans would address forest patch size with long-term objectives for vegetation.

## Wildlife Habitat

Under Alternative F, the goal would be to create and maintain the habitats that would be found if disturbances (fire, wind, insects, disease) were allowed to play their natural role. A full array of habitats would be provided. The focus would be on managing landscape ecosystems, rather than maintaining and creating habitat for single species. Management emphasizes maintaining and protecting of Threatened, Endangered and Sensitive (Region 9 and State) species.

## Timber

*Uneven-aged vs. Even-aged Prescriptions* The use of even-aged prescriptions would be similar to current use, but the use of uneven-aged management would increase compared current forest management.

*Timber Supply* A full array of forest products would be produced. Pulpwood would be the dominant forest product, but there would be no emphasis on any one product. ASQ in the first decade would be 37 MMBF annually on the Chippewa NF and 70 MMBF annually on the Superior NF.

## Fire

Where feasible based on values at risk, prescribed fire would be used along with harvesting as a primary tool to reintroduce natural processes on a range of spatial scales and with a variety of fire intensities. Prescribed fire would also be used to reduce fuel and prepare sites for reforestation.

## Water Quality & Aquatic Communities

*Watershed Health* Activities to improve or restore watershed health, if done, will tend to be site-focused.

*Riparian Areas and Fish Habitat* In riparian areas, timber management would be allowed because naturally occurring disturbance happens in riparian areas. The potential negative effects of harvesting in riparian areas would be limited through mitigation. Mitigation measures would generally be determined during site-level analysis. Fish habitat would be managed using a mitigative approach designed to maintain or protect populations.

## Special Designations

No areas would be recommended for wilderness study designation. On the Superior National Forest, 41 additional Research Natural Areas would be recommended. On the Chippewa National Forest, 10 would be recommended as Research Natural Areas.

## Recreation

*Scenic Quality* Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a high emphasis on scenic integrity in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would be a moderate emphasis on scenic integrity in forest management decisions.

### *Recreational Opportunities and Forest Settings*

A variety of recreation opportunities in a semi-primitive setting would be emphasized, where activities such as hiking, canoeing, backpacking, and some motorized travel would be common.

Opportunities would also be provided in developed settings where there may be facilities such as campgrounds, picnic areas, and boat landings. Recreation would occur in natural-appearing surroundings have been modified by forest management activities.

Compared to Alternative A, visitors would have more opportunities for experiencing remoteness, independence, closeness to nature, self-reliance with challenge, and risk because there would be less access and development compared to Alternative A.

*Recreational Motor Vehicles* The current trail system would be maintained, and there would be opportunities for additional ATV and snowmobile trails. ATV use on some low maintenance level roads would be allowed, except on Forest Service unclassified roads on the Chippewa NF.

Cross-country travel with OHVs would be prohibited on both National Forests. Cross-country travel with snowmobiles would be allowed in most MAs on the Superior National Forest but prohibited on the Chippewa.

**Water Access** Current water access sites would generally be maintained. Potential new water access sites would have facilities at a variety of development levels with some emphasis on moderate development levels such as single-lane drive-down gravel ramps.

## Economic & Social Sustainability

**Economic Sustainability of Local Communities**  
Economic resources and benefits are a by-product of the management goal to move toward the range of

natural variability. As such, benefits are a result of a mix of even-aged and uneven-aged management, associated wildlife species, and recreation opportunities. The economic trend across local communities would reflect a shift from mostly aspen pulpwood, to eventually incorporating more sawtimber.

The amount of timber volume available to sell remains approximately the same as the level offered by the National Forests in the past few years, resulting also in similar numbers of jobs, salary levels, and payments to counties. Recreation-related contributions to the economies of communities would remain fairly constant with the existing condition.

**Social Sustainability of Local Communities** As the character of the Forests changes to a setting that reflects the RNV, places that people have found important would also continue to evolve over time. Some special places may already reflect this goal, while other important places may be in settings that are different from RNV. Large-scale culturally and traditionally important areas would be managed less intensively, with more reliance on partial harvesting. Some areas may change considerably, depending on their existing status in terms of the range of natural variability. Access to the Forests would be somewhat reduced, as roads and trails are closed to motorized travel, or decommissioned. Social ties to

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	11,995	318,983
General Forest - Longer Rotation	553,236	856,220
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	1,800	110,500
Eligible Scenic Rivers	1,537	NA
Eligible Wild, Scenic, and Recreational River‡	NA	27,371
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	0	32,842
Semi-primitive Non-motorized Recreation	11,816	0
Semi-primitive Non-motorized & Motorized Recreation	0	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	36,408	
Unique Biological Areas	NA	514
Special Management Complexes		0
Minimum Management Natural Areas	0	0
Riparian Emphasis Areas	21,629	0
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,172
Potential Research Natural Areas	9,261	44,000
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	0	0
<b>Minimum Investment Emphasis</b>		
Minimum Investment	0	0
<b>Total*</b>	<b>658,006</b>	<b>2,208,417</b>

‡ On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA.

\* Totals do not exactly match among alternatives due to rounding.

the National Forests would continue, however, shifts in overall values may occur to reflect different quantities of vegetation, recreation, and wildlife.

## 2.4.7 Alternative G

### Theme

Alternative G emphasizes managing vegetation communities in a way that distributes young forest, older forest, and old growth across the Forests. Under Alternative G, the Forests would be ‘zoned’ as young, mature, or old-growth forests.

Timber harvest and prescribed fire would be used to mimic natural disturbances. Ecological processes would be maintained or restored by using a variety of timber harvest methods, management-ignited fire, and allowing natural processes to operate. Conifer and northern hardwood forest types would be restored.

This alternative would maintain the existing higher standards roads while decommissioning some of the existing low standard roads. New low standard roads would also be constructed.

Developed and undeveloped recreational opportunities in both motorized and non-motorized settings would be provided.

### How Alternative G Addresses the Issues

#### Forest Vegetation

**Forest Age & Composition** A mix of age classes would occur in zones across the Forests. Forest age and composition objectives were determined by LE for National Forest lands, striving to achieve more older vegetation growth stages than Alternative E, but less than Alternative F. Old growth would be addressed through older forest zones and Special Management Complex MAs. In contrast to the other alternatives, Alternative G would zone or allocate areas of predominantly younger trees, predominantly older trees, and predominantly very old trees in specific locations.

**Forest Spatial Patterns** This alternative would provide a variety of patch sizes, with a tendency toward large patches. Compared to the current patch size distribution, more large patches would result in an increase in large openings compared to the current number of large openings. The limit on temporary openings would be 1,000 acres. Revised Forest Plans would address forest patch size with long-term ecosystem objectives and by designating some specific locations.

#### Wildlife Habitat

Alternative G would emphasize a full array of habitats being on the landscape. Habitat for species associated with old and old-growth forests would be fixed on the landscape. The focus would be on managing landscape ecosystems, rather than maintaining and creating habitat for single species. Management emphasizes maintaining and protecting of Threatened, Endangered, and Sensitive (Region 9 and State) species.

#### Timber

**Uneven-aged vs. Even-aged Prescriptions** The percentage of clearcutting would be reduced from current levels and uneven-aged management would increase.

**Timber Supply** Provides a sawtimber focus, in older forest areas, and a pulpwood focus in younger forest areas. In the first decade, ASQ would be 46 MMBF annually on the Chippewa NF and 70 MMBF annually on the Superior NF.

#### Fire

Where feasible based on values at risk, management-ignited fire would be used to reinstate natural processes on a variety of spatial scales with a variety of intensities. Prescribed fire would also be used to reduce fuel and prepare sites for reforestation.

#### Water Quality & Aquatic Communities

**Watershed Health** Places emphasis and priority on activities to improve or restore watershed health, with the selection of site-level actions based on needs assessed in a whole watershed context.

**Riparian Areas and Fish Habitat** Management in riparian areas would protect and enhance ecosystem functions and would consider the entire watershed when making site-level decisions. In some parts of the riparian area, timber management (including harvest) would only be allowed if it restored or enhanced ecosystem functions. Therefore, this portion of riparian areas would not be in the timber base, reducing the area where the Forests could plan to manage for timber volume. Other types of activities, such as trails and roads, would be allowed in riparian areas.

Special importance would be given to protecting riparian areas along selected waters with the Riparian Emphasis MA.

The Forests would purposefully manage fish habitat by actively protecting and enhancing it. Management would be based on the potential diversity and abundance of aquatic habitat within a watershed context. This would rely heavily on associated management that enhances or restores riparian areas.

### Special Designations

One area would be recommended for wilderness study designation on the Chippewa and four areas would be recommended on the Superior National Forest. Twenty-six Research Natural Areas would be recommended on the Superior National Forest and nine would be recommended on the Chippewa national Forest.

### Recreation

**Scenic Quality** Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a high emphasis on scenic integrity in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would be a high emphasis on scenic integrity in forest management decisions.

#### **Recreational Opportunities and Forest Settings**

A variety of recreation opportunities in a semi-primitive setting would be emphasized, where activities such as hiking, canoeing, backpacking, and some motorized travel would be common.

Opportunities would also be provided in developed settings where there may be facilities such as campgrounds, picnic areas, and boat landings.

Recreation would occur in a range of settings from unmodified to highly modified natural surroundings.

Compared to Alternative A, visitors would have more opportunities for experiencing remoteness, independence, closeness to nature, self-reliance with challenge, and risk because there would be less access and development compared to the current level of access.

**Recreational Motor Vehicles** The current trail system would be maintained, and there would be opportunities for additional ATV and snowmobile trails. RMV use on some low maintenance level roads would be allowed, except on Forest Service unclassified roads on the Chippewa NF. Cross-country travel with ATVs would be prohibited on both National Forests. Cross-country travel with snowmobiles would be allowed in most MAs on the Superior National Forest but prohibited on the Chippewa.

**Water Access** Current access sites would generally be maintained. Potential new water access sites would have facilities at a variety of development levels with some emphasis on moderate development levels such as single-lane drive-down gravel ramps.

### Economic & Social Sustainability

#### **Economic Sustainability of Local Communities**

Economic resources and benefits are a by-product of the management goals. However, in this alternative, consideration was also given in the placement of management areas to reflect the existing economic and social use of an area. As such, benefits are a result of a mix of even-aged and uneven-aged management, associated wildlife species, and a variety of recreation opportunities. The economic trend across local communities would reflect a shift from mostly aspen pulpwood, to eventually incorporating more sawtimber.

The amount of timber volume available to sell would be less than Alternative A, resulting less timber-related jobs, lower salary levels, and a decrease in payments to counties. Recreation-related contributions to the economies of communities would remain fairly constant with the existing condition.

**Social Sustainability of Local Communities** As the character of the Forests changes, places that people have found important would also continue to evolve over time. Some special places may already reflect this goal, while other important places may be in settings that are different from RNV. Large-scale culturally and traditionally important areas would be managed less intensively, with more reliance on partial harvesting. A few areas may change considerably, depending on their existing status in terms geographic

placement of management areas. Access to the Forests would be somewhat reduced, as roads and trails are closed to motorized travel, or decommissioned. Social ties to the National Forests would continue as management areas were allocated based on both existing uses and vegetation opportunities, however, shifts in overall values may occur to reflect different quantities of vegetation, recreation and wildlife

Management Area	Chippewa NF	Superior NF
	Total MA (acres)	Total MA (acres)
<b>General Forest Emphasis</b>		
General Forest	153,978	419,516
General Forest - Longer Rotation	326,159	609,973
<b>Recreation and Scenic Emphasis</b>		
Recreation Use in a Scenic Landscape	1,802	87,406
Eligible Scenic Rivers‡	1,537	NA
Eligible Wild, Scenic, and Recreational River‡	NA	21,650
<b>Semi-primitive Recreation Emphasis</b>		
Semi-primitive Motorized Recreation	5,140	29,670
Semi-primitive Non-motorized Recreation	18,100	1,647
Semi-primitive Non-motorized & Motorized Recreation	0	0
<b>Conservation and Rare Features Emphasis</b>		
Unique Biological, Aquatic Geological, or Historical Areas	8,105	NA
Unique Biological Areas	NA	514
Special Management Complexes	85,621	183,302
Minimum Management Natural Areas	0	0
Riparian Emphasis Areas	35,498	0
<b>Research Emphasis</b>		
Experimental Forest	8,184	0
Research Natural Areas (existing)	2,140	3,172
Potential Research Natural Areas	9,015	34,000
<b>Wilderness Emphasis</b>		
Pristine Wilderness	0	113,700
Primitive Wilderness	0	299,760
Semi-primitive Non-motorized Wilderness	0	345,233
Semi-primitive Motorized Wilderness	0	51,916
Wilderness Study Areas	2,727	3,672
<b>Minimum Investment Emphasis</b>		
Minimum Investment	0	0
<b>Total*</b>	<b>658,006</b>	<b>2,208,417</b>

‡ On the Superior National Forest, acres of Eligible Wild, Scenic, and Recreational River corridors protected is the same in every alternative (31,834 acres). However, some corridors were assigned to management areas that are more protective than the Eligible Wild, Scenic and Recreational Rivers MA, such as Wilderness Study Areas or potential RNA MA. \* Totals do not exactly match among alternatives due to rounding.