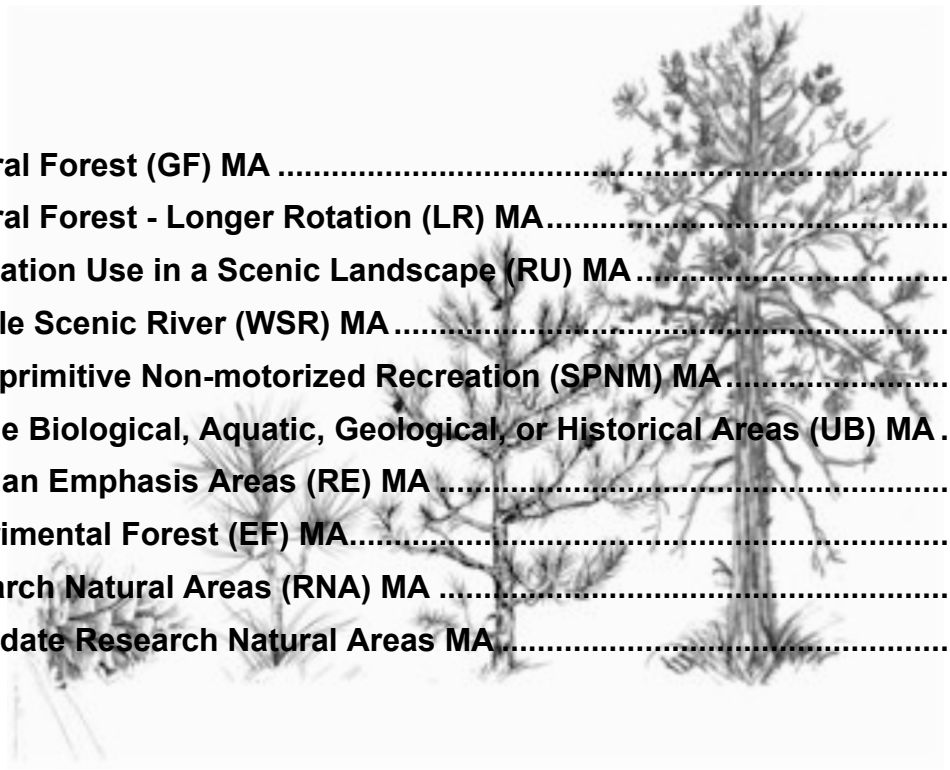
Chapter 3 Management Area Direction



Introduction

Chapter 3 presents management direction for specific management areas (MA). Forest-wide management direction, found in Chapter 2, also applies to all MAs, unless more specific direction for the MA is in Chapter 3.

MA direction was developed to be appropriate for the variety of different uses and resources in the MAs.

All management practices may be used in the MAs that have suitable timber land.

Relationship of Management Areas and Landscape Ecosystems

In designing projects that work toward reaching the desired conditions for an MA, managers will consider both MA direction and Landscape Ecosystem (LE) objectives. LE direction, in Chapter 2, provides vegetation objectives for forest type, forest age, and tree species diversity objectives. The LE objectives apply across an entire LE, whereas desired conditions and objectives for MAs describe what is desired socially and economically within a specific MA. This management direction provides a framework within which to manage vegetation by considering multiple-use and other resource desired conditions. In summary, proposed projects must reflect the blend of both MA and LE direction.

Abbreviations

MA	Management Area
D	Desired Condition
O	Objectives
S	Standard
G	Guideline
GF	General Forest MA
LR	General Forest - Longer Rotation MA
RU	Recreation Use in a Scenic Landscape MA
WSR	Eligible Scenic Rivers MA
SPM	Semi-primitive Motorized Recreation MA
SPNM	Semi-primitive Non-motorized Recreation MA
UB	Unique Biological, Aquatic, Geological, or Historical MA
RE	Riparian Emphasis Areas MA
EF	Experimental Forest MA
RNA	Research Natural Areas MA

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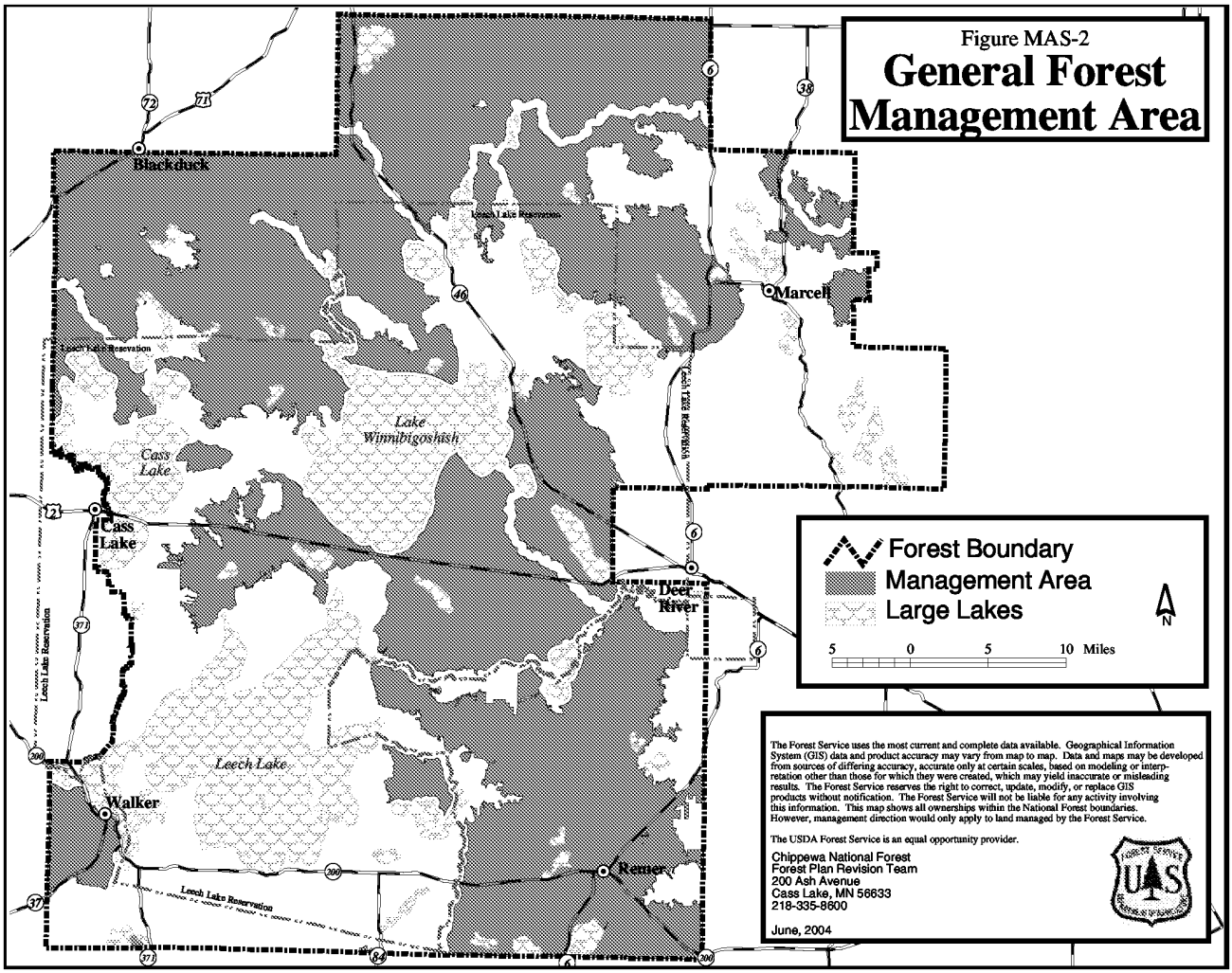
General Forest (GF) MA

Suitable Timber land in the General Forest MA	
	Acres
Total NFS land in the MA	347,319
NFS land suitable for timber management	257,213
NFS land not suitable for timber management	90,106

Landscape Ecosystems in the General Forest MA	
Landscape Ecosystem	Percent of MA
Dry Pine	3%
Dry Mesic Pine/Oak	30%
Dry Mesic Pine	9%
Boreal Hardwood/Conifer	34%
Mesic Northern Hardwood	8%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	3%
Tamarack Swamp	13%
Wet Sedge Meadow	<1%
Total	100%



Theme

General Forest MAs emphasize land and resource conditions that provide a wide variety of goods, uses, and services. These include wood products, other commercial products, scenic quality, developed and dispersed recreation opportunities, and habitat for a diversity of terrestrial and aquatic wildlife and fish. Numerous roads open to public travel provide access to resources and roaded recreation opportunities. Non-motorized recreation opportunities also occur.

Compared to other management areas, the General Forest MA has the most amount of young-forest and the largest sized timber harvest units.

Setting

The General Forest MA is located throughout the Forest and applies to large acreages of the Forest.

Three-fourths of the General Forest MA is suitable for timber management. Two Landscape Ecosystems dominate this MA: Dry Mesic Pine/Oak and Boreal Hardwood/Conifer.

Desired Conditions

Vegetation Management

D-GF-1 Forests in this management area are largely a mosaic of tree groupings of different ages and heights. Areas disturbed through management activities are generally quickly revegetated. Some recently harvested areas still have a partial canopy of older trees. The boundaries of these cut areas appear to follow natural landscape patterns.

D-GF-2 Forest vegetation communities are managed with practices that mimic ecosystem processes, mainly stand replacement disturbance. A variety of stand sizes, shapes, crown closures, age structures, and interspersions occur. Larger patch sizes are emphasized, especially those patches associated with young, even-aged vegetative conditions. Aspen, red pine, spruce/fir, white pine, jack pine, lowland conifer, and a number of northern hardwood species occur in large amounts, depending upon the landscape ecosystem.

D-GF-3 A full range of silvicultural practices is used. However, compared to the General Forest - Longer Rotation MA, there is more even-aged management.

Forest Health and Disturbance Processes

D-GF-4 Stands in this management area are generally dominated by the young to mature vegetative growth stages of the landscape ecosystem within which they lie. Management activities generally create young, even-aged forests. A mosaic of young to mature (1-150 years) trees dominates these areas. Insect and disease outbreaks are evident, but are managed to be within historical, natural levels in terms of longevity and area impacted (fulfilling ecosystem function).

D-GF-5 Forest health is maintained and management investments are protected to sustain the productivity of the area. To maintain or restore vegetation communities, natural disturbances to the landscape are mimicked through management activities such as timber harvest and management-ignited fires. Fire is also used as a tool to prepare sites for regenerating new forests and to reduce woody fuel that could cause wildfires.

Scenic Resources

D-GF-6 The forest has a fairly continuous canopy and frequent openings of various sizes up to 1,000 acres. The openings' sizes, shapes, and habitat conditions, not necessarily their appearance, mimic the scale, pattern, and ecologic function of large-scale natural disturbances. In the most frequently visited and most scenically valued areas of this MA, the large-scale openings have a natural appearance. Other, less scenic areas of this MA will be actively managed for timber production with a lower relative emphasis on scenery compared to other resource concerns.

Recreation and Access

D-GF-7 Developed recreation sites such as campgrounds, picnic sites, boat landings, observation sites, trailheads, and swimming areas may be provided for public use. Facilities may be constructed to protect the environment and provide some comfort for users. Natural or natural-appearing materials give facilities a rustic appearance. Increased site modification that reduces the rustic natural appearance may occur at existing highly developed and heavily used sites.

D-GF-8 Dispersed recreation facilities such as campsites and trails (day use, backpacking, portaging, bicycling, horseback riding, hunter walking, snowmobile, ATV use, interpretive) may be provided for public use. Other dispersed recreation opportunities that may not be associated with facilities, such as orienteering, hunting, fishing, berry picking, bird watching, wildlife viewing, and trapping, would also occur.

D-GF-9 Recreation sites will generally be spaced so as to minimize contacts between users.

D-GF-10 Many people may use this area, mostly along waterways, roads, and trails. In these more highly used areas, it is common to encounter others engaged in a wide variety of activities. In the remainder of the management area contacts between users will generally be less frequent. Vehicles associated with timber harvesting may be encountered on roads and in the woods throughout the year.

Land Adjustments

D-GF-11 Land ownership patterns (federal, State, county, corporation, and private), are consolidated, promote efficient administration, and reduce the costs of managing resources.

Facilities

D-GF-12 Buildings and structures may be provided to support resource management objectives. There may be occasional resorts, utility corridors, towers, dams, and similar structures.

D-GF-13 Roads and bridges range from one-lane surfaced with native soil or gravel to two lanes and paved surfaces

Objectives

O-GF-1 Over the course of the planning period, vegetation will be managed to generally represent young to mature (0 to 150 year old) vegetative growth stages.

O-GF-2 Land adjustment efforts will generally be based on consolidating ownership patterns as opportunities present themselves.

O-GF-3 Acquiring land along rivers and lakes will be encouraged where significant public ownership already exists.

O-GF-4 Land adjustment objectives:

a) Acquisitions – Priority 2 or 3

b) Conveyances – Allowed

(See the glossary for priority definitions.)

O-GF-5 The ROS class objective is primarily roaded natural, with small pockets of rural. Some areas that have roaded natural objectives would be managed to retain their remote character.

Standards and Guidelines

Recreation and Access

G-GF-1 Project level planning will generally use the Minnesota National Forest ROS inventory criteria (Appendix B). Inventoried semi-primitive motorized and non-motorized portions of the project areas will generally be managed to retain remote character. Management activities to retain remote character may include:

- Close some existing and all new roads to motorized vehicles. Construct only temporary and OML 1 roads.
- Emphasize semi-primitive recreation activities and opportunities.
- Manage forest settings using roaded

natural ROS criteria along with the Scenic Integrity Objectives.

Special Uses

G-GF-2 Most special uses can be accommodated.

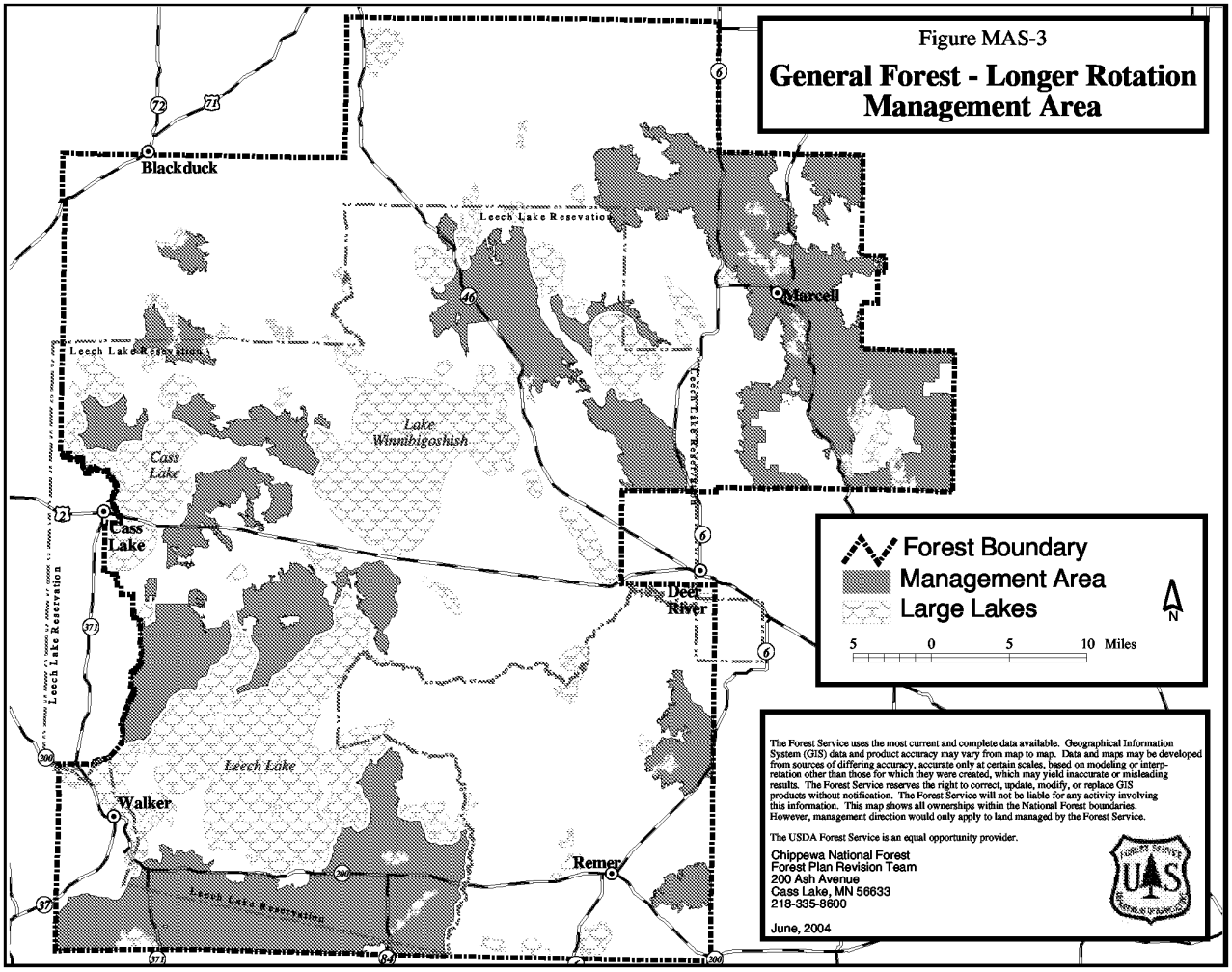
Land Adjustment

G-GF-3 Generally, on lakes with 80 percent or greater public ownership, NFS water frontage land will be retained or will only be conveyed to a public land management entity.

General Forest - Longer Rotation (LR) MA

Suitable Timber land in the General Forest - Longer Rotation MA	
	Acres
Total NFS land in the MA	191,829
NFS land suitable for timber management	149,899
NFS land not suitable for timber management	41,930

Landscape Ecosystems in the General Forest - Longer Rotation MA	
Landscape Ecosystem	Percent of MA
Dry Pine	1%
Dry Mesic Pine/Oak	31%
Dry Mesic Pine	30%
Boreal Hardwood/Conifer	12%
Mesic Northern Hardwood	23%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	0%
Tamarack Swamp	3%
Wet Sedge Meadow	0%
Total	100%



Theme

The General Forest – Longer Rotation MA emphasizes land and resource conditions that provide a wide variety of goods, uses, and services. These include wood products, other commercial products, scenic quality, developed and dispersed recreation opportunities, and habitat for a diversity of terrestrial and aquatic wildlife and fish species. Numerous roads that are open to public travel provide access to resources and roaded recreation opportunities. Non-motorized recreation opportunities also occur.

Compared to the General Forest MA, this area, while still having timber production as a key emphasis, will generally have longer rotations and more uneven-aged and partial cut harvests.

Setting

The General Forest – Longer Rotation MA is located throughout the Forest where recreation use and/or lake density is high, or the potential for such use is high.

The majority of the General Forest - Longer Rotation MA is suitable for timber management. Three Landscape Ecosystems dominate this MA: Dry Mesic Pine/Oak, Dry Mesic Pine, and Mesic Northern Hardwood.

Desired Conditions

Forest Vegetation

D-LR-1 Forests in this MA are largely a mosaic of tree groups of different ages and heights. Many recently cut areas still have a partial canopy of older trees. Areas disturbed through management activities are generally quickly revegetated. The boundaries of cut areas appear to follow natural landscape patterns.

D-LR-2 Forest vegetation communities are generally managed with practices that mimic less severe stand maintenance disturbance, along with some management practices that mimic stand replacement disturbance. A variety of stand sizes, shapes, crown closures, age structures, and interspersions occur. Some larger patch sizes would occur within this area, although those associated with young, even-aged vegetative conditions would be less frequent than in the General Forest MA. Aspen, red pine, spruce/fir, white pine, jack pine, lowland conifer, and a number of northern hardwood species occur in large amounts, the mix of species depending upon the landscape ecosystem.

D-LR-3 A full range of silvicultural practices is employed. However, compared to the General Forest MA, there is more uneven aged and partial cut harvesting resulting in more uneven aged and multi-aged forests. This area will have less extensive even-aged harvests than the General Forest MA. When clearcutting is used in this management area, it is often done at longer rotation ages.

Forest Health and Disturbance Processes

D-LR-4 Stands in this management area are a mix of young, even-aged and older, multi-aged vegetative growth stages of the landscape ecosystem within which they lie. A mosaic of young to old (1-250 years) trees dominates these areas. Insect and disease outbreaks are evident, but are managed to be within historical, natural levels in terms of longevity and area impacted (fulfilling ecosystem function).

D-LR-5 Forest health is maintained and management investments are protected to sustain the productivity of the area. To maintain or restore vegetation communities, natural disturbances to the landscape are mimicked through the use of management activities such as timber harvest and management-ignited fires. Fire is also used as a tool to prepare sites for regenerating new forests and to reduce woody fuel that could cause wildfires.

Scenic Resources

D-LR-6 The forest in the General Forest - Longer Rotation MA differs from the General Forest MA in that a greater emphasis is placed on managing for older and larger trees. The openings' sizes, shapes, and

habitat conditions, not necessarily their appearance, mimic the scale, pattern, and ecologic function of large-scale natural disturbances. In the most frequently visited and most scenically valued areas of the MA, larger-scale openings have a natural appearance. Other, less scenic or frequently visited areas of the MA will be actively managed for timber production with a lower relative emphasis on scenery compared to other resource concerns.

Recreation and Access

D-LR-7 Developed recreation sites such as campgrounds, picnic sites, boat landings, observation sites, trailheads, and swimming areas may be provided for public use. Facilities may be constructed to protect the environment and provide some comfort for users. Natural or natural-appearing materials give facilities a rustic appearance. Increased site modification that reduces the rustic natural appearance may occur at existing highly developed and heavily used sites.

D-LR-8 Dispersed recreation facilities such as campsites and trails (day use, backpacking, portaging, bicycling, horseback riding, hunter walking, snowmobile, ATV use, interpretive) may be provided for public use. Other dispersed recreation opportunities that may not be associated with facilities, such as orienteering, hunting, fishing, berry picking, bird watching, wildlife viewing, and trapping, would also occur.

D-LR-9 Recreation sites will generally be spaced so as to minimize contacts between users.

D-LR-10 Many people may use this area, mostly along waterways, roads, and trails. In these more highly used areas it is common to encounter others engaged in a wide variety of activities. In the remainder of the MA, contacts between users will generally be less frequent. Vehicles associated with timber harvesting may be encountered on roads and in the woods throughout the year.

Land Adjustments

D-LR-11 Land ownership patterns (federal, State, county, corporation, and private) are consolidated, promote efficient administration, and reduce the costs of managing resources.

Facilities

D-LR-12 Buildings and structures may be provided to support resource management objectives. There may be occasional resorts, utility corridors, towers, dams, and similar structures.

D-LR-13 Roads and bridges range from one-lane surfaced with native soil or gravel to two lanes and paved surfaces.

Objectives

O-LR-1 Over the course of the planning period, vegetation will be managed to generally represent young to old (0 to 250 year old) vegetative growth stages.

O-LR-2 Land adjustment efforts will generally be based on consolidating ownership patterns as opportunities present themselves.

O-LR-3 Acquiring land along rivers and lakes will be encouraged where significant public ownership already exists.

O-LR-4 Land adjustment objectives:

c) Acquisitions – Priority 2 or 3

d) Conveyances – Allowed

(See the glossary for priority definitions.)

O-LR-5 The ROS class objective is primarily roaded natural, with small pockets of rural. Some areas that have roaded natural objectives would be managed to retain their remote character.

Standards and Guidelines

Recreation and Access

G-LR-1 Project level planning will generally use the Minnesota National Forest ROS inventory criteria (Appendix B). Inventoried semi-primitive motorized and non-motorized portions of the project areas will generally be managed to retain remote character. Management activities to retain remote character may include:

- Close some existing and all new roads to motorized vehicles. Construct only temporary and OML 1 roads.
- Emphasize semi-primitive recreation activities and opportunities.
- Manage forest settings using roaded natural ROS criteria along with the Scenic Integrity Objectives.

Special Uses

G-LR-2 Most special uses can be accommodated.

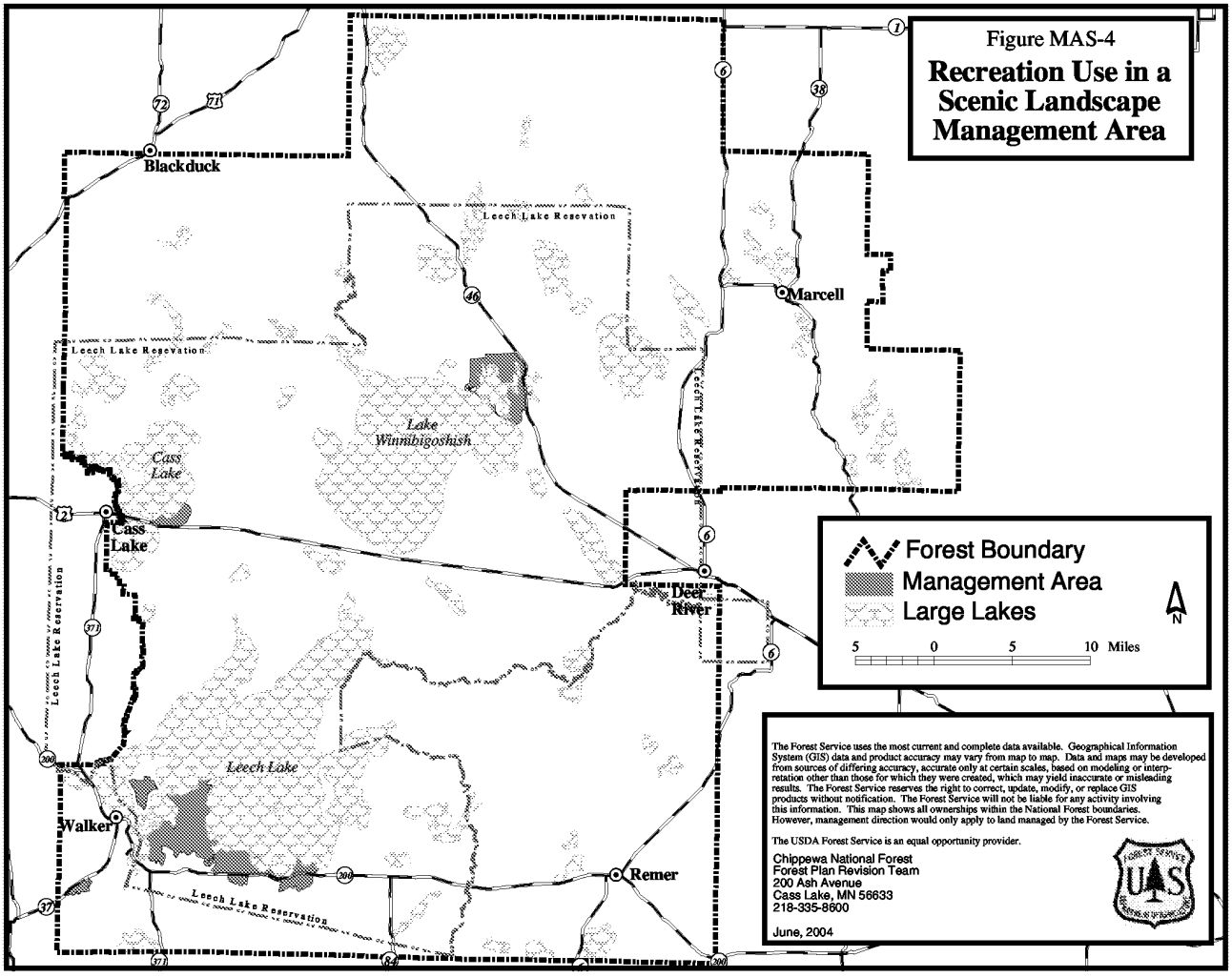
Land Adjustment

G-LR-3 Generally, on lakes with 80 percent or greater public ownership, NFS water frontage land will be retained or will only be conveyed to a public land management entity.

Recreation Use in a Scenic Landscape (RU) MA

Acreage in the Recreation Use in a Scenic Landscape MA	
	Acres
Total NFS land in the MA	12,469
NFS land suitable for timber management	7,448
NFS land not suitable for timber management	5,021

Landscape Ecosystems in the Recreation Use in a Scenic Landscape MA	
Landscape Ecosystem	Percent of MA
Dry Pine	0
Dry Mesic Pine/Oak	58
Dry Mesic Pine	27
Boreal Hardwood/Conifer	0
Mesic Northern Hardwood	0
White Cedar Swamp/Semi-terrestrial Cedar Forest	0
Tamarack Swamp	15
Wet Sedge Meadow	1
Total	100%



Theme

The Recreation Use in a Scenic Landscape (RU) management area emphasizes land and resource conditions that provide a scenic landscape for recreational activities in natural-appearing surroundings. This management area also provides wildlife habitat to enhance recreational wildlife watching opportunities. Concentrated recreation use is common. Facilities and access may be highly developed, resulting in a high degree of user interaction. Low-density recreation is also offered in areas with remote character.

Setting

The RU management area is often near high standard roads where developed recreation activities may already be provided. This management area is usually able to meet the demand for recreation use because the areas are easily accessible and already developed.

Two-thirds of the RU management area is suitable for timber management. Three Landscape Ecosystems dominate this MA: Dry Mesic Pine, Dry Mesic Pine/Oak, and Tamarack Swamp.

Desired Conditions

Vegetation Management

D-RU-1 Ecosystems are managed to provide a predominantly natural-appearing landscape that may be slightly modified by forest management activities. This management area emphasizes a large tree and old forest character. Vegetation management generally maintains or enhances older vegetative growth stages.

D-RU-2 Management activities such as timber harvest and management-ignited fire may be used to achieve Landscape Ecosystem objectives. Recreation and scenic integrity objectives guide the appearance of timber harvest, management-ignited fire, tree planting, and other management techniques.

D-RU-3 Vegetation management activities also enhance wildlife habitat. Management activities that promote wildlife habitat for public observation may occur.

Scenic Resources

D-RU-4 Viewsheds are managed for scenic beauty and big-tree character. Generally, this management area offers natural-looking forest surroundings with some facility and trail development and roads for recreation. Forest management enhances recreation and scenic objectives and management activities may be noticeable to visitors. Visitors to the Forest may occasionally see management activities such as timber harvest, management-ignited fire, tree planting, and other resource management techniques.

Recreation and Access

D-RU-5 This management area provides a variety of recreation opportunities. Developed recreation sites such as campgrounds, picnic sites, boat landings, observation sites, trailheads, and swimming areas are provided for public use. Developed sites may have a high degree of modification. Facilities are generally designed for comfort and convenience of users.

D-RU-6 Dispersed recreation facilities such as campsites and trails (day use, backpacking, portaging, bicycling, horseback riding, hunter walking, snowmobile, ATV use, interpretive) may be provided for public use. Other dispersed recreation opportunities that may not be associated with facilities, such as orienteering, hunting, fishing, berry picking, bird watching, wildlife viewing, and trapping, would also occur.

D-RU-7 Depending on project-level recreation objectives, a broad range of access may be permitted. This includes non-motorized trails, motorized trails, gravel roads, and paved roads.

D-RU-8 Many people use this area along lakes and roads and at developed recreation sites. It is common to encounter others. Some people may use the more remote parts of these areas where less development opportunities are provided and consequently fewer people are

encountered.

Facilities

D-RU-9 Buildings and structures may be provided to support resource management objectives. Structures include power lines, pipelines, and roads that serve recreational developments and private homesteads.

D-RU-10 Roads are common and range from one-lane roads with native soil or gravel surfaces to multiple-lane roads with paved surfaces.

Objectives

O-RU-1 The ROS class objective is primarily roaded natural, with small pockets of rural. Some areas that have roaded natural objectives would be managed to retain their remote character.

O-RU-2 Land adjustment objectives:

a) Acquisitions: Priority 2 or 3
b) Conveyances: Allowed

(See the glossary for priority definitions.)

Standards and Guidelines

Recreation and Scenic

G-RU-1 Project level planning will generally use the Minnesota National Forest ROS inventory criteria (Appendix B). Inventoried semi-primitive motorized and non-motorized portions of the project areas will generally be managed to retain remote character. Management activities to retain remote character may include:

- Close some existing and all new roads to motorized vehicles. Construct only temporary and OML 1 roads.
- Emphasize semi-primitive recreation activities and opportunities.
- Manage forest settings using roaded natural ROS criteria along with the Scenic Integrity Objectives.

Special Uses

G-RU-2 A wide variety of special uses is generally permitted.

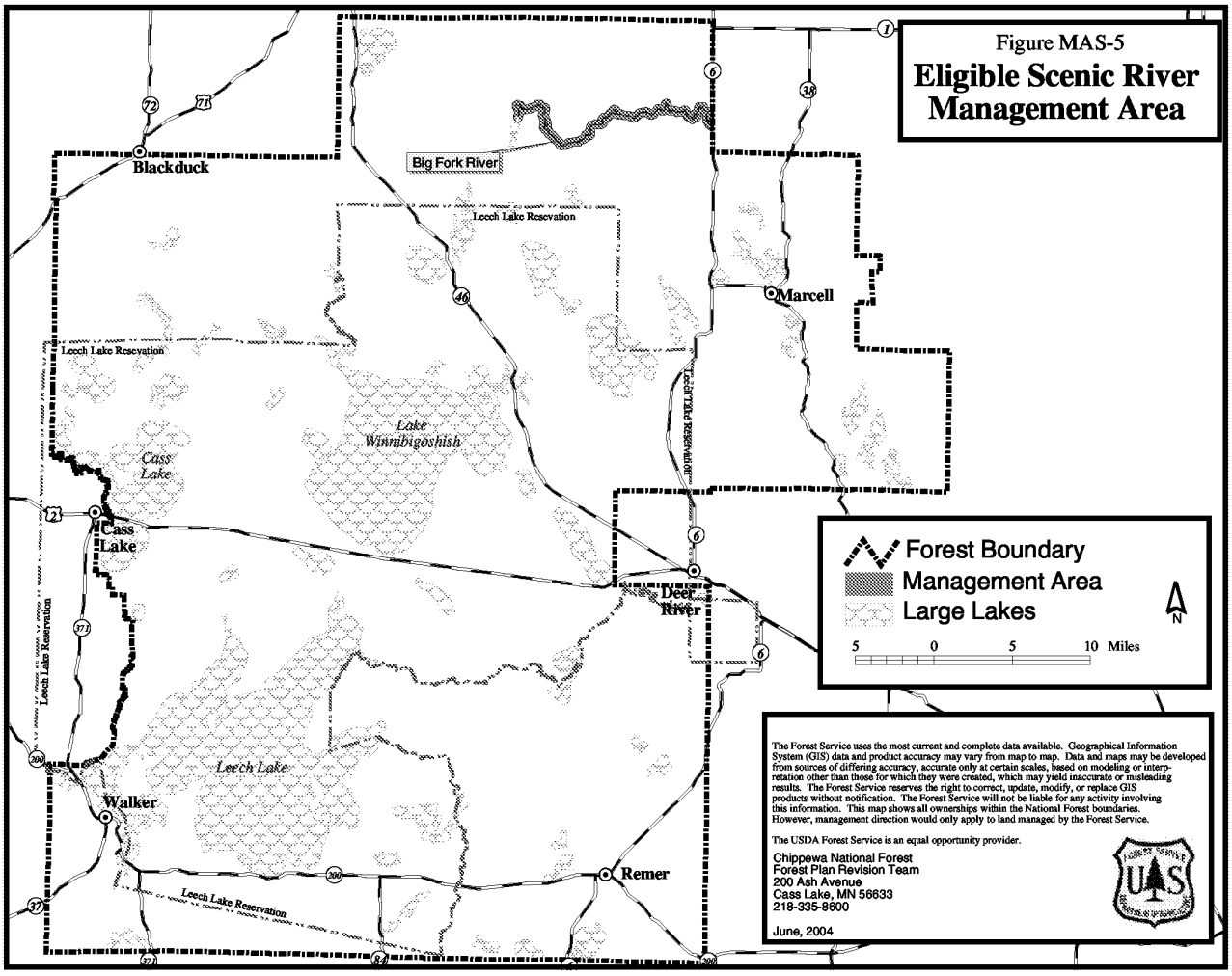
Land Adjustment

S-RU-1 To meet management, recreation, and scenic resource objectives, purchases, donations, and exchanges will be used to enhance and protect the landscape, viewshed, and character of the area. Conveyances will be permitted on a case-by-case basis, as long as management area objectives are not compromised.

Eligible Scenic River (WSR) MA

Acreage in the Eligible Scenic River MA	
	Acres
Total NFS land in the MA	1,537
NFS land suitable for timber management	1,111
NFS land not suitable for timber management	426

Landscape Ecosystems in the Eligible Scenic River MA	
Landscape Ecosystem	Percent of MA
Dry Pine	0%
Dry Mesic Pine/Oak	4%
Dry Mesic Pine	0%
Boreal Hardwood/Conifer	96%
Mesic Northern Hardwood	0%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	0%
Tamarack Swamp	0%
Wet Sedge Meadow	0%
Total	100%



Theme

The Eligible Scenic River (WSR) management area emphasizes land and resource conditions that provide for interim protection of the Big Fork River corridor identified as scenic. The corridor involved meets the eligibility criteria specified in section 1(b) and 2(b) of the Wild and Scenic Rivers Act. Under the interim protection, management activities in the river corridor will protect the river's free-flowing condition, outstandingly remarkable values, and classification.

Setting

The settings range from semi-primitive to developed recreation areas.

The majority of the Eligible Scenic River management area (MA) is suitable for timber management. The Boreal Hardwood/Conifer Landscape Ecosystem dominates this MA.

This management area applies to land one-quarter mile on each side of the Big Fork River. The segments of the river within the Chippewa National Forest boundaries are classified as scenic.

Desired Conditions

D-WSR-1 Eligible river ecosystems are managed to protect or enhance their outstandingly remarkable values, free-flowing character, and classification.

D-WSR-2 Management activities promote the river's outstandingly remarkable values and activities may occasionally be noticeable to visitors. Such management activities may include maintenance or development of recreation sites and vegetation management provided it maintains the river's eligibility.

Public use and enjoyment may be accommodated if these uses retain the river's natural values. Recreation activities may include viewing outstanding scenery, watching wildlife, hunting, fishing, and some activities related to recreational developments, such as camping, boating, swimming, hiking, mountain biking, and skiing.

D-WSR-3 Developed recreation sites (screened from the river) such as campgrounds, picnic sites, water access sites, observation sites, and trailheads may be provided for public use.

D-WSR-4 Dispersed recreation facilities such as campsites and trails (day use, backpacking, portaging, bicycling, cross-country skiing, horseback riding, hunter walking, snowmobile, and ATV use) may be provided for public use.

D-WSR-5 Interpretation of cultural resources may be provided and if so, will be compatible with the natural character and recreation opportunities in the area.

Objectives

O-WSR-1 The ROS class objective is semi-primitive motorized.

O-WSR-2 Land adjustment objectives:

a) Acquisitions – Priority 2

b) Conveyances – Allowed

(See the glossary for priority definitions.)

O-WSR-3 Non-NFS land will be acquired as opportunities arise to protect the existing characteristics of the river corridor.

O-WSR-4 If NFS land is conveyed, it will only be transferred to another public land management entity.

Standards and Guidelines

S-WSR-1 The Big Fork River shall be managed and protected under these standards and guidelines until a suitability study is completed or Congress acts to designate the river as a component of the National Wild and Scenic Rivers System.

S-WSR-2 The Forest will work with tribes, counties,

State, and local governments in the development of river studies and plans.

Ecosystem Function

S-WSR-3 In suppression of fires, planned actions will be based on an analysis after considering fire intensities and risk to health and safety. Heavy equipment will only be used with Forest Supervisor approval.

G-WSR-1 Prescribed fire may be used to establish, maintain, or improve vegetation or scenic conditions. This may include creating wildlife openings, making type conversions, or improving visual quality.

G-WSR-2 Herbicide or pesticide use will generally be allowed if environmental analysis shows it is the only means to control species causing severe problems.

Vegetation

S-WSR-4 Vegetative management will enhance the recreation experience and will maintain the near natural environment of the river corridor.

G-WSR-3 A wide range of silvicultural practices are allowed provided that the methods used would have no substantial adverse impact within the river corridor to the river's free flow, water quality, and outstandingly remarkable values. River corridors should be maintained in their near natural environment.

G-WSR-4 Vegetation management will generally be done to enhance the recreation experience and, to the extent practical, improve scenic values within the context of the purposes for scenic rivers.

G-WSR-5 Vegetation management practices will generally promote the retention of long-lived tree species, leading toward the development of a big-tree character throughout the river corridor.

Wildlife Habitat

G-WSR-6 Habitat improvement will generally emphasize maintaining essential habitat for wildlife associated with late successional stages of vegetation. Habitat improvement that is natural appearing and enhances values of the scenic river experience will generally be permitted.

Heritage, Recreation, and Access

S-WSR-5 Preservation of significant heritage resources will be emphasized.

S-WSR-6 OHV and snowmobile use is allowed on roads and trails that are part of the National Forest Transportation System which are open to specified motorized uses.

G-WSR-7 The following activities are generally permitted within 150 feet of subsurface heritage resource (buried) sites: grazing, heavy equipment and logging activity which can affect the integrity of the site and the construction of facilities other than those designed to interpret the site.

G-WSR-8 Roads may be retained at the maintenance level currently existing on the ground. Limited reconstruction of existing roads may occur when necessary to control road-caused erosion and sedimentation. Existing corridors and river access points should be used whenever possible. Proposals for river crossings may be approved where the crossing will not adversely impact the values, free flow, or change the classification.

Scenic

G-WSR-9 Public use recreation facilities are screened from the river and fit the appropriate guidelines and standards for ROS and SIOs assigned to the river.

Minerals

S-WSR-7 Exploration and development of reserved and outstanding mineral rights will be negotiated to minimize adverse environmental effects. Surface disturbance or occupancy for development and extraction of federally owned minerals is not permitted.

G-WSR-10 Extraction of sand and gravel is generally not permitted

Watershed Management

S-WSR-8 Where watershed improvement projects are undertaken, unobtrusive treatment will be prescribed. Only natural materials (i.e. rocks, logs, and native plants) will be used in restoration work. Flood control dams and levees will be prohibited.

Structures

G-WSR-11 A limited number of buildings and structures may be provided to support resource management objectives that fit the semi-primitive motorized setting.

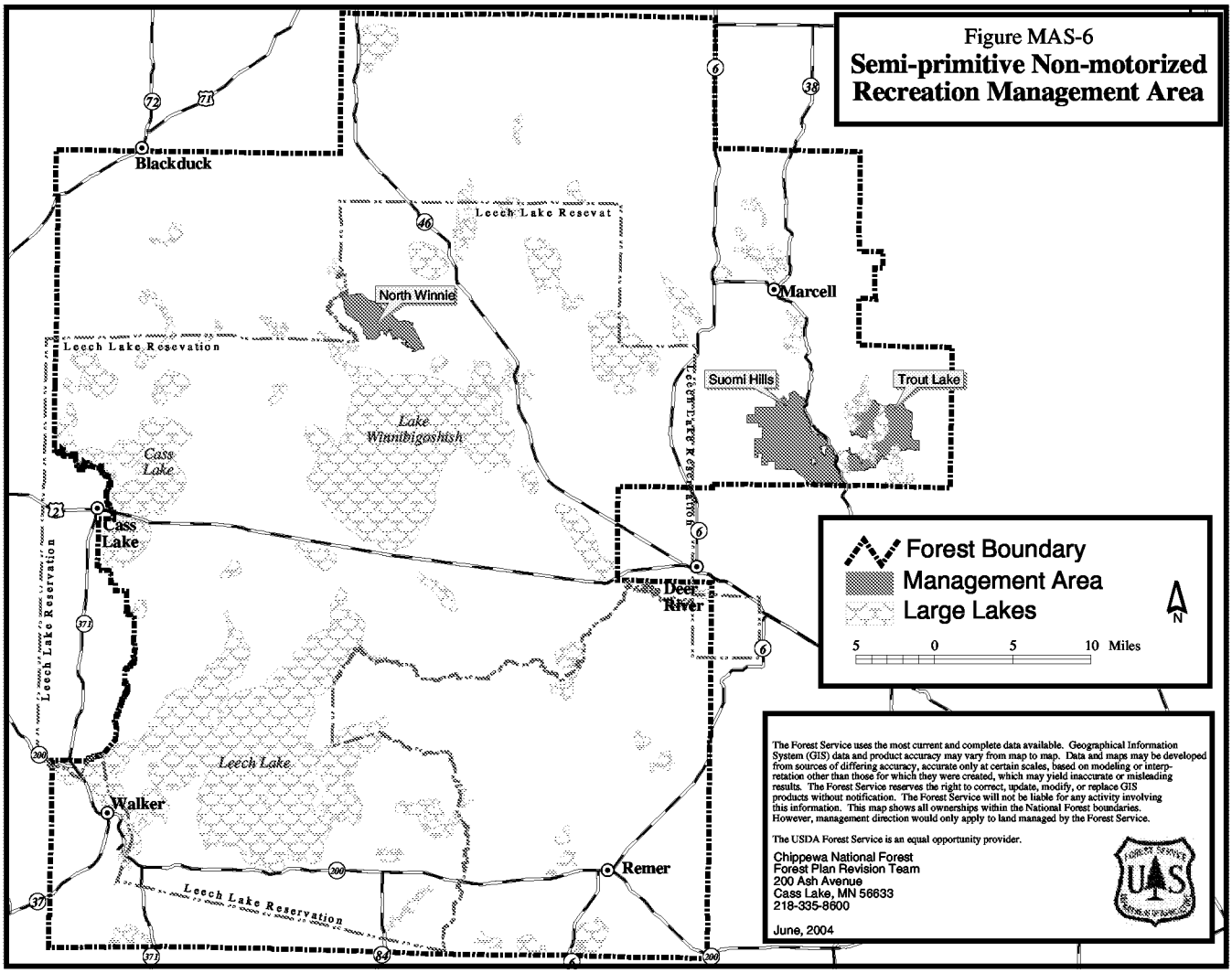
Special Uses

S-WSR-9 Existing special uses may be continued. New applications will be evaluated on their suitability relative to the river's values.

Semi-primitive Non-motorized Recreation (SPNM) MA

Acreage in the Semi-primitive Non-motorized Recreation MA	
Total NFS land in this MA	21,937
NFS land suitable for timber management	18,091
NFS land not suitable for timber management	3,846

Landscape Ecosystems in the Semi-primitive Non-motorized Recreation MA	
Landscape Ecosystem	Percent of MA
Dry Pine	0
Dry Mesic Pine/Oak	34
Dry Mesic Pine	38
Boreal Hardwood/Conifer	11
Mesic Northern Hardwood	13
White Cedar Swamp/Semi-terrestrial Cedar Forest	0
Tamarack Swamp	4
Wet Sedge Meadow	0
Total	100%



Theme

The Semi-primitive Non-motorized (SPNM) management area emphasizes land and resource conditions that provide recreational opportunities in nearly primitive surroundings where motorized use is NOT permitted. Most of the non-motorized recreation use occurs on lakes, trails, portages, and low standard roads. Interaction among recreational users is low. Forest management enhances recreation and scenic objectives and may occasionally be noticeable to visitors.

Setting

The SPNM management area is located in parts of the Forest with few low-standard roads and trails. Management activities are not very noticeable. Visitors may occasionally see stands that have been regenerated, low-standard timber access roads, and non-motorized trails.

The majority of the SPNM management area is suitable for timber management. Two Landscape Ecosystems dominate this MA: Dry Mesic Pine and Dry Mesic Pine/Oak.

Desired Conditions

Vegetation Management

D-SPNM-1 Ecosystems are managed to provide a predominantly natural-appearing landscape, emphasizing large trees and older forest with a continuous forest canopy. Vegetation management generally maintains or enhances the older vegetative growth stages.

D-SPNM-2 Management activities in these areas enhance recreation and scenic objectives and may occasionally be noticeable to visitors. Such management activities may include developing primitive campsites, harvesting timber, using management-ignited fire, and planting trees.

D-SPNM-3 Management activities such as timber harvest and management-ignited fire may be used to achieve vegetation objectives. These activities are designed to maintain the natural appearance of the landscape. Scenic integrity and recreation objectives also guide the design and implementation of these activities.

Scenic Resources

D-SPNM-4 Recreational activities occur in natural-appearing environments that may be slightly modified by forest management activities. Evidence of management activities is relatively low, consisting of occasional stands that have been harvested, low standard roads that are used for timber access, and trails that are used for non-motorized recreation.

Recreation and Access

D-SPNM-5 Developed recreation sites such as water access sites and trailheads may be provided for public use. There is generally little site modification with rustic improvements designed primarily for protection of the environment rather than the comfort of users. Use of natural materials for improvements is emphasized.

D-SPNM-6 Dispersed recreation opportunities such as campsites and trails (day use, backpacking, portaging, cross-country skiing, horseback riding, and hunter walking) may be provided for public use. Other human-made structures are rare. Other dispersed recreation opportunities that may not be associated with facilities, such as orienteering, hunting, fishing, berry picking, bird watching, wildlife viewing, and trapping, would also occur.

D-SPNM-7 Within the interior of the management area, small primitive camping sites may be provided. Spacing of camping sites is generally designed to minimize contacts between users.

D-SPNM-8 Low-standard roads, with native soil or gravel surfaces, are permitted to accomplish forest management. However, most roads would be closed to public

motor vehicle use.

D-SPNM-9 Most recreation use occurs on lakes, trails, and portages. It is uncommon to encounter others in the area.

Objectives

O-SPNM-1 The ROS class objective is semi-primitive non-motorized.

O-SPNM-2 The Forest will conduct an analysis for all SPNM management areas within five years to assess the needs of the existing roads and trails and their consistency with the objectives of the SPNM management area.

Standards and Guidelines

Recreation

S-SPNM-1 National Forest System land, roads, and trails are closed to public motorized use with the exception of Forest Roads 2153, 2376, 3464, 3494, West Suomi Snowmobile Trail during the Grant-In-Aid season, and motorized grooming of cross country ski trails.

G-SPNM-1 If small, low development level, parking areas are provided, they are generally located at the perimeter of the management area.

S-SPNM-2 Developing new motorized recreation trails is prohibited.

G-SPNM-2 The road or trail access to and facilities at water access sites will generally meet development levels described for Natural Environment Lakes and Remote River segments. (See G-RWA-9 in Chapter 2 for development levels)

Special Uses

G-SPNM-3 Special uses are generally not permitted, except those uses that do not detract from the semi-primitive environment or uses needed to access or supply utilities to private land, recreational facilities, or administrative sites.

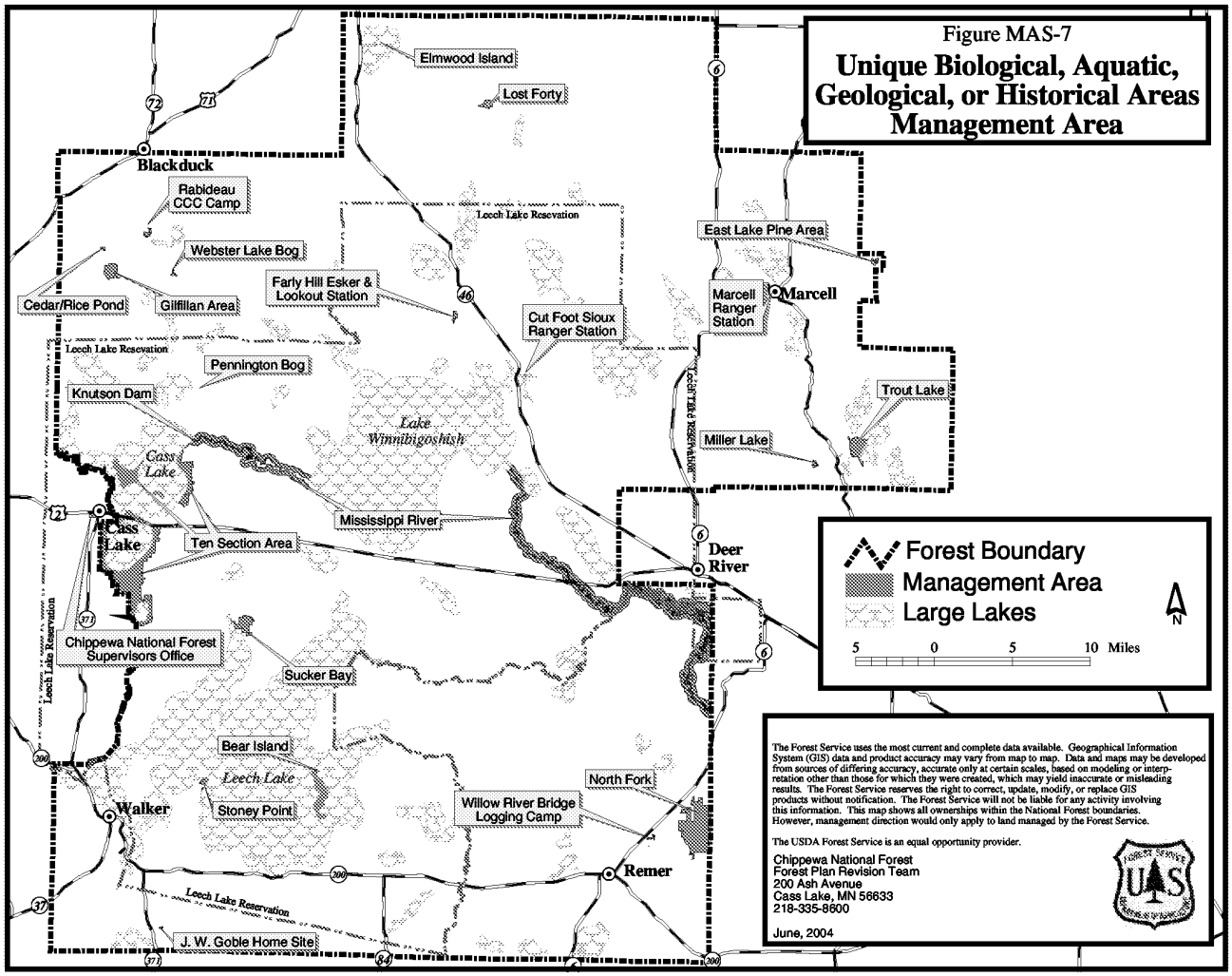
Land Adjustment

G-SPNM-4 Conveyances of NFS land will generally not be permitted. Acquisitions will generally be priority 2. (See the glossary for priority definitions.)

Unique Biological, Aquatic, Geological, or Historical Areas (UB) MA

Suitable Timber land in the Unique, Biological, Aquatic, Geological, or Historical Areas MA	
	Acres
Total NFS land in the MA	18,026
NFS land suitable for timber management	0
NFS land not suitable for timber management	18,026

Landscape Ecosystems in the Unique Biological, Aquatic, Geological, or Historical Areas MA	
Landscape Ecosystem	Percent of MA
Dry Pine	6%
Dry Mesic Pine/Oak	50%
Dry Mesic Pine	5%
Boreal Hardwood/Conifer	4%
Mesic Northern Hardwood	3%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	0%
Tamarack Swamp	22%
Wet Sedge Meadow	10%
Total	100%



Theme

The Unique Biological, Aquatic, Geological, or Historical (UB) management area includes areas with outstanding biological, aquatic, geological, historical, and other special values. Although this management area preserves these values, the UB areas are primarily managed for interpretive purposes.

Setting

None of the UB management area is suitable for timber management. The Dry Mesic Pine/Oak Landscape Ecosystem dominates this MA.

Unique biological and geological areas may be located in a number of places throughout the Forest. The environmental conditions in which they exist may differ from each other. The thread common to these areas is that they exhibit plant communities, associations, and/or individual species of particular interest. Unique historical and recreational areas are also located in a number of places throughout the Forest. These areas are where important historical and traditional uses have occurred and may still occur on the Forest.

The UB management area includes the following areas:

Lost Forty

This area includes old-growth red and white pine stands that were not harvested by early loggers because of a mapping error that indicated the area was under water.

Gilfillan Area

This undeveloped area has an abundance of orchids and a large white spruce progeny area.

Pennington Orchid Bog

Containing an abundance of orchids, this bog extends onto adjoining State land that is designated as a Scientific Natural Area.

Webster Lake Bog

This area contains an unusual abundance of linear-leaved sundew plants.

Bear Island

This undeveloped island in Leech Lake is significant in American Indian heritage and contains unusual plant communities because of its location in a warmer lake-effected microclimate.

East Lake Pine

This area includes a stand of 200-year old red pine.

Cedar/Rice Pond

This area represents a community of large cedar including an abundance of orchids.

Rabideau CCC Camp

This area is a former Civilian Conservation Corps camp site (CCC); one of only a few CCC camps remaining in the United States with a large number of unaltered standing structures.

Cut Foot Sioux Ranger Station

This one-room 1908 log cabin is the oldest remaining Ranger Station building in the Eastern Region of the Forest Service.

Knutson Dam

This dam was built about 1928 and controls the water levels of all the Cass Lake chain. The campground and adjacent area also contain archeological remains of an earlier logging dam, fur trade post, and settlements of Ojibwe, Dakota, and unknown aboriginal ancestors dating back about 10,000 years.

J.W. Goble Homesite

This area contains the remains of a house, garage, barn, and garden built by J.W. Goble about 1920. It is located near the Woodtick Trail, and the North Country Trail passes through it.

Chippewa National Forest Supervisors Office

The office was built in 1935 of native red pine using Finnish log construction style. Finnish craftsmen with the help of CCC and Works Progress Administration laborers supervised construction. The site also includes three additional historical buildings.

Willow River Bridge Logging Camp

The Red River Lumber Company purchased this land in 1935 and established a camp here. Remains of an earthen dam and sluiceway, foundation berms of four buildings, and other features are visible.

Ten Section

Large red and white pine trees remain as stands and as individual trees within younger stands. This area was protected from timber cutting and Euro-American settlement during the logging era in the early 1900s.

Elmwood Island

Located within Island Lake, this island is completely undeveloped and contains a stand of upland cedar, Canada yew, and ricing pits.

Stony Point on Leech Lake

This area represents an old-growth hardwood community, including spring ephemerals, and has excellent spring birding. The area is a traditional gathering place, was the site of an Ojibwe village recorded in the early 1830s, and has archaeological evidence of earlier settlements dating to about 2,000 years ago.

Miller Lake

This area is a sunken lake resulting from the wash out of a beaver dam, which created a 40-foot gully downstream from the lake.

Farley Hill Esker and Lookout Station

This historical fire lookout is located on an esker and consists of a 100-foot steel tower with an outside caged ladder to an enclosed cab, and the remains of the tender's cabin and garage. The Cutfoot Sioux Trail passes at the foot of the tower, providing easy access.

Marcell Ranger Station

This Forest Service administrative complex, constructed in 1934 by the Civilian Conservation Corps in the Finnish log style, includes ranger residence, garage, icehouse, warehouse, and oil house.

Trout Lake

This area represents the Mixed Pine-Hardwood Forest community. Most of the area is in an old forest condition and is a mixture of aspen, red pine, sugar maple-basswood, black spruce, deep marsh, sedge meadow, and bog communities. The area contains 120 acres of red pine more than 100 years old. A portion of Little Long Lake extends into the northwest portion of the area. Upper Spring Lake and Trout Lake are immediately adjacent to portions of the eastern boundary. This area is within the Trout Lake Semi-primitive Non-motorized Recreation Management Area.

Sucker Bay

This area represents the Maple-Basswood Forest community. The majority of the area is occupied by sugar maple-basswood stands, and also includes white cedar, quaking aspen, shrub swamp, and sedge meadow communities. The area contains approximately 300 acres of sugar maple-basswood stands more than 110 years old.

Mississippi River Corridor

In the headwaters of the largest watershed in the nation, this section of the Mississippi River was considered for inclusion under the Wild and Scenic Rivers Act in the 1980's, but instead was zoned and managed as a "Wild" river under the authorities of the Mississippi Headwaters Board. The river bisects the Chippewa NF, and this corridor provides a unique opportunity to enjoy the natural condition of the Mississippi River and its resources, without encroaching development.

North Fork

This is a large unroaded area of old lowland black spruce/tamarack/white cedar/mixed conifer swamp. It offers a remote setting and good representation of the Conifer Swamp Forest community. Numerous lakes less than five acres in size, shrub swamps, sedge meadows, and the North Fork of the Willow River are interwoven throughout the area.

Desired Conditions

D-UB-1 UB management areas are interpreted and preserved to provide public education regarding unique qualities of the Minnesota National Forests. Management emphasis is on conserving or enhancing areas of unique biological, aquatic, geological, and historical interest while developing and interpreting these areas for public education. Management practices that would alter important values associated with the UB management areas are not appropriate unless necessary for public health and safety. In most areas, the focus is on interpreting features but limitations on use are necessary for resource protection. Facilities are provided only when needed to interpret the resource or protect it from human impacts. Dispersed recreation occurs but may be discouraged in some UB areas.

D-UB-2 UB management areas provide habitat for federally listed endangered, threatened, proposed, or candidate species or for Regional Forester sensitive species; and other elements of biological diversity, and scenic and/or historical, geologic, aquatic property values are preserved. Other than at developed interpretive sites, vegetation, habitat, soil productivity, and water quality are affected little by present human use. Native plant communities are maintained, restored, or enhanced. The setting is usually rustic or natural, but varies from site to site. Facilities may be present to the extent needed to maintain the area or to facilitate visitor use of the area.

D-UB-3 UB management areas are tolerant to human visitation for interpretive purposes and are generally easy to access for the convenience of visitors and to facilitate resource monitoring. Management practices such as erecting boardwalks in bogs may provide access to visitors while protecting resource values. Many of the UB management areas provide recreational opportunities. In addition to activities of observation, interpretation, and photography, these areas may provide for such opportunities as fishing, hunting, picnicking, bird watching, and hiking.

D-UB-4 UB management areas, that exhibit features of northern Minnesota glacial history and that are located in close proximity of each other, may be interpreted as a group such as through an auto tour.

D-UB-5 The Forest maintains or enhances scenic quality in UB management areas that have a combination of features (terrain, water, vegetation – singly or in combination) that present an outstanding visual composite of the "Northwoods" scene that people expect to see.

D-UB-6 The Forest maintains or enhances UB management areas that include unique communities (old-growth, wetlands, unique species) or native habitat characteristics that result in concentrations (variety and quantity) of bird or other native species.

D-UB-7 The Forest maintains or enhances UB management areas have plant communities that exhibit the intersection of the three major biomes of the area (prairie, boreal forest, mixed pine and hardwood forest) or other communities of special interest.

D-UB-8 UB management area historical sites are evaluated as to their eligibility for listing on the National Register of Historic Places, but a determination of eligibility was not required for designation to this management area. Historical sites include representation of a cross-section of one or more of the following themes or eras:

- First Peoples (American Indians prior to the arrival of Europeans)
- Early Contact (American Indians, European exploration, and the fur trade)
- Homes and Settlements (related primarily to 19th and early 20th century villages, allotments, reservation, homesteading, agriculture, and other

subsistence practices)

- Industrial Logging (camps, dams, hoists, railroad landings, and mills)
- Recreation (resorts, summer homes, and other recreation sites)
- Depression Era Public Works (built or used by public relief programs such as the Civilian Conservation Corps)
- Public Land Management (historical sites pertaining to the Forest Service or other public land management administration).

D-UB-9 The **Ten Section** UB management area is managed to maintain, restore, or enhance old-growth forest characteristics as were generally present when the area was reserved from sale or settlement in 1903. Developed recreation sites within Ten Section are maintained to allow recreation within that forest setting. Trails are generally non-motorized. One motorized trail is provided. The operation and maintenance of existing developed recreation sites, trails, utility corridors, and travel routes is appropriate. Development of new facilities is designed to cause as little effect as possible to the old-growth, old forest characteristics for which the area was designated.

Objectives

O-UB-1 The Forest will implement new or improved public interpretation of five UB management areas.

O-UB-2 The Forest will enhance the botanical, aquatic, geological, historical, and other special features of five UB management areas.

O-UB-3 The ROS class objective is generally roaded natural.

Standards and Guidelines

Ecosystem Process

S-UB-1 Existing old-growth or old forest will be managed to protect and maintain existing conditions. In some forest community types, this may require the periodic use of prescribed fire.

G-UB-1 If consistent with other UB management area values, the compositional and structural character of the younger forests within the area will generally be created and restored for eventual management as old-growth or old forest.

Watershed

G-UB-2 Modifying water levels is generally not permitted.

Vegetation

G-UB-3 Measures designed to protect old-growth or other values will generally be implemented when stands near and adjacent to the UB management areas are subject to vegetation management activity. Protective measures may include buffers against potential sun and wind damage, soil erosion control, and prescribed fire.

Fire

G-UB-4 Wildfire suppression activities are generally allowed to protect UB management area values, but kept to the minimum necessary to achieve control.

Recreation and Access

S-UB-2 Sacred sites such as burial mounds and cemeteries are unsuitable for interpretation unless there is clear support from the appropriate family and community.

S-UB-3 UB management areas will be protected from actual or potential damage due to public use.

S-UB-4 Bear Island in Leech Lake will not be subject to public interpretation without prior consultation and cooperation of the Leech Lake Band of Ojibwe.

G-UB-5 Facilities are generally provided only when needed to interpret the resource or

protect it from human impacts.

G-UB-6 UB management areas will generally be closed to public use when needed to protect special attributes from disturbances. New roads are generally not permitted in these areas. New trails are generally not permitted, unless they are needed for interpretive or educational purposes or to correct resource damage currently occurring.

G-UB-7 New developed recreation sites will generally not be provided unless they facilitate public interpretation of a UB management area.

G-UB-8 Dispersed recreation sites are generally not appropriate in these areas. One-day hiking trails are appropriate and may be used if needed to accomplish research activities, provide access for public interpretation, or to protect the area by concentrating human use.

G-UB-9 Developing new motorized recreational trails is generally prohibited.

Land Adjustment

S-UB-5 Conveyances of NFS land are not permitted in this management area. Acquisitions are Priority 1. (See the glossary for priority definitions.)

Special Uses

G-UB-10 Renewable and extractive uses are generally restricted or prohibited.

G-UB-11 Authorizations that protect or enhance the UB management areas are generally allowed.

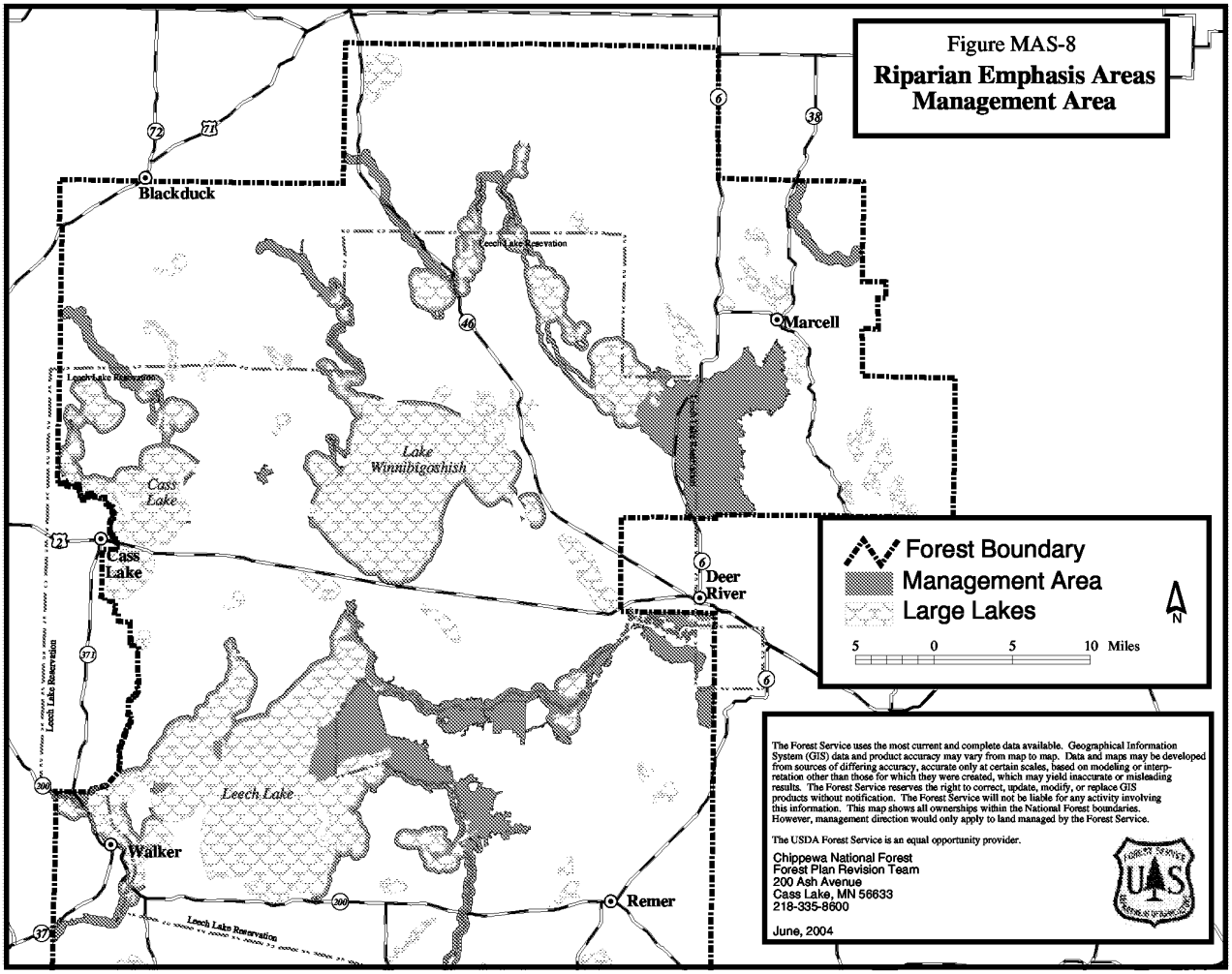
Minerals

S-UB-6 Federal mineral exploration and development activities that disturb the surface are not permitted.

Riparian Emphasis Areas (RE) MA

Suitable Timber land in the Riparian Emphasis Areas MA	
	Acres
Total NFS land in the MA	52,883
NFS land suitable for timber management	25,550
NFS land not suitable for timber management	27,333

Landscape Ecosystems in the Riparian Emphasis Areas MA	
Landscape Ecosystem	Percent of MA
Dry Pine	2%
Dry Mesic Pine/Oak	27%
Dry Mesic Pine	6%
Boreal Hardwood/Conifer	11%
Mesic Northern Hardwood	5%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	8%
Tamarack Swamp	27%
Wet Sedge Meadow	13%
Total	100%



Theme

Riparian ecological functions are actively restored, protected, and enhanced in areas where ecosystem processes are sensitive to degradation. This includes maintaining and restoring native vegetation communities; maintaining and restoring riparian/hydrologic functions such as shoreline stability, wildlife habitat, coarse woody debris recruitment to aquatic and riparian ecosystems, and temperature regulation; and controlling non-native invasive species. Restoration focuses on components of the ecosystem that are not functioning at or within the range of desired conditions. Those components that are functioning properly are protected.

These areas are also managed for water based recreational opportunities and visual quality adjacent to bodies of water.

Setting

Riparian Emphasis Areas are located along major rivers and lakes that receive varying levels of public use for recreational purposes. Also included are selected large areas of relatively contiguous wetland. Development spans from some of the most heavily used recreational areas of the Forest, to some of the more remote areas of the Forest.

Roughly half of the Riparian Emphasis Areas MA is suitable for timber management. The Dry Mesic Pine/Oak and Tamarack Swamp Landscape Ecosystems cover more than half this MA.

Desired Conditions

Watershed Health, Riparian Areas, and Soil Resources

D-RE-1 Management focuses on conserving or restoring special social or ecological features of the Forest, particularly those associated with riparian composition, structure and function. Aquatic plant communities are diverse and productive.

Forest Health and Disturbance Processes

D-RE-2 Forest stands in this management area are dominated by the older vegetative growth stages of the landscape ecosystem they lie within. Management activities mimic natural disturbances and result in structural diversity. Insect and disease potential is reduced through vegetative management. Fuels are managed to retain a natural forest appearance and to reduce threat of wildfire damage to Forest resources.

Vegetation Management

D-RE-3 Many tree species are present, because these areas cross a number or different Landscape Ecosystems. A mixture of young, but more frequently old, trees, with multi-layered canopies are present as well as snags and downed wood. Large red pine and white pine appear in pockets, accenting many areas. Aspen and other hardwoods often grow in patches adjacent to water bodies. Floodplains present in the area consist of sedge meadow and shrub wetland communities. Where ecologically suited, floodplains accommodate lowland conifers such as black spruce, cedar and tamarack.

D-RE-4 Vegetation is managed to provide for public safety and to improve forest health, as needed to maintain or improve conditions along water bodies and recreational settings.

Terrestrial and Aquatic Wildlife

D-RE-5 A wide variety of wildlife occurs in this management area, including multiple species of fish, birds, mammals, reptiles, and amphibians. Older vegetative growth stages associated with this management area provide habitat for cavity-nesting species. Coarse woody debris recruited to aquatic and riparian ecosystems enhances habitat for fish and amphibians. Wetlands that are adjacent to the large water bodies provide important nesting habitat for waterfowl.

Recreation, Trails, and Water Access

D-RE-6 The lakes and rivers that lie at the center of some of these areas serve as visual centerpieces and are main recreational attractions on the Forest.

D-RE-7 Developed recreation sites such as campgrounds, picnic sites, boat landings, observation sites, trailheads, and swimming areas may be provided . These occur in natural-appearing surroundings that are somewhat modified by forest management activities. Roads and trails through this management area are limited to stream crossings or those needed for recreational access to large lakes or rivers. High-use recreation sites may be hardened and additional restrictions may be enforced to protect sensitive natural resources. Hardened sites are only constructed in areas of established high recreation demand.

D-RE-8 Dispersed recreation activities occur in semi-primitive settings. Dispersed recreation facilities such as campsites and trails (day use, backpacking, portaging, bicycling, horseback riding, hunter walking, snowmobiling, ATV use, and interpretive) may be provided. Other dispersed recreation opportunities that may not be associated with facilities, such as orienteering, hunting, fishing, berry picking, bird watching, and wildlife viewing, and trapping, also occur.

Scenic Resources

D-RE-9 The forests along these corridors appear natural.

D-RE-10 Management alterations may be evident, but are less evident and of shorter duration than on many other parts of the Forest. These alterations are harmonious with the scenic condition of the natural landscape. Landscapes are visually appealing and provide a diversity of vegetative species and size classes.

Objectives

O-RE-1 Maintain or increase stands and acres of red pine, white pine, white spruce, and northern hardwoods, primarily through partial cutting prescriptions. Maintain existing stands and acres of lowland conifer and black ash. Maintain or increase species diversity and the number of wildlife viewing opportunities. Retain coarse woody debris.

O-RE-2 The ROS class objective is primarily semi-primitive motorized with roaded natural inclusions and small pockets of rural.

Standards and Guidelines

Special Uses

G RE-1 Special uses that do not complement or are not compatible with the kind and development level of associated Forest Service facilities within the area are generally not permitted.

S RE-1 New special uses that would degrade the long term ecological function of riparian ecosystems are not permitted.

Land Adjustment

G RE-2 Conveyances of NFS land are not permitted. Acquisitions are priority 2.

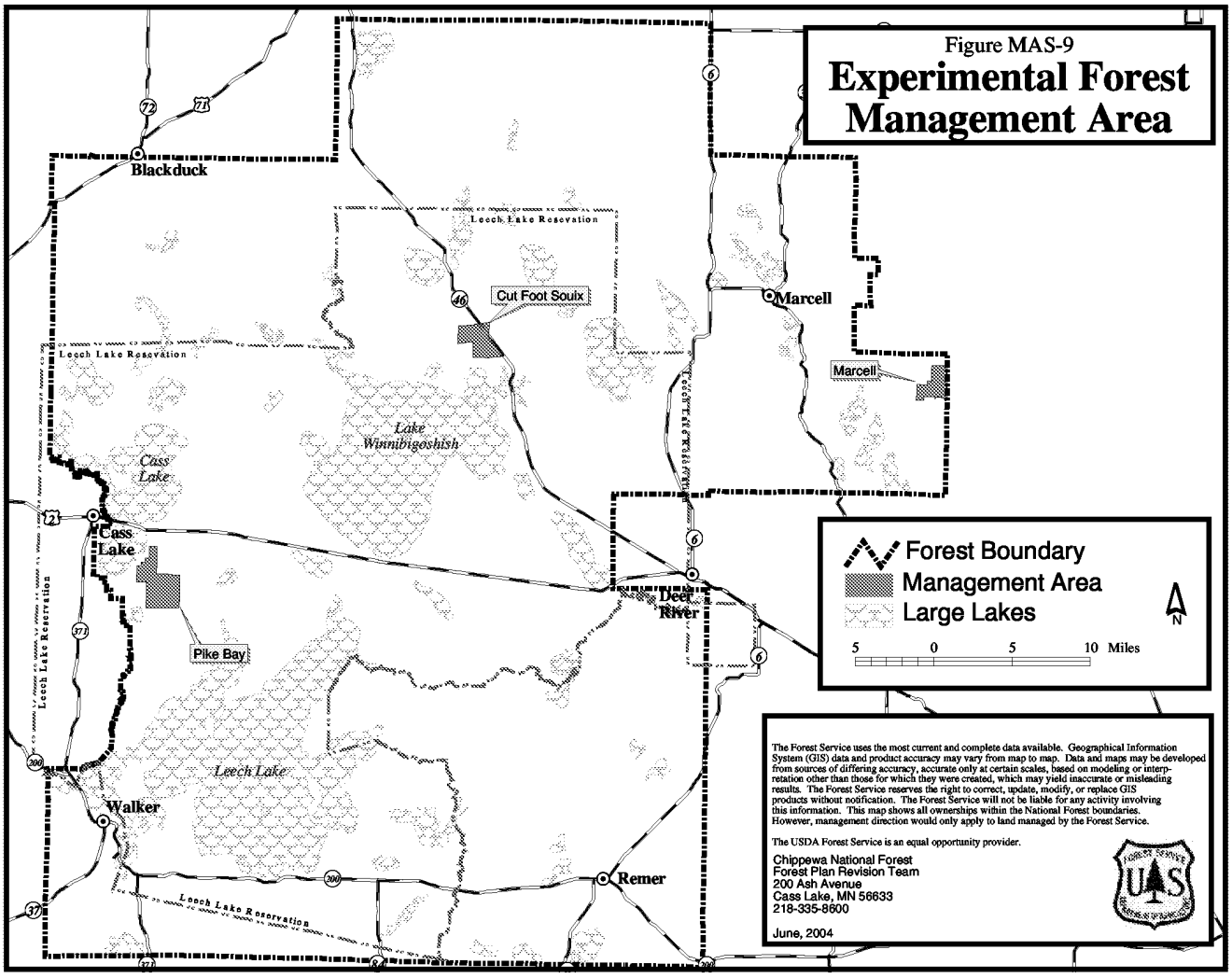
Other

S RE-2 The Mississippi Headwaters Plan will be integrated into management activities.

Experimental Forest (EF) MA

Suitable Timber land in the Experimental Forest MA	
	Acres
Total NFS land in the MA	8,184
NFS land suitable for timber management	0
NFS land not suitable for timber management	8,184

Landscape Ecosystems in the Experimental Forest MA	
Landscape Ecosystem	Percent of MA
Dry Pine	0%
Dry Mesic Pine/Oak	52%
Dry Mesic Pine	15%
Boreal Hardwood/Conifer	16%
Mesic Northern Hardwood	16%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	0%
Tamarack Swamp	0%
Wet Sedge Meadow	0%
Total	100%



Theme

These areas are managed for research conducted by scientists assigned to the North Central Forest Experiment Station. Silvicultural or other treatments appropriate to research and experimentation are used in these areas.

Setting

There are three Experimental Forests within the boundary of the Chippewa National Forest:

- Cut Foot
- Marcell
- Pike Bay

The Experimental Forest MA is not suitable for timber management. The Dry Mesic Pine/Oak Landscape Ecosystem covers half this MA. The Dry Mesic Pine, Boreal Hardwood/Conifer, and Mesic Northern Hardwoods also contribute to this MA.

Desired Condition

D-EF-1 Experiments are designed to determine how forest management programs or outside influences affect forest resources.

Minerals Management

D-EF-2 Minerals are managed in a way that protects surface resource conditions to prevent the alteration of research projects.

Vegetation Management

D-EF-3 Vegetation appears managed in these areas. Groups of trees exhibit different heights and ages, and the forest floor usually appears fairly undisturbed, with grasses, forbs and shrubs covering the ground. In recently cut areas, tree stumps, slash, and disturbed soil are evident. Fire suppression and fuel treatment activities are conducted with an emphasis on complementing rather than compromising ongoing research projects. Some natural or created openings of various shapes and sizes exist.

D-EF-4 Vegetation is managed consistent with current or planned research projects, ensuring that the integrity of these projects is protected. Interpretive opportunities and signing are provided for research and forest management projects.

Terrestrial and Aquatic Wildlife

D-EF-5 Wildlife habitat research is encouraged. The occurrence of some wildlife species may be associated with habitat conditions created through experimentation.

Recreation

D-EF-6 Hiking and hunting may occur. Developed recreation facilities are generally not provided. Dispersed recreation use occurs but is generally discouraged.

Transportation Systems

D-EF-7 These areas are roaded. Roads have paved, gravel, or native surfaces.

Scenic Resources

D-EF-8 Scenic conditions vary by area and are a by-product of the experimental process that determines the size, shape, and composition of the Forest.

Objectives

O-EF-1 Apply harvest practices, including untested experimental practices, to meet the needs of designed experiments

O-EF-2 Reduce the threat of wildfire damage to research projects. Implement fuel treatment that is recommended by research staff.

O-EF-3 The ROS class objective is roaded natural.

Standards and Guidelines

Vegetation

G EF-1 Prescribed fire will generally be permitted only in association with research projects.

Recreation

G EF-2 Recreation facilities are generally not provided.

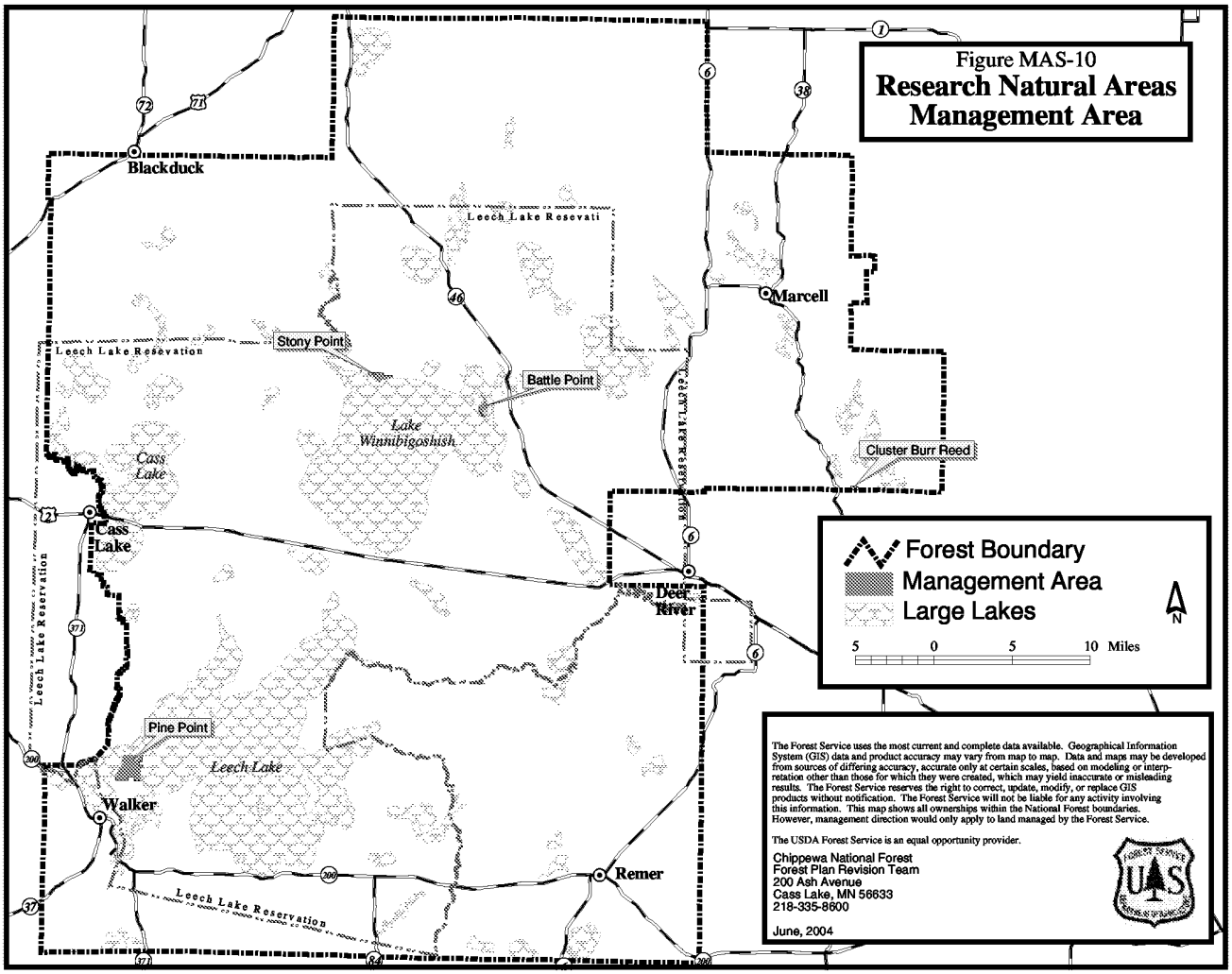
Special Uses

G EF-3 New special use permits are generally not allowed.

Research Natural Areas (RNA) MA

Suitable Timber land in the Research Natural Areas MA	
	Acres
Total NFS land in the MA	2,140
NFS land suitable for timber management	0
NFS land not suitable for timber management	2,140

Landscape Ecosystems in the Research Natural Areas MA	
Landscape Ecosystem	Percent of MA
Dry Pine	0%
Dry Mesic Pine/Oak	17%
Dry Mesic Pine	30%
Boreal Hardwood/Conifer	1%
Mesic Northern Hardwood	4%
White Cedar Swamp/ Semi-terrestrial Cedar Forest	0%
Tamarack Swamp	16%
Wet Sedge Meadow	32%
Total	100%



Theme

The focus is on preserving and maintaining areas for ecological research, observation, genetic conservation, monitoring, and educational activities. The role of these areas in ecological research and monitoring is in providing unique or high quality representative native plant community types. These areas often serve as baseline or reference areas for comparison to other similar ecosystems that are subject to a wider range of management activities. These areas are very suited to monitoring of succession and other long-term ecological changes.

Research Natural Areas (RNAs) also provide opportunities for low impact activities designed to educate people about ecological processes. No recreation facilities are provided. Dispersed recreation use occurs, but is generally discouraged.

Setting

RNAs are located in a number of places throughout the Forest. The environmental conditions in which they exist may differ from each other, such as site-specific climatic conditions, soil types, and terrain; however the thread common to all RNAs is that they exhibit plant communities, associations, individual species, aquatic types, or geologic types of particular interest.

None of the Research Natural Area MA is suitable for timber management. Four Landscape Ecosystems dominate this MA: Wet Sedge Meadow, Dry Mesic Pine, Dry Mesic Pine/Oak, and Tamarack Swamp.

Desired Conditions

Forest Health and Disturbance Processes

D-RNA-1 Ecological processes prevail with minimum human intervention. Land and resource conditions provide for maintenance of undisturbed ecosystems. These areas have unique land, aquatic, or rock formations or vegetative types that are worth studying in an undisturbed state. Management emphasizes conserving or enhancing these ecosystems, and where appropriate, interpreting these areas for public education.

D-RNA-2 Natural forces and site conditions are the primary factors that determine the size, shape, and composition of forest stands. In limited situations, deliberate manipulation (e.g. prescribed fire) may be used to maintain the ecosystem or unique features for which the RNA was established or to reestablish natural ecological processes. Non-native invasive species are controlled.

Vegetation Management

D-RNA-3 The forest is characterized by vegetation representative of the ecological capability of the area and is minimally affected by human activity.

Terrestrial and Aquatic Wildlife

D-RNA-4 As practicable, land and resource conditions provide habitat that reflects the natural condition. Habitat improvement projects are not normally undertaken, but can be used where specifically needed to restore natural ecosystem conditions.

Recreation

D-RNA-5 The setting is usually natural, but can vary from site to site. Recreational use is not a featured activity in these areas but low impact educational and interpretation activities can be provided for. These areas may be closed to public use when needed to protect botanical or other attributes from disturbances.

Scenic Resources

D-RNA-6 Scenic conditions vary by area and are a by-product of the natural forces and site conditions that primarily determine the size, shape, and composition of forest stands.

Transportation Systems

D-RNA-7 The area may contain trails, one-lane

roads surfaced with soil or aggregate, and small structures for gathering data, such as water monitoring stations, rain gauges, and instrument shelters.

Objectives

O-RNA-1 The ROS class objective is semi-primitive non-motorized. Specific RNA plans, when developed, may determine other appropriate ROS objectives.

Standards and Guidelines

Ecosystem Function

S-RNA-1 Modifying water levels of lakes, streams and wetlands is not permitted.

S-RNA-2 Dams and impoundments are not permitted.

S-RNA-3 Suppress fires that are destroying the uniqueness of the area, threatening persons or property, or that do not meet research goals.

G-RNA-1 Use of heavy equipment for fire suppression is generally not permitted. Snags, fire scarred trees, or other damage resulting from the fire will generally not be cleaned up. Fire hazard reduction activities that are compatible with the ecosystem or unique features of the RNA or help to reestablish natural ecological processes, are generally allowed.

Vegetation

S-RNA-4 No timber management may occur within these areas.

Recreation and Access

S-RNA-5 Recreational use that threatens or interferes with the objectives or purposes of the RNA is prohibited.

S-RNA-6 Developed recreation sites are not provided.

G-RNA-2 Dispersed recreation sites are generally not allowed in these areas. One-day hiking trails are appropriate and may be used if needed to accomplish research activities or to protect the area by concentrating human use. Where possible, trails will avoid the area.

S-RNA-7 Developing new motorized recreation trails is prohibited.

G-RNA-3 The road or trail access to and facilities at, water access sites will generally meet development levels described for Natural Environment Lakes and Remote River segments. (See G-RWA-9 in Chapter 2 for development levels.)

G-RNA-4 RMV use on OML 1 and OML 2 roads is generally prohibited.

Special Uses

S-RNA-8 New special use permits are not permitted. Exceptions can be made for permits to meet research needs.

S-RNA-9 Buildings, structures, and other improvements are provided only if needed for research purposes.

Land Adjustment

G-RNA-5 Conveyances of NFS land are not permitted . Acquisitions and donations are priority 1.

Other

S-RNA-10 Gravel pits are not permitted.

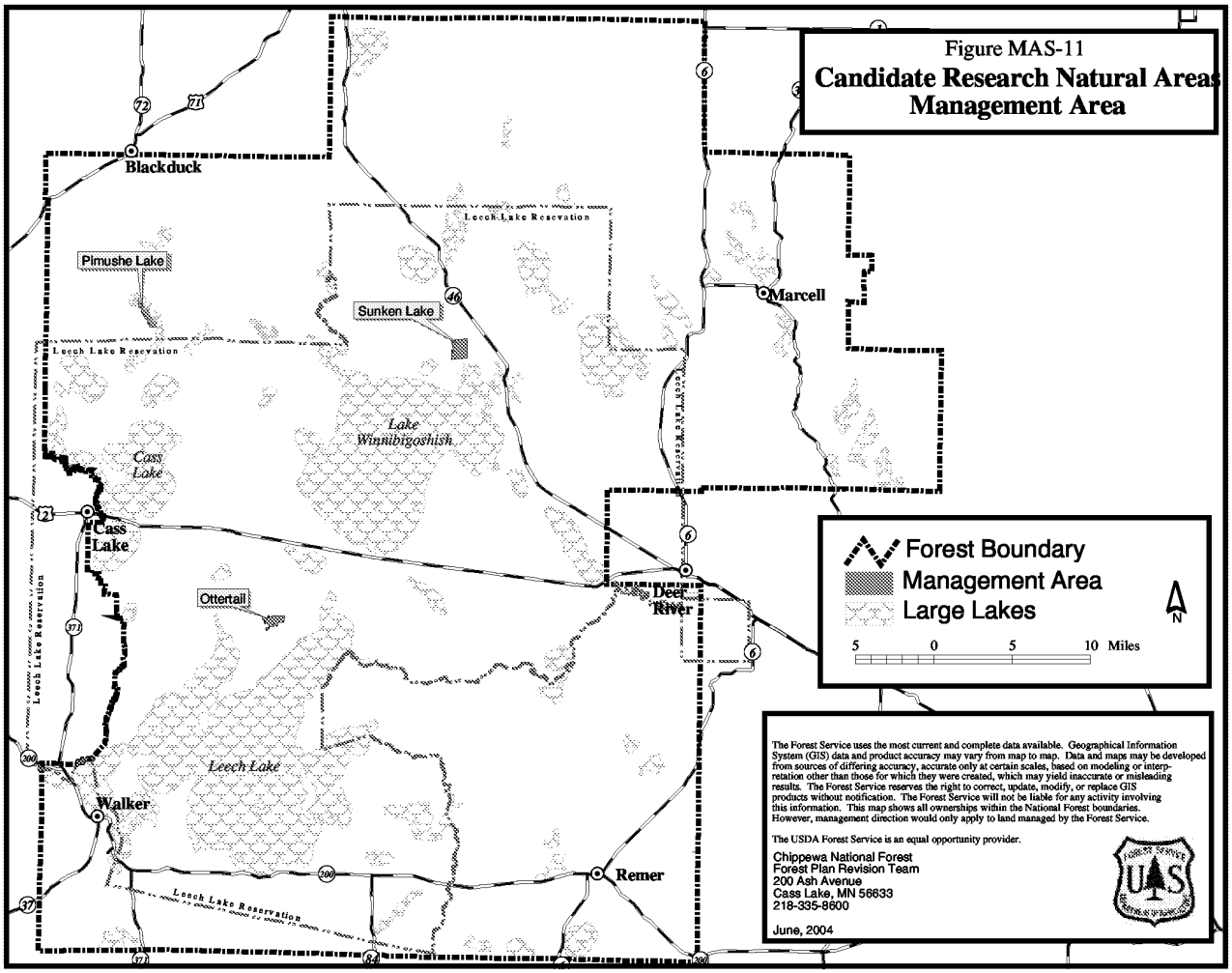
S-RNA-11 Federal mineral exploration and development activities that disturb the surface are not permitted.

S-RNA-12 Roads and trails are permitted only if needed to fulfill the purposes of the RNA.

Candidate Research Natural Areas MA

Acreage in the Candidate Research Natural Areas MA	
Total NFS land in this MA	1,699
NFS land suitable for timber management	0
NFS land not suitable for timber management	1,699

Landscape Ecosystems in the Candidate Research Natural Areas MA	
Landscape Ecosystem	Percent of MA
Dry Pine	0%
Dry Mesic Pine/Oak	45%
Dry Mesic Pine	0%
Boreal Harwood/Conifer	14%
Mesic Northern Hardwood	41%
White Cedar Swamp/Semi-terrestrial Cedar Forest	0%
Tamarack Swamp	0%
Wet Sedge Meadow	0%
Total	100%



These are areas identified as Candidate Research Natural Areas (CRNAs). The formal process to make them part of the national RNA network is part of Forest Plan implementation. Until these areas are formally designated as part of the RNA network, they will be managed in the same manner as existing Research Natural Areas, with one exception. The one exception is that the interim Recreation Opportunity Spectrum (ROS) class objective in CRNAs is semi-primitive non-motorized. This interim ROS designation may change if the formal designation process for specific RNAs shows a different long term ROS class objective is more appropriate.

The Candidate Research Natural Areas are not suitable for timber management. The Dry Mesic Pine/Oak and Mesic Northern Hardwood Landscape Ecosystems predominate in this MA, with a smaller contribution from the Boreal Hardwood/Conifer LE.

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