

## Specific Management Area Direction

This section describes the specific management prescriptions to be used to implement the Forest Plan. These management prescriptions contain multiple-use practices that produce resource outputs, goods, and services.

The 14 management prescriptions that follow describe the land conditions needed to produce the combination of goods and services needed to respond to the management problems. These prescriptions, and several additional ones, were also used as the basis for developing the alternatives analyzed in detail in the accompanying Final EIS.

The Forest's management area direction corresponds with the guidance given in the Regional Management Goals found in the Regional Guide. The first digit of the management prescription number corresponds to one of the nine Regional Management Goals.

Each of the management prescriptions is described in the following format:

- A narrative description of the prescription's purpose and the desired future condition that will result from using the prescription.
- A summary of the resource output objectives and proposed and probable management practices for the management area.
- The management prescription's standards and guidelines.

# Management Prescription 1.1

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## Purpose

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This management prescription:

- Emphasizes early successional community types (plant and animal) within a roaded natural motorized recreation environment.
- Maintains potential conditions for moderate to high populations of game species such as deer and ruffed grouse and nongame species such as golden-winged warbler.
- Maintains moderate to high amounts of aspen type along with associated timber products and habitat conditions.
- Provides an appearance that is predominantly forested with frequent temporary openings.

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## Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 69,300 acres in total. See the Forest Plan map in the enclosed map packet for location of Management Area 1.1.

Dominant landtype associations (LTAs) are:

LTA 16 - Nearly level; dissected glacial lake plain with deep ravines; sandy, loamy, and clayey; northern hardwood forests; water movement through the soil is very slow.

LTA 19 - Nearly level; glacial lake plain, clayey; aspen and northern hardwood forests; water movement through the soil is very slow.

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## Desired Future Condition of the Land

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The forest is a mosaic of temporary openings and stands featuring aspen, paper birch, and balsam fir. Stands of even- or uneven-aged northern hardwoods are interspersed throughout the management area. Table 1.1a describes the desired vegetation composition.

Aspen on productive sites is generally grown for sawtimber and may be thinned to increase production. Less productive sites produce primarily pulpwood.

Trees within each stand are about the same age and size giving a uniform appearance. However, stands within the management area are of many different ages.

The combination of openings and forest cover is habitat for diverse plant and animal species. Deer populations could be as high as about 15 per square mile in early spring. Populations of snowshoe hare and ruffed grouse could also be high.

Uneven-aged management that produces a continuous forest cover with many different-sized trees may be practiced where there are northern hardwoods. Pesticide use is very low.

The even-aged silvicultural system used for aspen and softwoods results in clearcuts accessed by many temporary roads that are obliterated after the timber is removed. In addition, the system of long-term local and collector roads averages 2-1/2 to 3-1/2 miles per square mile. The location and design of these roads minimizes their visual and physical impact.

Considerable human activity is evident but any structures or alterations are visually compatible with the surrounding environment.

This moderately roaded environment provides four-wheel-drive, snowmobiling, and other motorized recreation opportunities. Roads may be closed to public motorized vehicle use, providing nonmotorized recreation opportunities as well.

Table 1.1a  
 Desired Vegetation Composition  
 of Management Area 1.1

| Vegetation Type    | Final Harvest Product <sup>1/</sup> | % of Forest Land |
|--------------------|-------------------------------------|------------------|
| Aspen              | Sawtimber                           | 40-60            |
|                    | Pulpwood                            |                  |
| Softwood           | Sawtimber                           | 5-10             |
|                    | Pulpwood                            | 10-20            |
| Hardwood           | Sawtimber                           | 5-15             |
|                    | Pulpwood                            | 0-5              |
|                    | Old Growth <sup>2/</sup>            | 1-3              |
| Total Forest Land: |                                     | 100              |

Permanent upland openings will equal 1 to 5 percent of the total area.

<sup>1/</sup> Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.

<sup>2/</sup> The percentage of forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 1.1b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| <b>Harvest</b>                      |                                     |              |                |
| Clearcut                            | Acres                               | 800          | 880            |
| Selection                           | Acres                               | 170          | 280            |
| Shelterwood seed                    | Acres                               | 180          | 60             |
| Shelterwood removal 1/              | Acres                               | 20           | 60             |
| Commercial thinning                 | Acres                               | 140          | 70             |
| <b>Reforestation</b>                |                                     |              |                |
| Artificial                          | Acres                               | 50           | 20             |
| Natural with site preparation       | Acres                               | 550          | 590            |
| Natural without site preparation 2/ | Acres                               | 440          | 610            |
| <b>Timber Stand Improvement</b>     |                                     |              |                |
| Release                             | Acres                               | 60           | 30             |
| <b>Local Road Construction</b>      |                                     |              |                |
| Winter only                         | Miles                               | 2.4          | 3.8            |
| Winter/dry summer                   | Miles                               | 1.6          | 1.7            |
| Summer normal                       | Miles                               | 0.4          | 1.1            |

1/ Includes conversions of aspen to hardwoods.  
2/ Includes all selection harvest acreage.

Table 1.1c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                          |                |
|--------------------|--------------------------------------|----------------|
|                    | 1<br>Planned                         | 2<br>Projected |
|                    | (average annual thousand cubic feet) |                |
| Hardwood Sawtimber | 80                                   | 190            |
| Pulpwood           | 180                                  | 560            |
| Aspen Products     | 720                                  | 1,080          |
| Softwood Sawtimber | 50                                   | 360            |
| Pulpwood           | 150                                  | 220            |

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2200 Range  
Management

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If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, remote wildlife habitat, nonmotorized recreation opportunities, and public health and safety, to reduce noise, and to minimize user conflict.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles on that part of the Forest south of M-28 and east of M-64.

Visual  
Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety<br>Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|------------------|-----------------------------------|------|------|------|------|------|----|
|                  | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A          | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class B          | PR                                | M    | M    | PR   | M    | MM   | MM |
| Class C          | PR                                | M    | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

2400 Timber  
Management

Silvicultural  
Systems

Feature even-aged management as the primary silvicultural system. Emphasize the production of aspen pulpwood and sawtimber.

Provide for management of a long-term mix of vegetation (as shown in Table 1.1a) through the scheduling of management practices (as shown in Table 1.1b) to provide a mix of timber products (as shown in Table 1.1c) and wildlife habitats.

Uneven-aged management is emphasized adjacent to Ottawa National Forest visual management system Sensitivity Level I and II foreground areas along travel routes, use areas, and water bodies, or to provide vegetative diversity, utilizing sites that have strong successional trends to sugar maple.

Manage 5 to 15 percent of the hardwood type under an uneven-aged silvicultural system.

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2700 Special Use  
Management

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Utility  
Transmission  
Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the assessment for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility  
Distribution  
Systems

Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other  
Special Uses

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management.

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2800 Minerals and  
Geology

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Exploration of  
U.S. Minerals

Permit surface-disturbing exploration (including core drilling) in most areas, except within or adjacent to developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of  
U.S. Minerals

Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety  
Minerals

Make common minerals available to the public and to local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.

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7700  
Transportation  
System

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Roads

Provide an average of 2-1/2 to 3-1/2 miles of collector and local roads per square mile for the management area. This density may vary with the mix of vegetative types present.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.

# Management Prescription 2.1

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## Purpose

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This management prescription:

- Emphasizes late succession community types within a roaded natural motorized recreational environment.
- Maintains potential conditions for low to moderate populations of game species such as deer and ruffed grouse.
- Maintains moderate to high amounts of hardwood type along with associated timber products and habitat conditions.
- Emphasizes uneven-aged management of the hardwood type to provide for high visual quality, production of high quality hardwood sawtimber and veneer, and habitat conditions for wildlife species such as the red-eyed vireo that are representative of this community type.
- Provides an appearance that is predominantly forested with occasional permanent upland openings.

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## Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 359,700 acres in total. See the Forest Plan map in the enclosed map packet for location of Management Area 2.1

Dominant landtype associations (LTAs) are:

LTA 2 - Rolling; hummocky with numerous closed depressions; loamy and sandy end moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 3 - Rolling; linear north-south ridges and valleys; stony loamy ground moraine with bedrock; northern hardwood forests.

LTA 4 - Undulating; discontinuous ridges, knobs, and closed depressions; stony loamy ground moraine; northern hardwood forests.

LTA 6 - Rolling; hummocky with discontinuous knolls, ridges, and numerous closed depressions; loamy end moraine; northern hardwood forests.

LTA 7 - Rolling; linear northeast-southwest ridges and valleys; loamy drumlinoid ground moraine; northern hardwood forests.

Desired Future  
Condition of the  
Land

A continuous canopy of northern hardwoods, interspersed with some aspen and softwoods, covers management area 2.1. Occasional temporary openings occur where even-aged management is applied but uneven-aged stands of sugar maple are most common. White ash, yellow birch, red maple, northern red oak, eastern hemlock, eastern white pine, and other shade-tolerant species also are found. Table 2.1a describes the desired vegetation composition.

Trees within each stand are a mix of sizes and ages from seedlings to very large, old trees. Permanent upland openings are small and scattered.

The dense forest cover favors shade-tolerant plant species and associated wildlife. Deer populations are low, about 8 per square mile in early spring.

Pesticide use is very low in this area. The types of timber products to be produced here are listed in Table 2.1b.

Because of their frequent use for timber operations, local and collector roads are generally permanent. Their average density is 3 to 4 miles per square mile. The location and design of these roads minimizes their visual and physical impact.

Although not always readily evident, considerable human activity occurs. Any structures or alterations are visually compatible with the surrounding environment.

This highly roaded environment provides four-wheel-drive, snowmobiling, and other motorized recreation opportunities. Roads may be closed to public motorized vehicle use, providing nonmotorized recreation opportunities as well.

Table 2.1a  
 Desired Vegetation Composition  
 of Management Area 2.1

| Vegetation Type    | Final Harvest Product 1/ | % of Forest Land |
|--------------------|--------------------------|------------------|
| Aspen              | Sawtimber                | 15-20            |
|                    | Pulpwood                 |                  |
| Softwood           | Sawtimber                | 0-10             |
|                    | Pulpwood                 | 10-20            |
| Hardwood           | Sawtimber                | 50-65            |
|                    | Pulpwood                 | 1-5              |
|                    | Old Growth 2/            | 8-10             |
| Total Forest Land: |                          | 100              |

Permanent upland openings will be 1 to 5 percent of the total area.

1/ Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.

2/ The percentage of forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 2.1b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period    |                  |
|-------------------------------------|-------------------------------------|----------------|------------------|
|                                     |                                     | 1              | 2                |
|                                     |                                     | <b>Planned</b> | <b>Projected</b> |
| Harvest                             |                                     |                |                  |
| Clearcut                            | Acres                               | 1,440          | 1,130            |
| Selection                           | Acres                               | 2,800          | 4,750            |
| Shelterwood seed                    | Acres                               | 500            | 550              |
| Shelterwood removal 1/              | Acres                               | 130            | 600              |
| Commercial thinning                 | Acres                               | 1,300          | 1,020            |
| Reforestation                       |                                     |                |                  |
| Artificial                          | Acres                               | 40             | 30               |
| Natural with site preparation       | Acres                               | 1,250          | 1,070            |
| Natural without site preparation 2/ | Acres                               | 3,460          | 5,330            |
| Timber Stand Improvement            |                                     |                |                  |
| Release                             | Acres                               | 170            | 50               |
| Local Road Construction             |                                     |                |                  |
| Winter only                         | Miles                               | 14.7           | 17.8             |
| Winter/dry summer                   | Miles                               | 6.0            | 9.2              |
| Summer normal                       | Miles                               | 4.8            | 4.6              |
|                                     |                                     | 3.9            | 4.0              |

1/ Includes conversions of aspen to hardwoods.

2/ Includes all selection harvest acres.

Table 2.1c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                          |                  |
|--------------------|--------------------------------------|------------------|
|                    | 1                                    | 2                |
|                    | (average annual thousand cubic feet) |                  |
|                    | <b>Planned</b>                       | <b>Projected</b> |
| Hardwood Sawtimber | 1,000                                | 1,350            |
| Pulpwood           | 2,470                                | 3,540            |
| Aspen Products     | 1,480                                | 1,250            |
| Softwood Sawtimber | 905                                  | 1,480            |
| Pulpwood           | 710                                  | 1,060            |

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2200 Range  
Management

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If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

Limit forage management to existing permanent upland openings where it is compatible with the desired character of the landscape.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.



Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, remote wildlife habitat, nonmotorized recreation opportunities, and public health and safety, to reduce noise, and to minimize user conflict.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.

- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles on that part of the Forest south of M-28 and east of M-64.

Visual Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|---------------|-----------------------------------|------|------|------|------|------|----|
|               | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A       | R                                 | R    | R    | PR   | PR   | PR   | PR |
| Class B       | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class C       | PR                                | PR   | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground; bg-background.

Classes: Class A-distinctive; Class B-common; Class C-minimal.

VQO Abbreviations: R-retention; PR-partial retention; M-modification; MM-maximum modification (see Glossary for definitions).

2400 Timber Management

Silvicultural Systems

Feature uneven-aged management as the primary silvicultural system for northern hardwoods. Feature northern hardwood vegetation, along with components of aspen and conifers for additional variety.

Provide for management of a long-term mix of vegetation (as shown in Table 2.1a) through the scheduling of management practices (as shown in Table 2.1b) to provide a mix of timber products (as shown in Table 2.1c) and wildlife habitats.

Schedule selection cuttings on a 10- to 20-year cutting cycle depending on stand structure, productivity, and market conditions.

Use even-aged management as the secondary silvicultural system in northern hardwoods employed on the less productive sites or where greater species diversity is desirable and site conditions are favorable to maintain a wider variety of tree species.

Emphasize even-aged management of hardwoods within winter deer range, adjacent to thermal cover, and where aspen opportunities are lacking.

Manage 25 to 35 percent of the hardwood type under an even-aged silvicultural system.

Even-aged management will be the primary silvicultural system for aspen and conifer vegetation types.

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### 2700 Special Use Management

#### Utility Transmission Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the assessment for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

#### Utility Distribution Systems

Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

#### Other Special Uses

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the NEPA process.

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2800 Minerals and  
Geology

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|                                 |  |
|---------------------------------|--|
| Exploration of<br>U.S. Minerals | Permit surface-disturbing exploration (including core drilling) in most areas, except within or adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior). |
| Development of<br>U.S. Minerals | Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.  |
| Common Variety<br>Minerals      | Make common minerals available to the public and to local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.   |

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7700  
Transportation  
System

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|       |  |
|-------|--|
| Roads | Provide an average of 3 to 4 miles of collector and local roads per square mile for the management area. This density may vary with the mix of vegetative types present. |
|       | Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.                        |

## Management Prescription 3.1

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### Purpose

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This management prescription:

- Emphasizes a wide variety of vegetative conditions including moderate amounts of early, middle, and late successional community types, all within a roaded natural motorized recreation environment.
- Maintains potential conditions for moderate populations of game and nongame species.
- Maintains moderate to high amounts of hardwood, softwood, and aspen cover types along with associated timber products and habitat conditions.
- Provides a variety of cover types and age classes through even-aged management of the vegetation.
- Provides an appearance that is predominantly forested with occasional permanent upland openings as well as stands of larger and older trees.

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### Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 56,000 acres in total. See the Forest Plan map in the enclosed map packet for location of Management Area 3.1.

Dominant landtype association (LTA) is:

LTA 1 - Hilly; moderately steep discontinuous hills and depressions; sandy end moraine; northern hardwood and aspen forests; water available for plant use is low; natural fertility is low.

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### Desired Future Condition of the Land

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The forest is a highly mixed mosaic of northern hardwoods, hemlock, pine, white spruce, balsam fir, aspen, and lowland conifer stands, interspersed with permanent upland openings and wetlands. Table 3.1a describes the desired vegetation composition.

Trees within each stand are about the same age and size giving a uniform appearance. However, stands within the management area are of many different ages.

The combination of temporary and permanent upland openings and forest cover provides habitat for diverse plant and animal species. Deer populations could be about 12 per square mile in early spring. Populations of snowshoe hare and ruffed grouse could also be expected to be moderate.

Even-aged management that results in clearcuts (temporary openings) predominates the management of all species, but northern hardwoods may occasionally be managed uneven-aged. Pesticide use is very low to low in this area.

Considerable human activity is evident, but any structures or alterations are visually compatible with the surrounding environment.

Because of their frequent use for timber operations, local and collector roads are generally permanent. Road density varies with the mix of species present, but the average density is 3 to 4 miles per square mile. The location and design of these roads minimizes their visual and physical impact.

This moderately roaded environment provides four-wheel-drive, snowmobiling, and other motorized recreation opportunities. Roads may be closed to public motorized vehicle use, providing nonmotorized recreation opportunities as well.

Table 3.1a  
 Desired Vegetation Composition  
 of Management Area 3.1

| Vegetation Type    | Final Harvest Product 1/ | % of Forest Land |
|--------------------|--------------------------|------------------|
| Aspen              | Sawtimber                | 25-45            |
|                    | Pulpwood                 |                  |
| Softwood           | Sawtimber                | 20-30            |
|                    | Pulpwood                 | 10-20            |
| Hardwood           | Sawtimber                | 25-40            |
|                    | Pulpwood                 | 0-5              |
|                    | Old Growth 2/            | 4-7              |
| Total Forest Land: |                          | 100              |

Permanent upland openings will be 1 to 5 percent of the total areas.

- 1/ Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.
- 2/ The percentage of capable forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 3.1b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| <b>Harvest</b>                      |                                     |              |                |
| Clearcut                            | Acres                               | 460          | 380            |
| Selection                           | Acres                               | 110          | 125            |
| Shelterwood seed                    | Acres                               | 60           | 40             |
| Shelterwood removal 1/              | Acres                               | 20           | 40             |
| Commercial thinning                 | Acres                               | 280          | 630            |
| <b>Reforestation</b>                |                                     |              |                |
| Artificial                          | Acres                               | 50           | 170            |
| Natural with site preparation       | Acres                               | 340          | 250            |
| Natural without site preparation 2/ | Acres                               | 240          | 125            |
| <b>Timber Stand Improvement</b>     |                                     |              |                |
| Release                             | Acres                               | 170          | 350            |
| <b>Local Road Construction</b>      |                                     |              |                |
| Winter only                         | Miles                               | 3.2          | 6.8            |
| Winter/dry summer                   | Miles                               | 0.5          | 0.8            |
| Summer normal                       | Miles                               | 1.6          | 3.5            |
|                                     |                                     | 1.1          | 2.5            |

1/ Includes conversions of aspen to hardwoods.

2/ Includes all selection harvest acreage.

Table 3.1c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                     |  |
|--------------------|---------------------------------|--|
|                    | 1<br>(average annual<br>Planned | 2<br>thousand cubic feet)<br>Projected |
| Hardwood Sawtimber | 110                             | 150                                    |
| Pulpwood           | 240                             | 610                                    |
| Aspen Products     | 350                             | 260                                    |
| Softwood Sawtimber | 160                             | 140                                    |
| Pulpwood           | 125                             | 160                                    |

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2200 Range  
Management

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If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, remote wildlife habitat, nonmotorized recreation opportunities, and public health and safety, to reduce noise, and to minimize user conflict.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in R9 Travelway Guides and Recreation Opportunity Spectrum setting guidelines.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles on that part of the Forest south of M-28 and east of M-64.

Visual  
Quality

Meet visual quality objective displayed in the matrix by  
sensitivity level, distance zone, and variety class.

| Variety<br>Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|------------------|-----------------------------------|------|------|------|------|------|----|
|                  | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A          | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class B          | PR                                | M    | M    | PR   | M    | MM   | MM |
| Class C          | PR                                | M    | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

#### 2400 Timber Management

##### Silvicultural Systems

Feature even-aged management as the primary silvicultural  
system. Feature vegetation types consisting of a somewhat even  
mixture of northern hardwoods, conifers, and aspen.

Provide for management of a long-term mix of vegetation (as shown  
in Table 3.1a) through the scheduling of management practices (as  
shown in Table 3.1b) to provide a mix of timber products (as  
shown in Table 3.1c) and wildlife habitats.

Uneven-aged management is emphasized adjacent to Ottawa National  
Forest visual management system Sensitivity Level I and II  
foreground areas along travel routes, use areas, and water  
bodies, or to provide vegetative diversity, utilizing sites that  
have strong successional trends to sugar maple.

Manage 5 to 10 percent of the hardwood type under an  
uneven-aged silvicultural system.

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2700 Special Use  
Management

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Utility  
Transmission  
Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the assessment for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility  
Distribution  
Systems

Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other  
Special Uses

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

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2800 Minerals and  
Geology

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Exploration of  
U.S. Minerals

Permit surface-disturbing exploration (including core drilling) in most areas, except within and adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of  
U.S. Minerals

Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety Minerals      Make common minerals available to the public and to local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.

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7700  
Transportation  
System

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Roads      Provide an average of 3 to 4 miles of collector and local roads per square mile for the management area. This density may vary with the mix of vegetative types present.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.

## Management Prescription 3.2

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### Purpose

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This management prescription:

- Emphasizes a wide variety of vegetative conditions including moderate to high amounts of middle- to late-successional community types and low to moderate amounts of early successional community types, all within a roaded natural motorized recreational environment.
- Maintains potential conditions for moderate populations of game and nongame wildlife species.
- Maintains high amounts of hardwood cover type and low to moderate amounts of aspen and softwood cover types along with associated timber products and habitat conditions.
- Provides a variety of cover types and age classes through even-aged management of the vegetation.
- Provides an appearance that is predominantly forested with occasional permanent upland openings as well as stands of larger and older trees.

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### Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 141,300 acres in total. See the Forest Plan map in the enclosed map packet for location of Management Area 3.2.

Dominant landtype associations (LTAs) are:

LTA 2 - Rolling; hummocky with numerous closed depressions; loamy and sandy end moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 5 - Steep; sloping to the north with bedrock and bedrock escarpments of igneous and metamorphic rock to the south; loamy moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 9 - Gently sloping; hummocky low knolls and depressions; loamy ground moraine; aspen and northern hardwood forests.

LTA 10 - Undulating; discontinuous north-south low ridges and wet old drainways; loamy ground moraine; northern hardwood and lowland conifer forests.

LTA 11 - Undulating; discontinuous north-south old drainways and scattered low rock outcrops; loamy ground moraine with bedrock; northern hardwood forests.

LTA 13 - Deeply dissected; numerous sloping ridges and steep drainages; loamy ground moraine; northern hardwood and aspen forests.

Desired Future  
Condition of the  
Land

This forest is predominantly even-aged northern hardwood stands mixed with aspen interspersed with stands of uneven-aged northern hardwoods and even-aged pine, paper birch, and hemlock. Permanent upland openings and wetlands types may be present. Tables 3.2a describes the desired vegetation composition.

Trees within each stand are about the same age and size, giving a uniform appearance. However, stands within the management area are of many different ages.

The combination of forest cover and temporary and permanent upland openings is habitat for diverse plant and animal species. Deer populations could be low, about 10 per square mile in early spring. Populations of snowshoe hare and ruffed grouse could be low to moderate.

Even-aged management that results in clearcuts (temporary openings) predominates the management of all species but northern hardwoods may be managed uneven-aged. Pesticide use is very low in this area. Considerable human activity is evident but any structures or alterations are visually compatible with the environment.

Because of their frequent use for timber operations, local and collector roads are generally permanent. Road density varies with the mix of species present, but the average density is about 3 to 4 miles per square mile.

This moderately roaded environment provides four-wheel-drive, snowmobiling, and other motorized recreation opportunities. Roads may be closed to public motorized vehicle use, providing nonmotorized recreation opportunities as well.

Table 3.2a  
 Desired Vegetation Composition  
 of Management Area 3.2

| Vegetation Type    | Final Harvest Product 1/ | % of Forest Land |
|--------------------|--------------------------|------------------|
| Aspen              | Sawtimber                | 20-35            |
|                    | Pulpwood                 |                  |
| Softwood           | Sawtimber                | 5-15             |
|                    | Pulpwood                 | 5-15             |
| Hardwood           | Sawtimber                | 45-55            |
|                    | Pulpwood                 | 0-5              |
|                    | Old Growth 2/            | 4-7              |
| Total Forest Land: |                          | 100              |

Permanent upland openings will be 1 to 5 percent of the total area.

1/ Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.

2/ The percentage of forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 3.2b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| Harvest                             |                                     |              |                |
| Clearcut                            | Acres                               | 700          | 570            |
| Selection                           | Acres                               | 400          | 1,095          |
| Shelterwood seed                    | Acres                               | 250          | 150            |
| Shelterwood removal 1/              | Acres                               | 90           | 300            |
| Commercial thinning                 | Acres                               | 600          | 430            |
| Reforestation                       |                                     |              |                |
| Artificial                          | Acres                               | 120          | 60             |
| Natural with site preparation       | Acres                               | 520          | 450            |
| Natural without site preparation 2/ | Acres                               | 710          | 1,305          |
| Timber Stand Improvement            |                                     |              |                |
| Release                             | Acres                               | 250          | 50             |
| Local Road Construction             |                                     |              |                |
| Winter only                         | Miles                               | 3.4          | 4.5            |
| Winter/dry summer                   | Miles                               | 2.0          | 2.6            |
| Summer normal                       | Miles                               | 0.6          | 0.9            |
| Summer normal                       | Miles                               | 0.8          | 1.0            |

1/ Includes conversions of aspen to hardwoods.  
2/ Includes all selection harvest acres.

Table 3.2c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                      |                                       |
|--------------------|----------------------------------|---------------------------------------|
|                    | 1<br>(average annual<br>Planned) | 2<br>thousand cubic feet<br>Projected |
| Hardwood Sawtimber | 270                              | 330                                   |
| Pulpwood           | 570                              | 1,350                                 |
| Aspen Products     | 500                              | 500                                   |
| Softwood Sawtimber | 100                              | 140                                   |
| Pulpwood           | 130                              | 130                                   |

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2200 Range  
Management

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If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, remote wildlife habitat, nonmotorized recreation opportunities, and public health and safety, to reduce noise, and to minimize user conflicts.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected road and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles on that part of the Forest located south of M-28 and east of M-64.

Visual  
Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety<br>Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|------------------|-----------------------------------|------|------|------|------|------|----|
|                  | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A          | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class B          | PR                                | M    | M    | PR   | M    | MM   | MM |
| Class C          | PR                                | M    | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

#### 2400 Timber Management

##### Silvicultural Systems

Feature even-aged management as the primary silvicultural system. Feature northern hardwood vegetation along with components of aspen and conifers for additional variety.

Provide for management of a long-term mix of vegetation (as shown in Table 3.2a) through the scheduling of management practices (as shown in Table 3.2b) to provide a mix of timber products (as shown in Table 3.2c) and wildlife habitats.

Uneven-aged management is emphasized adjacent to Ottawa National Forest visual management system Sensitivity Level I and II foreground areas along travel routes, use areas and water bodies, or to provide vegetative diversity, utilizing sites that have strong successional trends to sugar maple.

Manage 25 to 35 percent of the hardwood type under an uneven-aged silvicultural system.

2700 Special Use Management

Utility Transmission Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the assessment for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility Distribution Systems

Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other Special Uses

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

2800 Minerals and Geology

Exploration of U.S. Minerals

Permit surface-disturbing exploration (including core drilling) in most areas, except within and adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of U.S. Minerals

Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety Minerals      Make common minerals available to the public and to local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.

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5400  
Landownership

Emphasize land adjustment along Black River Road and the North Country National Scenic Trail corridor as needed to meet management objectives.

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7700  
Transportation System

Roads      Provide an average of 3 to 4 miles of collector and local roads per square mile for the management area. This density may vary with the mix of vegetative types present.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.

## Management Prescription 4.1

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### Purpose

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This management prescription:

- Emphasizes middle- to late-successional coniferous community types within a roaded natural motorized recreational environment.
- Maintains potential conditions for low to moderate populations of game and nongame species.
- Maintains moderate to high amounts of long-lived conifer cover types along with associated timber products and habitat conditions.
- Provides a variety of cover types and age conditions.
- Provides an appearance that is predominantly forested with occasional permanent upland openings as well as stands of larger and older trees.

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### Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 62,600 acres in total. See the Forest Plan map in the enclosed map packet for location of Management Area 4.1.

Dominant landtype associations (LTAs) are:

LTA 14 - Nearly level; glacial outwash plains and old glacial drainages; sandy; aspen, red pine, and jack pine forests; water available for plant use is low to very low; natural fertility is low.

LTA 14a - Nearly level; old glacial drainways, river valley terraces, deltas, and outwash plains; loamy over gravelly; aspen, red pine, and jack pine forests; water available for plant use is moderate to low; natural fertility is medium.

LTA 17 - Nearly level, glacial lake plain and stream benches; sandy and loamy; northern hardwood forests; water available for plant use is low; natural fertility is low.

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### Desired Future Condition of the Land

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The forest is a mosaic of temporary and occasional permanent upland openings and stands featuring red pine with some white pine and white spruce. Some stands of aspen, paper birch, and

northern hardwoods are interspersed with the predominant coniferous cover type. Tables 4.1a describes the desired vegetation composition.

Trees within each stand are about the same age and size, giving a uniform appearance. However, stands within the management area are of many different ages.

The combination of openings and forest cover is habitat for diverse plant and animal species. Populations of deer, snowshoe hare, and ruffed grouse could be low to moderate.

Intensive site preparation, tree planting, and manual/mechanical release are common practices. Even-aged management which results in clearcuts (temporary openings) predominates the management of all species but northern hardwoods may occasionally be managed uneven-aged. Pesticide use in this area is more than in other areas of the Forest but still is relatively low.

Considerable human activity is evident but any structures or alterations are visually compatible with the environment.

Because of their frequent use for timber operations, local and collector roads are generally permanent. Road density varies with the mix of species present, but the average density is about 3 to 4 miles per square mile.

This highly roaded environment provides four-wheel-drive, snowmobiling, and other motorized recreation opportunities. Roads may be closed to public motorized vehicle use, providing nonmotorized recreation opportunities as well.

Table 4.1a  
 Desired Vegetation Composition  
 of Management Area 4.1

| Vegetation Type    | Final Harvest Product <sup>1/</sup> | % of Forest Land |
|--------------------|-------------------------------------|------------------|
| Aspen              | Sawtimber                           | 10-20            |
|                    | Pulpwood                            |                  |
| Softwood           | Sawtimber                           | 45-70            |
|                    | Pulpwood                            | 10-15            |
| Hardwood           | Sawtimber                           | 5-15             |
|                    | Pulpwood                            | 0-5              |
|                    | Old Growth <sup>2/</sup>            | 4-7              |
| Total Forest Land: |                                     | 100              |

Permanent upland openings will be 1 to 5 percent of the of total area.

- <sup>1/</sup> Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.
- <sup>2/</sup> The percentage of capable forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 4.1b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| Harvest                             |                                     |              |                |
| Clearcut                            | Acres                               | 640          | 600            |
| Selection                           | Acres                               | 50           | 80             |
| Shelterwood seed                    | Acres                               | 100          | 90             |
| Shelterwood removal 1/              | Acres                               | 20           | 120            |
| Commercial thinning                 | Acres                               | 230          | 470            |
| Reforestation                       |                                     |              |                |
| Artificial                          | Acres                               | 200          | 320            |
| Natural with site preparation       | Acres                               | 500          | 370            |
| Natural without site preparation 2/ | Acres                               | 90           | 80             |
| Timber Stand Improvement            |                                     |              |                |
| Release                             | Acres                               | 270          | 300            |
| Local Road Construction             | Miles                               | 2.8          | 6.7            |
| Winter only                         | Miles                               | 0.3          | 0.6            |
| Winter/dry summer                   | Miles                               | 1.3          | 3.4            |
| Summer normal                       | Miles                               | 1.2          | 2.7            |

1/ Includes conversions of aspen to hardwoods.

2/ Includes all selection harvest acres.

Table 4.1c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                     |  |
|--------------------|---------------------------------|--|
|                    | 1<br>(average annual<br>Planned | 2<br>thousand cubic feet)<br>Projected |
| Hardwood Sawtimber | 50                              | 100                                    |
| Pulpwood           | 290                             | 470                                    |
| Aspen Products     | 400                             | 780                                    |
| Softwood Sawtimber | 240                             | 350                                    |
| Pulpwood           | 170                             | 270                                    |

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2200 Range  
Management

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If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, remote wildlife habitat, nonmotorized recreation opportunities, and public health and safety, to reduce noise, and to minimize user conflict.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles on that part of the Forest south of M-28 and east of M-64.

Visual  
Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|---------------|-----------------------------------|------|------|------|------|------|----|
|               | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A       | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class B       | PR                                | M    | M    | PR   | M    | MM   | MM |
| Class C       | PR                                | M    | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground; bg-background.

Classes: Class A-distinctive; Class B-common; Class C-minimal.

VQO Abbreviations: R-retention; PR-partial retention; M-modification; MM-maximum modification (see Glossary for definitions).

4.1

#### 2400 Timber Management

Silvicultural Systems

Feature even-aged management as the primary silvicultural system. Manage red pine as the predominant type in this management area.

Provide diversity by managing for low to moderate amounts of hardwoods and aspen.

Provide for management of a long-term mix of vegetation (as shown in Table 4.1a) through the scheduling of management practices (as shown in Table 4.1b) to provide a mix of timber products (as shown in Table 4.1c) and wildlife habitats.

Uneven-aged management is emphasized adjacent to Ottawa National Forest visual management system Sensitivity Level I and II foreground areas along travel routes, use areas and water bodies, or to provide vegetative diversity, utilizing sites that have strong successional trends to sugar maple.

Manage 5 to 10 percent of the hardwood type under an uneven-aged silvicultural system.

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2700 Special Use  
Management

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Utility  
Transmission  
Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the assessment for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility  
Distribution  
Systems

Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other  
Special Uses

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

---

2800 Minerals and  
Geology

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Exploration of  
U.S. Minerals

Permit surface-disturbing exploration (including core drilling) in most areas, except within and adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of  
U.S. Minerals

Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety  
Minerals

Make common minerals available to the public and to local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.

---

5100 Fire  
Management

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Address fuelbreak management in the development of project prescriptions, with locations and size based on expected fire intensities, potential versus allowable net resource value change, and Ottawa National Forest Level I Fire Management Analysis.

---

7700  
Transportation  
System

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Roads

Provide an average of 3 to 4 miles of collector and local roads per square mile for the management area. This density may vary with the mix of vegetative types present. 

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.

## Management Prescription 4.2

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### Purpose

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This management prescription:

- Emphasizes early- to late-successional coniferous community types within a roaded natural motorized recreation environment.
- Maintains potential conditions for low to moderate populations of game and nongame wildlife species.
- Maintains moderate to high amounts of short-lived conifer cover types along with associated timber products and habitat conditions.
- Provides a variety of cover types and age classes through even-aged management of vegetation.
- Provides an appearance that is predominantly forested with frequent temporary openings.

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### Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 13,700 acres in total. See the Forest Plan map in the enclosed map packet for location of Management Area 4.2.

Dominant landtype associations (LTAs) are:

LTA 14 - Nearly level; glacial outwash plains and old glacial drainages; sandy; aspen, red pine, and jack pine forests; water available for plant use is low to very low; natural fertility is low.

LTA 15 - Nearly level; glacial lake plain; sandy; jack pine forests; water available for plant use is very low; natural fertility is very low.

LTA 17 - Nearly level; glacial lake plain and stream benches; sandy and loamy; northern hardwood forests; water available for plant use is low; natural fertility is low.

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### Desired Future Condition of the Land

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The forest is a mosaic of temporary openings and stands featuring jack pine, balsam fir, black spruce, tamarack, and lowland conifers. Stands of aspen, red pine, paper birch, lowland hardwoods, and northern hardwoods are interspersed with the

predominant coniferous cover type. Table 4.2a describes the desired vegetation composition.

Trees within each stand are about the same age and size giving a uniform appearance. However, stands within the management area are of many different ages.

The combination of openings and forest cover is habitat for diverse plant and animal species. Deer populations could be moderate, about 13 per square mile. Populations of snowshoe hare and ruffed grouse could also be low to moderate.

Even-aged management that results in clearcuts (temporary openings) predominates the management of all species but northern hardwoods may occasionally be managed uneven-aged. Pesticide use is very low in this area.

Considerable human activity is evident but any structures or alterations are visually compatible with the environment.

Because of their frequent use for timber operations, local and collector roads are generally permanent. Road density varies with the mix of species present, but the average density is 2-1/2 to 3-1/2 miles per square mile.

This moderately roaded environment provides four-wheel-drive, snowmobiling, and other motorized recreation opportunities. Roads may be closed to public motorized vehicle use providing nonmotorized recreation opportunities as well.

Table 4.2a  
 Desired Vegetation Composition  
 of Management Area 4.2

| Vegetation Type    | Final Harvest Product 1/ | % of Forest Land |
|--------------------|--------------------------|------------------|
| Aspen              | Sawtimber                | 10-25            |
|                    | Pulpwood                 |                  |
| Softwood           | Sawtimber                | 10-25            |
|                    | Pulpwood                 | 50-60            |
| Hardwood           | Sawtimber                | 0-10             |
|                    | Pulpwood                 | 0-5              |
|                    | Old Growth 2/            | 1-3              |
| Total Forest Land: |                          | 100              |

Permanent upland openings will be 1 to 10 percent of the total area.

---

1/ Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.

2/ The percentage of forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 4.2b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| <b>Harvest</b>                      |                                     |              |                |
| Clearcut                            | Acres                               | 260          | 280            |
| Selection                           | Acres                               | 10           | ---            |
| Shelterwood seed                    | Acres                               | ---          | 20             |
| Shelterwood removal 1/              | Acres                               | 20           | ---            |
| Commercial thinning                 | Acres                               | 30           | 230            |
| <b>Reforestation</b>                |                                     |              |                |
| Artificial                          | Acres                               | 70           | 30             |
| Natural with site preparation       | Acres                               | 190          | 240            |
| Natural without site preparation 2/ | Acres                               | 10           | 30             |
| <b>Timber Stand Improvement</b>     |                                     |              |                |
| Release                             | Acres                               | 80           | 20             |
| <b>Local Road Construction</b>      |                                     |              |                |
| Winter only                         | Miles                               | 0.6          | 2.7            |
| Winter/dry summer                   | Miles                               | 0.1          | 0.2            |
| Summer normal                       | Miles                               | 0.3          | 1.4            |
|                                     |                                     | 0.2          | 1.1            |

1/ Includes conversions of aspen to hardwoods.  
2/ Includes all selection harvest acres.

Table 4.2c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                          |                |
|--------------------|--------------------------------------|----------------|
|                    | 1<br>Planned                         | 2<br>Projected |
|                    | (average annual thousand cubic feet) |                |
| Hardwood Sawtimber | 20                                   | 20             |
| Pulpwood           | 30                                   | 50             |
| Aspen Products     | 160                                  | 170            |
| Softwood Sawtimber | 50                                   | 70             |
| Pulpwood           | 30                                   | 50             |

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2200 Range  
Management

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If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection remote wildlife habitat, nonmotorized recreation opportunities, and public health and safety, to reduce noise, and to minimize user conflict.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles on that part of the Forest south of M-28 and east of M-64.

Visual  
Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety<br>Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|------------------|-----------------------------------|------|------|------|------|------|----|
|                  | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A          | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class B          | PR                                | M    | M    | PR   | M    | MM   | MM |
| Class C          | PR                                | M    | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

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#### 2400 Timber Management

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#### Silvicultural Systems

Feature even-aged management as the primary silvicultural system. Feature short-rotation conifers.

Provide diversity by managing for low to moderate amounts of northern hardwoods and aspen.

Provide for management of a long-term mix of vegetation (as shown in Table 4.2a) through the scheduling of management practices (as shown in Table 4.2b) to provide a mix of timber products (as shown in Table 4.2c) and wildlife habitats.

Manage 5 to 10 percent of the hardwood type under an uneven-aged silvicultural system.

Uneven-aged management is emphasized adjacent to Ottawa National Forest visual management system Sensitivity Level I and II foreground areas along travel routes, use areas and water bodies, or to provide vegetative diversity, utilizing sites that have strong successional trends to sugar maple.

Emphasize natural regeneration. Specify logging methods that help accomplish natural regeneration.

2700 Special Use Management

- Utility Transmission Corridors Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.
- Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.
- Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.
- Utility Distribution Systems Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.
- In general, require:
- Burial of new or reconstructed telephone lines.
  - Burial of new or reconstructed powerlines of 34.5 KV or less.
  - Multiutility use of individual utility rights-of-way.
- Other Special Uses Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

2800 Minerals and Geology

- Exploration of U.S. Minerals Permit surface-disturbing exploration (including core drilling) in most areas, except within or adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).
- Development of U.S. Minerals Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety  
Minerals

Make common minerals available to the public and to local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.

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5100 Fire  
Management

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Address fuelbreak management in the development of project prescriptions, with locations and size based on expected fire intensities, potential versus allowable net resource value change, and Ottawa National Forest Level I Fire Management Analysis.

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7700  
Transportation  
System

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Roads

Provide an average of 2-1/2 to 3-1/2 miles of collector and local roads per square mile for the management area. This mix may vary with the mix of vegetative types present.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.

## Management Prescription 5.1

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### Purpose

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This management prescription:

- Provides for management and protection of Congressionally designated wildernesses.
- Protects the wilderness character for future generations.
- Provides a wilderness experience.
- Preserves natural ecosystems.

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### Area Description

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Areas allocated to this form of management are generally 5,000 contiguous acres or larger in size, with the surface and subsurface generally in public ownership in order to adequately coordinate management.

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### Desired Future Condition of the Land

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The areas usually are unmodified environments, often with mature forests, shade-tolerant vegetation, and associated wildlife.

Access within the areas may be by foot and/or horse trail, as needed. No utility corridors, roads, or motorized uses are permitted unless specifically allowed by the establishing act or subsequent amendments. The areas are essentially free of structures. Surface-disturbing mineral exploration is not permitted. Facilities may be present when necessary to protect the wilderness character.

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### 1300 Administration

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The District Ranger is responsible for administration and protection of wilderness.



Construct, rehabilitate, operate, and maintain hiking and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles, All-  
terrain  
Vehicles, and  
Snowmobiles

Permit off-road-vehicle use only when specifically authorized by the act establishing the wilderness.

Cultural  
Resources

Stabilize and preserve cultural resource values within wilderness when these values are compatible with and enhance wilderness values.

Prohibit on-site cultural resource interpretation.

Interpretive  
Services

Develop and implement interpretive programs that address the ethics of use normally associated with wilderness.

Develop interpretive materials that highlight the unique characteristics and management of the wilderness.

Prohibit interpretive activity that requires permanent structures at other than entry points or stations.

Visual  
Quality

Meet the visual quality objective of preservation.

No investments will be made to mitigate the visual impacts of natural-caused changes.

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2400 Timber  
Management

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Silvicultural  
Systems

Timber is not harvested in these areas.

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2500 Water and  
Soil Resource  
Management

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Watershed  
Disturbance

Mitigate erosion with control measures commensurate with the soil characteristics, expected use, and management objectives of the area.

Limit watershed improvement projects to correcting human-caused problems and natural disasters that threaten downstream health and safety.

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2600 Wildlife  
Habitat  
Management

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- Wildlife Recognize the special needs of wildlife species requiring remoteness, consistent with the act establishing the wilderness.
- Fish Provide for fish management and research in wilderness consistent with the act establishing the wilderness.

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2700 Special Use  
Management

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- Utility Transmission Corridors Prohibit corridors for reservoirs, water conservation works, power projects, transmission lines, and other facilities, except as authorized by the act establishing the wilderness.
- Other Special Uses Prohibit special uses in wilderness areas except as authorized by the act establishing the wilderness or by other public law. Consider approval on an individual basis.

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2800 Minerals  
and Geology

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- Exploration of U.S. Minerals Prohibit surface-disturbing exploration (including core drilling) in wilderness except as authorized by the act establishing the wilderness.
- Allow exploration that does not modify the ecosystem, or otherwise conflict with the objectives of the management area.
- Development of U.S. Minerals Recommend against U.S. Department of Agriculture consent to mineral extraction plans.

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3400 Forest Pest  
Management

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- Obtain Regional Forester approval for all pesticide applications in wilderness.

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5100 Fire  
Management

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Suppress all wildfire (natural or human caused).

Use of prescribed fire, either natural or human caused, is prohibited.

Fire suppression practices with motorized or mechanical equipment may be utilized provided such use does not adversely impact wilderness values during the time of the emergency.

The use of heavy equipment such as tractors for fire suppression within the management area requires Regional Forester approval.

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5400  
Landownership

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Provide for land adjustment consistent with the act establishing the wilderness. Refer to Forestwide Standards and Guidelines - 5400 Landownership for additional direction.

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7300 Buildings  
and Structures

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Do not construct buildings or structures except as authorized by the act establishing the wilderness.

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7400 Public Health  
and Pollution  
Control  
Activities

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Solid Waste            Do not provide landfill disposal sites.

Water Supply         Do not develop drinking water sources.

Human Waste  
Treatment            Treatment of human waste may be provided at designated sites.

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7700  
Transportation  
System

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Roads                      Do not provide roads except as required by the act establishing  
the wilderness.

## Management Prescription 6.1

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### Purpose

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This management prescription:

- Emphasizes semiprimitive nonmotorized recreational environment.
- Maintains potential conditions for low to moderate populations of wildlife species with particular emphasis on species requiring remoteness or old growth habitat.
- Maintains moderate to high amounts of northern hardwoods along with associated habitat conditions and timber products.
- Emphasizes uneven-aged management of northern hardwoods to provide for high visual quality, habitat conditions for wildlife species such as the black bear and barred owl and production of low to moderate amounts of high quality northern hardwood sawtimber and veneer.
- Provides a natural appearance that is predominantly forested with occasional permanent upland openings.
- Provides mostly late successional community types.

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### Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 60,900 acres in total. Refer to Forest Plan map in the enclosed map packet for location of Management Area 6.1. 

Dominant landtype associations (LTAs) are:

LTA 2 - Rolling; hummocky with numerous closed depressions; loamy and sandy end moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 5 - Steep; sloping to the north with bedrock and bedrock escarpments of igneous and metamorphic rock to the south; loamy moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 12 - Gently sloping; northeast-southwest low ridges and drainages; clayey glacial lake sediments over loamy ground moraine; northern hardwood and aspen forests.

LTA 13 - Deeply dissected; numerous sloping ridges and steep drainages; loamy ground moraine; northern hardwood and aspen forests.

LTA 20 - Very steep; unstable river valley walls, valley bottoms, and floodplains; aspen, northern hardwood, and spruce/fir forest; water available for plant use is low to high; natural fertility is medium to high.

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Desired Future  
Condition of the  
Land

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A continuous canopy of northern hardwoods interspersed with aspen, softwoods, and occasional permanent upland and temporary openings occurs in the management area. Table 6.1a describes the desired vegetation composition.

Uneven-aged stands of sugar maple, with scattered permanent upland openings, are common. White ash, yellow birch, red maple, northern red oak, eastern hemlock, eastern white pine, and other shade-tolerant species are also found.

Pesticide use will be very low in this area.

The combination of forest cover and openings provides habitat for diverse plant and animal species. Populations of deer, snowshoe hare, and ruffed grouse will be low.

Recreation opportunities such as hunting, fishing, camping, backpacking, hiking, and cross-country skiing occur in a semiprimitive nonmotorized forest environment. Roads and trails are closed to public motorized vehicle use, except as needed for administrative uses and other uses associated with harvesting of timber products.

Although not always readily apparent, human activity occurs. Recreation and special use facilities such as trailhead signs, transmission structures, and utility corridors are permitted, provided they are compatible with the character of the area.

The system of long-term local and collector roads within the area has an average density from 1-1/2 to 2-1/2 miles per square mile.

Table 6.1a  
 Desired Vegetation Composition  
 of Management Area 6.1

| Vegetation Type    | Final Harvest Product <sup>1/</sup> | % of Forest Land |
|--------------------|-------------------------------------|------------------|
| Aspen              | Sawtimber                           | 10-55            |
|                    | Pulpwood                            |                  |
| Softwood           | Sawtimber                           | 1-45             |
|                    | Pulpwood                            | 1-30             |
| Hardwood           | Sawtimber                           | 15-90            |
|                    | Pulpwood                            | 0-5              |
|                    | Old Growth <sup>2/</sup>            | 10+              |
| Total Forest Land: |                                     | 100              |

Permanent upland openings will be 1 to 5 percent of the total area.

<sup>1/</sup> Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.

<sup>2/</sup> The percentage of forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 6.1b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| <b>Harvest</b>                      |                                     |              |                |
| Clearcut                            | Acres                               | 140          | 120            |
| Selection                           | Acres                               | 260          | 410            |
| Shelterwood seed                    | Acres                               | 50           | 90             |
| Shelterwood removal 1/              | Acres                               | 20           | 70             |
| Commercial thinning                 | Acres                               | 40           | 230            |
| <b>Reforestation</b>                |                                     |              |                |
| Artificial                          | Acres                               | 0            | 0              |
| Natural with site preparation       | Acres                               | 150          | 130            |
| Natural without site preparation 2/ | Acres                               | 300          | 490            |
| <b>Timber Stand Improvement</b>     |                                     |              |                |
| Release                             | Acres                               | 30           | 0              |
| <b>Local Road Construction</b>      |                                     |              |                |
| Winter only                         | Miles                               | 1.1          | 2.2            |
| Winter/dry summer                   | Miles                               | 0.7          | 1.4            |
| Summer normal                       | Miles                               | 0.2          | 0.4            |

1/ Includes conversions of aspen to hardwoods.

2/ Includes all selection harvest acres.

Table 6.1c  
Timber Volume to be Removed by Species Product

| Species/Product                      | Time Period  |                |
|--------------------------------------|--------------|----------------|
|                                      | 1<br>Planned | 2<br>Projected |
| (average annual thousand cubic feet) |              |                |
| Hardwood Sawtimber                   | 150          | 190            |
| Pulpwood                             | 310          | 500            |
| Aspen Products                       | 90           | 110            |
| Softwood Sawtimber                   | 30           | 80             |
| Pulpwood                             | 40           | 50             |

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2200 Range  
Management

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No forage resource management is planned.

If use of the forage resource is requested, treat on a case-by-case basis.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily semiprimitive nonmotorized recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Permit the development, operation, maintenance, and grooming of cross-country ski trails by communities, organizations, or businesses that will support and operate them.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in semiprimitive nonmotorized ROS setting guidelines.

Off-road Vehicles, All-terrain Vehicles, and Snowmobiles

Close the area to all-terrain-vehicle (ATV), off-road-vehicle (ORV) use, and snowmobile use except on roads and trails specifically designated as open to their use. Exceptions include use of administrative or emergency vehicles or use by permit or contract.

Sign Forest development trails that may be used by snowmobiles and ATVs in cooperation with the Michigan Department of Natural Resources.

Cultural Resources

Provide interpretation of cultural resources that is compatible with the natural character and recreation opportunities of this management area.

Visual Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|---------------|-----------------------------------|------|------|------|------|------|----|
|               | fg-1                              | mg-1 | bg-1 | fg-1 | mg-2 | bg-2 | 3  |
| Class A       | R                                 | R    | R    | PR   | PR   | PR   | PR |
| Class B       | R                                 | PR   | PR   | PR   | M    | M    | MM |
| Class C       | PR                                | PR   | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground; bg-background.

Classes: Class A-distinctive; Class B-common; Class C-minimal.

VQO Abbreviations: R-retention; PR-partial retention; M-modification; MM-maximum modification (see Glossary for definitions).

#### 2400 Timber Management

Silvicultural Systems

Feature uneven-aged management as the primary silvicultural system. Feature northern hardwood vegetation, along with interspersed stands of aspen and softwoods.

Provide for management of a long-term mix of vegetation (as shown in Table 6.1a) through the scheduling of management practices (as shown in Table 6.1b) to provide a mix of timber products (as shown in Table 6.1c) and wildlife habitats.

Practice even-aged management as the secondary silvicultural system for northern hardwoods and for aspen and softwood species where site conditions favor these types and for a variety of tree species.

Manage up to 20 percent of the hardwood type using an even-aged silvicultural system.

Emphasize even-aged management of northern hardwoods within winter deer range, adjacent to thermal cover, and where aspen opportunities are lacking.

Emphasize natural regeneration.

Temporary openings created by even-aged management will generally not exceed 25 acres.

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#### 2600 Wildlife Management

Wildlife Manage wildlife habitat to maintain viable populations of those species requiring remoteness such as the black bear and barred owl.

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#### 2700 Special Use Management

Utility Transmission Corridors Provide utility transmission corridors. Emphasize use of existing corridors when granting rights-of-way.

**6.1**

Locate utilities, such as railroads, pipelines, and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility Distribution Systems Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other Special Uses            Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

---

2800 Minerals and Geology

Exploration of U.S. Minerals            Permit surface-disturbing exploration (including core drilling) in most areas, except within or adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of U.S. Minerals            Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety Minerals            Allow extraction only where needed for National Forest purposes and only when reasonable alternative sources are not available. Do not permit private use.

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5400 Landownership

Emphasize land adjustment within the North Country National Scenic Trail corridor.

---

7400 Public Health and Pollution Control Activities

Solid Waste            Do not provide landfill disposal sites.

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7700 Transportation System

Roads            Provide an average of 1-1/2 to 2-1/2 miles of local and collector roads per square mile.

Design, construct, and manage roads so they meet semiprimitive nonmotorized ROS setting requirements.

Emphasis is on constructing low standard roads and requiring longer skidding distances. Close local roads to motorized public use following completion of construction and/or closure of timber sales except for established uses (e.g., access to private land, established ORV trails) and emergency and administrative needs.

Refer to Forestwide Standards and Guidelines - 7700  
Transportation System applicable to all management areas for additional management direction.

## Management Prescription 6.2

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### Purpose

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This management prescription:

- Emphasizes semiprimitive motorized recreation environment.
- Maintains potential conditions for low to moderate populations of nongame wildlife species with particular emphasis on species requiring remoteness or old growth habitat. Portions of the area will provide conditions for moderate populations of wildlife game species.
- Maintains moderate to high amounts of northern hardwoods, with some aspen emphasized in portions of the area, along with associated wildlife habitat conditions and timber products.
- Emphasizes uneven-aged management of northern hardwoods to provide for high visual quality, habitat conditions for wildlife species such as the black bear, and production of low to moderate amounts of high quality northern hardwood sawtimber and veneer. Even-aged management of aspen provides habitat conditions for wildlife species such as deer and ruffed grouse.
- Provides a natural appearance that is predominantly forested with occasional permanent openings and some temporary openings.

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### Area Description

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Areas allocated to this form of management are generally 2,500 contiguous acres or larger in size. The management area encompasses approximately 50,700 acres in total. Refer to Forest Plan map in the enclosed map packet for location of Management Area 6.2.

Dominant landtype associations (LTAs) are:

LTA 2 - Rolling; hummocky with numerous closed depressions; loamy and sandy end moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 5 - Steep; sloping to the north with bedrock and bedrock escarpments of igneous and metamorphic rock to the south; loamy moraine; northern hardwood forests; water available for plant use is moderate to low; natural fertility is medium to low.

LTA 9 - Gently sloping; hummocky low knolls and depressions; loamy ground moraine; aspen and northern hardwood forests.

LTA 10 - Undulating; discontinuous north-south low ridges and wet old drainways; loamy ground moraine; northern hardwood and lowland conifer forests.

LTA 12 - Gently sloping; northeast-southwest low ridges and drainages; clayey glacial lake sediments over loamy ground moraine; northern hardwood and aspen forests.

LTA 13 - Deeply dissected; numerous sloping ridges and steep drainages; loamy ground moraine; northern hardwood and aspen forests.

LTA 17 - Nearly level; glacial lake plain and stream benches; sandy loamy; northern hardwood forests; water available for plant use is low; natural fertility is low.

LTA 18 - Hilly; dissected lake plain margin over terminal moraine; aspen, northern hardwood forest; water available for plant use is moderate; natural fertility is medium.

LTA 19 - Nearly level; glacial lake plain, clayey; aspen and northern hardwood forests; water movement through the soil is very slow.

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Desired Future  
Condition of  
the Land

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A continuous canopy of northern hardwoods interspersed with aspen, softwoods, and occasional permanent upland and temporary openings occur in the management area. Table 6.2a describes the desired vegetation composition.

Uneven-aged stands of sugar maple, with scattered permanent upland openings, are common. White ash, yellow birch, red maple, northern red oak, eastern hemlock, eastern white pine, and other shade-tolerant species are also found. Portions of the area may favor early successional plant communities.

Pesticide use will be very low in this area.

The combination of forest cover and openings provides habitat for diverse plant and animal species. Populations of deer, snowshoe hare, and ruffed grouse will be low in some portions of the area and high in others.

Recreation opportunities such as hunting, fishing, camping, backpacking, hiking, and cross-country skiing occur in a semiprimitive motorized forest environment. Use of off-road motorized vehicles such as snowmobiles and all-terrain vehicles occurs only on designated trails. Generally, roads and trails are closed to public passenger vehicle use.

Although not always readily apparent, human activity occurs. Recreation and special use facilities such as trailhead signs, transmission structures, and utility corridors are permitted, provided they are compatible with the character of the area.

The system of long-term local and collector roads within the area has an average density from 1-1/2 to 2-1/2 miles per square mile.

Table 6.2a  
Desired Vegetation Composition  
of Management Area 6.2

| Vegetation Type    | Final Harvest Product 1/ | % of Forest Land |
|--------------------|--------------------------|------------------|
| Aspen              | Sawtimber and Pulpwood   | 10-55            |
| Softwood           | Sawtimber<br>Pulpwood    | 1-45<br>1-30     |
| Hardwood           | Sawtimber<br>Pulpwood    | 15-90<br>0-5     |
|                    | Old Growth 2/            | 10+              |
| Total Forest Land: |                          | 100              |

Permanent upland openings will be 1 to 5 percent of the total area.

1/ Final Harvest Product defines the desired end product a stand is managed for, not the condition of a stand at a point in time.

2/ The percentage of forest land managed as old growth can be achieved from any of the three forest vegetation types (aspen, softwood, and hardwood).

Table 6.2b  
Summary of Management Practices

| Practice                            | Unit of Measure<br>(average annual) | Time Period  |                |
|-------------------------------------|-------------------------------------|--------------|----------------|
|                                     |                                     | 1<br>Planned | 2<br>Projected |
| <b>Harvest</b>                      |                                     |              |                |
| Clearcut                            | Acres                               | 420          | 340            |
| Selection                           | Acres                               | 100          | 260            |
| Shelterwood seed                    | Acres                               | 70           | 50             |
| Shelterwood removal 1/              | Acres                               | 20           | 20             |
| Commercial thinning                 | Acres                               | 280          | 250            |
| <b>Reforestation</b>                |                                     |              |                |
| Artificial                          | Acres                               | 0            | 0              |
| Natural with site preparation       | Acres                               | 300          | 240            |
| Natural without site preparation 2/ | Acres                               | 290          | 410            |
| <b>Timber Stand Improvement</b>     |                                     |              |                |
| Release                             | Acres                               | 20           | 0              |
| <b>Local Road Construction</b>      |                                     |              |                |
| Winter only                         | Miles                               | 1.6          | 1.8            |
| Winter/dry summer                   | Miles                               | 1.1          | .3             |
| Summer normal                       | Miles                               | 0.3          | .8             |
|                                     | Miles                               | 0.2          | .7             |

1/ Includes conversions of aspen to hardwoods.  
2/ Includes all selection harvest acreage.

Table 6.2c  
Timber Volume to be Removed by Species Product

| Species/Product    | Time Period                      |                                       |
|--------------------|----------------------------------|---------------------------------------|
|                    | 1<br>(average annual<br>Planned) | 2<br>thousand cubic feet<br>Projected |
| Hardwood Sawtimber | 140                              | 80                                    |
| Pulpwood           | 180                              | 310                                   |
| Aspen Products     | 400                              | 440                                   |
| Softwood Sawtimber | 20                               | 25                                    |
| Pulpwood           | 20                               | 15                                    |

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2200 Range  
Management

Design forage management practices to enhance the visual, recreation, and wildlife values of the management area.

If use of the forage resource is requested, treat on a case-by-case basis.

Favor use of forage species that are suitable for both grazing and quality hay production and that require minimum fertilization.

Require that the amount of forage used annually for livestock will not exceed the total available forage less the annual forage needs of wildlife.

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2300 Recreation  
Management

Recreation Opportunities      Feature primarily semiprimitive motorized recreation opportunities.

Trails      Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impact as needed.

Rehabilitate, operate, and maintain trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in semiprimitive motorized ROS setting guidelines.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Construct, operate, and maintain cross-country ski trails and trailhead facilities to provide for public health and safety and to protect the resource as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles,  
and  
Snowmobiles

Permit use of motorized vehicles (ORV), all-terrain vehicles, (ATV), and snowmobiles only on trails specifically designated open to such use. Allow exceptions for use by administrative or emergency vehicles or use authorized by permit or contract.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected trails and roads, where appropriate, to all motorized vehicles (ATVs, snowmobiles) during hunting seasons to provide for nonmotorized hunting experiences.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round snowmobile and ATV use when such use is within state and local laws and will not result in resource damage.

Designate or post forest development trails that may be used by snowmobiles and ATVs.

When the ground is snowcovered:

- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads that are closed to ATV and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles and ATVs in cooperation with Michigan Department of Natural Resources and other cooperators.

Cultural  
Resources

Provide interpretation of cultural resources that is compatible with the natural character and recreation opportunities of this management area.

67

Visual  
Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety<br>Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|------------------|-----------------------------------|------|------|------|------|------|----|
|                  | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A          | R                                 | R    | R    | PR   | PR   | PR   | PR |
| Class B          | R                                 | PR   | PR   | PR   | M    | M    | MM |
| Class C          | PR                                | PR   | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

#### 2400 Timber Management

##### Silvicultural Systems

Feature uneven-aged management as the primary silvicultural system. Feature northern hardwood vegetation along with interspersed stands of aspen and softwoods.

Provide for management of a long-term mix of vegetation (as shown in Table 6.2a) through the scheduling of management practices (as shown in Table 6.2b) to provide a mix of timber products (as shown in Table 6.2c) and wildlife habitats.

Practice even-aged management as the secondary silvicultural system for northern hardwoods and for aspen and softwood species where site conditions favor these types and for a variety of tree species.

Emphasize even-aged management of hardwoods within winter deer range, adjacent to thermal cover, and where aspen opportunities are lacking.

Manage up to 20 percent of the hardwood type using an even-aged silvicultural system.

Emphasize natural regeneration.

Temporary openings created by even-aged management will generally not exceed 25 acres.

---

2600 Wildlife  
Management

---

Wildlife Manage most wildlife habitat in the northern hardwood ecosystem for wildlife species requiring remoteness such as the barred owl. Manage some wildlife habitat in the aspen ecosystem for those wildlife species that require an early successional vegetative condition such as deer and ruffed grouse.

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2700 Special Use  
Management

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Utility Transmission Corridors Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Locate utilities, such as railroads, pipelines, and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility Distribution Systems Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other Special Uses Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

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2800 Minerals and  
Geology

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Exploration of U.S. Minerals Permit surface-disturbing exploration (including core drilling) in most areas, except within or adjacent developed recreation sites during the recreation use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of U.S. Minerals Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety Minerals Allow extraction only where needed for National Forest purposes and only when reasonable alternative sources are not available. Do not permit private use.

---

7400 Public Health and Pollution Control Activities

---

Solid Waste Do not provide landfill disposal sites.

---

7700 Transportation System

---

Roads Provide an average of 1-1/2 to 2-1/2 miles of local roads per square mile.

Emphasis is on constructing low standard roads and requiring longer skidding distances. Close all local roads to motor vehicles except ATVs and snowmobiles following completion of construction and/or closure of timber sales except for emergency and administrative needs.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.

## Management Prescription 7.1

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### Purpose

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This management prescription:

- Provides high density self-contained motorized recreational environment in the Black River Recreation Area.

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### Area Description

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Area allocated to this form of management contains 860 acres of National Forest System lands and waters within the Black River Recreation Area, Gogebic County, Michigan. Refer to Forest Plan map in enclosed map packet for location of Management Area 7.1.

Dominant landtype association is gently sloping; hummocky low knolls and depressions; loamy ground moraine; aspen and northern hardwood forests.

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### Desired Future Condition of the Land

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This forested environment contains recreation developments such as the major recreation area at Black River Harbor on Lake Superior, scenic overlooks, hiking and backpacking trails, and cross-country skiing. Adjacent private areas provide complementary recreation opportunities such as downhill ski resorts and horseback riding.

The roads and trails that access the area are designed to accommodate heavy use.

Recreation facilities and structures are present and may dominate the landscape. Design, building materials, and placement of facilities and structures are in harmony with the environment. Utility corridors and other special uses compatible with the character of the area are present.

Mineral exploration may occur where geologic studies suggest special needs for subsurface information. Federal surface and subsurface ownership is ensured because of major investments in the developed facilities and structures.

Landscape management techniques maintain the long-term viability, safety, and attractiveness of the area and its vegetation.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Manage all developed recreation and interpretive sites according to Forest Supervisor-approved operation and maintenance plans (see FSM 2333).

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing developments and vegetation.

Redesign and construct the boat service area at the marina.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitors opportunities in conformance with the designated recreation opportunity spectrum (ROS) class.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage passenger vehicle, off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, remote habitat for wildlife, nonmotorized recreation opportunities, and public health and safety, to reduce noise and to minimize user conflict.

Construct ATV and snowmobile trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Close selected areas, trails and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) especially during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by ATVs and snowmobiles.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

Cultural Resources

Emphasize development and interpretation of significant cultural resources to enhance recreation opportunities.

Interpretive Services

Develop and implement interpretive programs that address the ethics of use normally associated with the use of Black River Recreation Area including hiking/backpacking on the North Country National Scenic Trail, Lake Superior fishing, and more.

Provide interpretive programs at Black River Harbor during peak use periods.

Visual Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|---------------|-----------------------------------|------|------|------|------|------|----|
|               | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A       | R                                 | R    | R    | PR   | PR   | PR   | PR |
| Class B       | R                                 | PR   | PR   | PR   | M    | M    | MM |
| Class C       | PR                                | PR   | M    | M    | M    | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

---

2400 Timber  
Management

Silvicultural Systems      Feature uneven-aged management as the primary silvicultural system. Feature big and older trees throughout the area.

Manage vegetation to enhance the recreation use of the area.

Utilize commercial timber harvest to achieve desired management of vegetation where possible.

Restrict harvesting operations as needed to minimize conflicts with recreational use.

Temporary Openings Created by the Application of Even-Aged Silviculture      Govern the creation of temporary openings and their size by the management area objectives and meet visual quality objectives.

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2600 Wildlife  
Habitat  
Management

Wildlife      Manage wildlife habitat to enhance visitor enjoyment.

Fish      Conduct stream surveys, including fish populations surveys, before fish habitat improvements are prescribed or carried out.

Emphasis in trout waters less than 18 feet wide designated by Michigan Department of Natural Resources will be for recruitment of trout.

Maintain or restore fish population balance, to the extent practical, through habitat and access manipulation.

Construct spawning riffles in top-quality trout-feeder streams that lack quality spawning areas.

Remove inactive beaver dams.

2700 Special Use  
Management

Utility  
Transmission  
Corridors

Provide utility transmission corridors. Emphasize use of existing corridors when granting rights-of-way.

Work with utilities to develop vegetative management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as pipelines and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environment assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility  
Distribution  
Systems

Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other Special  
Uses

Use of the seasonal boat dock at the Black River Marina is on a first come-first served basis. A waiting list for seasonal boat dock space is kept at the District Ranger's office in Bessemer, Michigan.

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

---

2800 Minerals and  
Geology

- Exploration of U.S. Minerals Prohibit surface-disturbing exploration (including core drilling) in this management area. Allow exploration that does not modify the ecosystem, or otherwise conflict with the objectives of the management area.
- Development of U.S. Minerals Recommend U.S. Department of Agriculture consent to mineral bases and extraction plans on an individual and continuing basis.
- Common Variety Minerals Allow extraction only where needed for National Forest purposes and only when reasonable alternative sources are not available. Do not permit private use.

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5100 Fire  
Management

Suppress all wildfire (natural or human caused). Use of prescribed fire, either natural or human caused, is prohibited.

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5400  
Landownership

Emphasize land adjustment along Lake Superior, Black River, Black River Road, and the North Country National Scenic Trail corridor as needed to meet management objectives. Refer to Forestwide Standards and Guidelines - 5400 Landownership for additional direction.

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7300 Buildings  
and Structures

Provide buildings and structures needed to support resource management objectives.

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7400 Public  
Health and  
Pollution Control  
Activities

- Solid Waste Do not provide landfill disposal sites.
- Water Supply Drinking water will be provided at the day-use area and auto access campground. It must meet federal and state regulations and be protected to ensure its continued quality.

Wastewater  
Treatment

Redesign and construct the boat dock service area including the sewage pump station.

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7700  
Transportation  
System

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Roads

Provide and design roads needed to access the recreation developments in the area in accordance with ROS setting guidelines. Recreation road widths may vary from 10 feet to 20 feet.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.



## Management Prescription 8.2

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### Purpose

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This management prescription:

- Provides primarily roaded natural motorized recreation opportunities in a distinctive environment in the Sylvania Recreation Area (perimeter area) and the Cyrus H. McCormick Experimental Forest entrance area.
- Maintains high visual quality.

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### Area Description

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Area allocated to this form of management contains 2,389 acres of National Forest System lands and waters within the Sylvania Recreation Area (perimeter area), Gogebic County, Michigan and 318 acres of the Cyrus H. McCormick Experimental Forest (entrance area), Baraga and Marquette counties, Michigan. Refer to the Forest Plan map in the enclosed map packet for the location of Management Area 8.2.

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### Desired Future Condition of the Land

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Recreation improvements provide opportunity for camping, picnicking, swimming, boating, canoeing, hiking, cross-country skiing, hunting, fishing, sightseeing, and parking.

Registration stations provide visitor information, interpretive facilities, registration for interior campsites (Sylvania), and information and regulations pertaining to the use of the areas.

Vegetation will be managed to protect the safety and health of users and maintain the scenic forest environment.

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### 1900 Land and Resource Management

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#### Vegetation Management

Manage vegetation to meet the management area objectives.

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2200 Range  
Management

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Prohibit grazing.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily roaded natural recreation opportunities.

Construct no new recreation facilities during this plan period in Sylvania.

Manage all developed recreation and information sites according to Forest Supervisor-approved operation and maintenance plans.

Prepare vegetation management plans for all developed recreation sites.

Give high priority to rehabilitating existing recreation developments.

Rehabilitate recreation sites and areas to correct health and safety problems, protect the environment and investments, and complement and enhance recreation visitor opportunities in conformance with the designated recreation opportunity spectrum (ROS) class setting guidelines.

Modify the existing day-use center building at Clark Lake in Sylvania to optimize public use of and benefit from the facility. (Refer to Day-Use Building Environmental Assessment dated 12/22/83.)

Administer the areas to protect and maintain the unique character of its forest lands and waters, while providing opportunity for a variety of outdoor recreation opportunities.

In Sylvania, limit open fires to fire rings or grills at approved sites when the ground is not snow covered.

Prohibit the cutting of live vegetation except where necessary for the reconstruction or maintenance of approved facilities or to provide for user safety.

Allow users to collect dead and down material for firewood, tent poles, and other purposes.

Require campers to register at the entrance station in Sylvania. Request other users to do the same.

In Sylvania, prohibit the transportation of motors across National Forest System land except on roads open for use by motor vehicles and on the developed boat access sites on Long and Crooked lakes.

Prohibit storage or mooring on National Forest System land of watercraft, motors, mechanical devices, or equipment not being used in connection with a current visit.

Prohibit mooring, use, or transportation of aircraft, amphibious craft of any type, or watercraft designed for or used as floating living quarters on National Forest System land.

Prohibit the use of saddle horses and pack animals.

Limit signs to those needed for public information, safety, and traffic control.

In Sylvania, permit grooming of designated cross-country ski trails only with snowmobiles.

Do not allow hunting blinds, deer stands, or similar structures on National Forest System land.

Prohibit pesticide use in the management of vegetation.

If needed, provide for an improved parking area near the entrance to McCormick.

Issue permits needed for the conduct of public business and for reasonable exercise of private rights as defined by public law and deed.

Require all permitted telephone and electric lines to be buried.

Limit toilets to water-borne or sealed vault systems.

## Trails

Prohibit trails for motorized use.

Provide trail management that is consistent with the management area objectives.

Locate trail and other recreational facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts.

Reconstruct, rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Operate and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Closed to off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use.

Interpretive  
Services

Develop and implement interpretive programs that address the ethics of use associated with the areas.

Develop interpretive materials that highlight the unique characteristics and management of the areas.

Cultural  
Resources

Emphasize development and interpretation of significant cultural resources to enhance recreation opportunities.

Visual  
Quality

Meet a visual quality objective of retention to partial retention in the development and management of the areas.

---

2400 Timber  
Management

Silvicultural  
Systems

Do not schedule sustained yield of timber from these lands.

Limit commercial timber harvest to that which is needed to meet the safety, health and recreation objectives of the area.

Salvage of timber resulting from damage or insect and disease is permitted.

Design and schedule timber harvest to minimize conflicts with recreation uses.

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2500 Water and  
Soil Resource  
Management

Watershed  
Management

Provide for lake monitoring to detect changes from baseline data already on hand for Clark, Helen, and Snapjack lakes on productivity and impacts of atmospheric deposition (acid rain).

Watershed  
Disturbance

Mitigate erosion with control measures commensurate with the soil characteristics, expected use, and management objectives of the area.

Limit watershed improvement projects to those necessary to maintain environmental values and to protect public health and safety.

---

2600 Wildlife  
Habitat  
Management

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Wildlife            Manage wildlife habitat consistent with the management area objectives.

Fish                Conduct lake or stream surveys, including fish population surveys, before fish habitat improvements are prescribed or carried out.

Emphasis in lake and stream fisheries will be for larger, older fish to provide for a high quality fishing experience.

Consult with Michigan Department of Natural Resources on the range of fishing regulations appropriate to achieve the desired fisheries goals within Sylvania.

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2700 Special Use  
Management

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Utility  
Transmission  
Corridors            Provide for buried utility transmission in existing corridors when granting rights-of-way.

Prohibit location of utilities, such as pipelines and transmission lines of greater than 34.5 KV, within this management area.

Maximize the use of existing transportation system and utility corridors in the placement of any additional buried utilities. Document in an environmental assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility  
Distribution  
Systems              Consider applications for distribution systems crossing National Forest System lands (such as utility rights-of-way serving individual residences) on an individual basis.

Require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

2800 Minerals and  
Geology

- Exploration of U.S. Minerals      Prohibit surface-disturbing exploration (including core drilling) in special management areas.
- Allow exploration that does not modify the ecosystem, or otherwise conflict with the objectives of the management area.
- Development of U.S. Minerals      Recommend against U.S. Department of Agriculture consent to mineral extraction plans.
- Use a no-surface-occupancy stipulation when consenting to mineral leases.
- Common Variety Minerals      Prohibit removal of common variety minerals.

5100 Fire  
Management

Suppress all wildfire (natural or human caused). Use of prescribed fire, either natural or human caused, is prohibited.

7300 Buildings  
and Structures

Rehabilitate buildings and structures needed to support recreation resource management objectives as needed, especially to meet safety and health requirements.

7400 Public  
Health and  
Pollution Control  
Activities

Solid Waste      Do not provide landfill disposal sites.

7700  
Transportation  
System

Roads      Prohibit construction of roads except those associated with improving the parking near the entrance to McCormick and temporary roads needed to salvage timber. Maintain or reconstruct existing roads as needed to accommodate a planned motorized recreation use and ROS setting guidelines.

## Management Prescription 9.1

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### Purpose

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This management prescription:

- Protects and maintains existing environmental values within legislated wilderness study areas and other roadless areas recommended for wilderness designation or wilderness study and proposed research natural areas. (Refer to Appendices C and E in the Final EIS Appendix Volume for more information.)

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### Area Description

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Areas allocated to this form of management are:

- Sturgeon Gorge Roadless Area, a legislated wilderness study area which contains 14,849 acres of National Forest System land and waters within Baraga and Houghton counties, Michigan. The area also includes a segment of the Sturgeon River Wild/Scenic River identified for further study for inclusion on the National Wild and Scenic River System and the proposed Sturgeon River Gorge Research Natural Area.
- Sylvania Roadless Area recommended wilderness study which contains 18,327 acres of National Forest System lands and waters within the Sylvania Recreation Area (interior zone), Gogebic County, Michigan.
- Cyrus H. McCormick Experimental Forest Roadless Area which contains 16,850 acres of National Forest System lands and waters within Baraga and Marquette counties, Michigan. The area also includes the McCormick Research Natural Area and portions of the Yellow Dog River Wild/Scenic Inventory River identified for further study for inclusion in the National Wild and Scenic River System.
- Proposed Sturgeon River Gorge Research Natural Area which contains 210 acres and the Sylvania Research Natural Area which contains about 2,740 acres.

Refer to Forest Plan map in the enclosed map packed for location of Management Area 9.1.

Dominant landtype associations (LTAs):

Sylvania Roadless Area - LTA 2 - Rolling; hummocky with numerous closed depressions; loamy and sandy end moraine; northern hardwood forests; numerous lakes.

Sturgeon Gorge Roadless Area - LTAs 20, 14, 17, 18, and 6 - Level, hilly, and very steep landforms; river valleys with ridging highlands and alluvial valley bottoms and floodplains; variable soils; northern hardwood, aspen, spruce-fir, jack pine, red pine, and lowland conifer forests; landslides, mass soil wasting, and soil creep are common.

Cyrus H. McCormick Experimental Forest Roadless Area - Hilly; moderately steep discontinuous hills and depressions with bedrock outcrops of igneous and metamorphic rocks; sandy to sandy loam terminal moraine and outwash plains; northern hardwood and pine forests; numerous lakes.

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Desired Future  
Condition of  
the Land

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No vegetation manipulation, development, or capital investment occurs. Whatever conditions exist now are maintained and influenced only by natural forces. Management activities and facilities ensure the protection of health and safety, and prevent significant loss of existing resources or productivity within the area and in adjoining areas.

Existing roads and trails provide access to the areas. Existing facilities are generally maintained. Additional facilities or improvements provide only for protection of the land and public health. Utility corridors and other special use applications are considered on a case-by-case basis. Depending on the area, evidence of human activities such as backcountry recreation use may be present.

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1300  
Administration

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The Kenton District Ranger is responsible for administration and protection of the Cyrus H. McCormick Experimental Forest Roadless Area and McCormick Research Natural Area. The Director, North Central Forest Experiment Station, St. Paul, Minnesota, coordinates all research activities in the roadless and research natural area.

---

1900 Land and  
Resource  
Management  
Planning

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Vegetation  
Management

Make no investments in vegetation management unless emergency conditions make it necessary to protect the wilderness environment and/or adjoining lands from insect, disease, and fire or to protect public safety.

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2100  
Environmental  
Management

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Pesticide Use

Obtain Regional Forester approval for all pesticide applications.

Use pesticides only when emergency conditions exist to prevent significant loss to resource values on private or public lands bordering or within wilderness study and proposed research natural areas.

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2200 Range  
Management

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Prohibit grazing.

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2300 Recreation  
Management

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Recreation  
Opportunities

Feature primarily semiprimitive nonmotorized recreation opportunities except in the proposed research natural areas where recreation facilities are not developed and recreation use is not promoted.

Manage existing recreation opportunities without further investment.

Trails

Manage trails.

Operate and maintain existing hiking, backpacking, and cross-country ski trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Off-road Vehicles, All-terrain Vehicles, and Snowmobiles      Close the area to off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use except those roads within Sturgeon Gorge Roadless Area approved for "winter use by snowmobiles only." (See "Environmental Analysis Report, Motor Vehicle Use of Roads within Sturgeon River Wilderness Study Area, 1976, Ottawa National Forest.")

Prohibit use of off-road vehicles in proposed research natural areas.

Cultural Resources      Prohibit on-site cultural resource interpretation.

Interpretive Services      Prohibit interpretive activity that requires permanent structures at other than entry points or stations.

Visual Quality      Meet visual quality objective of retention.

No investments will be made to mitigate the visual impacts of natural-caused changes.

---

2400 Timber Management

Silvicultural Systems      Do not schedule a sustained yield of timber from these lands.

Salvage of timber resource will be considered on an individual project basis and only when emergency conditions like fire, insect and disease, or protecting public safety make it necessary.

No timber shall be harvested within proposed research natural areas.

---

2500 Water and Soil Resource Management

Watershed Disturbance      Mitigate erosion with control measures commensurate with the soil characteristics, expected use, and management objectives of the area.      =

Limit watershed improvement projects to those necessary to maintain environmental values and to protect public health and safety.

---

2600 Wildlife  
Habitat  
Management

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Wildlife                    Protect wildlife habitat for those species requiring remoteness.

Fish                        Conduct lake or stream surveys, including fish population surveys, before fish habitat improvements are prescribed or carried out in a manner consistent with management requirements of the area.

                              Emphasis in lake fisheries within Sylvania and McCormick will be for larger, older fish in a semiprimitive nonmotorized environment to provide for a high-quality fishing experience.

                              Consult with the Michigan Department of Natural Resources on the range of fishing regulations appropriate to achieve the desired fisheries goals within Sylvania.

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2700 Special Use  
Management

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Utility                    Permit only those facilities that are required to serve  
Transmission            recreational or administrative facilities. Consider  
Corridors                exceptions on an individual basis.

---

2800 Minerals  
and Geology

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Exploration of            Prohibit surface-disturbing exploration (including core drilling)  
U.S. Minerals            in wilderness study areas, proposed wilderness, and proposed  
                              research natural areas.

                              Permit minerals exploration and development that does not modify the ecosystem or otherwise conflict with the objectives of the management area.

Common Variety        Prohibit removal of common variety minerals.  
Minerals

Outstanding            Issue reserved mineral permits needed for the exercise of  
and Reserved            outstanding and reserved rights, as defined by public law and  
Minerals                deed.

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3400 Forest  
Pest Management

Obtain Regional Forester approval of all pesticide applications in wilderness study areas and research natural areas.

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4060 Research  
Natural Areas

Complete evaluations of the proposed Sturgeon Gorge and Sylvania candidate RNAs and make appropriate recommendations concerning their suitability. Maximize the use of cooperators in these evaluations.

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5100 Fire  
Management

Suppress all wildfire (natural or human caused). Use of prescribed fire, either natural or human caused, is prohibited.

Fire suppression practices with motorized or mechanical equipment may be utilized provided such use does not adversely impact long-term wilderness or research natural area values.

The use of heavy equipment such as tractors for fire suppression within the management area requires Forest Supervisor approval.

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7300 Buildings  
and Structures

Maintain buildings and structures needed to support the management area objectives and needed to protect public health and safety.

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7400 Public  
Health and  
Pollution  
Control  
Activities

- |                       |   |
|-----------------------|---|
| Solid Waste           | Do not provide landfill disposal sites.                       |
| Water Supply          | Do not develop drinking water sources.                        |
| Human Waste Treatment | Treatment of human waste may be provided at designated sites. |

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7500 Water  
Transmission  
and Storage

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Inspect the dam at the outlet of Bulldog Lake in the McCormick roadless area annually.

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7700  
Transportation  
System

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Roads

Prohibit construction and reconstruction of roads in proposed wilderness study and research natural areas.

## Management Prescription 9.2

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### Purpose

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This management prescription:

- Protects for further study the wild/scenic inventory river corridors and associated environmental values for consideration for inclusion in the National Wild and Scenic River System.

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### Area Description

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Areas allocated to this form of management are river corridors estimated to contain 52,360 acres of National Forest System lands and waters. In addition, 1,000 acres along the Sturgeon River in the Sturgeon Gorge Roadless Area and 1,280 acres along the Yellow Dog River in the Cyrus H. McCormick Experimental Forest Roadless Area are being protected under MA 9.1. These are corridors for rivers identified for potential inclusion in the National Wild and Scenic River System, located within a minimum distance of 1/4 mile either side of the river's edge.

Land type associations include LTAs 1, 2, 5, 7, 9, 10, 11, 12, 13, 14, 16, 17, 19, and 20. (Refer to Appendix D for descriptions of LTAs listed above.)

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### Desired Future Condition of the Land

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Management practices that affect national wild, scenic, or recreation river values are deferred until required studies have been completed.

Little or no vegetation manipulation, development, or capital investment occurs. Existing conditions are maintained and influenced only by natural forces. Management activities and facilities protect health and safety and prevent significant loss of existing resources or productivity within or on lands adjacent to the area.

Existing roads and trails provide access to the areas. Existing facilities are generally maintained. Additional facilities or improvements are provided only for protection of the land and public health. Utility corridors and other special use applications are considered on a case-by-case basis. Depending upon the area, evidence of human activities such as mineral exploration, recreation developments, incidental recreation use, and salvage logging may occur.

---

1900 Land and  
Resource  
Management  
Planning

Vegetation  
Management

Make no investments in vegetation management unless needed to protect adjoining lands from pests or fire or to protect the resources and existing investments.

Permit timber salvage only for fire hazard reduction, pest management, and prevention of significant resource loss.

---

2200 Range  
Management

Prohibit grazing.

---

2300 Recreation  
Management

Recreation  
Opportunities

Feature primarily semiprimitive nonmotorized recreation opportunities.

Maintain the existing ROS class conditions without further investment pending completion of individual Wild and Scenic Inventory evaluations for rivers or river segments as determined in Appendix D of the Final Environmental Impact Statement Appendix Volume, Wild and Scenic Inventory Rivers Evaluation, preliminary analysis results.

Prohibit construction of new improvements or structures and additions to existing facilities or structures except as provided for protection of the land and for public health and safety.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Construct, operate, and maintain cross-country ski trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Make investments in existing trails needed to connect segments of a continuous or extensive trail system, other than National Scenic Trails, only for user safety and resource protection.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Close the area to all-terrain-vehicle (ATV), off-road-vehicle (ORV) use, and snowmobile use except on roads and trails specifically designated as open to their use to protect wild, scenic, and recreation river environmental values and during hunting seasons to provide for nonmotorized hunting opportunities and provide endangered and threatened wildlife habitat.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles in that part of the Forest south of M-28 and east of M-64.

Sign Forest development trails that may be used by snowmobiles and ATVs in cooperation with the Michigan Department of Natural Resources.

Cultural  
Resources

Provide interpretation of cultural resources that is compatible with the natural character and recreation opportunities of this management area.

Interpretive  
Services

Develop interpretive materials that highlight the unique characteristics and management of these rivers.

Visual  
Quality

Meet visual quality objective of retention to partial retention as displayed on Forest Visual Resource Management System maps.

National  
Wild/Scenic  
Inventory  
Rivers

Protect the rivers identified to maintain their eligibility and suitability for potential inclusion in the National Wild, Scenic, and Recreation River System.

Rivers to be protected until studied for potential inclusion in the National Wild, Scenic, and Recreational River System:

Sturgeon River - From mouth (Portage Lake) to source, excluding Prickett Lake (98 miles).

Brule River - From backwaters of Brule Island Dam to its source in Brule Lake (44 miles).

Black River - From its mouth to Black River Dam (33 miles).

Ontonagon River - From its mouth to confluence of East and Middle branches (25 miles).

Ontonagon, East Branch - From confluence with Ontonagon River to its source at Spring Lake, excluding 1 mile in Upper Dam Lake (51 miles).

Ontonagon, Middle Branch - From confluence with East Branch, to source at Crooked Lake, excluding 3 miles from Bond Falls Dam upstream (58 miles).

Ontonagon, South Branch - From its confluence with West Branch to Cisco Lake (60 miles).

Ontonagon, West Branch - From Victoria Reservoir spillway to Highway 28 east of Bergland (27 miles).

Paint, including North Branch - From backwaters of Crystal Falls Reservoir to Mallard Lake (32 miles).

Paint, South Branch - From confluence with North Branch at Gibbs City to Paint River Springs (28 miles).

Presque Isle, East Branch - From confluence with Presque Isle to Presque Isle Springs (25 miles).

Presque Isle, South Branch - From confluence with Presque Isle to Presque Isle Lake (12 miles).

Presque Isle, West Branch - From confluence with Presque Isle to Chaney Lake (15 miles).

Presque Isle - From mouth of Lake Superior to confluence of West and South branches (37 miles).

Prohibit modifications of the waterway.

Protect each of the river segments for an area extending at least 1/4 mile from each bank.

Study these rivers for potential inclusion in the National Wild, Scenic, and Recreational River System as directed in Federal Register, Vol. 47, No. 173, Sept. 7, 1982, p. 39456.

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2400 Timber  
Management

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Silvicultural  
Systems

Do not schedule a sustained yield of timber from these lands.

Salvage of timber will be considered on an individual project basis.

Silvicultural  
Examination

Schedule silvicultural examination along with adjacent management areas to maintain the inventory of the vegetation and other resource conditions to the extent needed to monitor the changes in timber land suitability and for future forest plan revisions. Defer timber sale activities until the Wild/Scenic River studies are completed.

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2500 Water and  
Soil Resource  
Management

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Watershed  
Disturbance

Mitigate erosion with control measures commensurate with the soil characteristics, expected use, and management objectives of the area.

Limit watershed improvement projects to those necessary to maintain environmental values and to protect public health and safety.

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2600 Wildlife  
Habitat  
Management

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Wildlife

Protect wildlife habitat to maintain viable populations of those species requiring remoteness such as the bald eagle.

Fish

Conduct lake or stream surveys, including fish population surveys, before fish habitat improvements are prescribed or carried out.

Maintain or restore fish population balance, to the extent practical, consistent with protecting the river for Wild and Scenic River study.

Assist Michigan Department of Natural Resources efforts to control beaver populations and remove active beaver dams on:

- East Branch Presque Isle River (Gogebic County) from County Road 525 to Presque Isle River.
- North Branch Paint River (Iron County) and all tributaries from Mallard Lake to South Branch Paint River.

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2700 Special Use  
Management

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Utility  
Transmission  
Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as railroads, pipelines, and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

Utility  
Distribution  
Systems

Permit only those facilities that are required to serve recreational or administrative facilities. Consider exceptions on an individual basis.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other Special  
Uses

Issue special use permits needed for the exercise of outstanding and reserved rights, as defined by public law and deed.

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

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2800 Minerals  
and Geology

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Exploration of  
U.S. Minerals

Prohibit surface-disturbing exploration (including core drilling) in the wild/scenic river corridors.

Allow exploration that does not modify the ecosystem or otherwise conflict with the objectives of the management area.

Development of  
U.S. Minerals

Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety Minerals Prohibit removal of common variety minerals.

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5100 Fire Management

Suppress all wildfire (natural or human caused). Use of prescribed fire, either natural or human caused, is prohibited.

---

5400 Landownership

Emphasize land adjustments within these river corridors as needed to meet management area objectives.

---

7300 Buildings and Structures

Maintain buildings and structures only as needed to protect public health and safety.

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7400 Public Health and Pollution Control Activities

Solid Waste Do not provide landfill disposal sites.

Water Supply Do not develop drinking water sources outside of existing developed recreation sites.

Existing drinking water sources must meet federal and state regulations and be protected to ensure its continued quality.

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7700 Transportation System

Roads Prohibit construction of roads except that short-term roads may be constructed to salvage timber. Permit reconstruction of existing arterial and collector roads.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional direction.

## Management Prescription 9.3

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### Purpose

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This management prescription:

- Protect and maintain environmental values.
- Protect the health and safety of the public.
- Protect proposed Bergland Ski Hill Area.

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### Area Description

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Areas allocated to this form of management vary in size and ownership pattern.

A variety of land conditions occur. In general, little or no vegetation manipulation, development, or capital investment occurs. Whatever conditions exist now are maintained and influenced only by natural forces.

The management area encompasses approximately 5,800 acres in total. Refer to Forest Plan Map in the enclosed map packet for location of Management Area 9.3.

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### Desired Future Condition of the Land

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The forest vegetation is natural appearing. Management activities include only those needed to protect life, health, and safety of incidental users; to prevent environmental damage caused by water, soil, pests, or fire on land of other ownership or downstream areas; to administer unavoidable non-Forest Service special uses; and to meet other legal requirements. Depending on the area, evidence of human activities such as mineral exploration, incidental recreation use, and salvage logging may occur. Wildlife populations are variable, depending on the management of adjacent lands.

Existing roads and trails provide access to the areas. Existing facilities are generally maintained. Additional facilities or improvements are provided only for protection of the land and public health. Utility corridors and other special use applications are decided on a case-by-case basis.

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1900 Land and  
Resource  
Management  
Planning

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Vegetation  
Management

Make no investments in vegetation management unless needed to protect adjoining lands from pests or fire or to protect the resources and existing investments.

Permit timber salvage only for fire hazard reduction, pest management, and prevention of significant resource loss.

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2200 Range  
Management

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Make no capital investments to develop or enhance forage production. Permit hay cutting on existing forage areas.

If use of the forage resource is requested, treat on a case-by-case basis.

---

2300 Recreation  
Management

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Recreation  
Opportunities

Feature existing recreation opportunities (semiprimitive nonmotorized to roaded natural).

Manage existing recreation opportunities without further investment.

Trails

Manage trails.

Relocate existing trails and associated facilities on soil-site conditions that minimize construction and long-term maintenance costs and where they do not create undesirable soil and water impacts as needed.

Rehabilitate, operate, and maintain hiking trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Permit the development, operation, maintenance, and grooming of cross-country ski trails and snowmobile trails by communities, organizations, or businesses that will support and operate them.

Emphasize cooperator and volunteer involvement in the development and maintenance of designated cross-country ski trails.

Construct, operate, and maintain cross-country skiing trails and trailhead facilities to provide for public health and safety and to protect the resource, as described in ROS setting guidelines.

Make investments in existing trails needed to connect segments of a continuous or extensive trail system, other than National Scenic Trails, only for user safety and resource protection.

Off-road  
Vehicles,  
All-terrain  
Vehicles, and  
Snowmobiles

Manage off-road-vehicle (ORV), all-terrain-vehicle (ATV), and snowmobile use to provide for resource protection, public health and safety, and to minimize user conflict.

Close selected roads and trails as necessary to provide endangered and threatened wildlife habitat.

Close selected areas, trails, and roads, where appropriate, to all motorized vehicles (ORVs, ATVs, snowmobiles, trucks, cars, tractors) during hunting seasons to provide for nonmotorized hunting opportunities.

Leave system roads that are not gated, signed, barricaded, or otherwise closed, open to year-round ORV use when such use is within state and local laws and will not result in resource damage.

Designate or post Forest development trails that may be used by ORVs, ATVs, and snowmobiles.

When the ground is snowcovered:

- Limit cross-country off-road-vehicle use to travel by snowmobiles and ATVs.
- Allow snowmobile and ATV use of plowed roads at approved crossings, unloading areas, and where bridges must be crossed.
- Post unplowed roads and areas that are closed to ORV, ATV, and snowmobile use.
- Sign Forest development trails that may be used by snowmobiles in cooperation with Michigan Department of Natural Resources and other cooperators.

From March 1 to snowmelt, limit ORV, ATV, and snowmobile use to designated areas and trails to protect nesting of bald eagles in that part of the Forest south of M-28 and east of M-64.

Cultural  
Resources

Prohibit on-site cultural resource interpretation in this management area.

Visual  
Quality

Meet visual quality objective displayed in the matrix by sensitivity level, distance zone, and variety class.

| Variety<br>Class | Distance Zone - Sensitivity Level |      |      |      |      |      |    |
|------------------|-----------------------------------|------|------|------|------|------|----|
|                  | fg-1                              | mg-1 | bg-1 | fg-2 | mg-2 | bg-2 | 3  |
| Class A          | R                                 | PR   | PR   | PR   | M    | M    | M  |
| Class B          | PR                                | M    | M    | PR   | M    | MM   | MM |
| Class C          | PR                                | M    | M    | M    | MM   | MM   | MM |

Sensitivity Levels: 1-most sensitive; 3-least sensitive.

Distance Zones: fg-foreground; mg-middleground;  
bg-background.

Classes: Class A-distinctive; Class B-common; Class  
C-minimal.

VQO Abbreviations: R-retention; PR-partial retention;  
M-modification; MM-maximum modification (see Glossary for  
definitions).

No investments will be made to enhance the existing visual  
resource or mitigate the visual impacts of natural-caused  
changes.

#### 2400 Timber Management

Silvicultural Systems Do not schedule a sustained yield of timber from these lands.

Salvage of timber will be considered on an individual project  
basis.

Silvicultural Examination Schedule silvicultural examination to maintain the inventory  
of the vegetation and other resource conditions to the extent  
needed to monitor the changes in timber land suitability and for  
future forest plan revisions.

#### 2500 Water and Soil Resource Management

Watershed Disturbance Mitigate erosion with control measures commensurate with the  
soil characteristics, expected use, and management objectives  
of the area.

Limit watershed improvement projects to those necessary  
to maintain environmental values and to protect public  
health and safety.

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2700 Special Use  
Management

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Utility  
Transmission  
Corridors

Provide utility transmission corridors. Emphasize use of corridors when granting rights-of-way.

Work with utilities to develop vegetation management plans for projects such as pipelines and transmission lines of greater than 34.5 KV. Manage rights-of-way vegetation for wildlife habitat, visual quality, and other resources.

Locate utilities, such as railroads, pipelines, and transmission lines of greater than 34.5 KV, within managed corridors. Maximize the use of existing transportation system and utility corridors in the placement of any additional utilities. Document in an environmental assessment the analysis for expansion of existing corridors and establishment of new corridors. When feasible, require multiutility use of individual rights-of-way within corridors.

In general, require:

- Burial of new or reconstructed telephone lines.
- Burial of new or reconstructed powerlines of 34.5 KV or less.
- Multiutility use of individual utility rights-of-way.

Other Special  
Uses

Issue special use permits needed for the exercise of outstanding and reserved rights, as defined by public law and deed.

Use U.S. Department of Transportation and U.S. Department of Agriculture easements to provide rights-of-way for county and state roads and highways. Limit such developments to existing corridors and to locations determined best and suitable through the integrated resource management process.

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2800 Minerals  
and Geology

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Exploration of  
U.S. Minerals

Permit surface-disturbing exploration (including core drilling) in most areas except the proposed Bergland Ski Hill Area during the use season. Permit exploration especially where there is a potential to discover minerals of compelling domestic significance (as defined by U.S. Department of the Interior).

Development of  
U.S. Minerals

Recommend U.S. Department of Agriculture consent to mineral leases and extraction plans on an individual basis.

Common Variety  
Minerals

Make common minerals available to the public and to the local, state, and federal government agencies in accordance with management direction under Forestwide Standards and Guidelines - 2800 Minerals and Geology.

5400  
Landownership

Emphasize land adjustment by utilizing National Forest System lands in this management area to exchange for privately owned lands needed in other management areas to meet management objectives.

7300 Buildings  
and Structures

Provide buildings and structures only as needed to protect public health and safety.

7400 Public  
Health and  
Pollution Control  
Activities

Water Supply      Do not develop drinking water sources.

7700  
Transportation  
System

Roads              Provide roads only as needed for access to adjacent areas or to protect resources.

Refer to Forestwide Standards and Guidelines - 7700 Transportation System applicable to all management areas for additional management direction.