

4.14 Fourteen Mile Point Lake Plain Management Area

Summary of Use and Management

Vegetative management in the Fourteen Mile Lake Plain management area (MA) (Figure 4.14.1) will provide a variety of forest products; maintain or enhance wildlife habitat; protect areas with unique characteristics; and provide for forest based recreational uses. Timber management objectives for the 10-year planning period are secondary due to remoteness and small ownership in this area. Wildlife management objectives include protection of the Lake Superior shoreline character, protecting thermal cover for wildlife species, and regenerating hemlock where appropriate. Management activities may be constrained by the remoteness of this area on the Lake Superior shoreline with limited access.

Introduction

The Fourteen Mile Point Lake Plain management area is on a till-floored lake plain in northern Ontonagon County. The state forest covers about 3,500 acres and is mostly contiguous. The major ownerships in this vicinity are forest industry and non-industrial private. The management area is dominated by northern hardwood, lowland conifer and hemlock cover types. Other attributes that played a role in the definition of this management area include:

- Dominated by three natural communities: dry mesic northern forest, mesic northern forest, and boreal forest;
- Mid-range in site quality; and
- Remote area on the Lake Superior shoreline with limited access.

The management priorities for this area are the protection of the Lake Superior shoreline character, protecting thermal cover for wildlife species and regenerating hemlock where appropriate. Management for timber products is secondary due to remoteness and small ownership in this area.

The predominant cover types, composition, and projected harvest areas for the Fourteen Mile Point Lake Plain management area are shown in Table 4.14.1.

Table 4.14.1. Summary of cover types, composition, limiting factor area manageable area and projected harvest area for the Fourteen Mile Point Lake management area (2012 Department of Natural Resources inventory data).

Cover Type	Cover %	Current Acreage	Hard Factor Limited Acres	Manageable Acres	10 Year Projected Harvest (Acres)		Projected Acreage in 10 Years	Desired Future Harvest (Acres)	
					Final Harvest	Partial Harvest		Final Harvest	Partial Harvest
Northern Hardwood	27%	917	0	917	0	456	917	0	456
Lowland Conifers	17%	573	129	444	11	0	573	49	0
Hemlock	11%	369	0	369	0	73	369	0	73
Upland Open/Semi-Open Lands	0%	2	0	2	0	0	2	0	0
Lowland Open/Semi-Open Lands	1%	48	0	48	0	0	48	0	0
Misc Other (Water, Local, Urban)	3%	90	0	90	0	0	90	0	0
Others	42%	1,422	487	935	312	74	1,422	123	257
Total		3,421	616	2,805	323	603	3,421	172	786

Fourteen Mile Point Lake Plain

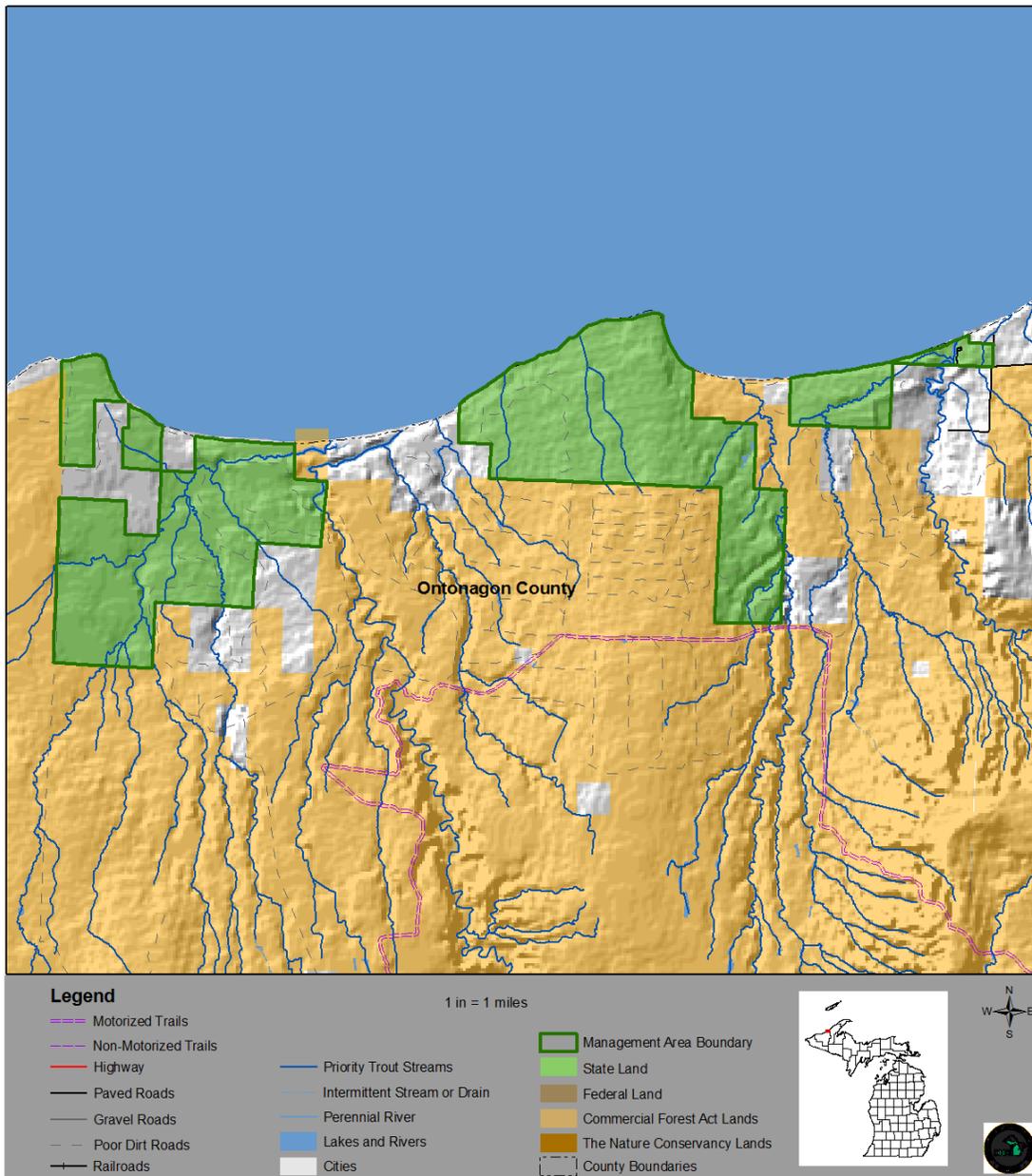


Figure 4.14.1. A map of the Fourteen Mile Point Lake Plain management area (dark green boundary) in relation to surrounding state forest and other lands and other ownerships (light gray).

4.14.1 Forest Cover Type Management Direction

The following sections contain information on vegetation management for each of the major cover types, a grouping of minor cover types and important non-forested vegetation types for the Fourteen Mile Point Lake Plain management area in the form of Desired Future Condition, 10-Year Management Objectives and Long-Term Management Objectives. This information applies to those portions of the forest where active management (i.e., timber harvest, prescribed fire, planting or mowing) will be conducted. In other portions of the state forest, the natural processes of succession and disturbance will provide ecological benefits. While most stands have a variety of tree species and other vegetation, they are classified by the species with dominant canopy coverage.

The following cover types are valued commercially for their timber products; ecologically as sources of habitat for numerous wildlife species; and for the variety of recreational opportunities they provide. Harvesting and regenerating these cover types will provide for a continuous flow of forest products and will help to ensure (or provide) wildlife habitat.

Northern Hardwoods Cover Type

Current Condition

Northern hardwood stands make up 917 acres (27%) of state forest land in this management area (Table 4.14.1). They occur on good-quality sugar maple sites mixed with wetland sites. Most stands have been managed using the selection harvest system based on basal area to provide uneven-aged stands. Figure 4.14.2 shows the current basal area distribution for the management area.

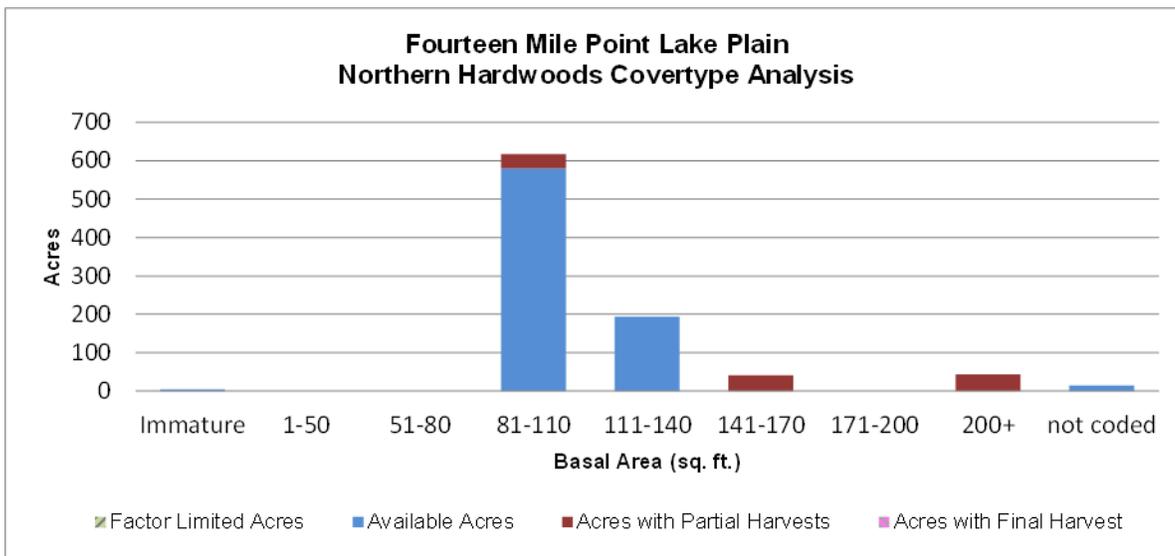


Figure 4.14.2. Graph of the basal area distribution for the northern hardwood cover type on the Fourteen Mile Lake Plain management area (2012 Department of Natural Resources inventory data).

Desired Future Condition

- Uneven-aged northern hardwood stand structure promoting high-value sugar maple sawlogs;
- A full complement of tree seedlings recruiting into the overstory; and
- Well-developed shrub and herbaceous layers.

Long-Term Management Objectives

- Selectively harvest northern hardwood stands on a 20-year cycle; and
- Maintain and encourage minor species to increase within-stand diversity.

10-Year Management Objectives

- Selectively harvest 456 acres in this 10-year planning period;
- Maintain and regenerate white pine, oak, hemlock and upland cedar where they occur in stands that are harvested; and
- Work to regenerate hemlock and white pine components in stands lacking that species.

Lowland Conifers Cover Type

Current Condition

Lowland conifers occur on 573 acres (17%) of the management area (Table 4.14.1). These are poorly drained sites supporting mixed stands of cedar, black spruce, tamarack, balsam fir, white birch and balsam poplar. There are 129 acres that have factor limits due to wet conditions or for riparian corridors. These hard factor limited acres have been removed from the total number of manageable acres available for harvest calculations. Due to the wet site conditions, they are

more susceptible to rutting damage from logging equipment and present difficult operating conditions for harvesting. Lowland conifers are poorly distributed across the age-class distribution (Figure 4.14.3).

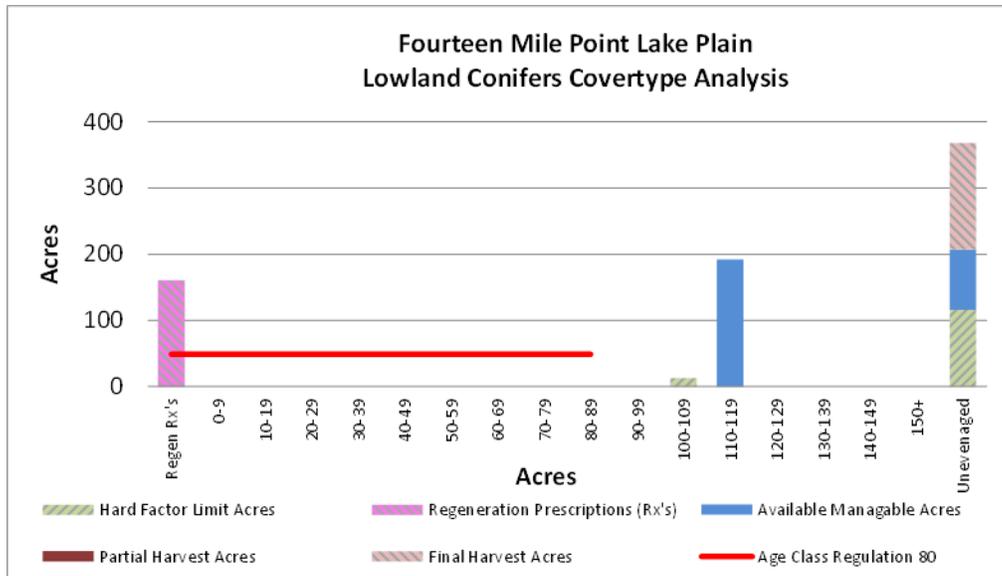


Figure 4.14.3. Graph of the age-class structure for the lowland conifer cover type for the Fourteen Mile Lake Plain management area (2012 Department of Natural Resources inventory data).

Desired Future Condition

- Closed canopy stands interspersed with patches of all age classes;
- Sustainable regeneration and recruitment of seedlings and saplings; and
- Maintain mixed lowland conifer stands with closed canopy structure to provide important winter habitat for deer.

Long-Term Management Objectives

- Manage stands on an 80-year rotation allowing for 49 acres to be harvested per decade;
- Regenerate stands to species-mix similar to the pre-harvest conditions with a preference for cedar, black spruce and balsam fir; and
- Harvesting will be done using small clearcuts or strips with clumped retention.

10-Year Management Objectives

- Harvest 11 acres over this 10-year planning period focusing on the use of “low impact” harvesting systems and successful, reliable regeneration techniques; and
- Regenerate stands to species-mix similar to the pre-harvest conditions with a preference for cedar, black spruce and balsam fir.

Hemlock Cover Type

Current Condition

Hemlock stands make up 369 acres (11%) of state forest land in this area (Table 4.14.1). This cover type is important to wildlife as a source of thermal cover. Most stands have been managed using the selection harvest system. Due to low deer numbers in this area, there are few problems with herbivory and most areas regenerate successfully. Hemlock is often managed using an uneven-aged harvest system based on basal area rather than age prior to final harvest at rotation age (Figure 4.14.4).

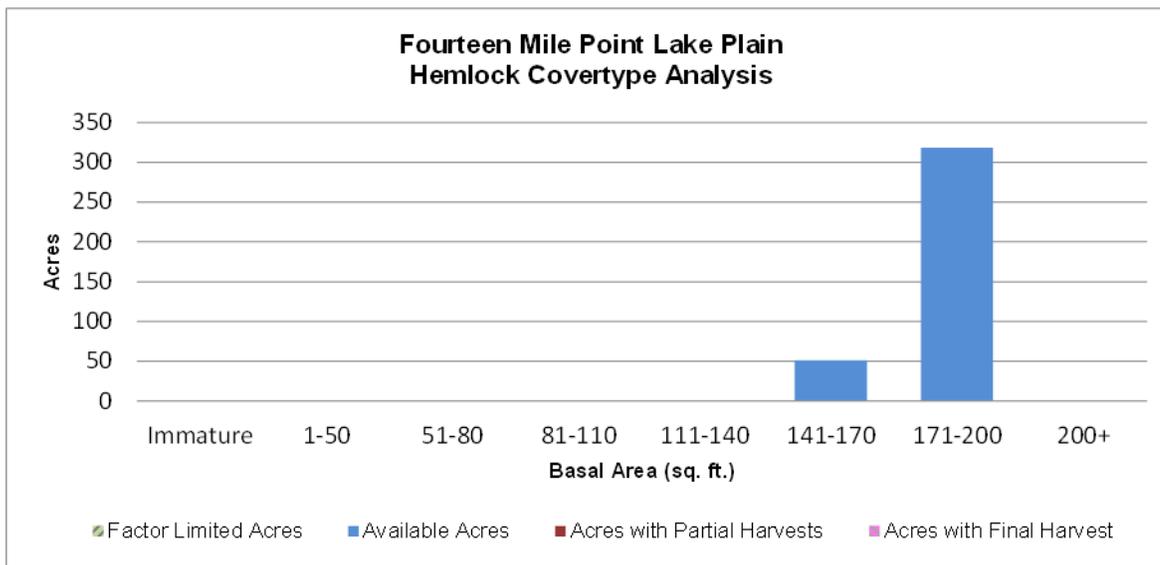


Figure 4.14.4. Graph of the basal area distribution for the hemlock cover type on the Fourteen Mile Lake Plain management area (2012 Department of Natural Resources inventory data).

Desired Future Condition

- Uneven-aged hemlock stand structure promoting sawlogs;
- A full complement of tree seedlings recruiting into the overstory; and
- Well-developed shrub and herbaceous layers.

Long-Term Management Objectives

- Maintain or promote hemlock stands; and
- Maintain and encourage minor species to increase within-stand diversity.

10-Year Management Objectives

- Selectively harvest 73 acres in this planning period to promote hemlock while maintaining canopy structure.

Other Forested Cover Types

Current Condition

Other forested cover types make up 1,422 acres and are made up of mixed upland deciduous (793 acres), upland conifers (246 acres), upland mixed forest (218 acres), aspen (111 acres), lowland deciduous (27 acres) and natural mixed pines (27 acres). Together these cover types make up about 42% of the management area (Table 4.14.1).

Desired Future Condition

- Maintain the presence of the minor cover types within the management area.

Long-Term Management Objectives

- Manage minor cover types to maintain representation using appropriate silvicultural methods; and
- Harvest as opportunities arise in conjunction with other management activities.

10-Year Management Objectives

- Harvest those stands without harvest limitations adjacent to other planned harvest activities and where stand conditions indicate that harvesting is appropriate;
- Projected harvests in these types are 313 acres of final harvest and 74 acres of partial harvest over this 10-year planning period.

Other Non-forested Cover Types

Current Condition

The following non-forested cover types are found on this management area: upland/semi-open lands (2 acres - >1%), lowland open/semi-open lands (48 acres – 1%) and other (water, local, urban) (90 acres – 3%) (Table 4.14.1).

Desired Future Condition

- These areas will be maintained in the current condition.

Long-Term Management Objective

- Grass will be burned or mowed to prevent forest encroachment.

10-Year Management Objective

- Grass-types will be treated for opening maintenance as needed.

4.14.2 – Featured Wildlife Species Management

Wildlife management priorities for Fourteen Mile Point Lake Plain management area are protecting existing thermal cover (particularly hemlock) for deer, bear, marten, fisher and birds that use conifer cover types and maintaining riparian features that provide wildlife movement corridors by minimizing management activities in those areas. The primary focus of wildlife habitat management in the Fourteen Mile Point Lake Plain management area will be to address the habitat requirements identified for the following featured species: American marten, pileated woodpecker and white-tailed deer. Some of the most significant wildlife management issues in the management area are: habitat fragmentation; coarse woody debris; mesic conifer; mature forest; retention or development of large living and dead standing trees (for cavities); and deer wintering complexes. During this 10-year planning period, additional analyses to better define the spatial extent of priority areas (e.g., large suitable patches of contiguous habitat and dispersal corridors for marten) for featured species will be performed.

American Marten

The goal for marten is to maintain or increase suitable habitat and strive to identify, maintain and connect known populations to facilitate genetic exchange. Management during this planning period should focus on providing mature conifer forest conditions (e.g., coarse woody debris and large living cavity trees) across cover types in marten habitat.

Wildlife habitat specifications:

- Maintain a minimum of 30% canopy cover in key even-aged managed stands of northern hardwood and conifer stands as marten tend to avoid stands with less canopy cover. Retention patches should be oriented to minimize potential blow down.
- Discourage land transactions and management activities that facilitate additional fragmentation of marten habitat by identifying and maintaining corridors between large forested tracts (e.g., Huron Mountains, Craig Lakes State Park, McCormick Wilderness, portions of The Nature Conservancy's Northern Great Lakes Forest Project and several smaller natural areas) west to Ottawa National Forest and south Chequamegon-Nicolet National Forest (WI) and Whisker Lake Wilderness.
- Provide late successional conifer-dominated stands in this management area.
- Provide for late successional mesic conifer-dominated stands in the area by extending the normal rotation length for white spruce and balsam fir cover types by 20 years.
- Retain down coarse woody debris present before cutting, and debris resulting from incidental breakage of tops and limbs in the general harvest area, except on skid trails and landings, to the extent feasible. Where coarse woody debris is lacking, increase both standing dead and down dead wood by leaving at least three secure large diameter (>14 inches in diameter at breast height) live trees to serve as future den trees, snags, coarse woody debris and logs on the ground per acre harvested.
- Limit biomass harvesting, whole tree chipping and limit firewood permits and retain the maximum residues in the Woody Biomass Harvesting Guidelines within this management area.
- Increase the within-stand component of mesic conifers in forested stands and manage to increase mesic conifer forest types by group or gap selective harvest. Consider under planting on suitable sites where a seed source is absent.

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Pileated Woodpecker

The western Upper Peninsula goal for pileated woodpeckers is to maintain or improve habitat. State forest management for the species should address mature forest and retention or development of large living and dead standing trees (for cavities) in this management area. Focusing such efforts on riparian and animal movement corridors will benefit additional species.

Wildlife habitat specifications:

- Identify and retain as many existing large (>15 inches in diameter at breast height) snags and cavity trees, coarse woody debris and reserve green trees, as possible to ensure a sustainable supply of future cavity/foraging trees and associated coarse woody debris. Poorly formed trees and those damaged by natural disturbance or earlier harvests, particularly deciduous trees, are good candidates for future snags and cavity trees. Large diameter aspen and other soft hardwoods are preferred.
- Even-aged managed stands: leave scattered retention patches around some 18 inches in diameter at breast height or greater (if unavailable, identify future potential 18 inch secure trees) to be recruited as a nucleus, using the upper end of the retention guidelines.
- Uneven-aged managed stands: Retain a minimum of three secure cavity or snags per acre with one exceeding 18 inches in diameter at breast height. If snags or cavity trees are lacking, leave trees with defects of the maximum available size that will likely develop and be recruited as cavity trees.
- Offset salvage harvests deemed necessary due to insect or disease, or fire within the same cover type and age class (within the compartment, management area or western Upper Peninsula ecoregion), to minimize impacts on pileated woodpecker habitat. Total allowable harvest in these situations will be evaluated on a case-by-case basis.

White-tailed Deer

The western Upper Peninsula goals for white-tailed deer are to: 1) Maintain existing deer wintering complexes and 2) Expand the extent of areas suitable as winter deer habitat, especially in the medium and high snowfall zones. Management should focus on maintaining habitat quality in priority wintering complexes. DNR department procedure 32.22-07 states "Coniferous swamps are important as winter deeryards and shall be managed primarily for deer. The objective shall be to maintain them for this purpose and through commercial cuttings and silvicultural practices, improve these areas to provide winter cover and food for deer." There is a complex relationship between deer abundance; available summer and winter habitat; timber management; and regeneration tree species, particularly white cedar and hemlock. It is recognized that meeting both timber management and deer goals presents challenges for the department and our stakeholders. Information on deer wintering complexes is currently being updated and new management guidelines are being developed. When completed, these will provide additional direction for managing these critical areas for white-tailed deer.

Wildlife habitat specifications for deer wintering complexes:

- Strive to maintain > 50% of the land area within deer wintering complexes in mixed or pure stands of cedar, hemlock, white and black spruce, white and natural red pine, balsam fir, mixed swamp conifer and mixed upland conifer-hardwood.
- In northern white cedar and hemlock cover types that are commonly occupied by deer during severe winters, especially in medium and high snowfall zones, maintain canopy closure of >65%.
- In deer wintering complexes in low snowfall areas, and within ¼-mile of severe-winter cover in the higher snowfall zones, write prescriptions that strive to maintain canopy closure of 40-65%, favoring cedar, hemlock, white spruce, black spruce, balsam fir and white pine.
- Provide winter forage in deer wintering complexes through stands of regenerating hardwood or brush, including preferred species of red maple, sugar maple, aspen, yellow birch, ashes, oaks, dogwood, crabapple, elderberry, high-bush cranberry, sumac and hazel.
- Enhance accessibility to winter browse within deer wintering complexes by maintaining mature mesic conifer components within upland hardwood stands or by maintaining or enhancing sheltered travel corridors between areas of conifer cover and browse.

- Provide spring break out areas by maintaining open hardwood stands on southern exposures and herbaceous openings adjacent to deer wintering complexes.
- When possible, timber harvests within deer wintering complexes should be carried out only during winter months and tops should be left. Chipping of non-bole wood and whole-tree harvesting in the deer wintering complexes should be avoided, but will be discussed on a case-by-case basis through the compartment review process.
- Harvests of cedar and hemlock may only be conducted when:
 - There is reasonable confidence of successful recruitment/regeneration of the cover types; or
 - There is a forest health issue (e.g., hemlock woolly adelgid); or
 - Part of an approved research project; or
 - Removal of selected trees will facilitate a reduction of harvest trails, landings, etc. to minimize soil sedimentation and possible soil compaction issues.
- Provide fall foods in the form of hard and soft mast, and provide dense escape cover or bedding areas in the form of early successional forests, brush and warm-season grasses that will encourage fall deer use in areas open to public hunting. Where habitat types are appropriate, increase diversity of hard mast by planting oak.

4.14.3 –Rare Species and Special Resource Area Management

All forest operations must be reviewed for potential conflicts between rare species and proposed forest operations following the guidance in “DNR’s Approach to the Protection of Rare Species on State Forest Lands” (IC4172). This is especially important when listed species are present, when past surveys have indicated a possibility of their presence, or when appropriate habitat is available and the species is known to occur in the general region.

Past surveys have noted and confirmed three listed species and two natural communities of note occurring in the management area as listed in Table 4.14.2. Any established management guidelines will be followed. Further surveys for special species and natural communities will be carried out as a matter of course during the inventory process and opportunistically for special more focused surveys.

There is one potential Type 2 old growth area that is a special conservation area at the Sleeping Misery Bay site that consists of 287 acres of the mesic northern forest natural community type (Figure 4.14.5).

There are no high conservation value areas or ecological reference areas identified in this management area as illustrated in Figure 4.14.5.

Management goals during this planning period:

Goal 1: To develop and maintain a list of rare, threatened, endangered and special concern species and natural communities for the management area through a continuous inventory and through opportunistic focused inventory surveys.

Objective 1-1: Field staff should be trained and aware of the identification characteristics and natural history of rare, threatened, endangered and special concern species.

Objective 1-2: Occurrences of rare, threatened, endangered and special concern species noted during the inventory process by inventory staff should be verified and added to the body of knowledge for the management area.

Goal 2: To evaluate all potential Type 1, potential Type 2 and potential old growth to determine its status as to its special resource status.

Objective 2-1: To evaluate the potential old growth areas by the end of this 10-year planning period.

Table 4.14.2. Occurrence information for special concern, rare, threatened and endangered communities and species for the Fourteen Mile Point Lake Plain management area.

Common Name	Scientific Name	Status	Status in Management Area	Climate Change Vulnerability Index (CCVI)	Confidence	Natural Community Association	Probable Cover Types	Successional Stage
Natural Communities								
Sandstone bedrock lakeshore		S2/G4G5	Confirmed				Upland open/semi-open	N/A
Sandstone cobble shore		S2/G2G3	Confirmed				Upland open/semi-open	N/A
Bird								
Bald eagle	<i>Haliaeetus leucocephalus</i>	SC/G5/S4	Confirmed	IL	Moderate	Bog	Lowland open/semi-open	N/A
						Hardwood-conifer swamp	Lowland Mixed	Mid
						Northern hardwood swamp	Black Ash	Late
						Poor conifer swamp	Tamarack	Late
						Floodplain forest	Lowland mixed	Mid
						Dry northern forest	Jack Pine, Red Pine	Early
						Dry-mesic northern forest	White Pine	Late
						Mesic northern Forest	Northern Hardwood	Late
Plants								
Northern gooseberry	<i>Ribes oxycanthoides</i>	SC/G5/S3	Confirmed			Northern bald	Upland open/semi-open	N/A
						Granite bedrock glade	Upland open/semi-open	N/A
Downy oat-grass	<i>Trisetum spicatum</i>	SC/G5/S2S3	Confirmed			Alvar	Upland open/semi-open	N/A
						Volcanic bedrock lakeshore	Upland open/semi-open	N/A
						Volcanic cobble shore	Upland open/semi-open	N/A
						Volcanic lakeshore cliff	Upland open/semi-open	N/A
						Sandstone lakeshore cliff	Upland open/semi-open	N/A
						Granite bedrock lakeshore	Upland open/semi-open	N/A
						Granite lakeshore cliff	Upland open/semi-open	N/A

Climate Change Vulnerability Index: EV – Extremely Vulnerable; HV – Highly Vulnerable; MV – Moderately Vulnerable; PS – Presumed Stable; and IL – Increase Likely.

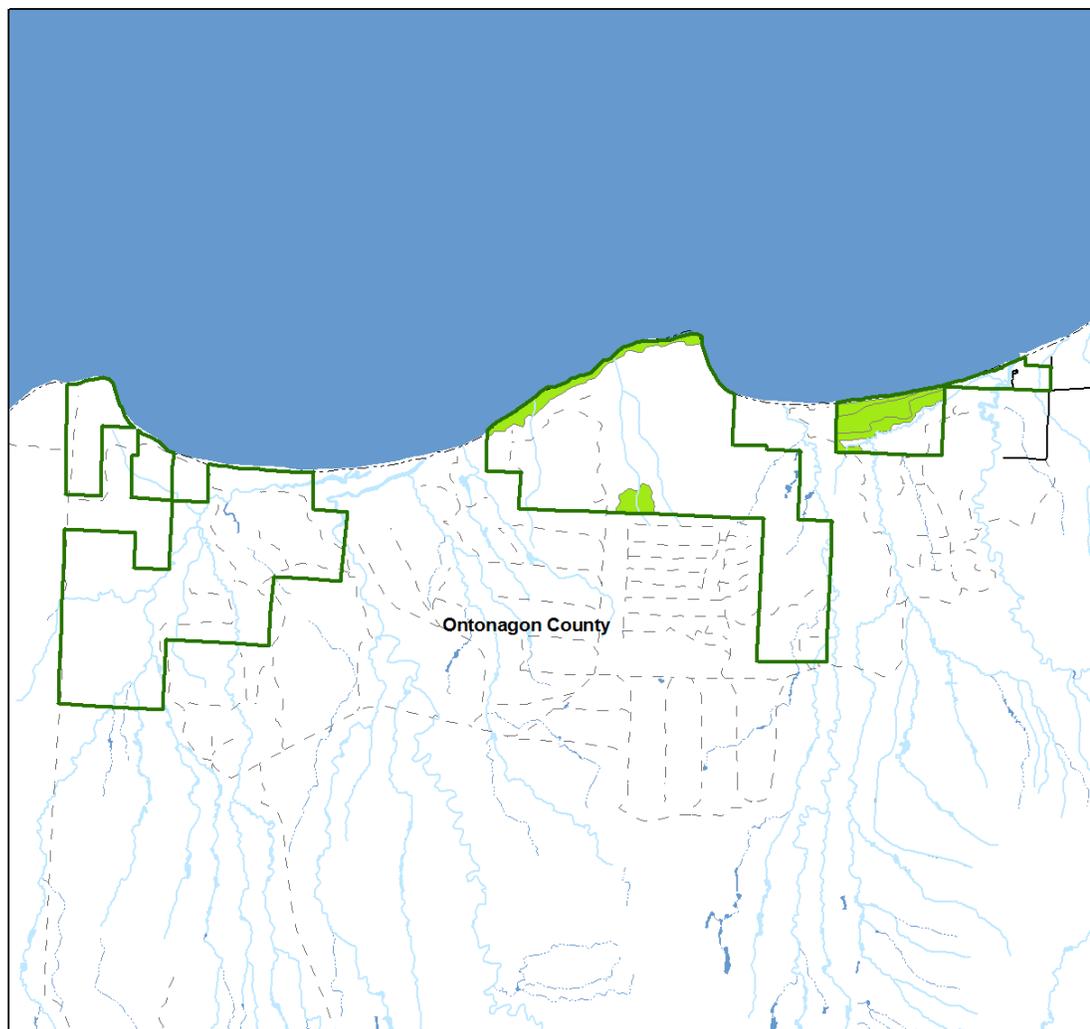
4.14.4 – Forest Health Management

Although forest health issues span the entire landscape, some specific threats are more important in this management area due to the species composition, site quality or other factors. Some of the more important forest health pests in this area include emerald ash borer and hemlock woolly adelgid.

When forest pests are detected, they are to be reported to the forest health specialist for treatment recommendations. The treatment of large outbreaks of forest pests will be coordinated on a state and regional level.

Several invasive exotic species of plants are thought to be located in the vicinity. When invasive species are detected, they will be reported to the forest health specialist and treatment options will be reviewed. Priority for treatment should be given to those species that threaten sensitive sites due to their location or growth characteristics and have population levels that may be successfully controlled. There are no known occurrences of species of concern that been documented in or near this management area.

Fourteen Mile Point Lake Plain



Legend

- Highway
- Paved Roads
- Gravel Roads
- - - Poor Dirt Roads
- + + + Railroads
- Intermittent Stream or Drain
- Perennial River
- Lakes and Rivers
- ▭ Management Area Boundary
- ▭ Cities
- - - County Boundaries

Ecological Reference Areas

High Conservation Value Areas

- Coastal Environmental Areas
- Critical Dunes
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Critical Coastal Habitat (Piping Plover)
- Kirtland Warbler Habitat
- Dedicated Management Areas
- Natural Areas Legally Dedicated

1 in = 1 miles

Special Conservation Areas

- ▲ Campgrounds
- Fishing Access Sites
- Boat Access Sites
- ⊗ Mineral Resource Locations
- Wild & Scenic Rivers (USFS Lands)
- ▭ Visual Management Areas
- ▭ Contiguous Resource Areas
- ▭ Possible Type 1 and Type 2 Old Growth
- ▭ Potential Old Growth
- ▭ Non-Dedicated Natural Areas & National Natural Landmarks
- ▭ Springs, Wetlands, or Riparian Areas



- ▭ Cold Water Streams & Lakes
- ▭ Wildlife Management Areas
- ▭ Research, Development, and Military Lands
- ▭ Great Lakes Islands

Figure 4.14.5. A map of the Fourteen Mile Point Lake Plain management area showing the special resource areas.

4.14.5 – Aquatic Resource Management

Fisheries Division management unit biologists will review proposed forest management activities using the compartment review process and will consider the potential impact of proposed prescriptions upon riparian and aquatic values. Management prescriptions will be modified to account for riparian and aquatic values by applying the standards and guidance documents listed in the introduction to this plan section to the unique conditions specific to any given forest stand.

Prescription of riparian management zone widths greater than the minimum widths provided in IC4011 (*Sustainable Soil and Water Quality Practices on Forest Land*) must be justified and documented during the compartment review process.

Forested stands adjacent to designated high priority trout streams will specifically be managed to discourage beaver use in accordance with both DNR Policy and Procedure 39.21-20 Beaver Management and IC 4011. Designated high priority trout streams are identified in the Integrated Forest Monitoring Assessment and Prescription Geographic Decision Support Environment. Remove or discourage beaver populations on designated high priority trout streams.

High priority trout streams in this management area are shown in Figure 4.14.1.

4.14.6 – Fire Management

This management area is dominated by mesic northern forest. Fire impacts were rare, resulting in very long fire return intervals.

- All wildfires are subject to appropriate initial attack.

4.14.7 – Public Access and Recreation

This area is very remote and there are few public access roads. There are no state forest campgrounds in this area. Boating access sites are located on the Misery River and at Agate Beach.

- Work to establish legal access for management and public use.

4.14.8 – Oil, Gas and Mineral Resources

Exploration and development for oil and gas has been limited to a few wells drilled in the eastern Upper Peninsula and no economic oil and gas production has been found anywhere in the Upper Peninsula.

Surface sediments consist of lacustrine (lake) clay and silt. There is insufficient data to determine the glacial drift thickness. Sand and gravel pits are not located in the area of the management area and there is limited potential.

The Precambrian Freda Sandstone subcrops below the glacial drift. The Freda does not have a current economic use.

Metallic mineral exploration is not known to have occurred in the management area in the past. Metallic mineral potential appears to be limited in this area.