4.25 Norwich Plains Management Area

Summary of Use and Management

Vegetative management in the Norwich Plains management area (MA) (Figure 4.25.1) 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 include improving the age-class distribution of aspen; maintaining the conifer component in northern hardwood stands; maintaining the presence of minor cover types on the landscape; and maintaining non-forest vegetation types. Wildlife management objectives include address the habitat requirements identified for the following featured species: American woodcock, black bear and white-tailed deer. Management activities may be constrained by site conditions and the skewed age-class distributions. Balancing age classes and potential insect (emerald ash borer) outbreaks will be issues for this 10-year planning period.

Introduction

The Norwich Plains management area is on a dissected till plain in north Ontonagon County. The state forest covers about 4,600 acres and is in a contiguous block. The major ownership in this vicinity is non-industrial private. The management area is dominated by the aspen and northern hardwood cover types. Other attributes that played a role in the definition of this management area include:

- Dominated by the mesic northern forest natural community;
- Mid-range in site quality;
- Provides multiple benefits including forest products and dispersed recreational activities; and
- Provides a variety of fish and wildlife habitats.

The management priority in this area is to continue to provide these multiple benefits while minimizing user conflicts.

The predominant cover types, composition and projected harvest areas for the Norwich Plains management area are shown in Table 4.25.1.

Table 4.25.1. Summary of cover types, composition, limiting factor area, manageable area and projected harvest area for the Norwich Plains 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	46%	2,115	734	1,381	0	67	2,115	0	645
Aspen	39%	1,772	0	1772	0	0	1,772	253	0
Upland Open/Semi-Open Lands	2%	69	0	69	0	0	69	0	0
Lowland Open/Semi-Open Lands	5%	244	0	244	0	0	244	0	0
Misc Other (Water, Local, Urban)	1%	56	0	56	0	0	56	0	0
Others	7%	313	0	313	114	98	313	35	105
Total		4,569	734	3,835	114	165	4,569	288	750

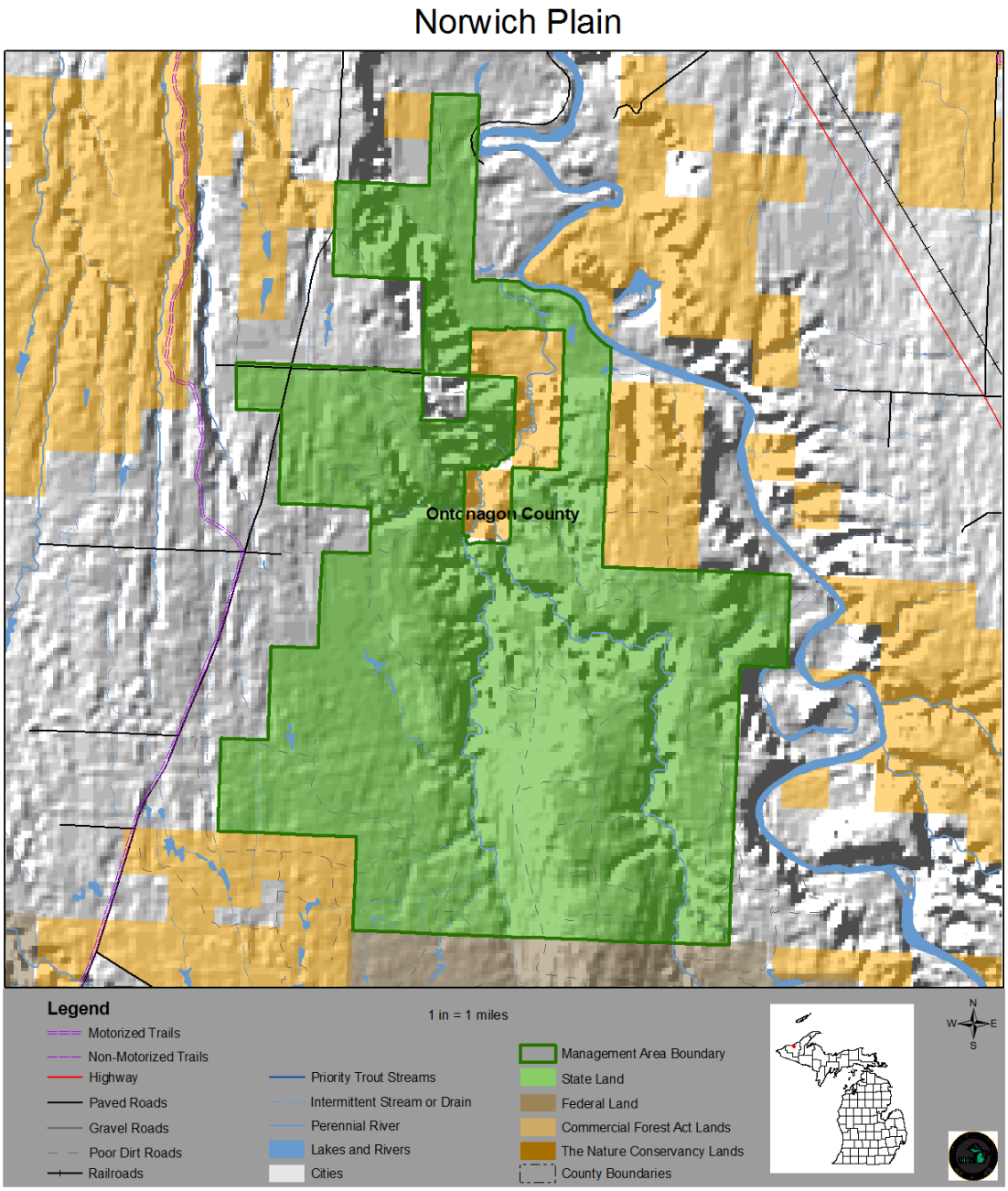

Figure 4.25.1. A map of the Norwich Plains management area (dark green boundary) in relation to surrounding state forest lands and other ownerships.

4.25.1 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 Norwich Plains 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 2,115 acres (46%) of state forest land in this management area (Table 4.25.1). They occur on high-quality sugar maple sites. Most stands have been managed on a selection harvest basis, and harvesting is based on basal area distribution rather than age (Figure 4.25.2). About 35% of the stands in this area (734 acres) have limiting factors. These hard factor limited acres have been removed from the total number of manageable acres available for harvest calculations. Due to low deer numbers in this area, there are few problems with herbivory and most areas regenerate successfully.

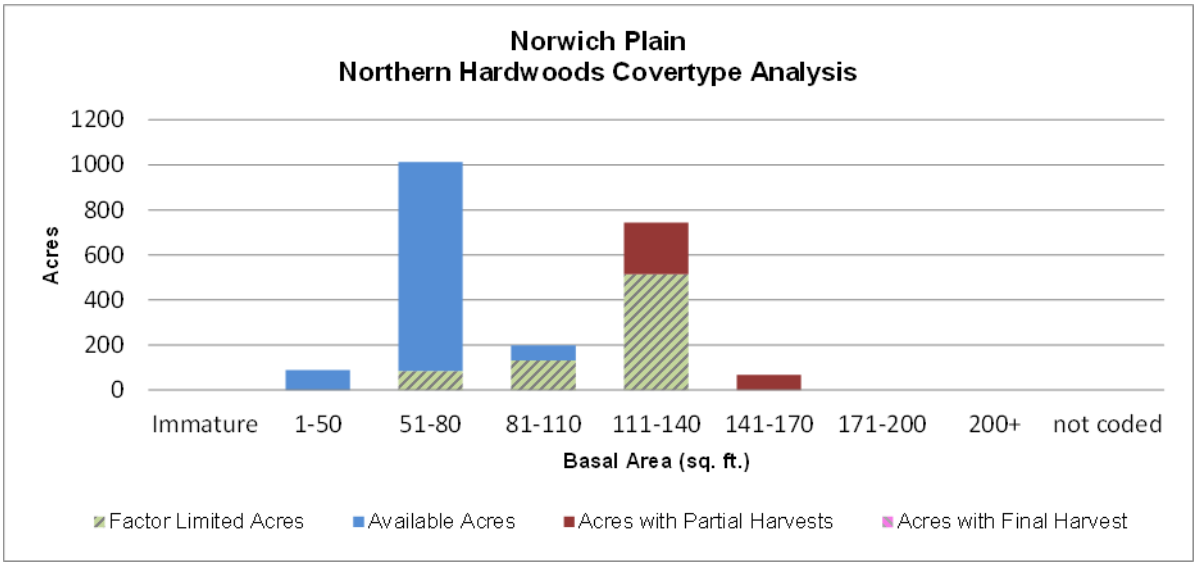

Figure 4.25.2. Graph of the basal area distribution for the northern hardwood cover type on the Norwich Plains management area (2012 Department of Natural Resources inventory data).

Desired Future Condition

- Uneven-aged northern hardwood stand structure promoting high-value sugar maple sawlogs
- Provide for a full complement of tree seedlings recruiting into the overstory; and
- Provide for 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 in-stand diversity.

10-Year Management Objectives

- Selectively harvest 67 acres over the 10-year planning period;
- Resolve factors limiting harvest to increase the allowable harvest area;
- Maintain and regenerate white pine, oak, hemlock and upland cedar where they occur in stands that are harvested;
- Favor oak where found for retention; and
- Work to regenerate hemlock components in stands lacking that species.

Aspen Cover Type

Current Condition

The aspen cover type covers 1,772 acres (39%) of state forest land in this management area (Table 4.25.1). Aspen has been successfully harvested and regenerated over recent years and the majority of the acres are in the 0-9, 10-19 and 20-29 year age classes (Figure 4.25.3).

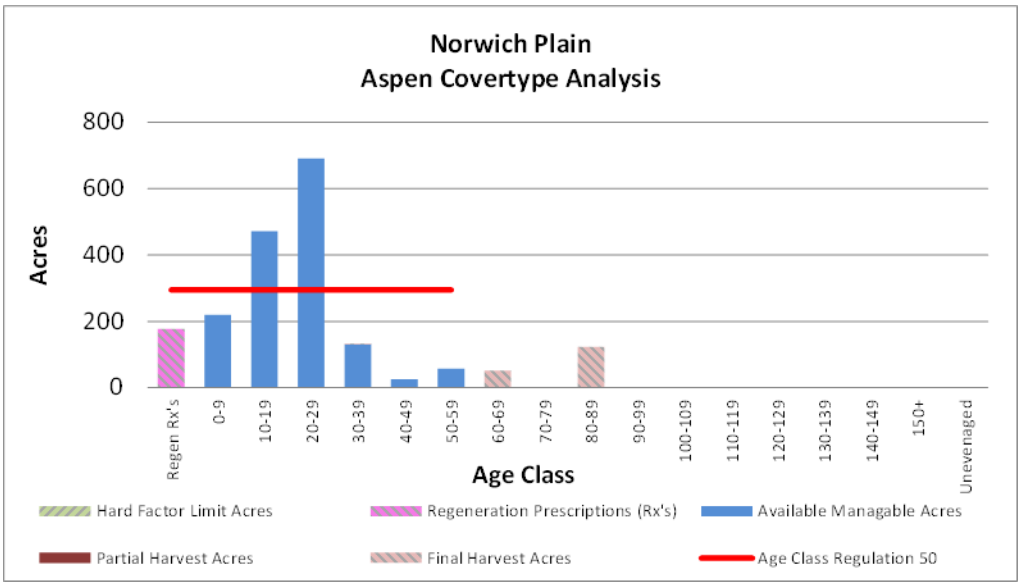

Figure 4.25.3. Graph of the age-class distribution for the aspen cover type on the Norwich Plains management area (2012 Department of Natural Resources inventory data).

Desired Future Condition

- Provide a supply of forest products;
- Provide a balanced mix of habitat conditions for a variety of wildlife; and
- Provide for a variety of hunting-type opportunities.

Long-Term Management Objective

- Regenerate approximately 295 acres each decade.

10-Year Management Objectives

- The projected harvest is 134 acres for this 10-year planning period;
- Two-aged stands with mature aspen over younger stands should be identified and scheduled for harvest; and
- Retain mature large-tooth aspen where appropriate.

Other Forested Cover Types

Current Condition

Other forested types make up 313 acres and are made up of mixed upland deciduous (197 acres), cedar (46 acres), hemlock (39 acres), lowland deciduous (17 acres), oak (seven acres) and upland spruce/fir (seven acres). Together these types make up about 7% of the management area (Table 4.25.1).

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; and
- The projected 10-year harvest is 212 acres of final harvest and 98 acres of partial harvest in these types.

Other Non-forested Cover Types

Current Condition

The following non-forested cover types are found on this management area: upland open/semi- open lands (69 acres – 2%), lowland open/semi-open lands (244 acres – 5%) and miscellaneous other (water, local, urban) (56 acres – 1%) (Table 4.25.1).

Desired Future Condition

- Maintain current acreage in grasses and other non-forested cover types.

Long-Term Management Objective

- Permanent grass openings will be maintained with frequent low-intensity fires and mechanical treatments allowing native grasses and forbs to dominate.

10-Year Management Objective

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

4.25.2 – Featured Wildlife Species Management

The primary focus of wildlife habitat management in the Norwich Plains management area will be to address the habitat requirements identified for the following featured species: American woodcock, black bear and white-tailed deer. Based on the selected featured species, some of the most significant wildlife management issues in the management area are: mast (hard and soft); early successional forest conditions (associated with alder, riparian zones or forested wetlands); and deer wintering habitat. During this 10-year planning period, additional analyses to better define the spatial extent of priority areas for featured species will be performed.

American Woodcock

The western Upper Peninsula goal for woodcock is to maintain or increase woodcock habitat. In priority areas, management should focus on maintaining early successional habitat associated with riparian zones and forested lowlands.

Wildlife habitat specifications:

- Maintain aspen cover type within the management area where associated with alder, riparian zones or forested wetlands;
- Balance aspen age-class distribution within the management area;
- Use silvicultural practices that encourage the aspen component in mixed stands associated with alder, riparian zones or forested wetlands; and
- Maintain or create rough openings associated with alder, riparian zones, regenerating aspen or forested wetlands within the management area.

Black Bear

The western Upper Peninsula black bear goal is to maintain or improve habitat. Management for bear should focus on improving existing habitat (e.g., maintaining corridors, mast and refuge trees) in this management area.

Wildlife habitat specifications:

- Maintain or increase the oak cover type and within stand oak component of hardwood forests within the management area;
- Maintain or increase mast by providing forest clearings that promote food sources such as pin cherry, juneberry/serviceberry, hazel, raspberry, blackberry and blueberry;
- Minimize herbicide use that would be detrimental to mast production;
- Maintain lowland conifer and hardwoods along and around drainages, vernal pools and forested wetlands; and
- Maintain refuge tree species with rough bark for cubs to escape (e.g., white pine and hemlock).

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 wooly 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.

4.25.3 – 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 two listed species and no natural communities of note occurring in the management area as listed in Table 4.24.2. 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.

Table 4.24.2. Occurrence information for special concern, rare, threatened and endangered communities and species for the Norwich Plains 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
Mammal								
Tri-colored bat (Eastern pipistrelle)	*Perimyotis subflavus*	SC/G5/S2S3	Confirmed	PS	Very High	Caves	Caves	N/A
Reptile								
Wood turtle	*Glyptemys insculpta*	SC/G4/S2S3	Confirmed	MV	Moderate	Northern wet meadow	Lowland open/semi-open	N/A
						Bog	Lowland open/semi-open	N/A
						Rich conifer swamp	Tamarack	Late
						Hardwood-conifer swamp	Lowland Mixed	Mid
						Northern shrub thicket	Upland open/semi-open	N/A
						Mesic northern forest	Northern Hardwood	Late

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

There are no high conservation value areas or ecological reference areas identified in this management area as illustrated in Figure 4.24.4.

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.

4.25.4 – 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 white trunk rot of aspen, *Hypoxylon* canker and emerald ash borer.

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. Following is a list of species of concern that have been documented in or near this management area:

- Bell's honeysuckle
- Black locust
- Common buckthorn
- Crack willow
- European swamp thistle; Giant knotweed
- Glossy buckthorn

- Japanese barberry
- Morrow's honeysuckle
- Narrow-leaved cat-tail
- Wild parsnip
- Norway maple
- Phragmites
- Purple loosestrife
- Scots pine
- Spotted knapweed
- Tatarian honeysuckle
- Wild parsnip.

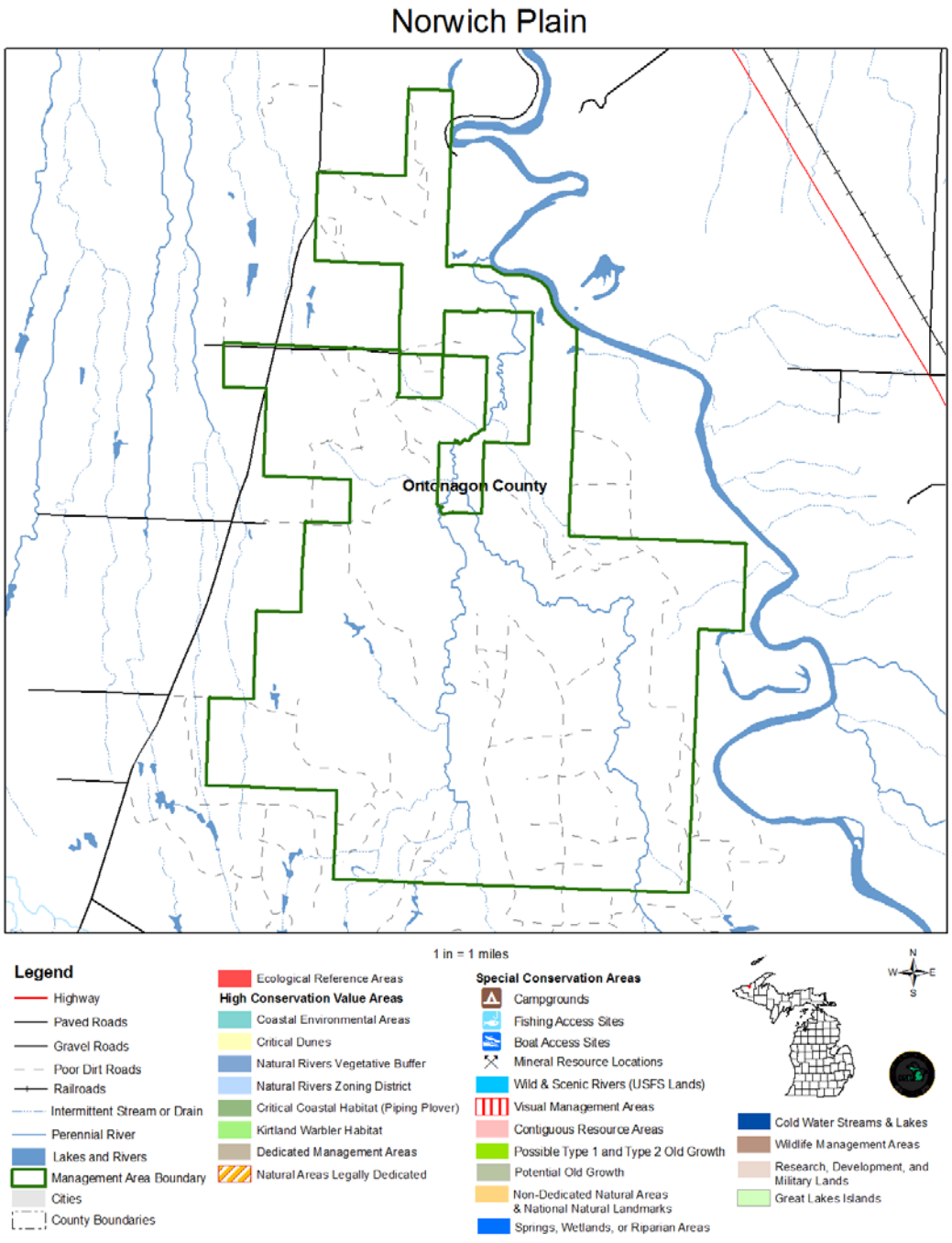

Figure 4.24.4. A map of the Norwich Plains management area showing the special resource areas.

4.25.5 – 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 4.25.1.

4.25.6 – Fire Management

Fire probably did not play a significant role in this mesic northern forest community, especially due to its proximity to the lake and heavy winter snowfall.

- All wildfires within the management area should be subject to appropriate initial attack response; and
- Work to develop modified suppression strategies for the area between the main branch and east branch of Mill Creek.

4.25.7 – Public Access and Recreation

This area is very remote and there are few public access roads. There are no state forest campgrounds or boating access sites in this area.

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

4.25.8 – 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. No economic oil and gas production has been found in the Upper Peninsula.

Surface sediments consist of lacustrine (lake) clay and silt. The glacial drift thickness varies between 10 and 50 feet. Sand and gravel pits are not located in the management area and there is limited potential for additional pits.

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

Metallic mineral exploration has not occurred in the management area in the past, but there could be some potential.