GOGEBIC COUNTY FORESTRY AND PARKS COMMISSION

Management Plan for the Mosinee Grouse Enhanced Management System

Prepared by:
Greg Ryskey
Director
February 12, 2015

Introduction

The Mosinee Grouse Management Area is being developed to enhance ruffed grouse habitat through intensive forest management and increase hunter walk-in access to intensively managed grouse habitat. This concept is being expanded through a Grouse Enhanced Management System (GEMS) across the Upper Peninsula (UP). The UP GEMS are intended to be destination sites for grouse hunting across the UP, providing unique opportunities for hunting and wildlife viewing, and ultimately supporting local economies.

The GEMS will benefit grouse and woodcock primarily, but will also bolster habitat for an array of other wildlife species including bear, deer, and snowshoe hare. These areas will be utilized by local and non-resident grouse hunters. The GEMS can also be used as an effective tool for hunter recruitment and retention, as well as a showcase of optimal grouse habitat management for educational purposes. The UP GEMS will support our forest economy and will further tie local communities to our natural resources by capitalizing and expanding on the forest tourism industry, in accordance with the Department of Natural Resources' (DNR) Managed Public Land Strategy.

Inventory

The Mosinee Grouse Enhanced Management (GEM) lies within Compartment 29 of the Gogebic County Forestry and Parks Commission Management Area (Appendix 1) The GEM area encompasses approximately 1,136 acres of County forest land south of Wakefield adjacent to the Mosinee Grade in Gogebic County. It is located in portions of sections 17, 20, 21, 28, and 29 of T46N R45W (Appendix 2). Aspen stands compose approximately 20% (236 acres) of the GEM (Appendix 3). Stands in this area have been managed using the criteria in the 2012 Gogebic County Forest Comprehensive Forest Plan.

The soils consist of silt loam, fine sandy loam, and muck. Most of the GEM is a complex of these five types. Aspen, and Northern Hardwood, are primarily located on the silt and sandy loams. Swamp Hardwoods, Mixed Swamp Conifers and Cedar is common on muck soils.

There are three primary points of access to this area where proposed gates will be located; one along County Road 519, one along the Mosinee Grade Road and one off an improved gravel road on the east side of the GEM. Gates will be located at all three access points. The closed logging trails through the GEM will provide foot trails for walk-in access. The entire area will be closed to motorized vehicles.

MANAGEMENT ACTIONS

Goal 1: Promote preferred habitat for ruffed grouse.

Ruffed grouse prefer young aspen stands (< 25 years old) with high stem densities. Older trees that provide sites for roosting and budding are also important. Grouse feed on buds, catkins, and leaves as well as the flower buds of older aspen (> 25 years old) (Hammill & Visser, 1984). Thus, various age classes are important to grouse. Aspen stands are also important to other wildlife. Woodcock prefer young aspen growth, particularly when it is in association with moist soils where they can use their long beaks to probe for earthworms. These stands can also provide browse and cover for white-tailed deer and snowshoe hare. Edges between young and older stands as well as transitions between aspen stands and other cover like lowland conifers and openings are also used by all of these species.

Aspen are relatively shade-intolerant. Stands are managed via clearcutting to allow adequate sunlight for young growth. Cutting also tends to spur growth of these species through root sprouts, or clones. White birch, often a component of aspen stands and another important tree for ruffed grouse and other wildlife, also does best in full sunlight.

Aspen stands will be managed in small blocks to encourage multiple age classes in close proximity to one another. Management activities over the past 35 years have resulted in variable sized stands of primarily young aspen. Future management activities will further enhance the age class diversity. Stand sizes have been adjusted with the goal of having stands in approximately 5- 20 acre blocks. Stand age currently varies from areas that were cut in 2014 to around 35 years. The current age class distribution of the approximately 236 acres of aspen stands is as follows:

- 0% (0 acres) in the 11-20 years old category,
- 39% (96 acres) in the 21-30 year old category,
- 36% (88 acres) in the 0-10 year old category,
- 23% (52 acres) in the 31-40 year old category,
- 0% (0 acres) are over 40 years old (stand ages are $\geq$35).

Age classes of aspen stands will be diversified with the objective of having up to 8 age classes present at one time, and stands of varying age classes in close proximity to one another. To accomplish this, some areas may be treated early. The treatment rotation map in Appendix 4 shows blocks for treatment and the planned treatment rotation for each stand, and Tables 1 & 2 provide details by rotation as well as stand-level details. The rotation will occur such that the area is re-entered on 5 year intervals to treat stands. This will provide a continuous gradient of age classes. The habitat created by these treatments should encourage use of the area by ruffed grouse as well as American woodcock, snowshoe hare, white-tailed deer, and other game and non-game species.

Stand treatments will primarily be conducted through commercial timber sales where possible. However, some non-commercial timber stand improvements may be necessary

at times. During stand treatments, conifers ≤ 4 inches dbh may be left uncut since low conifer cover can be important to grouse (Hammill & Moran, 1986). Efforts will be made to maintain species diversity by leaving cedar, hemlock, and under-represented species. Any oak, dogwood, or other mast-producing species will generally be maintained and promoted. Some trees or shrubs will be planted near or along trails to enhance food resources. Species planted may include hawthorn, nannyberry, high bush cranberry, redosier dogwood, red oak, beaked hazelnut, and/or other native or naturalized species. Pockets of retention will occur near stand intersections with 2 or more adjacent stands to enhance budding and roosting habitat. Small slash piles will be encouraged during harvest activities where feasible and practical to enhance cover for snowshoe hare.

Goal 2: Promote preferred habitat for White-tailed Deer adjacent to Wintering Deer Yard Complex.

This GEM location is also an established deer yard wintering complex. In addition to the aspen management, four wildlife openings 1-2 acres in area are proposed to be created within the GEM. These openings will be cultivated, soil tested, fertilized, limed and planted with a mixture of native perennials. Native shrubs will be planted along the edges of openings to provide spring, summer and winter forage for grouse, deer and a variety of other wildlife. Once established the wildlife openings will provide recovery of does from drain of winter and fawn rearing, and will support fawn growth. These openings will also benefit woodcock for their spring breeding ritual as well ruffed grouse for snow roosting. The grouse will also be attracted to the fruit bearing shrubs during the fall, enabling the public to see more birds.

In the Northern Hardwood stands located within the GEM a cutting cycle of 15 years to coincide with the Aspen harvesting will be applied. Hardwood stands will be selectively thinned to 70-90 sq.ft. of basal area by removing high risk, poor quality, and over mature stems first. Management will be for best tree in place regardless of species. All spruce, Balsam Fir, and Aspen will be designated to be harvested. Where Aspen clones exist, pocket clearcutting will take place. These areas will generally be less than 1 acre in size. Canopy gaps will be created where quality crop trees are not present and will be planted with red oak seedlings. Canopy gaps will be limited to 10% or less of the total stand area. Where 30 sq. ft. or more of Hemlock occurs basal area will be reduced to not less than 100 sq. ft. All Red Oak, Hemlock, White Pine and White Cedar and 1-2 snags/wildlife trees per acre will be retained. The stands will be limited to winter harvesting only to provide browse for deer and to limit trail damage/compaction.

In the Lowland Hardwood/ Mixed Swamp Conifer stands located within the GEM a cutting cycle of 15 years to coincide with the Aspen harvesting will be applied. These stands will be strip clearcut by establishing 100' wide strips North to South across the stands harvesting all trees 2" diameter and larger. 300 feet will be left between strips with no harvesting. All Hemlock, White Cedar and White Pine and 1-2 snags/wildlife trees per acre will be retained. The stands will be limited to winter harvesting only to provide browse for deer and to limit trail damage/compaction.

No harvesting will take place within the Cedar stands during this plan period.

Goal 3: Enhance the recreational opportunities for hunting.

The primary recreational purpose of this GEM is to enhance the hunting opportunities here, and create a destination for hunting. Similar areas are being developed on state land across the UP. Although the emphasis is on ruffed grouse, the area is intended to be available for pursuing all huntable species, and management should encourage others like woodcock, white-tailed deer, and snowshoe hare. Hunting opportunities will be enhanced using a number of methods, identified in each objective below.

Support a unique hunting experience

The Mosinee GEM will be established specifically for walk-in grouse hunting opportunities. It will continue to support both a unique walk-in experience and an opportunity for hunting a remote area.

Parking areas will be available at 3 locations in the GEM (Appendix 5). The main parking area will be located at the east entrance to the GEM on County Road 519; a kiosk will be placed at this location. The main entrance is approximately 7 miles south of the City of Wakefield. Visitors can also park at other gated entrances located further west along the Mosinee Grade Road, and on the northwest end of the GEM accessed via the Improved gravel road.

A kiosk will be placed at the main parking area on County Road 519. This entrance is the most accessible to the public. The parking area will be established to accommodate the kiosk and multiple vehicles. Gogebic County Forestry and Parks staff will work with the Gogebic County Road Commission to place a directional sign for the GEM near the intersection of County road 519 and Mosinee Grade Road to point the public toward the GEM. The kiosk will include a map of the area that has the location of other entrances to the GEM. Parking areas at the other entrances will be more limited.

Signs will be installed at all gates identifying the area. One is located at the main parking area, and will be replaced by the kiosk. Signs restricting motorized vehicle access will be posed at all entrances to clarify the access restraints for motorized vehicles.

Maintain a trail system for hunters and other users

The existing forest roads resulting from previous logging activities provide a trail system through the GEM. These roads are not marked, generally are unimproved, and are essentially linear forest openings. Some have young forest regeneration in them.

There are few, loop trails already present in the Mosinee GEM. Three connector trails (Appendix 5) approximately 0.5 miles in total length are proposed to aid Hunters and others walking the trails from the need to return the same direction they walked in.

A trail map will be posted at the main parking area, and trail signs may be posted in some places to show hunters and hikers the location for better navigation. Trails will require maintenance, which may range from mowing, periodic brushing to graveling or other improvements.

Trails will be planted with herbaceous items such as grasses or legumes. This may occur in conjunction with other management activities that require use of the roads, like logging, or as independent projects. Partnerships with stakeholders will be sought for at least some of the projects. Interior locations—those ¼ mile or more (by trail) from a parking area—may receive higher priority for planting.

Establish partnerships to assist in management

Partnerships with stakeholders are desirable to conduct management here and promote the GEM. Gogebic County will continue to seek partnerships with organizations to implement management activities such as gates, parking areas, opening creation (including plantings), trail creation and maintenance or improvements (including plantings) and establishing and maintaining signs. The Gogebic Conservation District will apply for 2 grants to assist in implementing this Gem (Table 3 Project Costs). The first grant is a 2015 Upper Peninsula Deer Habitat Improvement Partnership Initiative grant. The second grant is through the Wildlife Habitat Grant Program.

Goal 5: Public information/outreach

This GEM was created within the context of promoting a destination for hunters. Public outreach will be needed to identify and promote the area, as well as to direct visitors to the site.

Identify the area

Various methods can be used to identify the area and direct people to the site. The Mosinee GEM will be identified on the MI Hunt system, and it will be promoted as part of the UP GEMS. On-site, signs identifying the area will be placed at the main entrance on County Road 519. A directional sign will be placed along County Road 519. Other directional signs as well as GEM signs may be placed at other locations—along roads or at gates—in the future as the need arises.

Establish the site as a destination and an asset to the local economy

Establishment of the Mosinee GEM will be communicated through various media. Local businesses will be able to use the GEM as a tool to promote tourism to the area. Once established on the MI Hunt system and possibly in other media, the Mosinee GEM can be advertised or promoted by local businesses to encourage tourism. Although currently difficult to quantify, the GEM will be an asset to the local economy.

REFERENCES

Hammill, J., and L. Visser. Status of Aspen in Northern Michigan as Ruffed Grouse Habitat. Pages 123-136 *in* Ruffed Grouse Management: State of the Art in the Early 1980's. Proceedings of a symposium held at the 45th Midwest Fish and Wildlife Conference, St. Louis, Missouri, December 1983. Edited by William Robinson, Professor of Biology, Northern Michigan University. 1984. 181 pp.

Hamill, J. H., and R. J. Moran. 1986. A habitat model for ruffed grouse in Michigan *in* Wildlife 2000: Modeling Habitat Relationships of Terrestrial Vertebrates. Edited by J. Verner, M. L. Morrison and C. J. Ralph. pp. 15–18. University of Wisconsin Press, Madison, Wisconsin. 470 pp.

Managed Public Land Strategy. 1 July 2013. Michigan Department of Natural Resources. <http://www.michigan.gov/documents/dnr/Draft_DNR_Public_Land_Management_Strategy-5-24-13_422381_7.pdf>. Accessed 23 June 2014.

Minzey, T. W. 1994. Strickler Grouse Management Unit Management Plan. Michigan Department of Natural Resources. 5pp.

Regional State Forest Management Plan/Eastern Upper Peninsula. Michigan Department of Natural Resources. <http://www.michigan.gov/regionalforestplans>. Accessed 19 June 2014.

Jentoft, D. 2014. Management Plan for the Strickler Grouse Enhanced Management System. Michigan Department of Natural Resources Wildlife Division. 13pp.

Jentoft, D. 2013. Management Plan for the Drummond Grouse Enhanced Management Area. Michigan Department of Natural Resources Wildlife Division. 11pp.

Table 1. Harvest treatment rotation, year of entry, and acreage for aspen types in the Mosinee Grouse Enhanced Management System.

Rotation	Year of Entry	Acres
1	2025	23.21
2	2030	39.90
3	2035	42.26
4	2040	47.28
5	2045	21.68
6	2050	15.21
7	2055	30.84
8	2060	15.37
	Total:	*235.75*

Table 2. Compartment and aspen stand numbers, rotation, and year of entry for harvest treatments.

Compartment	Stand	Age in 2015	Rotation	Treatment Year of Entry	Acres
29	70	35	1	2025	3.9
29	71	35	1	2025	4.2
29	72	35	1	2025	9.6
29	97	35	1	2025	5.5
29	94	35	2	2030	1.1
29	99	35	2	2030	10.4
29	100	29	2	2030	9.6
29	102	29	2	2030	7.4
29	104	29	2	2030	5.8
29	105	29	2	2030	5.7
29	68	35	3	2035	7.7
29	96	30	3	2035	4.5
29	98	35	3	2035	1.7
29	101	29	3	2035	23.8
29	103	29	3	2035	4.6
29	11	29	4	2045	19.4
29	42	30	4	2045	8.8
29	91	29	4	2045	22.7
29	88	0	5	2050	6.0
29	89	0	5	2050	4.7
29	106	0	5	2050	11.0
29	86	0	6	2055	12.2
29	87	0	6	2055	3.0
29	69	0	7	2060	6.6

Table 2 continued. Compartment and aspen stand numbers, rotation, and year of entry for harvest treatments

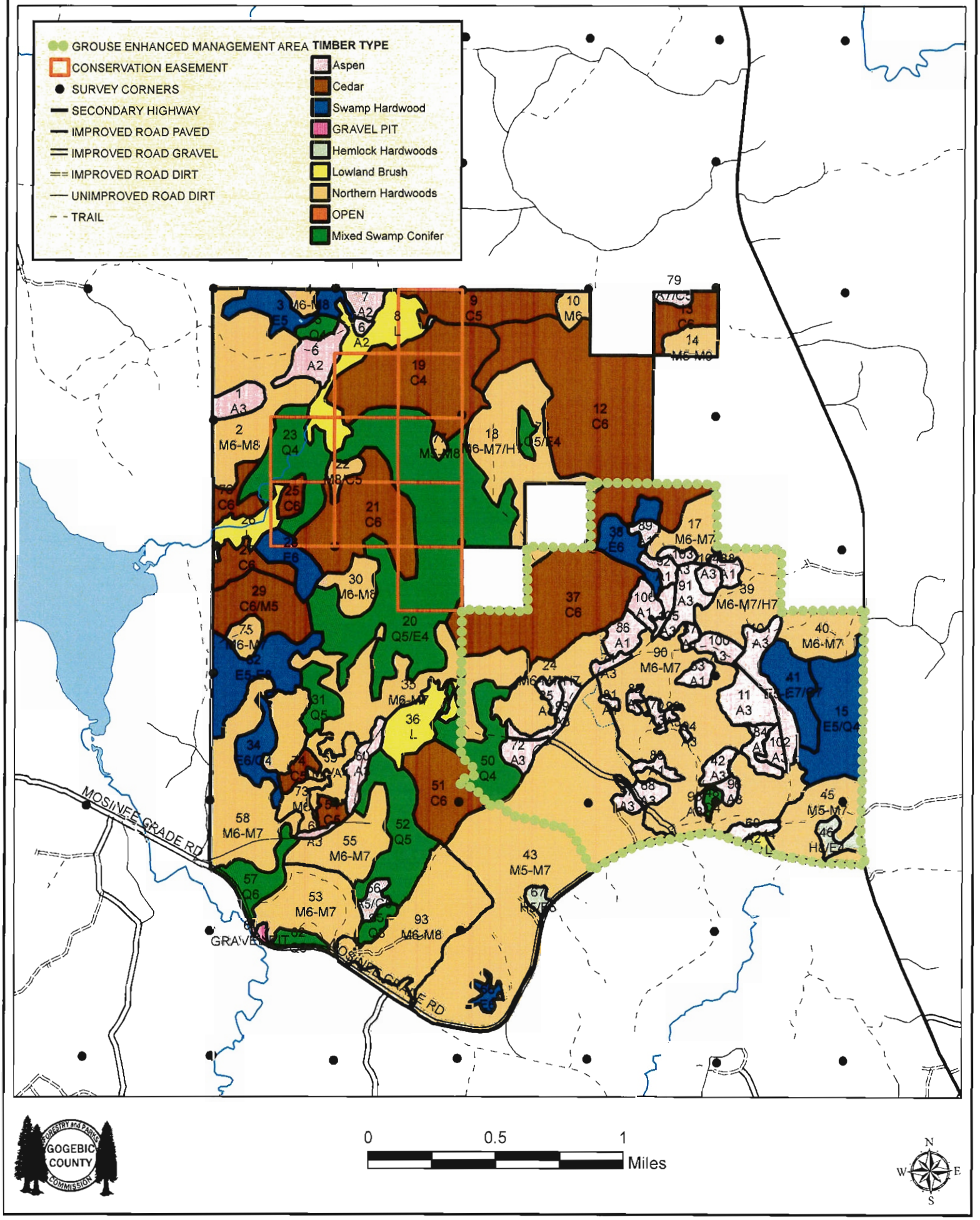
Compartment	Stand	Age in 2014	Rotation	Treatment Year of Entry	Acres
29	82	0	7	2060	3.1
29	84	0	7	2060	9.9
29	85	0	7	2060	5.7
29	80	0	7	2060	5.6
29	81	0	8	2065	1.7
29	83	0	8	2065	6.7
29	92	0	8	2065	7.0

Table 3. Estimated Project Costs Mosinee Grouse Enhanced Management System.

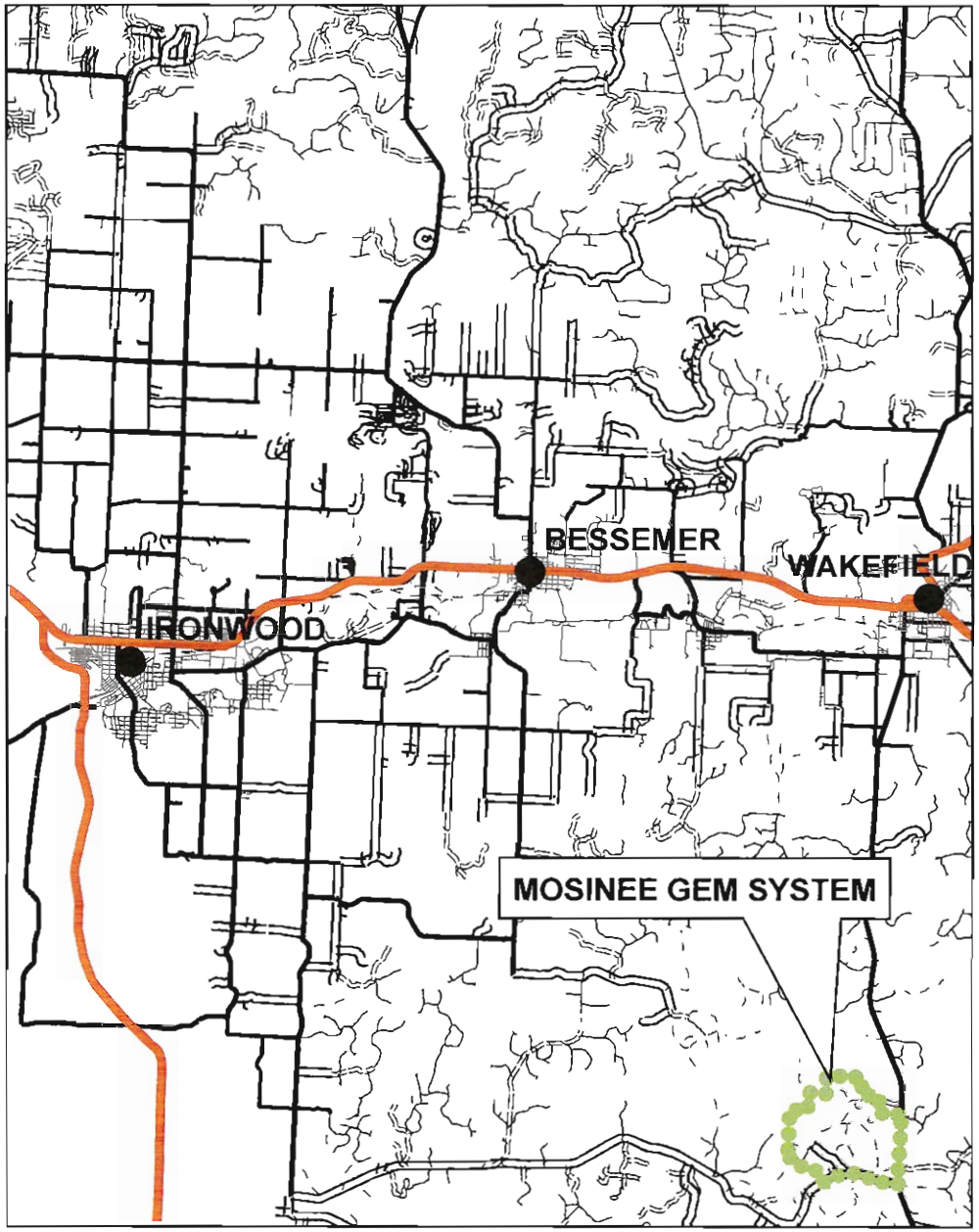
Practice	Estimated Cost	Description
Wildlife Openings	$2,500	Create 4 openings 1-2 acres in size
Soil Test, Fertilize, Lime Openings & Trails	$1,000	
Seeding	$400	Seed Wildlife Openings and Trails With Clover Mixture
Plantings	$1,000	Plant perimeter of openings with Native Shrubs
Trail Re-Shaping	$2,000	4.5 Miles
New Trail Connectors	$2,000	0.5 Miles
Gates	$6,000	4 Gates Installed
Parking Area Construction	$2,500	3 Parking Areas for Vehicles
Signage	$1,500	1 Kiosk and Signs
Value of Donated Labor	$400	Seeding, Fertilizing, Liming & Planting
Force Account Labor	$1,064	GCFP Staff Time Spent to Administer Project
Contingency	$1,018	5% Contingency
Gogebic County 10% Match	-$2,143	
TOTAL	**$19,239**	

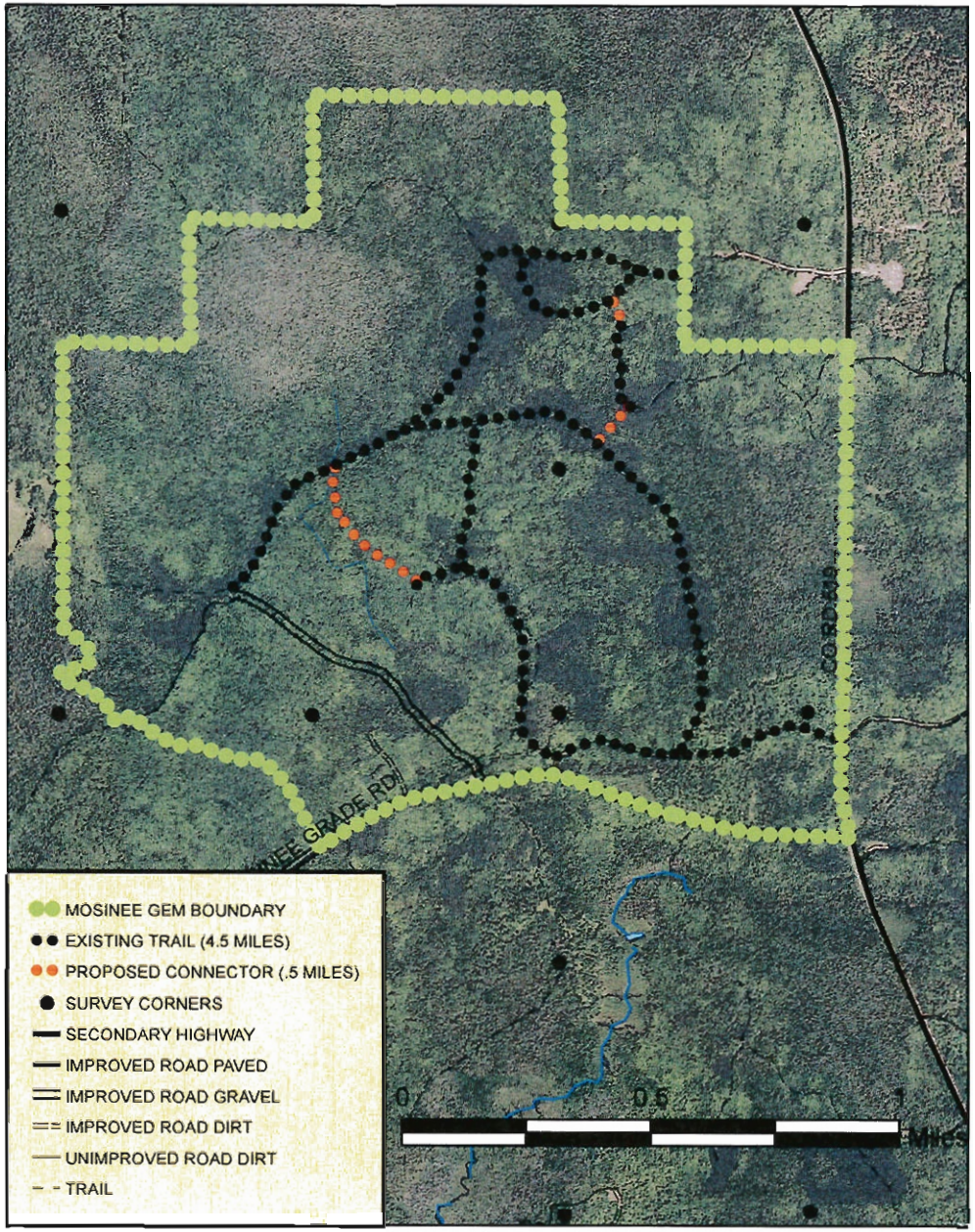
Appendix 1.

Compartment 29

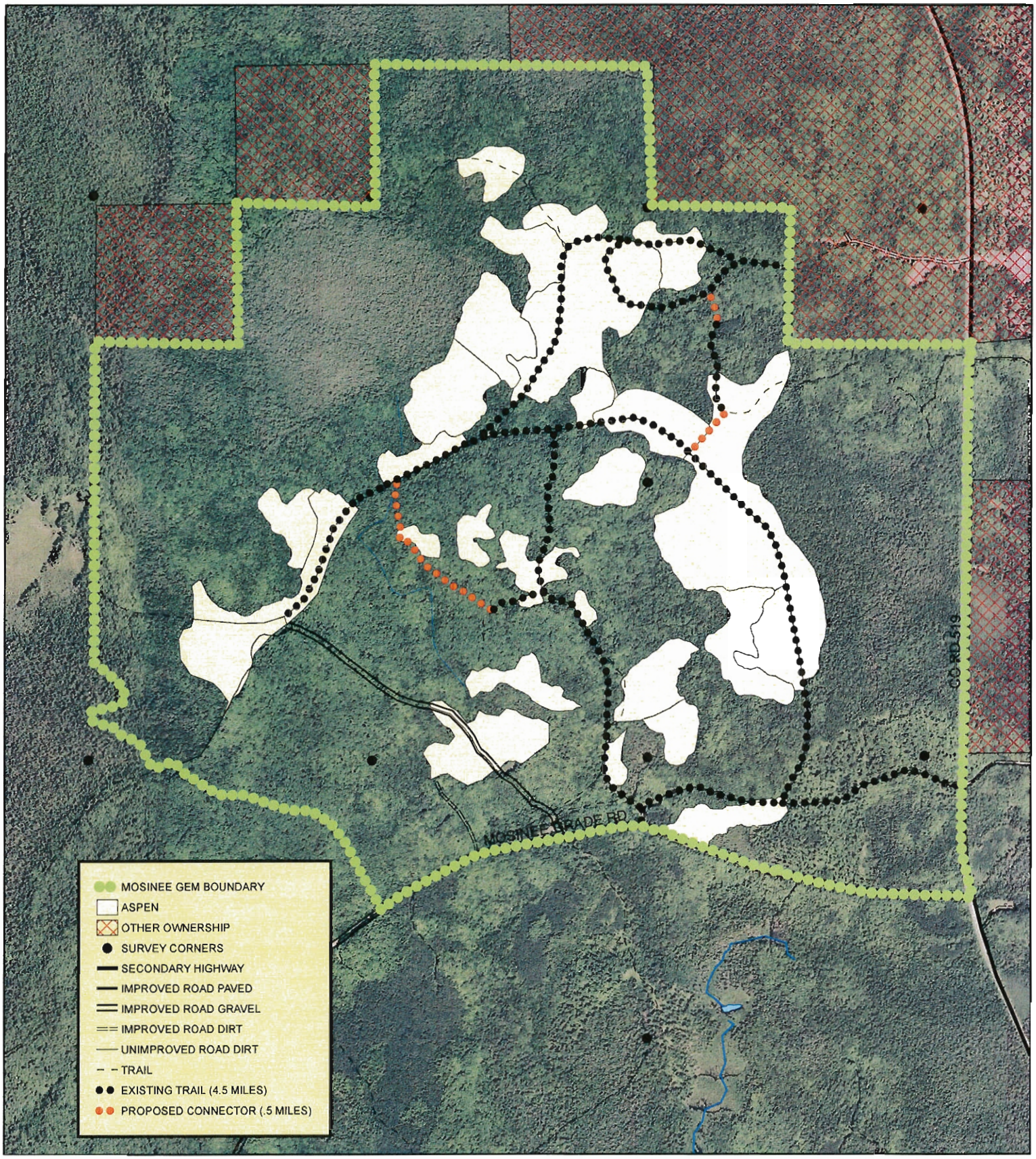


Appendix 2. Location and boundary of the Mosinee Grouse Enhanced Management (GEM) System





Appendix 3. Mosinee Grouse Enhanced Management System
Aspen Stands

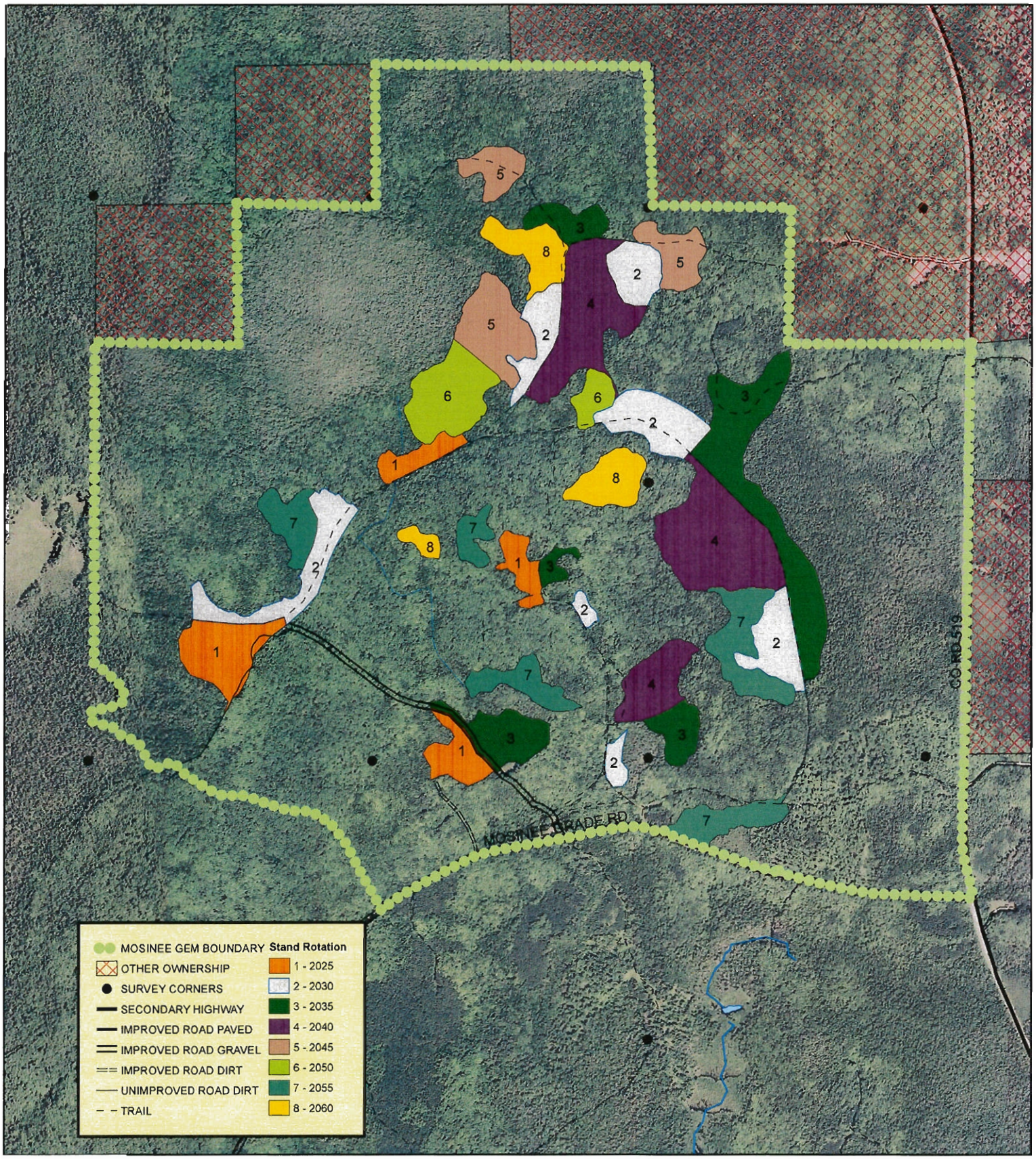


FORESTRY and PARKS
GOGEBIC COUNTY
COMMISSION

0 0.5 1 Miles

N
W E
S

Appendix 4. Treatment rotation for the Mosinee Grouse Enhanced Management System
(stand rotation: rotation number - year of entry)



FORESTRY and PARKS
GOGEBIC COUNTY
COMMISSION

0 0.5 1 Miles

N W E S

Appendix 5. Access points for the Mosinee Grouse Enhanced Management System.