

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
WILDLIFE DIVISION

**Management Plan for the
Melstrand Grouse Enhanced Management System
(GEM)**



Prepared by:
Donald Brown
Wildlife Technician
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Introduction

The Melstrand Grouse Enhanced Management System (GEM) is being developed to promote ruffed grouse habitat and hunting opportunities in the North Central Upper Peninsula (UP). The Melstrand GEM is one of a growing number of GEMS spread across the UP Region (Figure 6). GEMS are a collection of intensively managed lands spread across the Peninsula to provide walk-in hunting opportunities. These areas will act as destination sites for grouse hunters, while providing a unique opportunity for hunting and wildlife viewing, and ultimately supporting local economies.

The GEMS will benefit grouse and woodcock primarily but will bolster habitat for an array of other wildlife species including bear, deer, turkey and snowshoe hare. These areas will be utilized by local and non-resident grouse hunters. Also of great importance, GEMS can 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 the forest tourism industry, in accordance with the Department's Land Management Strategy. MDNR Wildlife staff will build a reciprocal relationship with community leaders and local businesses by advertising GEMS throughout the UP Region. Signs will be posted at each site.

Inventory

The Melstrand GEM is located in Alger County, in sections 21 & 28 of T47N R17 (Figure 1). The GEM is approximately 1,908 acres in size with a perimeter of 6.7 miles. Aspen types compose approximately 29% (553 acres) of the GEM (Figure 2). Additional acreage of early successional aspen will be available after mature stands of conifer and hardwood (which contain an aspen component) are harvested in the near future. Other cover types within the Melstrand GEM include northern hardwood, northern white cedar, upland conifer, lowland conifer and grasslands, all of which are important in meeting life requisites for a variety of game and non-game wildlife species.

There are two primary access points to this area, from which a network of forest roads/trails originate. Other trails will be added to the network as a result of logging activity in the area.

This network of closed logging roads throughout the GEM provides forest trails that are only available through walk in access. The two primary access points are roads originating off of County Road (CR) H-58 near William's Crossing, between the villages of Van Meer and Melstrand (Figure 4). Gates and/or berms will be placed at these locations to block vehicular traffic creating many walk-in hunting only areas in the GEM (Figure 4). Other access points are also located in the GEM, but do not provide the same access to the trail network.

MANGEMENT ACTIONS

Goal 1: Promote preferred habitat for ruffed grouse.

Aspen Management

Ruffed Grouse prefer young stands of aspen (<25 years old) with high stem densities for nesting habitat. Older trees that provide sites for roosting and budding are also an important component. Grouse feed on buds, catkins, leaves, and also on the flower buds of older aspen (>25 years old) (Hammill and Visser 1984). Thus, various age classes are important to grouse. Aspen stands also serve an important purpose for other wildlife. Woodcock prefer young aspen growth, especially when in association with moist soils where they can probe for earthworms and invertebrates with their long beak. Aspen also provides browse and cover for white-tailed deer and snowshoe hare. Edges that are created between young and old stands as well as with other cover types such as cedar, northern hardwood and grassy openings are also used by many species, including those mentioned above.

Aspen is a shade intolerant species, therefore stands are managed via clear-cutting, which allows adequate sunlight to promote growth. Cutting itself also tends to spur growth of these species through root sprouting or clones. White Birch, often a component of aspen stands and another important tree for ruffed grouse and other species, like aspen, does best in full sunlight.

Aspen stands will be managed in small blocks to encourage multiple age classes in close proximity to one another, promoting better grouse habitat. Stand age currently varies from 7 to 41 years, but the majority of stands (89 % of aspen) are 21 years or older. Of the 553 acres of aspen in the GEM, 379 acres (68%) range in age from 38-41 years old. This provides ample opportunity to create varying age classes throughout the GEM. Conifer inclusions within aspen stands are an important source of escape cover for grouse so such stands will be managed to support this component (Hammil and Moran, 1986). Efforts will also be made to maintain stand diversity by retaining cedar, hemlock, and other under-represented species in the stands. Any mast producing species will generally be maintained and promoted. We will also attempt to rotate decadent alder by chipping those stands on occasion and as equipment availability allows.

Future management will focus on diversifying age classes of aspen with the goal of having up to 8 age classes at one time, with stands of varying age classes in close proximity to one another. To accomplish this, older areas will be treated first, with the youngest stands being treated last in the rotation. The treatment rotation map (Figure 3) shows blocks for treatment and the planned treatment rotation for each stand. Stands will be treated over 5 year intervals. Planned rotation allows for approximately 70 acres of aspen to be cut every 5 years, ensuring age class diversity (Table 2). The habitat created by these treatments should encourage use of the area by ruffed grouse as well as other game and non-game species.

Soft and Hard Mast Production

Grouse usually have a wide array of foods available to them but we will attempt to bolster soft and hard mast production in the Melstrand GEM. Wild raisin, crabapple, highbush cranberry, dogwood species, Michigan holly, mountain ash, thornapple, black cherry, red oak, burr oak, beaked hazelnut and others may be good candidates for planting. Many of the above listed species will be planted along the trail system as well as along the edges of the many forest openings/grasslands found within the GEM.

Grassland Opening Maintenance and Road Seeding

The network of small and large grass openings (Figure 5) will be maintained as such and a portion of those grasslands, along with woods roads and skid trails, may be planted to a forage mix consisting primarily of clover or a Ruffed Grouse Society approved mixture composed of Alsike White, White Dutch, Haifa New Zealand White, Crimson, Jumbo II Ladino, and Duration Red clover species. There are 218 total acres of openings in this GEM where opening maintenance (clover planting, succession setback, hard and soft mast plantings) will be conducted (Table 1). Some portions of openings will be used as parking areas as well.

Goal 2: Enhance the recreational opportunities for hunting.

The primary purpose of the GEM is to enhance the hunting opportunities here, and create a destination for grouse and other hunters. Similar areas are being developed on state land throughout the UP. Although the GEMS primary emphasis is on ruffed grouse, the area is intended to be available for hunting all game species and management should encourage others such as white-tailed deer, woodcock, and snowshoe hare.

Support a unique hunting experience

The Melstrand GEM will be able to offer hunters both a unique walk-in experience and the opportunity to hunt an intensively managed area for ruffed grouse and other species.

Parking areas will be available at three locations in the GEM (Figure 4). One area is located just north off of CR H-58, which accesses the primary trail network. Hunters will be able to park here in a small improved parking area and then be able to walk in and hunt behind the gate. The second parking area will be located just south of CR H-58, where hunters will be able to park in a small opening and hunt the aspen stands to the north and south. A third parking area will be located off a well-worn two-track on the north end of the GEM where one can park and hunt the north end walking trails.

A kiosk will be placed at the main parking area, to better identify the GEM, recognize our local stakeholders, and clarify the access restraints for motorized vehicles. Signs will be placed at the other parking areas, helping to identify them. Ten (10) gates will be placed throughout the GEM to provide a quality, walk-in access only hunting opportunity

(Figure 4). Other gates may need to be placed in the GEM on resulting two-tracks as logging activities increase in the GEM.

Maintain and create a trail system for hunters and other users.

Existing forest roads that are a result of past logging activities currently provide a trail system throughout the GEM. These are unmarked roads, generally unimproved, and are basically linear forest openings. Some have young forest regeneration in them and others have been kept open due to ATV or vehicle usage. Other trails will also be created due to future logging activities in the GEM. These will then be maintained as walking trails to better access areas of the GEM that currently may be difficult to access.

Trail signs or kiosks will be posted in some locations, mainly near parking areas, to provide a map and/or location directions from different starting points. Trails will require maintenance, which will include periodic brushing, graveling, planting, or other improvements.

Some trails will be planted with herbaceous vegetation such as legumes or grasses. This will occur in conjunction with other management activities that require the use of the trail system, such as logging, or as independent projects. Partnerships with stakeholders, such as the Ruffed Grouse Society, will be sought for some of the projects. Planting locations will generally be located towards the interior of the GEM- at least a ¼ mile from parking areas.

Establish partnerships to assist in management

WLD staff will submit annual budget requests over the next decade to perform the above-noted habitat work. We are in contact with the Ruffed Grouse Society and are hopeful of a long term partnership with them in each of our proposed GEMS. Other financial opportunities will be explored when available, including ongoing partnerships with the UP Bear Houndsmen Association, UP Whitetails, Alger County Fish and Game Alliance, and the National Wild Turkey Federation.

Goal 3: Public Information and Outreach

This GEM is being created to provide a destination for hunters in the North Central UP. Public outreach will be needed to identify and promote the area, as well as direct visitors to the site.

Identify the area

Various methods can be used to identify the area and direct people to the GEM. The Melstrand GEM will be identified on the MI Hunt program, and it will be promoted as a part of the UP GEMS. Once on site, signs/kiosks identifying the area will be placed near parking areas off of CR H-58. Pamphlets identifying the GEM can be handed out to local businesses to distribute to the public.

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

Establishment of the Melstrand GEM will be communicated to local stakeholders for promotion in the Munising/Shingleton/Melstrand area. Local businesses will be able to use the GEM as a tool to promote tourism to the area. Once established on the MI Hunt program and other media, the Melstrand GEM can be advertised or promoted by local businesses to encourage tourism. This will also allow anyone with computer internet access to plan their hunt to the GEM from anywhere in the world. Although, difficult to quantify, the GEM will likely 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.

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

Table 1. Melstrand GEM Openings

Compartment	Stand Number	Acres	Treatment
180	7	1.1	Opening Maintenance
180	15	1.7	Opening Maintenance
180	19	2.1	Opening Maintenance
180	20	38.0	Opening Maintenance
180	27	3.3	Opening Maintenance
180	30	3.4	Opening Maintenance
180	31	2.3	Opening Maintenance
180	31	2.0	Opening Maintenance
180	32	5.0	Opening Maintenance
180	36	2.3	Opening Maintenance
180	41	2.1	Opening Maintenance
180	46	7.6	Opening Maintenance
180	54	1.3	Opening Maintenance
180	55	1.1	Opening Maintenance
180	57	1.4	Opening Maintenance
180	58	143.0	Opening Maintenance
Total Acreage		217.7	

Table 2. Melstrand Aspen Treatment by Year

Compartment	Stand Number	Acreage	Treatment Rotation
179	61	53.0	1,3,7
179	23	171.8	1,2,3,4,5,6,7
179	39	4.3	7
179	6	33.3	3,6
179	52	4.5	8
179	50	43.8	2,5,7
179	48	27.1	5,8
179	26	22.2	8
179	46	12.5	4
179	66	4.2	1
179	71	2.1	2
179	38	31.9	4,7
179	43	17.7	8
179	21	1.7	1
180	11	20.5	2
180	48	5.3	8
180	2	19.7	4
180	30	59.6	2,3,6,8
180	40	5.4	5
180	6	11.8	6
Total Acreage		553	
Treatment Rotation by Year (approx.)		1 = 2016 2 = 2021 3 = 2026 4 = 2031 5 = 2036 6 = 2041 7 = 2046 8 = 2051	

Figure 1. Location and Boundary of Melstrand Grouse Enhanced Management (GEM) Area.

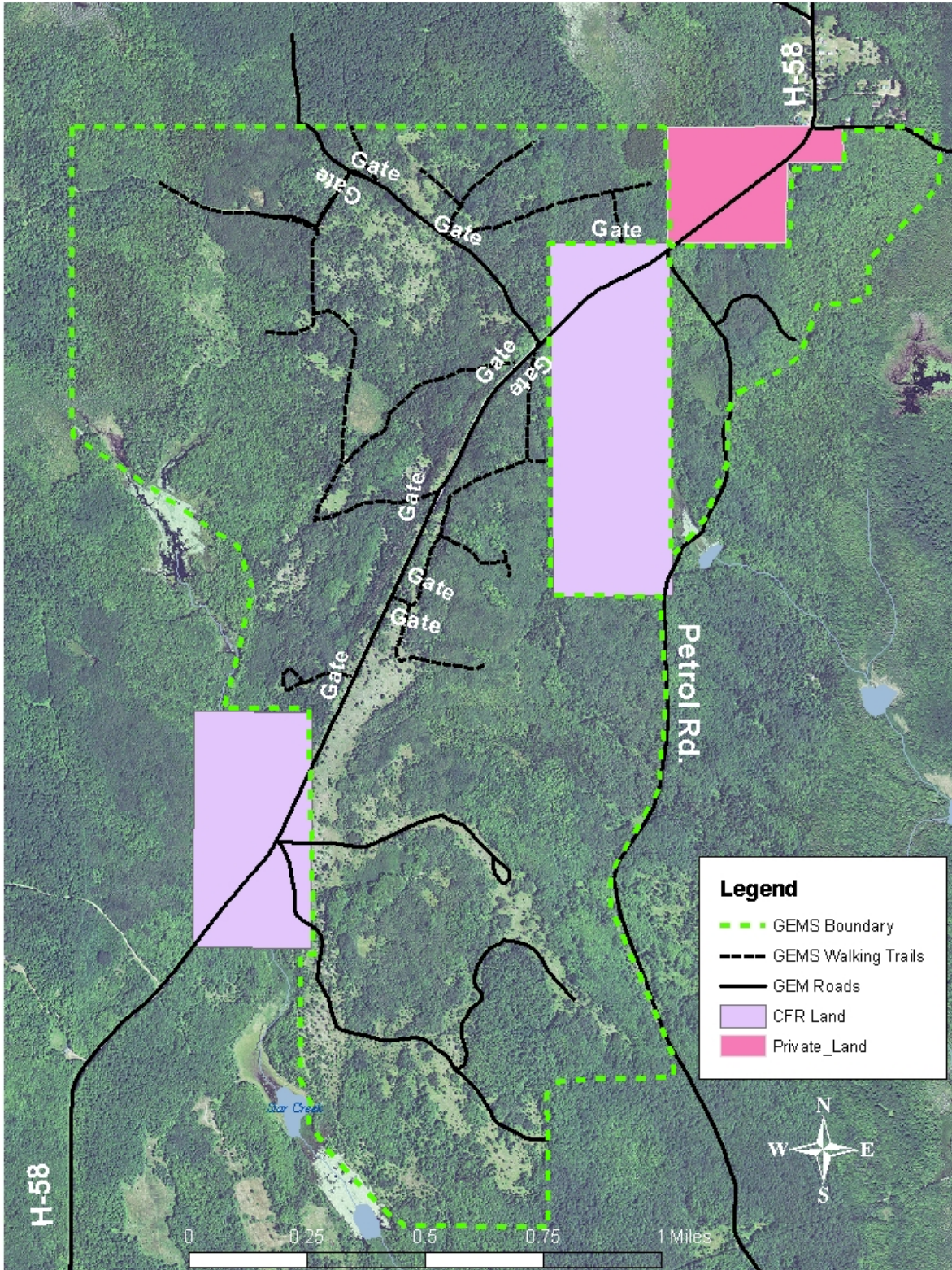


Figure 2. Melstrand Grouse Enhanced Management Area Aspen Stands

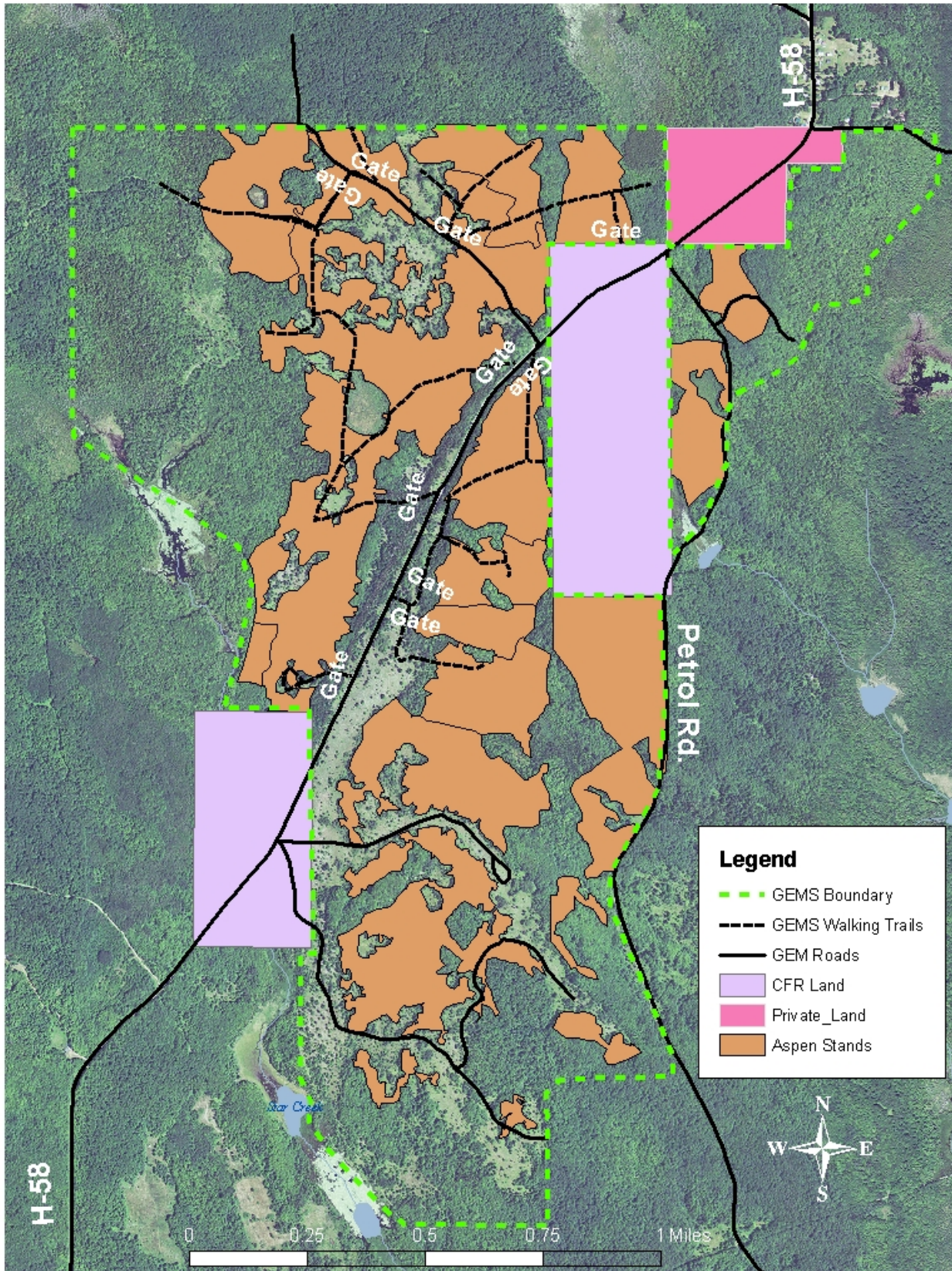


Figure 3. Treatment Rotation for the Melstrand GEM.

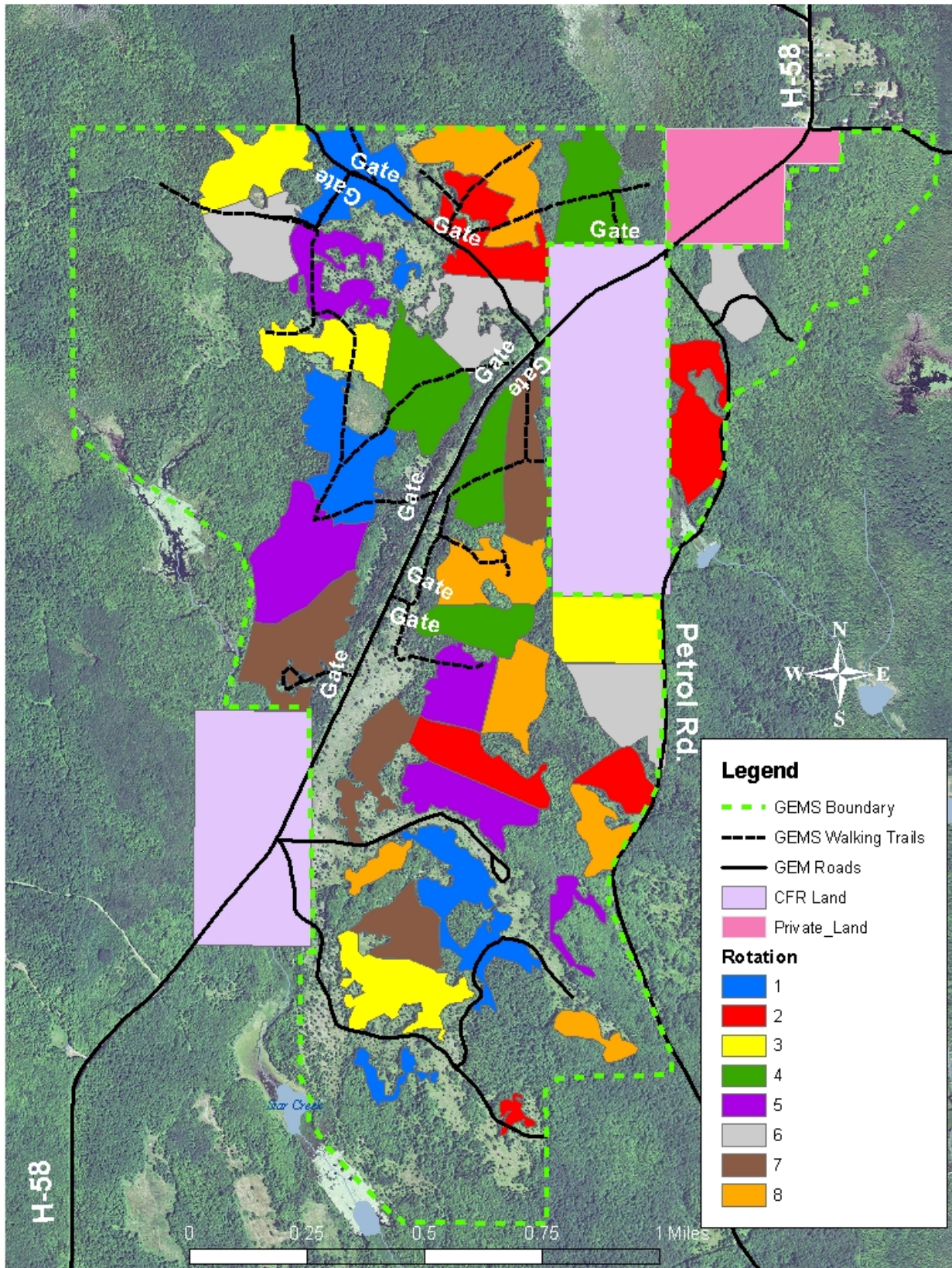


Figure 4. Access points for the Melstrand GEM.

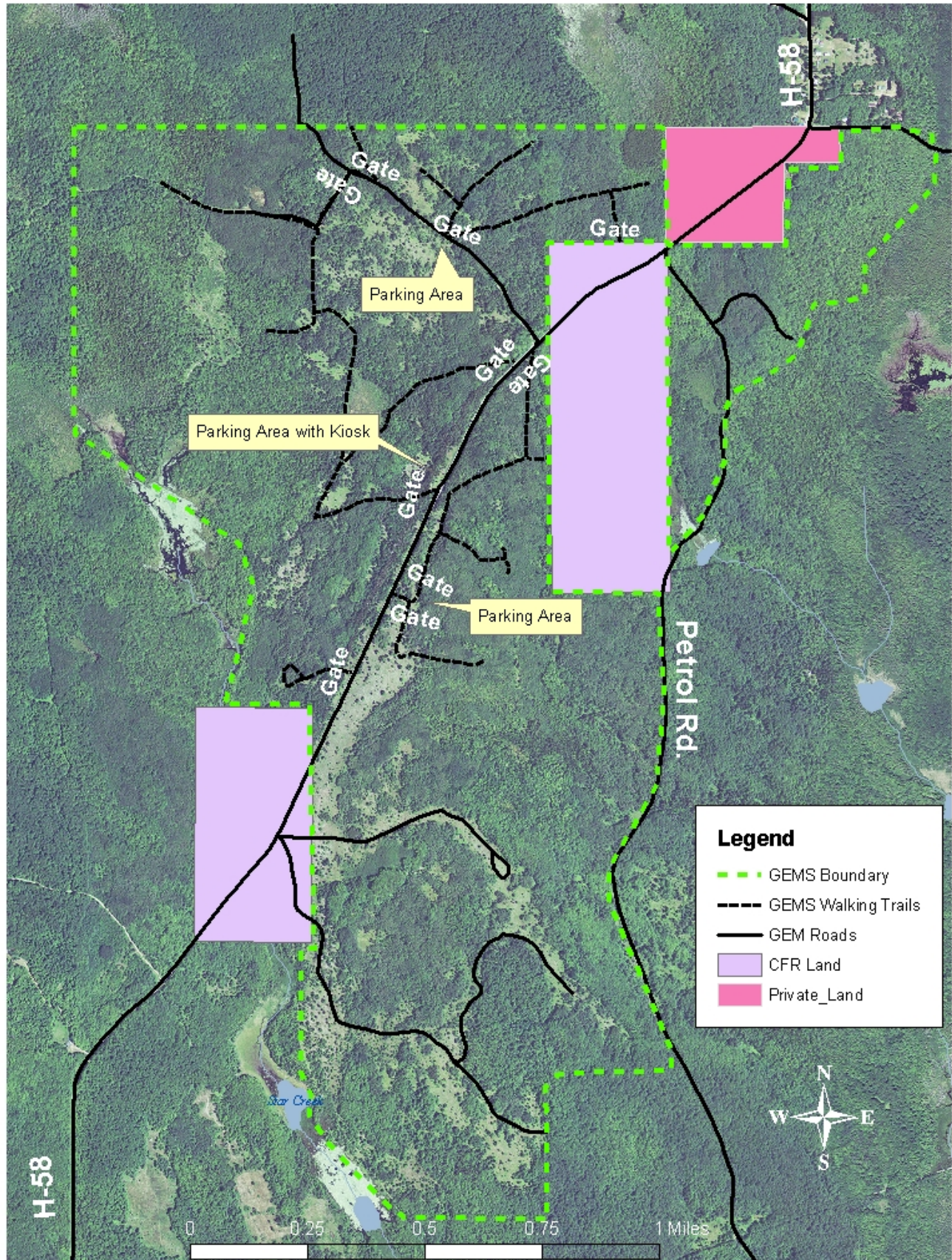


Figure 5. Melstrand GEM Openings

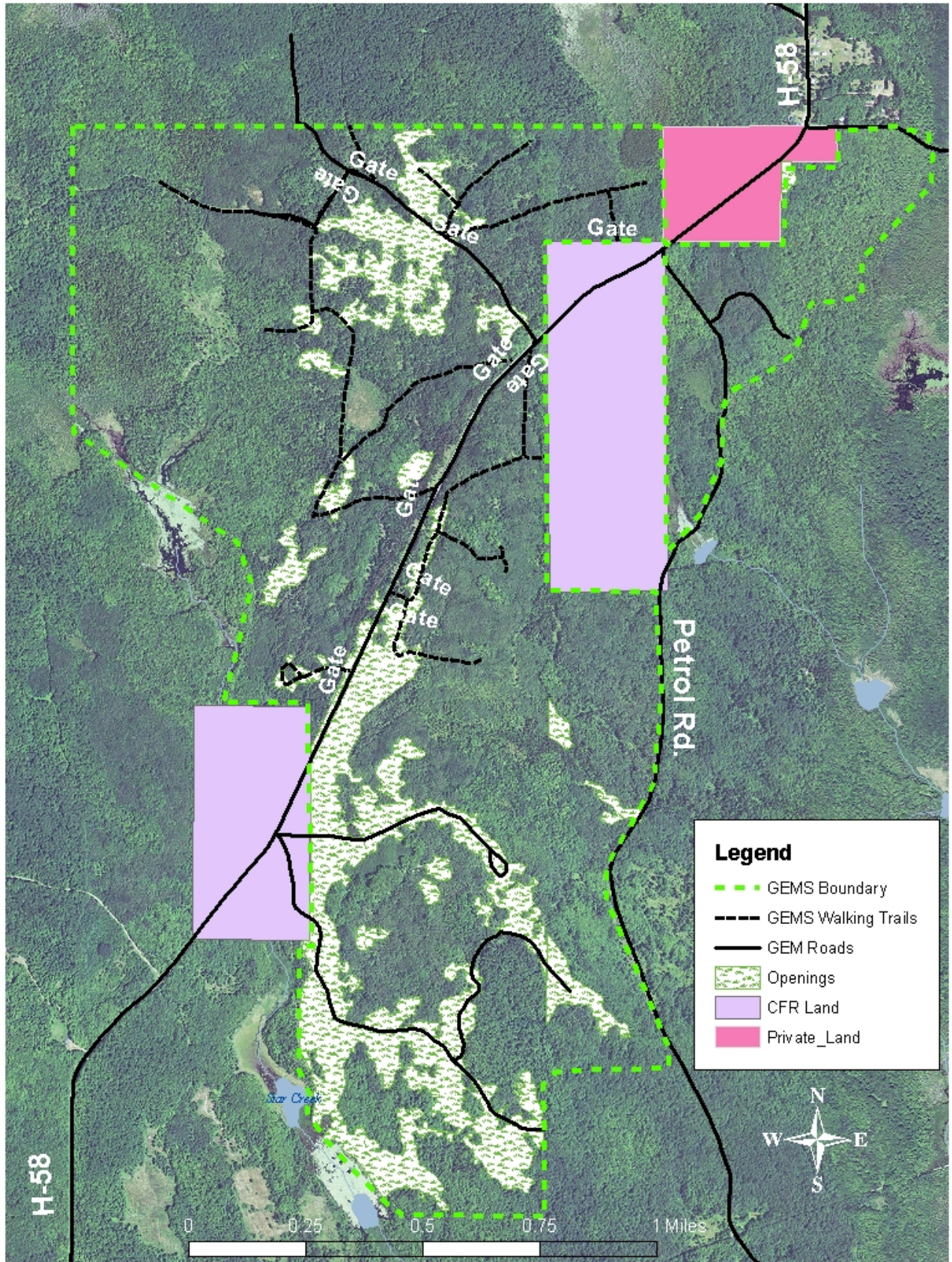


Figure 6. Upper Michigan GEMS Locations

