



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

**COMPARTMENT # 282 ENTRY YEAR: 2009**

**GIS Compartment Acreage: 1716 County: Crawford**

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**Revision Date:** April 6, 2007

**Stand Examiner:** Lucas Merrick

**Legal Description:** T27N, R01W, Sections 21, 22, 27, 28, 34 Lovells Township

**Management Goals:** To maintain forest health, productivity, sustainability, and structural diversity by actively managing flora and fauna, while providing for multiple use and visual management. This compartment is a dedicated *Dendroica kirtlandii* (Kirtland's warbler) management area. The area is to be managed in order to provide a healthy and sustainable habitat for the endangered Kirtland's warbler in accordance with Wildlife Division management plans.

**Soils and Topography:** Topography is primarily flat with rolling hills in the north. Soils types are Grayling associations with inclusions of Tawas-Leafriver-Lupton and Kinross-Croswell-Au Gres associations. Grayling associations are excessively drained, sandy soils. They are found on outwash plains, kames, and moraines. The other two associations are nearly level, poorly drained, mucky and sandy soils. They are found on outwash plains, stream terraces, and lake plains.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The majority of 27N 01W is State of Michigan ownership. Private ownership can be found along the river corridors. Oil and gas development is present and active south of North Down River Road.

**Unique, Natural Features:** There is potential for dry prairie plants in grassy openings: Hill's thistle, rough fescue, Alleghany plum, and pale agoseris. There is potential for several animals of concern in this compartment: Kirtland's warbler, prairie warbler, secretive locust, dusted skipper, grizzled skipper, and the red legged spittle bug.

**Archeological, Historical, and Cultural Features:** This compartment contains an old CCC camp. AuSable Camp 681. Old building foundations are still evident.

**Special Management Designations or Considerations:** Compartment 282 is a Kirtland's Warbler Management Area. These areas are designated High Conservation Value Areas (HCVA). All HCVA stands are coded as stand condition 8. The SW1/4 of Section 34 is involved with the Master Plan of the Conner's Marsh Flooding.

**Watershed and Fisheries Considerations:** The North Branch AuSable River parallels the east side of this compartment and is a few hundred feet from the NE corner of Section 21. Big Creek borders stand number 44. These rivers are designated "Natural Rivers". Stands located within 200 feet of these rivers are designated as HCVA.

**Wildlife Habitat Considerations:** Kirtland's warbler and prairie warbler could occur in the young jack pine. Along the Au Sable, there may be eagles, osprey, and great blue heron rookeries. There is potential for dusted skipper, grizzled skipper, and red-legged spittle bug to occur in grassy openings. Secretive locust may occur in bog habitat and surrounding uplands. Blanding's turtle, wood turtle, and massasauga rattle snake have potential to be found along the drainage ways.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift is the Coldwater Shale. The Coldwater does not have a current economic use. A gravel pit is located in Section 26 and potential is good. Most of the Compartment is leased for oil and gas and is part of the Conner's Marsh Field. The field has produced over 20 Bcf gas from the Ordovician Prairie du Chien.

**Vehicle Access:** This compartment is easily accessed by county roads and two-tracks.

**Survey Needs:** None at this time.

**Recreational Facilities and Opportunities:** A portion of the Midland to Mackinaw Hiking Trail system is present. There are no designated motorized recreational trails. Dispersed recreational use is evident throughout the compartment.

**Fire Protection:** There is potential for extreme fire events. This compartment has been involved in multiple fire events, including the Stephan Bridge Fire (1990) and the Bald Hill Fire (1975). The North Branch AuSable River provides a natural fire break to the east. This would also be sufficient water source for suppression needs. The area has adequate access for equipment which will be able to use the county roads and forest two-tracks

**Additional Compartment Information:** A large portion of Kirtland's warbler habitat is scheduled for treatment and planting north and south of North Down River Road in Entry Year 2019.

**LOTS Compartment Acreage:** 1720 acres.

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
  - ◆ **Cover Type by Age Class**
  - ◆ **Cover Type by Management Objective**
  - ◆ **Compartment Volume Summary**
  - ◆ **Proposed Treatments – No Limiting Factors**
  - ◆ **Proposed Treatments – With Limiting Factors**
  
- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - ◆ **Base feature information, stand numbers, cover types**
  - ◆ **Proposed treatments**
  - ◆ **Proposed road access system**
  - ◆ **Suggested potential old growth**



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Michigan Department of Natural Resources - Operations Inventory System  
Individual Compartment Report

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: 282

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total
A Aspen	52																										52
S Black Spruce		62																									62
G Grass					35																						35
J Jack Pine							1223																				1223
L Lowlnd Brush									9																		9
N Marsh											24																24
Q Mx Swmp Cnfr												4															4
O Oak														115													115
R Red Pine																175											175
T Tamarack																						7					7
U Upland Brush																								8			8
M Upland Hdwds																								1			1
Z Water																									1		1
<b>Total</b>	<b>52</b>	<b>62</b>			<b>35</b>		<b>1223</b>		<b>9</b>	<b>24</b>	<b>4</b>		<b>115</b>	<b>175</b>							<b>7</b>		<b>8</b>	<b>1</b>	<b>1</b>	<b>1716</b>	

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **282**

*Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS*

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	1717 Cds	Hardwood	454 Cds
Hardwood	314 Mbf	Hardwood	97 Mbf
Softwood	10327 Cds	Softwood	1904 Cds
Softwood	425 Mbf	Softwood	69 Mbf
Sum TotVol	13522 Cds	Sum CutVol	2690 Cds
<b>Total Cmpt Acres</b>		Acres Proposed For Cut.....	
1716		244	

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
1	R6	24	69	55	red pine	old growth (potential or actual)	thinning	2		
<p>comnts Fmd : 2006: This was part of the plantation that was not thinned. The stand has areas where rows are evident. Other parts of the stand the plantaion has failed and oak, maple and aspen have developed. There is some steep topography in the NW portion of the stand which may prove difficult for equipment. Thin the areas of red pine to 80 - 90BA (remove the majority of jack pine from these areas). Final harvest w/ reserves for the oak pockets. Leave 10 -20BA of representative timber (but favor oak) for retention and as a mast source in these pockets. Stand is coded as an 8 because it is found within a warbler management unit which is a HCVA. An oak stand adjacent to the north has been marked for a thinning in a different compartment. 1997:LET ASPEN DYE OUT AND OAK SEEDLINGS GET TALLER BEFORE WE THIN.</p>										
4	O6	14	79	46	oak	old growth (potential or actual)	final harvest	1		
<p>comnts Fmd : 2006: A few scattered pine in the understory, but very little regen to speak of. Lots of epicormic branching on the oak (majority of oak is of poor quality). There are pockets of mixed aspen found throughout the stand. Final harvest and try to obtain natural regen. Whole tree or leave tops of the jack pine to promote natural regen. The pockets of aspen should expand and the oak should be represented through stump sprouts. The management objective is oak but, any combination of oak, aspen, maple or jack pine, red pine, with white pine which meets the medium stocking requirement should be considered a success. Stand will be planted back to jack pine if natural regeneration fails. Leave small scattered islands which represent the stand make-up for in-stand retention requirements. Stand is coded as an 8 because it is found within a warbler management unit which is a HCVA.</p>										
8	A6	7	74	55	aspen (upland)	mature	final harvest	2		
<p>comnts Fmd : 2006: Stand conditions are variable ranging from wet and low (open water) - to high and dry. West edge of stand is on a hill with a NE aspect. Quaking aspen found in the lower areas, big tooth is found in the dry spots mixed w/ oak. A couple black ash in stand. Final harvest, avoid crossing the drainage. Stand should be entered when conditions are condusive to operations (dry summer or frozen winter harvest is preffered). Leave small scattered islands for in-stand retention. Harvest w/ stand 4. Management objective is aspen but any medium to fully stocked stand consisting of aspen, maple, oak, or mixed conifer is acceptable. If stand is unable to regenerate, it will be planted back to a pine mix.</p>										
13	R6	75	46	56	red pine	old growth (potential or actual)	thinning	1		
<p>comnts Fmd : 2006: This block will be liquidated in 2019 for warbler habitat. The stand varies in quality, some areas the red pine averages 5 sticks, others only 3. The best quality is in the NW part of the stand. Thin this stand to try and put on some growth to enhance value before warbler management operations. Should be able to third row thin most of stand. There are a couple tricky areas where the operators will need some guidance. Third row and remove excessively suppressed red and jack pine in the remaining two rows. Shoot for a BA of 90 - 100. Stand is coded as a stand condition 8 because is is part of a warbler management area. These areas are HCVA's. Warbler specs? 1997: N. BRANCH KW MGT UNIT. Y.O.E. 2019.</p> <p>Wld : Compt is a designated kirtland warbler mgt unit- mgt block 71 which is located in portions of section 21, 22, and 28 are scheduled for treatment or regeneration very near the end of this year of entry of 2009 or at the start of the next ten year cycle in 2019. So we may need to put this block up in 2017 to meet KW schedule. Make sure we plant shortly after harvest due to local controversy from nearby store re: clearcutting.</p>										
42	J6	40	62	45	jack pine	old growth (potential or actual)	final harvest	2	planting	
<p>comnts Fmd : Final harvest w/ reserves. Stand has scattered pine in the understory. A lot of dead jack pine. Over all condition of the stand is poor. Some aspen found in the north. This stand contains two maintained wildlife openings. Leave small scattered islands for retention as well as a buffer along the SW edge of stand along McMasters Bridge road. There is a steep ridge there, best to keep equipment off. Watch for "natural river" restrictions in the NE of stand (ie buffers). Work with wildlife to ensure openings are not negatively impacted. Stand is coded as a stand condition 8 because is is part of a warbler management area. These areas are HCVA's. Warbler specs will apply. When we harvest stand 42, do not replant an area to connect existing openings of stands 402 and 401 and manage this more open area as pine barrens. Just concentrate planting along edge of stand for visual mgt along private lands. Wildlif will continue to manage and maintain grassy openings and surrounding these area we will convert to pine barrens.</p>										
47	O9	18	69	50	oak	immature	seed tree	2		
<p>comnts Fmd : 2006: Stand is declining, both jack pine and oak are starting to die. Poor regen, there is some scattered mixed pine and a fir here and there- understory is mostly cherry brush. The aspen is in pockets primarily along the SW edge of the stand. Would like to leave 10 -20 BA of oak, also leave some other species represented in the stand in small pockets for in-stand retention. If conditions allow, make the stand boundary about a chain inside stand 50 to try and create a feathered edge contrast. I would like to try and get natural regeneration. The management objective is oak but any combination of aspen, maple, red pine, jack pine, white pine, and fir with an oak component which meets minimum stocking requirments should be considered a success. Pockets of open and/or brushy areas are expected and acceptable. If natural regeneration fails, the stand will be planted to jack pine around any present regen. 1997:SOUTH HALF MORE AND BETTER OAK.</p>										

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 282 Entry Year: 2009**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status	
51	O6	47	80	49	oak	mature	final harvest	3			
comnts Fmd : 2006: The 5 -spot cuts were unsuccessful at regenerating oak. The patches have developed into u-types w/ scattered stump sprouts and some advanced pine regen that had been left. I recommend a final harvest w/ reserves. Leave scatterd small islands for retention. Put east stand line about 1 chain into stand 50 to create a more natural transition zone. Winter harvest only, Warbler specs will apply. Management objective is oak but, any mixture of aspen, maple, or pine with some component of oak should be considered a success. If regeneration fails the stand will be planted to jack pine around any regeneration. Stand contains Midland to Mackinaw Hiking Trail-watch visual mgt via retention islands and patches. == 2001: Nine patches were cut in 2001 under contract #043-99-01, Conners Marsh Oak Patches for a total of 16 acres. ==1997: Use the 5 spot group selection											
52	J6	17	65	49	jack pine	old growth (potential or actual)	final harvest	2	planting		
comnts Fmd : Final harvest - no reserves. Species of stand are represented well by stand 151. This stand is small and I would like to maximize natural regen in order to create as diverse of a stand as possible. There is an aspen clone in the south east which should expand with harvest and some oak stump sprouts are expected. Watch warbler specs. Warch for green up issues for adj sale. This area is critical warbler habitat and is part of the Warbler Management Plan. These areas are coded as stand condition 8 and are designatd HCVA's. Except any natural regen -a poor to medium stocked pine barren type stand is expected.											
Wld :											
148	A6	2	35	55	aspen (upland)	immature	final harvest	2			
comnts Fmd : Use this stand to access stand 47. Cut into stand 50 S6 std about a chain to creat a more natural transition zone. INCLUSIONS OF MATURE OAK AND ASPEN.											
400	G0	9			grass	nonstocked		0	opening maintenance		
comnts Fmd : Maintained wildlife opening. PLANTED TO RYE NOW.											
401	G0	1			grass	nonstocked		0	opening maintenance		
comnts Fmd : Maintained wildlife opening. PLANTED TO RYE NOW. Trees were originally removed for a "big tree" river restoration project (2002-2003). Copy of FTP found in reference compartment folder.											
402	G0	3			grass	nonstocked		0	opening maintenance		
comnts Fmd : Maintained wildlife opening. PLANTED TO RYE NOW. Trees were originally removed for a "big tree" river restoration project (2002-2003). Copy of FTP found in reference compartment folder.											
<b>Total Acres.....</b>		<b>257</b>									

**Proposed Treatments  
With Limiting Factors**

**Compartment: 282**

**Entry Year: 2009**

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<b>Stand</b>	<b>Cover Type</b>	<b>Acres</b>	<b>Age</b>	<b>Site Index</b>	<b>Mgt Obj</b>	<b>Condition</b>	<b>Method Cut</b>	<b>Harvest Priority</b>	<b>Cultural Need</b>	<b>FD Status</b>
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TREATMENT LIMITING FACTORS:

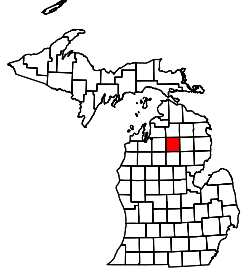
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**Total Acres..... 0**



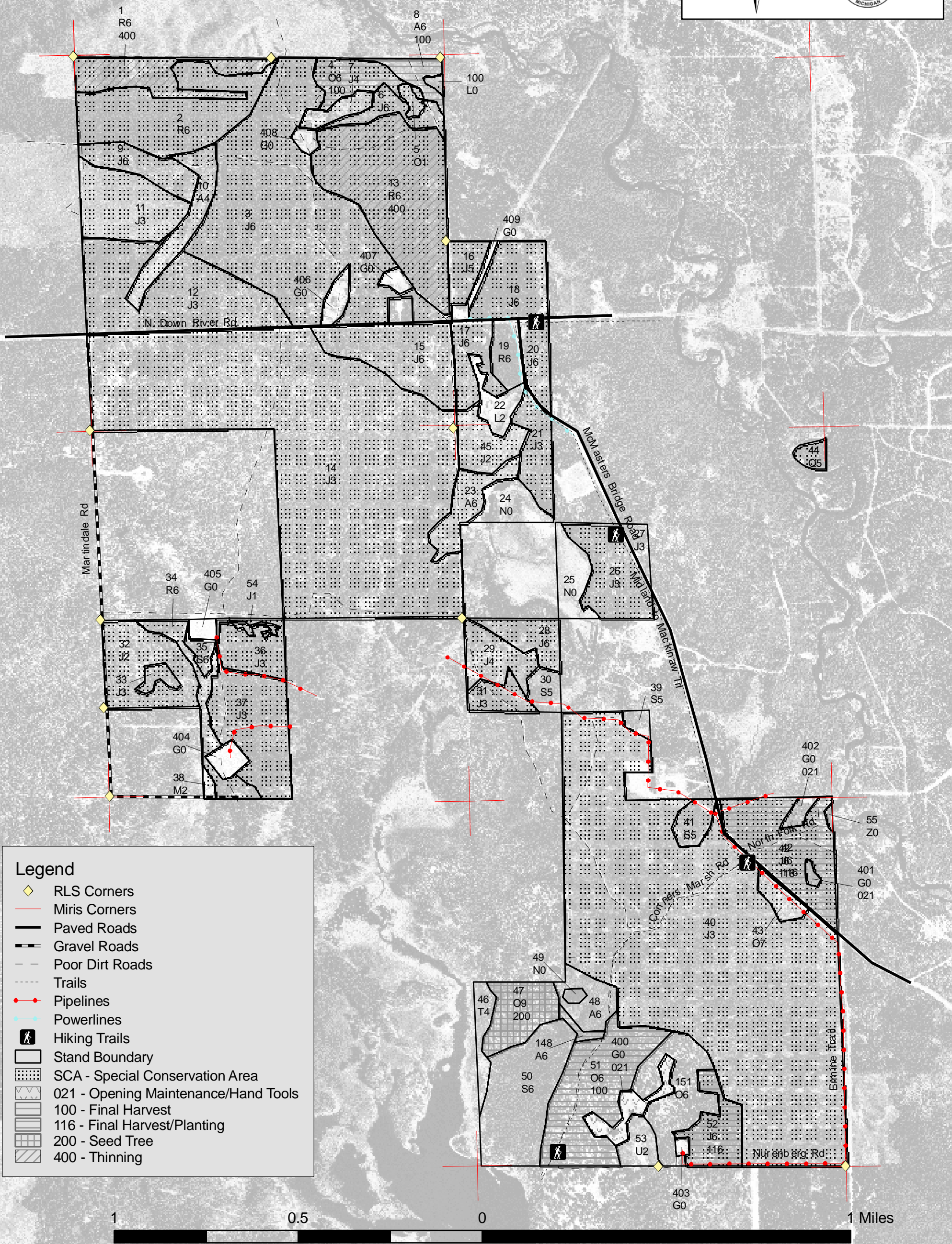
Compartment 282  
 T27N, R01W, Sec. 21, 22, 27, 28, 34  
 County: Crawford  
 Unit: Grayling  
 YOE: 2009  
 Acres: 1716 GIS Calculated  
 Stand Examiner: Lucas Merrick  
 Map Revised: 8/29/2007  
 Map Phase: Pre-review

# Field Map

21	22
28	27
	34



N

**Legend**

- ◆ RLS Corners
- Miris Corners
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trails
- Pipelines
- Powerlines
- 🚶 Hiking Trails
- ▭ Stand Boundary
- ▨ SCA - Special Conservation Area
- ▨ 021 - Opening Maintenance/Hand Tools
- ▨ 100 - Final Harvest
- ▨ 116 - Final Harvest/Planting
- ▨ 200 - Seed Tree
- ▨ 400 - Thinning

