



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 214 ENTRY YEAR: 2010

GIS Compartment Acreage: 1305 County: Crawford

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**Revision Date:** 3/25/08

**Stand Examiner:** Patrick Cotant

**Legal Description:** T28N R3W Sections 8, 9 and 17

**Management Goals:** To maintain species diversity while also addressing sustainability, forest health, productivity, wildlife habitat requirements, aesthetics, best management practices and recreational opportunities throughout the compartment.

**Soils and Topography:** Topography within this compartment is gently rolling in most places with some more significant topographical features found in varied locations, most notably in the eastern portions of section 17. Soils are somewhat variable however the majority of this compartment is dominated by Kalkaska sand. Two small bogs lie within the compartment and these are described by Dawson Loxley peats as the predominant soil type. Kalkaska sands are commonly associated with flats and low knolls on outwash plains and moraines and are characterized as being somewhat excessively drained with very rapid permeability. Hazard of water erosion is slight while hazard of soil blowing is severe where vegetative cover is light or nonexistent. Major management concerns on this soil type include equipment limitation and seedling mortality. Dawson-Loxley peats are commonly associated with low flats and closed depressions on outwash plains and are characterized as being very poorly drained with moderately slow permeability. Major management concerns for this soil type include equipment limitation, seedling mortality, windthrow hazard and plant competition.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The majority of the three sections included in this compartment are comprised of state owned land. Private land exists along Babbitt, Sherman and Roberts roads with the majority lying in the southern half of section 9. Oil and gas development has occurred somewhat extensively within this compartment with wells and pipelines located throughout sections 8 and 9. Section 17 has not had any oil and gas development as of yet.

**Unique, Natural Features:** This compartment does not have any water bodies and for the most part is forested with moderate quality northern hardwood stands along with extensive aspen blocks. There is also a fair amount of red pine plantations scattered throughout the compartment. Two unique stands do exist within the compartment and lie in the southeastern portion of section 17. They are bog/pothole stands that are currently treed with tamarack, white pine and other swamp conifer species.

**Watershed and Fisheries Considerations:** Aside from the two small bogs mentioned above, no watershed or fisheries concerns exist within the compartment.

**Wildlife Habitat Considerations:** A multitude of wildlife species abound in this area due to the diverse forest types present along with plentiful sources of food.

**Mineral Resource and Development Concerns and/or Restrictions:** Oil and gas development is quite extensive within this compartment. For the most part it is concentrated to sections 8 and 9. A pipeline paralleling a 2-track meanders through these two sections and connects the well-sites to one another. Surface sediments consist of ice-contact outwash sand and gravel. The glacial drift thickness varies between 600 and 800 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 6 and potential is excellent on the upland areas. Sections 8 & 9 are leased and have been developed for the Antrim Shale and Guelph (Niagaran) reefs.

**Vehicle Access:** Access to this compartment is good. Forest roads and two tracks extend from county roads and meander throughout the entire compartment.

**Survey Needs:** No survey needs are required at this time.

**Recreational Facilities and Opportunities:** This area provides abundant hunting and wildlife viewing opportunities. Extensive aspen stands along with areas of diverse cover and food sources make this compartment extremely valuable for grouse as well as whitetail deer and turkey habitat.

**Fire Protection:** Northern hardwood stands are the dominant forest type within this compartment, therefore fire danger is minimal. Protection for this area is provided throughout the year by FMFM.

- **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: 214

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	All Aged	Total
Aspen		323	137	45			30	40											575
Grass	55																		55
Jack Pine		7				4													11
Red Pine				59		163													222
Tamarack							2												2
Treed Bog	8																		8
Upland Brush						18													18
Upland Hdwds				4			38	169	35	17								151	414
Total	63	330	137	108	4	181	70	209	35	17								151	1305

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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: 214

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	575																										575
G Grass					55																						55
J Jack Pine							11																				11
R Red Pine															222												222
T Tamarack																					2						2
D Treed Bog																						8					8
U Upland Brush																								18			18
M Upland Hdws																								414			414
<b>Total</b>	<b>575</b>				<b>55</b>		<b>11</b>								<b>222</b>						<b>2</b>	<b>8</b>	<b>18</b>	<b>414</b>			<b>1305</b>

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **214**

**Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS**

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	5841 Cds	Hardwood	411 Cds
Hardwood	1018 Mbf	Hardwood	27 Mbf
Softwood	8754 Cds	Softwood	2510 Cds
Softwood	431 Mbf	Softwood	98 Mbf
Sum TotVol	17493 Cds	Sum CutVol	3171 Cds
<b>Total Cmpt Acres</b>		Acres Proposed For Cut.....	197
1305			

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
5	M6	15	95	55	northern hardwood	immature	improvement	3		
comnts Fmd : previously prescribed in last OI YOE. Looked at stand but did not update OI database, was uncertain of status of past prescription. (old comment) HEAVY BEECH REGENERATION. WOLF BEECH TREES. ONLY MERCHANTABLE FOR FIREWOOD SALE. COULD MARK IF STAND 32 IS THINNED, OTHERWISE NOT MUCH VOLUME FOR A SALE.										
35	R6	39	48	46	red pine	immature	thinning	1		
comnts Fmd : Nice red pine in valley. Growing fairly well, not as high of a site index as stand 50. A few WP scattered along with variable hardwood understory in places, mainly concentrated along edges. Opening/road runs down the center of the stand. Overall the stand is responding well to thinning. Becoming crowded in spots. Red pine are slightly larger/denser in the northern reaches of the stand. Recommend thinning 1/3 of volume by focusing removal on poor quality, suppressed or otherwise poorly formed individuals with the goal of increasing overall stand quality. Use 2-track in center of stand linked to 2-track that heads west to Roberts road as access to stand. Mark stand boundary 1-2 chains back from tree'd bog at the southern edge of the stand. (old comment) Third row thin. Far west rows on a slope. Thinned in 2001 contract # 72-034-00 Rainy Day Red Pine.										
39	R6	5	48	72	red pine	immature	thinning	1		
comnts Fmd : Red pine growing well with some defect/poorly formed individuals throughout. Thin 1/3 by removing poorly formed, suppressed trees with the goal of improving overall stand quality. Has been thinned once and is now becoming slightly crowded. Thinning should really give residual trees excellent growing conditions following treatment. Minimal hardwood understory to deal with when marking. Will most likely advance following thinning. (old comment) Thinned in 1992, still growing strong.										
50	R6	102	50	71	red pine	immature	thinning	1		
comnts Fmd : Overall stand is very good quality. Some defect in the form of forked stems, deformed boles, however majority is very nice. The stand is becoming quite crowded with tall height and larger crowns becoming common. Understory is M2/3 in places is very thick, mainly concentrated around perimeter of stand. Interior is more open and more of an x-type understory, typical of red pine planations in the area. Lots of squirrel activity throughout stand. Recommend thinning 1/3 by removing poorly formed, suppressed individuals with the goal of increasing overall stand quality, size and tree spacing. (old comment) Thinned in 1992, still growing good, 12 rings to last inch, hold till next time, the fortys are GX										
51	A5	16	62	52	aspen (upland)	two aged	final harvest	1		
comnts Fmd : Fair quality aspen, some defect, cankering. Hardwood understory with aspen present in more open areas. White pine scattered. Red maple is common with occasional poor quality sugar maple present throughout. Recommend final harvest with reserves. Leave white pine within stand, this will constitute less than 20 BA overall. WP should be left to increase diversity in area while also maintaining cover source being utilized by game birds, deer, etc. Protect hardwood/aspen regen wherever possible. Stand has somewhat low stocking but seems to have stagnated recently. Thus it is recommended to regenerate stand while quality is still acceptable and mortality is limited. Stand has small draw/valley through center running in north/south direction. Seems to be somewhat of a wildlife corridor. (no old comment)										
53	M6	4	78	64	northern hardwood	immature	thinning	1		
comnts Fmd : Harwood stand just south of stand 52. Small stand. Scattered yellow birch and black cherry throughout stand. Descent hardwood stand with thick hardwood understory dominated by beech. Beech and maple are dominant in overstory as well. Scattered aspen in southern portions of stand. Recommend thinning stand with stand 50. Mark to 80 BA removing poorly formed individuals and large wolfy beech trees. Favor sugar maple where possible while maintaining each species to enhance diversity and aesthetics of stand.										
57	R6	2	48	66	red pine	immature	thinning	1		
comnts Fmd : Descent RP stand with light hardwood understory. Growing fairly well, tall with some defect. Hemlocks at edges add to diversity and make a nice transition zone between this stand and the adjacent hardwood type. Has been row thinned. Recommend thinning by removing 1/3 of the volume. Thin by removing poorly formed, defected and forked individuals. Favor the finest quality individuals while focusing on improving spacing and releasing residual to enhance growth. Do not cut any hemlock which may fall within stand boundary. Protect hardwood regeneration near perimeter of stand. (old comment) Marked for a third row thin in 1991 and was not cut.										
103	A6	14	65	65	aspen (upland)	immature	final harvest	1		
comnts Fmd : Previously this stand was part of stand 3 and was separated for reasons of species composition and size/density. This portion of stand seems to have a much higher aspen component along with a lower average DBH. There is also a major paper birch component. Red maple continues to be the most dominant hardwood species however it is now outnumbered by aspen. There is also a significant amount of beech within the stand and it remains the dominant understory species as is common within many hardwood stand within this area. Prescription for this stand is to do a species removal of aspen and some paper birch. The coding has been entered as a final harvest and the silvicultural sytem should be intepreted as a final harvest with reserves. Mark to leave healthy, vigorous paper birch in smaller size classes. Leave hardwood component in tact and attempt to get a somewhat open hardwood stand with aspen understory to develop. In many circumstances this stand would be final harvested, however with it's proximity to I-75, I feel that it would be in the best interest of the department to leave facets of this stand in tact and to maintain a visual corridor through this high profile area. The pine component should also remain within the stand to add to diversity and improve aesthetics in the area. The red/white pine in the stand constitute approximately 10 BA throughout with areas much lower than that as is evidenced by the collected OI data. Regeneration of aspen, red maple, paper birch and a minimal pine component should be considered successful. (old comment) Some WP patches in the south end. Half aspen half maple NE corner. Thin out aspen next time.										

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 214    Entry Year: 2000**

<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>FDF Status</b>
Total Acres.....		197								

**Proposed Treatments  
With Limiting Factors**

**Compartment: 214**

**Entry Year: 2010**

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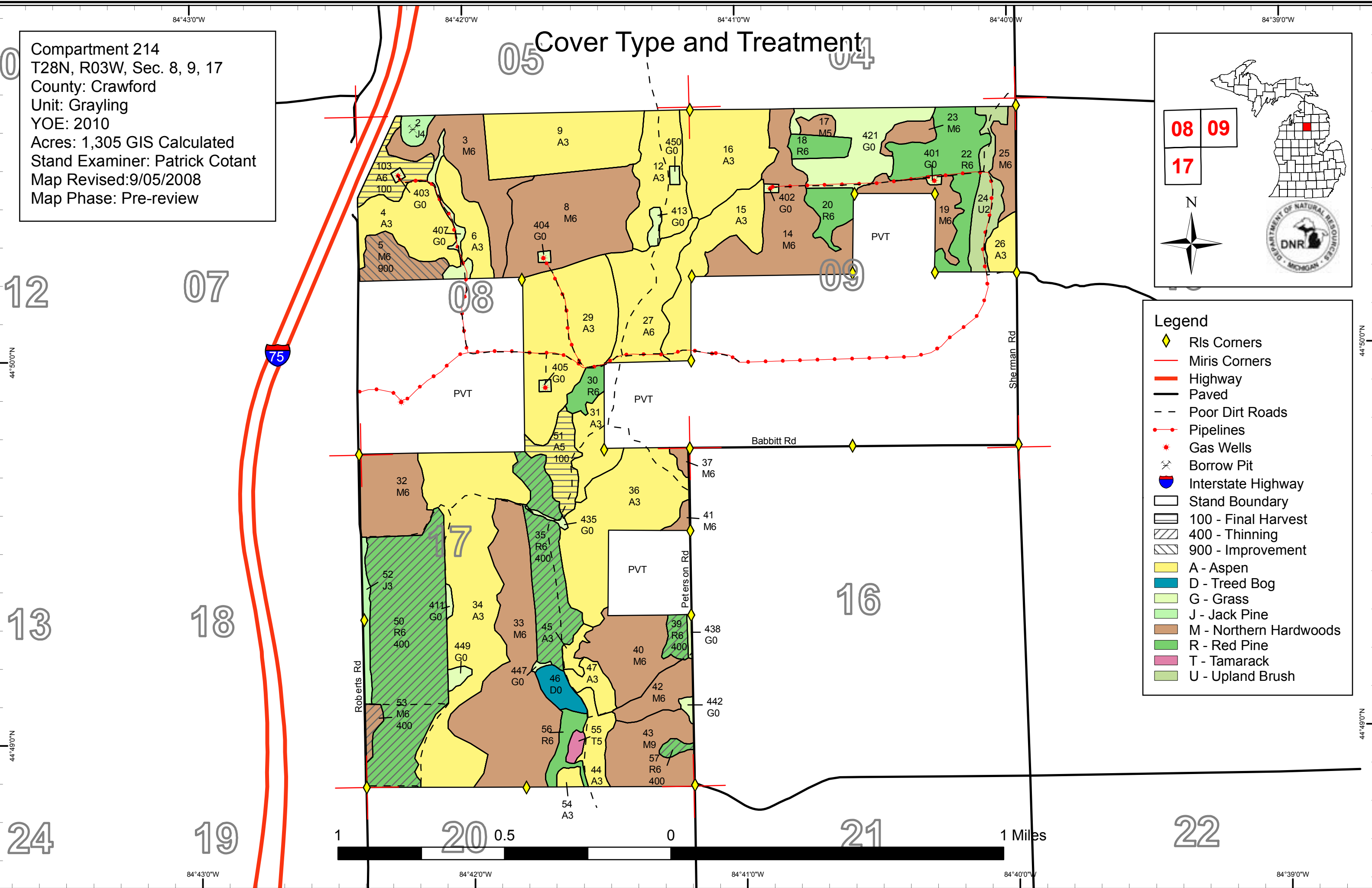
**Total Acres..... 0**

# Cover Type and Treatment

0  
 Compartment 214  
 T28N, R03W, Sec. 8, 9, 17  
 County: Crawford  
 Unit: Grayling  
 YOE: 2010  
 Acres: 1,305 GIS Calculated  
 Stand Examiner: Patrick Cotant  
 Map Revised: 9/05/2008  
 Map Phase: Pre-review

### Legend

- RIs Corners
- Miris Corners
- Highway
- Paved
- Poor Dirt Roads
- Pipelines
- Gas Wells
- Borrow Pit
- Interstate Highway
- Stand Boundary
- 100 - Final Harvest
- 400 - Thinning
- 900 - Improvement
- A - Aspen
- D - Treed Bog
- G - Grass
- J - Jack Pine
- M - Northern Hardwoods
- R - Red Pine
- T - Tamarack
- U - Upland Brush



12

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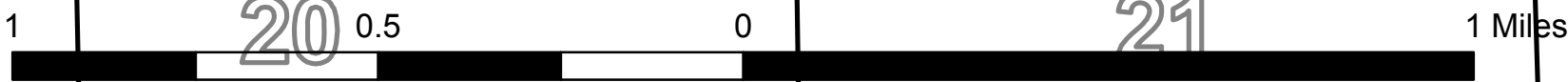
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




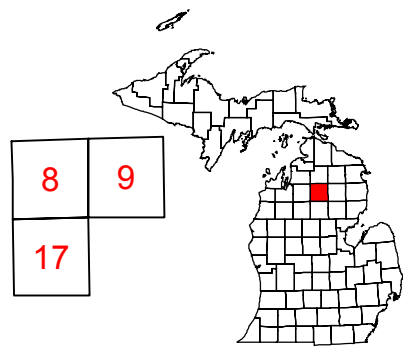


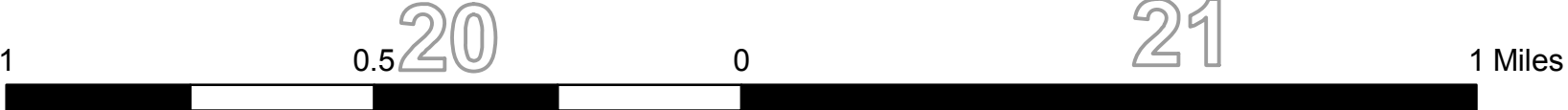
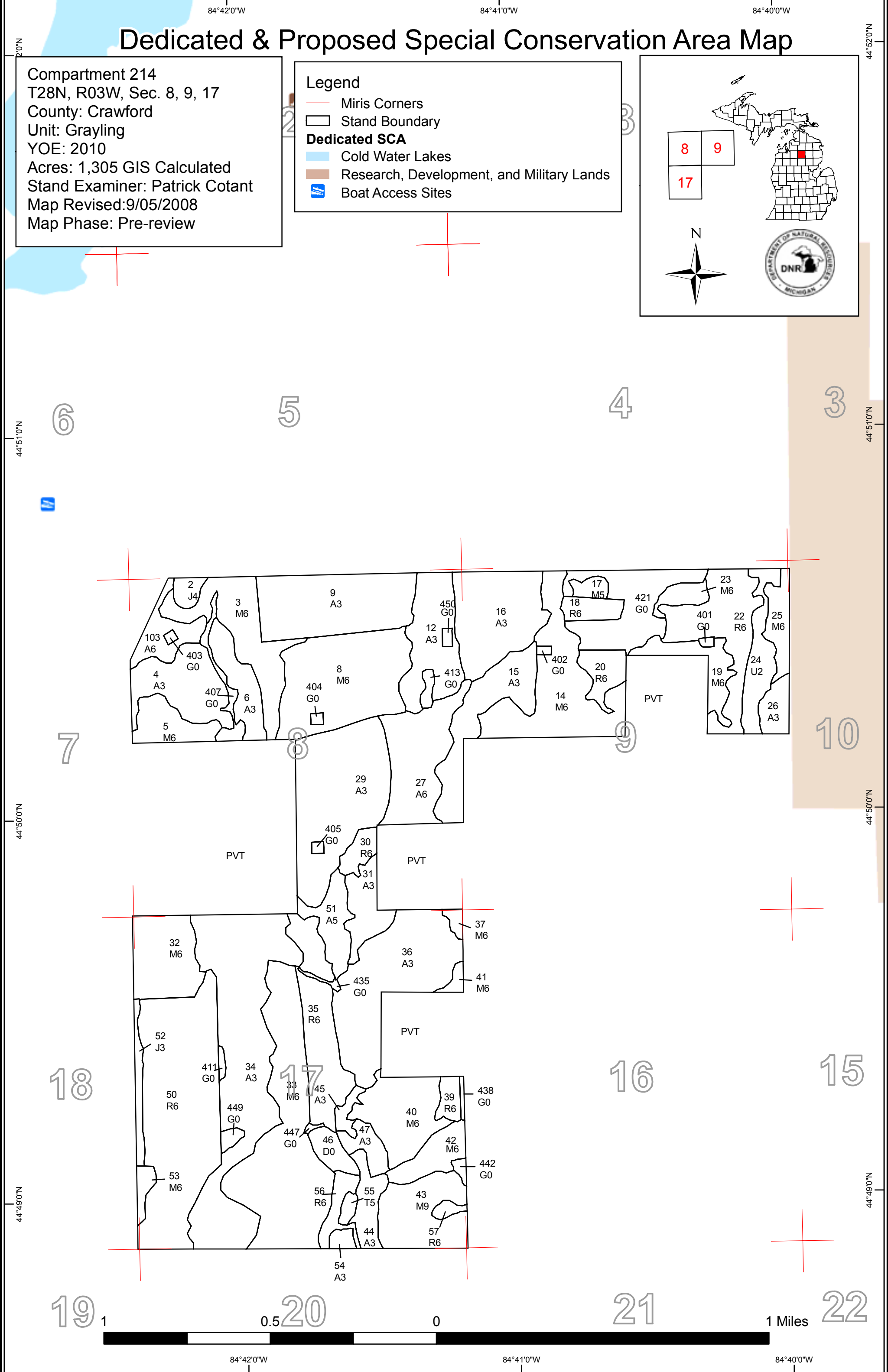


# Dedicated & Proposed Special Conservation Area Map

Compartment 214  
 T28N, R03W, Sec. 8, 9, 17  
 County: Crawford  
 Unit: Grayling  
 YOE: 2010  
 Acres: 1,305 GIS Calculated  
 Stand Examiner: Patrick Cotant  
 Map Revised: 9/05/2008  
 Map Phase: Pre-review

**Legend**

-  Miris Corners
-  Stand Boundary
- Dedicated SCA**
-  Cold Water Lakes
-  Research, Development, and Military Lands
-  Boat Access Sites

84°42'0"W                      84°41'0"W                      84°40'0"W

44°51'0"N

44°50'0"N

44°49'0"N

44°51'0"N

44°50'0"N

44°49'0"N



## DEDICATED CONSERVATION AREA DETAILS

\* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.