



**GRAYLING FOREST MANAGEMENT UNIT  
COMPARTMENT REVIEW RESENTATION**

**COMPARTMENT # 176 ENTRY YEAR: 2010**

**GIS Compartment Acreage: 1227 County: Crawford**

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**Revision Date:** September 12, 2008

**Stand Examiner:** Craig Farrer

**Legal Description:** T27N, R4W, Sections 4 & 9 Crawford County

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

**Soils and Topography:** Soils within the compartment include Rubicon-Roselawn, Graycalm and Blue Lake Loamy Sand types. Terrain consists of slightly to gently rolling hills in the north and in the south and divided by a narrow valley.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** A solid block of state ownership, with one private forty in the northeast of the compartment. Surrounding land is predominately state ownership with the exception of 120 acres in the northeast and a forty in the southeast that are under private ownership. These private lands are used as residential sites.

**Unique, Natural Features:** None

**Archeological, Historical, and Cultural Features:** None

**Special Management Designations or Considerations:** Visual management along County Road 612 is a consideration when harvesting any of the stands along this road. Also, any treatment along any of the many trails within the compartment should be taken in to consideration.

**Watershed and Fisheries Considerations:** None within the compartment.

**Wildlife Habitat Considerations:** To maintain and manage the existing forest cover types for Ruffed Grouse, Woodcock, White-tailed Deer, Wild Turkey, Black Bear and Squirrel.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact outwash sand and gravel. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift are the Coldwater Shale and the Marshall Sandstone. The Marshall was previously used as a building stone. Gravel pits are not located in the area, but potential is excellent on the upland areas. The compartment is partially leased for oil and gas development.

**Vehicle Access:** Compartment is accessible from County Road 612, which runs through the compartment in the north and Batterson Road (a Seasonal County Road) that runs through the center of the compartment almost east and west. Compartment is also accessible from the Blue Bear Snowmobile Trail and ORV Route from the north and south.

**Survey Needs:** None.

**Recreational Facilities and Opportunities:** Recreation opportunities include hunting, horseback riding, hiking, ORV and snowmobiling. A portion of the Frederic ORV Loop winds through several stands within the compartment. The Shore-to-Shore Horse and Hiking trail traverses through a portion of the compartment and the Blue Bear Snowmobile Trail/ORV Route also runs through the compartment.

**Fire Protection:** Compartment falls under the protection of the Frederic Township Volunteer Fire Department and the Michigan Department of Natural Resources. The nearest water sources include the Manistee and the North Branch of the Au Sable River. Compartment is mostly hardwoods with some Red Pine plantations located in the valleys that Batterson Road runs through.

**Additional Compartment Information:**

- **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: 176

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		242	190		32		6												470
Grass	15																		15
Jack Pine					5			21		6									32
Oak			35				65	40	122	80									342
Red Pine				14	33	146	7												200
Upland Brush	4	14																	18
Upland Hdwds					8				49									65	122
White Pine			12			16													28
Total	19	256	237	14	78	162	78	61	171	86								65	1227

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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: 176

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	470																										470
G Grass					15																						15
J Jack Pine							11							21													32
O Oak														342													342
R Red Pine															200												200
U Upland Brush					4																		14				18
M Upland Hdwds																								122			122
W White Pine																									28	28	
<b>Total</b>	470				19		11							363	200								14	122		28	1227

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **176**

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

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	10470 Cds	Hardwood	3934 Cds
Hardwood	2093 Mbf	Hardwood	552 Mbf
Softwood	5214 Cds	Softwood	1520 Cds
Softwood	923 Mbf	Softwood	265 Mbf
Sum TotVol	21716 Cds	Sum CutVol	7088 Cds
<b>Total Cmpt Acres</b>		Acres Proposed For Cut.....	
1227		417	

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 176 Entry Year: 2000**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
<b>2</b>	<b>J6</b>	6	88	42	jack pine	mature	final harvest	1		
comnts Fmd : Mixed stand of softwood and hardwood along County Road 612. Stand includes Jack, Red and White Pine and Aspen, Red Maple and some Oak. Recommend final harvest, but leave some Oak and Red Pine for visual. Aspen should regenerate naturally, but will except any regeneration. No retention										
<b>3</b>	<b>A9</b>	6	61	76	aspen (upland)	mature	final harvest	1		
comnts Fmd : Small mature stand of Aspen and Oak mixed that is found on ridge. Visible from County Rd 612. Recommend final harvest, but leave 10 BA of scattered Oak throughout the stand for mast and visual management. Stand acreage small. Aspen should regenerate naturally, but will except all species (some Oak should stump sprout) No retention. Mark the 10BA of Oak in green.										
<b>4</b>	<b>O9</b>	7	72	74	oak	mature	shelterwood-seed	1		
comnts Fmd : Mature Oak stand somewhat visible from County Rd 612. Found on ridge top and side slopes. Recommend shelterwood seed (40% crown closure). Treat with stand 3 and 5.										
<b>5</b>	<b>A9</b>	9	43	73	aspen (upland)	mature	final harvest	1		
comnts Fmd : Mature Aspen stand. South end of the stand borders County Rd 612. Recommend final harvest, but leave Red Pine (White Pine) in the stand. Recommend no other retention species other than Red Pine (White Pine) for the stand. Red Pine (White Pine) is for visual management and the stand will quickly regenerate to Aspen and Red Maple mixed. Stand is somewhat small and Aspen is somewhat on the poor quality side.										
<b>11</b>	<b>M6</b>	25		72	northern hardwood	immature	thinning	1		stand with fdf potential
comnts Fmd : Notes: 2007: Even aged northern hardwood stand on side slope (east facing). Recommend a thinning as well as createing some scattered regeneration gaps throughout the stand. Leave a residual of 90 BA Work at converting the stand to an unevenaged stand. Treat with stand 35 to the north and stand 12 to the east. 1988: STAND HAS HAD RECENT TSI WORK										
<b>12</b>	<b>A6</b>	9	45	75	aspen (upland)	mature	final harvest	1		
comnts Fmd : Aspen stand mixed with Maple and located within a valley that runs north and south. Recommend final harvest with retention guidelines. Treat with stand 11 and 35. Stand should regenerate to Aspen and Maple.										
<b>13</b>	<b>R6</b>	48	48	57	red pine	immature	thinning	1		stand with fdf potential
comnts Fmd : 2007: Red Pine plantation that was row thinned in 1991. Recommend thinning between rows or from above (crown spacing). BA goal of 90. Old data 1991: ROW THIN - EVERY 3RD ROW. FDF POTENTIAL.										
<b>15</b>	<b>R9</b>	16	48	68	red pine	immature	thinning	1		prescribed for fdf treatment
comnts Fmd : 2007: Red Pine Plantation row thinned in 2000. Recommend thinning within the rows or from above (spacing). BA goal of 90. Old data 1991: ROW THIN-EVERY 3RD ROW. FDF POTENTIAL. Stand marked and harvested fall 2000, sale number 7200600-01										
<b>17</b>	<b>O6</b>	22	85	68	oak	mature	final harvest	1		
comnts Fmd : Mature Oak stand found on ridge top and side slopes. M1 understory. Recommend a final harvest with retention. (Could also thin the stand or shelterwood (seed cut).										
<b>20</b>	<b>J4</b>	5	40	42	jack pine	immature	final harvest	1		
comnts Fmd : 2008 Jack Pine stand in valley on flat land. Stand was harvested about 30 years ago. Old pulp piles are scattered throughout the stand. Recommend harvesting with stand 38 on the side slope. Use this stand for landing and protect as much of the Oak regeneration within the stand. No retention to be left.										
<b>23</b>	<b>O9</b>	65	65	73	oak	mature	final harvest	1		
comnts Fmd : 2007 Field Notes: Mature Oak stand found on ridge top and side slopes and valley with old two track an horse trail traversing through the stand. ORV trail also traverses through the stand. Recommend final harvest with large two acre patches left scattered throughout the stand for mast, visual and retention. Protect all trails within the stand. 1997: ORV trail runs through stand as well as riding/hiking trail. 2 acres of dead oak salvaged in SW corner in 1997 contract # 32-94-01										
<b>24</b>	<b>R6</b>	43	52	67	red pine	immature	thinning	1		
comnts Fmd : 2007 Field Notes: Red Pine plantation located in a valley. Two tracks traverse through portions of the stand a long with Batterson Road, a seasonal county road. Level to slightly rolling terrain, blueberry and pine needles for ground cover. Recommend 3rd row thinning. Treat with stand 29 to the south and also with the same stand to the west in compartment 175 to the west. Shore to Shore Riding and Hiking trail traverses through a portion of this stand. 1988 : STAND EMERGING INTO POLE CLASS 1 AND 2 STICK DOMINATE										

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 176 Entry Year: 2000**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
<b>25</b>	<b>M9</b>	8	43	65	northern hardwood	mature	final harvest	1		
comnts Fmd : 2007 Field Notes: Small mature hardwood stand. Poor quality and Wolf trees. M2 understory with a small grass patch in the middle. Stands east side borders private property. Rolling terrain and Braken Fern for ground cover. Recommend final harvest and manage for a mixed stand (mixed stand should be Aspen/hardwoods). Private line may need survey work done. 1988: COMBINES WITH 5 ACRES IN COMPARTMENT 208 - 1992 YOЕ.										
<b>27</b>	<b>R6</b>	12	52	46	red pine	immature	thinning	1		
comnts Fmd : 2007 Field Notes: Red Pine Plantation. Aspen, Oak and Jack Pine removed from the stand in last entry year. Recommend 3rd row thinning. Treat with other Red Pine thinnings recommended in the compartment. 1988: STAND HAS 5 ACRES OF MATURE AND IMMATURE J IN EAST END. 1997: HORSE TRAIL AND SNOWMOBILE TRAIL RUN ON BATTERSON ROAD THROUGH THE STAND. THIN JACK PINE FROM THE STAND. Saddle Red Pine Block, Sale # 720070001-harvested.										
<b>29</b>	<b>R6</b>	14	31	57	red pine	immature	thinning	1		
comnts Fmd : 2007 Field Notes: Red pine plantation. Two track and snowmobile trail traverse through the stand. Recommend 1st time 3rd row thin. Treat with stand 24 to the north. Old field notes: COMBINES 1959 AND 1979 R PLANTATIONS RECENTLY LIBERATED										
<b>30</b>	<b>O9</b>	38	80	71	oak	mature	selection	1		
comnts Fmd : 2007 Field Notes: Mature Oak stand with some pine mixed within the stand. Pockets of Red and White Pine scattered within the west portion of the stand. Also scattered pockets of White Pine regeneration. ORV trail traverses through the stand. Recommend Selection cut. Cut canopy gaps throughout the stand in order to obtain oak regeneration in these openings. Between canopy gaps, pockets can be thinned based on timber quality and composition as well as to improve access through stand for equipment. Residual BA following harvest will be variable with some areas higher based on quality and species composition. Regeneration of Oak species, red maple, aspen and white/red pine should be considered successful following harvest. Protect ORV trail. Rolling terrain. (										
<b>35</b>	<b>M6</b>	49	80	65	northern hardwood	mature	thinning	1		
comnts Fmd : 2008 Even aged Northern hardwood stand. Dominantly Sugar Maple Poles with Beech understory. Some sawlogs. Average diameter in 9 inches. Northwest portion of the stand borders private property and the north end of the stand borders County Road 612. Level to slightly rolling terrain.. Recommend thinning stand to 70-90 BA with scattered regeneration gaps created. 1997: ?? FDF POTENTIAL. ??										
<b>38</b>	<b>J6</b>	21	74	50	oak	mature	final harvest	1		
comnts Fmd : 2007 Field Notes: Mixed stand of Jack Pine and Oak found on side slope. Some pockets of Oak regeneration. Recommend final harvest. Protect and Oak regeneration. Natural regeneration will occur of mixed species. Leave a pocket of retention. 1997: NOT RECOMMEND FOR HARVEST. OLD JACK PINE ON A SLOPE CONVERTING TO OAK										
<b>42</b>	<b>A6</b>	7	41	66	aspen (upland)	mature	final harvest	1		
comnts Fmd : 1997: STAND IS FOUND ALONG COUNTY ROAD 612. Leave no retention. Stand should regenerate naturally to Aspen and probably Red Malple.										
<b>43</b>	<b>A9</b>	7	47	77	aspen (upland)	mature	final harvest	1		
comnts Fmd : 1997: NORTH END OF STAND BORDERS COUNTY ROAD 612. No retention, stand should regenerate to Aspen and Red Maple.										
<b>Total Acres.....</b>		<b>417</b>								

**Proposed Treatments  
With Limiting Factors**

**Compartment: 176**

**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**

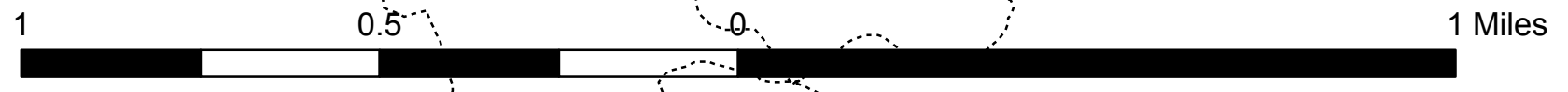
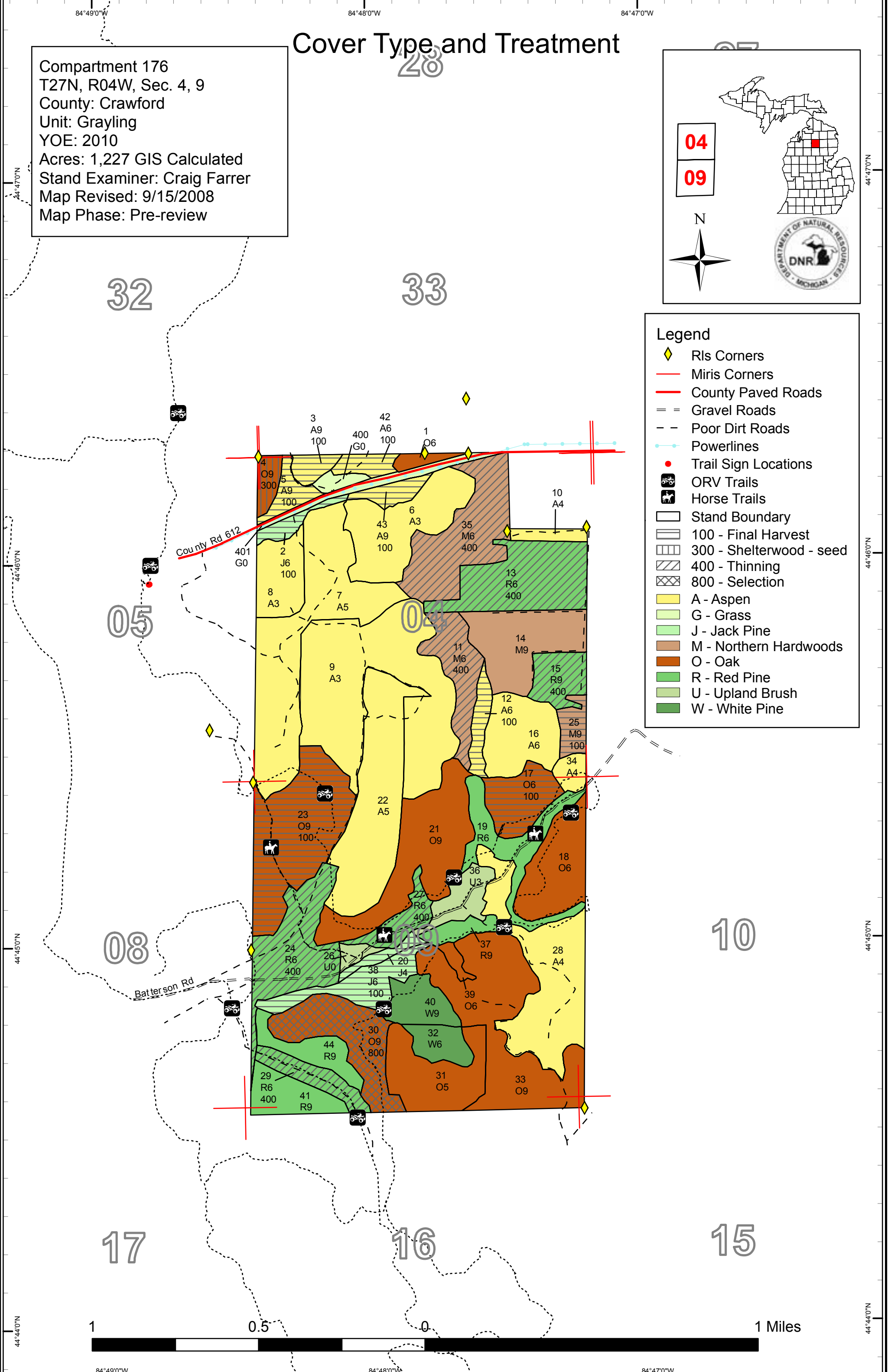
# Cover Type and Treatment

28

Compartment 176  
 T27N, R04W, Sec. 4, 9  
 County: Crawford  
 Unit: Grayling  
 YOE: 2010  
 Acres: 1,227 GIS Calculated  
 Stand Examiner: Craig Farrer  
 Map Revised: 9/15/2008  
 Map Phase: Pre-review

### Legend

- RIs Corners
- Miris Corners
- County Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Powerlines
- Trail Sign Locations
- ORV Trails
- Horse Trails
- Stand Boundary
- 100 - Final Harvest
- 300 - Shelterwood - seed
- 400 - Thinning
- 800 - Selection
- A - Aspen
- G - Grass
- J - Jack Pine
- M - Northern Hardwoods
- O - Oak
- R - Red Pine
- U - Upland Brush
- W - White Pine



84°49'0"W 84°48'0"W 84°47'0"W 44°44'0"N 44°45'0"N 44°46'0"N 44°47'0"N



84°49'0"W







84°48'0"W

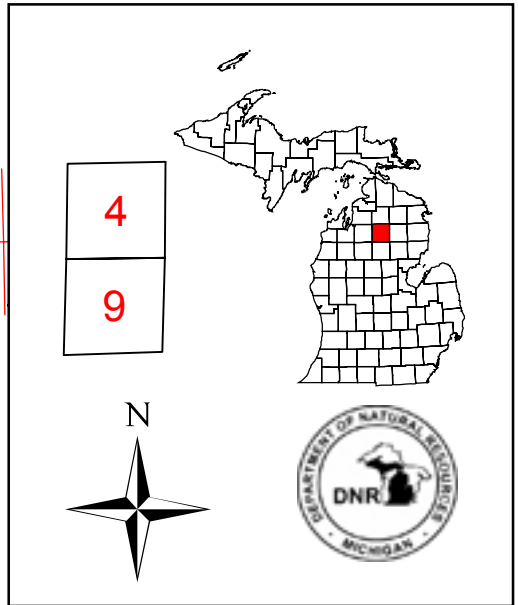
84°47'0"W

# Dedicated & Proposed Special Conservation Area Map

Compartment 176  
 T27N, R04W, Sec. 4, 9  
 County: Crawford  
 Unit: Grayling  
 YOE: 2010  
 Acres: 1,227 GIS Calculated  
 Stand Examiner: Craig Farrer  
 Map Revised: 9/15/2008  
 Map Phase: Pre-review

## Legend

-  Miris Corners
-  Stand Boundary
- Dedicated SCA**
-  Cold Water Streams
-  Natural Rivers Vegetative Buffer
-  Natural Rivers Zoning District
-  Kirtland Warbler Habitat



44°47'0"N

44°47'0"N

32

33

34

44°46'0"N

44°46'0"N

5

3

44°45'0"N

44°45'0"N

8

10

17

16

15

1

0.5

0

1 Miles

84°49'0"W

84°48'0"W

84°47'0"W





**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
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.