



**GRAYLING FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 177 ENTRY YEAR: 2009

Compartment Acreage: 1,347 County: Crawford

Revision Date: 08/28/2007

Stand Examiner: Craig Farrer

Legal Description: T27N R04W Sections 15, 16 and 17 South Frederic Township

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.

Soil and Topography: Soils within the compartment consists of Roselawn and Rubicon-Roselawn Sands found on rolling terrain. The Manistee River and flood plain is Rifle Peat.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The State land is in a solid block, except for an 80 acre parcel along the Manistee River. The area along the river is heavily subdivided and developed. The primary land uses is recreation and timber. There is no oil/gas use at this time.

Unique, Natural Features (include only non-site specific and non-sensitive information): The compartment contains Gypsy Month Impact Research plots. The compartment also has the potential for Massasauga Rattlesnake, Blanding's Turtle, Wood Turtle and the Kirtland's Warbler. All of which are endangered or threatened species.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None

Special Management Designations or Considerations: Special management considerations should include the Manistee River, a designated natural river and trout stream and the northwest portion of the compartment which has been designated as part of the Manistee River Kirtland's Warbler Unit.

Watershed and Fisheries Considerations: A small portion of the Manistee River, a designated trout stream and a natural river, exists within the far west portion of the compartment. There is no legal access across state ownership to this portion of the river.

Wildlife Habitat Considerations: To manage and maintain existing cover types within the compartment and to improve habitat conditions for a wide variety of non-game and game wildlife.

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 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 Howes Lake Road and Batterson Road (Both seasonal County Roads. The Blue Bear Snowmobile Trail/ORV Route traverses north and south through the compartment. All of these roads and trails are passable by 2 wheel drive vehicle.

Survey Needs: None.

Recreational Facilities and Opportunities: Many dispersed recreational opportunities exist within the compartment, including hunting and camping. Designated snowmobile trail no. 679 traverses section 16 and also is a designated ORV route. The Frederic ORV Trail runs through most of the compartment. The Shore to Shore Riding and Hiking Trail is located just to the north of the compartment in sections 8 and 9.

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. No major Pine types that would pose a fire hazard or problem.

LOTS Compartment Acreage: 1359

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**

9/6/2007 9:40:26 AM

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

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: 177

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	STAND AGE CLASS																All Aged	Total
		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		
Aspen			20	77	44	13	16												170
Cedar													52						52
Grass	18																		18
Jack Pine						23		44											67
Oak			32	72	83		1	14			539	154							895
Red Pine							109												109
Tamarack								13											13
Upland Brush	10																		10
Water	10																		10
White Pine												3							3
Total	38		52	149	127	36	126	71			539	157	52						1347

9/6/2007 9:40:35 AM

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

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: 177

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	170																										170
C Cedar				52																							52
G Grass					18																						18
J Jack Pine																67											67
O Oak														895													895
R Red Pine																98								11			109
T Tamarack																						13					13
U Upland Brush																								10			10
Z Water																									10		10
W White Pine																										3	3
Total	170			52	18									895	165							13		21	10	3	1347

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **177**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	10592 Cds	Hardwood	3898 Cds
Hardwood	2819 Mbf	Hardwood	996 Mbf
Softwood	4900 Cds	Softwood	1688 Cds
Softwood	524 Mbf	Softwood	148 Mbf
Sum TotVol	22178 Cds	Sum CutVol	7874 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	460
1347			

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
6	J6	44	63	48	red pine	mature	final harvest	1	planting	
comnts Fmd : 2006 Notes: Mature Jack Pine stand mixed with Oak, Red and White Pine. 02/J1 understory. Old two track traverses north and south through stand. Two track(Batterson County Rd) passes through the center of the stand east and west. This is a seasonal road not maintained. West side of stand borders Manistee River Road. Note, a small strip of private land runs between Manistee River Road and state boundary. Recommend final harvest with retention patches of about an half acre in size for each of them. Plant to Red Pine in final harvested areas. Treat with stand 10 to the south. (Sort of same treatment and reason for this treatment that is being recommend. Visual, KW influence in area and diversity. Stand should become a mixed Red Pine and Oak stand in the future.										
10	J6	23	46	50	red pine	mature	final harvest	1	planting	
comnts Fmd : 2006 Notes: Mixed stand , but predominately Jack Pine. Large Super Canopy Red Pine. Stand has a past fire history. There is evidence of plow lines and fire scars. Stand border Manistee River Road. Note, a narrow strip of pvt land runs between manistee river rd and state boundary. Recommend final harvest with retention patches of the super canopy Red Pine and Jack Pine and Oak patches. Plant areas final harvested and other existing open areas to Red Pine within the stand. Stand should convert naturally and artificially to Red Pine/ Oak stand. Reason to do this is because Red Pine is longer lived species for visual management along Manistee River Road. There is KW management to the north and south along Manistee River Road. Also the retention of some of the super canopy Red Pine will give the stand vertical structure for diversity and for visual management. Old trail or road traverses north and south through the stand. Per pre-review is ok to leave super canopy red pine in stand, conversion to red pine is ok with wildlife here.										
14	O9	38	97	60	oak	mature	final harvest	1		
comnts Fmd : 2006-2007 Notes: Mature Oak stand mixed with Red Maple. Better Quality in the northwest portion of the stand. M2/O1 understory. Some scattered poackets of advanced Oak regeneration. Level to slightly rolling terrain with east facing slopes on the east side of stand. Ground cover consists of Bracken Fern, Wintergreen and sedges. Also, Serviceberry and Witch Hazel is scattered throughout the stand.. Some heavy deer browsing. Recommend final harvest, protect advanced Oak regeneration, Service berry and Witch hazel. Will accept a mixed stand of natural regeneration. ORV trail (Frederic Loop) traverses through the west portion of the stand. The Blue Bear Snowmobile trail/ ORV Route traverses along the east side of stand. Per pre-review follow standard retention guidelines. Need to add ORV Rte, ORV trail, and snowmobile trail to map (3 symbols). Leave some islands for retention encompassing wolfy oak trees.Old Notes: STAND HAS MINS RESEARCH PLOT										
15	A9	5	42	49	aspen (upland)	low quality	final harvest	1		
comnts Fmd : 2007 Notes: Small somewhat mature to mature poor quality Aspen stand with a small Oak knoll within the stand. Stand borders Howes Lake Road. Recommend final harvesting the Aspen with no retention (stand is to small) and thin Oak Knoll within the stand to 70 BA (one plot to mark from), leaving the remaining Oak knoll for visual management and wildlife purposes. Treat with stand 18 to the south. Leave oak knoll for retention- leave no other retention in stand other than oak knoll per pre-review.										
18	A6	8	48	49	aspen (upland)	low quality	final harvest	1		
comnts Fmd : 2007 Notes: Small Aspen stand (somewhat poor quality). Stand borders Howes Lake Road. Recommend final harvest with stand 15 to the north. Stand too small for retention(No retention is to be left).										
26	R9	4	48	54	red pine	immature	final harvest	1	planting	
comnts Fmd : 2006 Notes: Red Pine plantation with Red Maple scattered throughout the stand. Lots of forked trees scattered throughout the stand. Poor planting stock, disease/insect and hardwood competition has took a toll on the stand. Recommend final harvest and replant to Red Pine.										
31	O9	1	57	59	oak	mature	thinning	1		
comnts Fmd : 2006 Notes: Small mature Oak stand found o a smalla knoll and surrounded by Red Plantation. Harvest with The Red Pine plantation that surrounds the stand. Thin to 70BA Treat with stand 41.										
35	R6	11	48	57	upland brush	immature	final harvest	1		
comnts Fmd : CUT EVERY THIRD ROW. Stand third row thinned summer 2000 sale number 7205098-01. Per pre-review on 8/14/07 we are to final harvest this stand with no retention, stand is to convert to a U type via natural regeneration. There is lots of natural regeneration on site-protect that natural regen while harvesting.										
39	O6	75	97	54	oak	mature	shelterwood-seed	1		
comnts Fmd : 2006 Notes: Mature Oak stand 130 BA total 60 in sawtimber and 70 in pulpwood. Rolling terrain (Ridges and Valleys) Northwest corner of the stand borders private 40 (being thinned in winter of 2006). Portions of the east and south edge of the stand borders Howes Lake Road. Some fuelwood cutting has been done in the past on the south end of the stand. Understory is primarily Red Maple saplings. Some scattered White Pine seedling/sapling throughout the stand. Recommend a shelterwood seed cut leaving 40BA of residual or Final harvest with retentions patches scattered throughout the stand. Per pre-review on 8/14/07 leave retention patches along private edge to serve as a buffer.										
41	R6	54	48	60	red pine	immature	thinning	1		
comnts Fmd : 2006 Notes: Red Pine plantation. Recommend 3rd row thinning. Stand varies is diameters and heights throughout the stand. Level to rolling terrain. M1 understory. Portion of the stand border Howes Lake Road. Per pre-review on 8/14/07 change south part of stand 41 to final harvvest- will need to recode stand. No rention should occur.										

GRAYLING FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 177 Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
42	O6	38	88	48	oak	immature	shelterwood-seed	1	planting	
comnts Fmd : 2006 Notes: Mature Oak stand with Aspen and Red Maple scattered throughout the stand. Recommend Shelterwood seed cut 40% Crown closure cut. Remove all Aspen and Red Maple. Rolling terrain. Could possibly hold another 10 years. Block all new roads created into the stand if logging occurs. Stand border the McAuthor tract to the east. The Mc Arthurs tract portion to the east is the same as this stand and could be cut with this stand. Check with wildlife and silviculturalist. Per J Bielecki at Pre-review should cut all trees and just leave better clumps of high quality trees for shelterwood aspect and retention then he will trench and plant red and white pine around the clumps of better oak in an effort to get pine- oak rotation and improve long term oak regeneration on site. Will need to chip sale or require removing tops and slash to eliminate slash for planting operations.										
43	R6	6	48	60	red pine	immature	thinning	1		
comnts Fmd : 2006 Notes: Red Pine plantation. Recommend 3rd row thinning. Stand varies is diameters and heights throughout the stand. Level to rolling terrain. M1 understory. Portion of the stand border Howes Lake Road.										
46	R6	2	48	60	red pine	immature	thinning	1		
comnts Fmd : 2006 Notes: Red Pine plantation. Recommend 3rd row thinning. Stand varies is diameters and heights throughout the stand. Level to rolling terrain. M1 understory. Portion of the stand border Howes Lake Road.										
47	O9	4	89	48	oak	immature	thinning	1		
comnts Fmd : 2006 Notes: Mature Oak stand surround by Red Pine Plantation. Recommend thinning to 70 BA and treat with Stands 41,43,46 and 54.										
49	A6	5	50	57	aspen (upland)	mature	final harvest	1		
comnts Fmd : Small 1-2 acre stand of Aspen and Red Maple. Some scattered Red Pine that was planted. Red Pine when planted did not survive in this location and Aspen and Hardwood took over. Redcommend Final harvest with stand 26										
50	A9	1	57	59	aspen (upland)	mature	final harvest	1		
comnts Fmd : 2006 Notes: Recommend final harvest when Red Pine Plantations get 3 third row thinned.										
51	A9	1	57	59	aspen (upland)	mature	final harvest	1		
comnts Fmd : 2006 Notes: Recommend final harvest when Red Pine Plantations get 3 third row thinned.										
54	R6	2	48	60	red pine	immature	thinning	1		
comnts Fmd : 2006 Notes: Red Pine plantation. Recommend 3rd row thinning. Stand varies is diameters and heights throughout the stand. Level to rolling terrain. M1 understory. Portion of the stand border Howes Lake Road.										
55	A6	1	48	60	aspen (upland)	mature	final harvest	1		
comnts Fmd : 2006 Notes: Aspen Hardwood pocket found in Red Pine Plantation. Recommend final harvest when row thinning Red Pine Plantation.										
Total Acres.....		323								

GRAYLING FOREST MGT UNIT

**Proposed Treatments
With Limiting Factors**

Compartment: 177 **Entry Year: 2009**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDI Status
11	O6	137	97	55	oak	mature	final harvest	1		

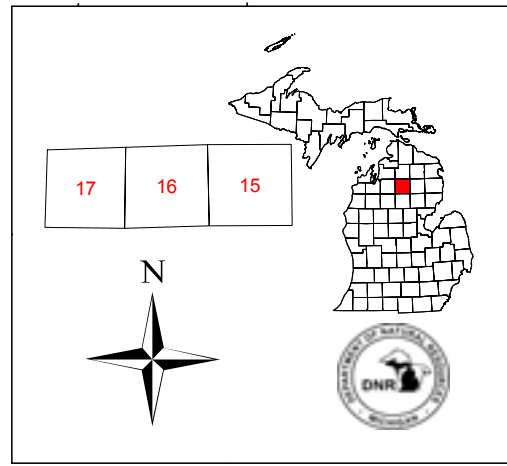
TREATMENT LIMITING FACTORS: Too steep

comnts Fmd : 2006 Notes: Large mature Oak stand with several ridges and vallies. Slopes are somewhat steep, but most or all should be harvestable. M1 understory and Bracken fern and sedges for ground cover. Old ORV trail traverses through the stand (not a designated trail anymore). Recommend a thinning to 70 BA. Protect slope from erosion where skidd trails may occur. Per pre-review on 8/14/07 change prescription from thin to final harvest with leaving ridges and areas of steep terrain for retention. Area will be difficult to work due to areas of steep slope- limit factor stand for this.

Total Acres..... 137

Field Map

Compartment 177
 T27N, R4W, Sec. 15, 16, 17
 County: Crawford
 Unit: Grayling
 YOE: 2009
 Acres: 1,347 GIS Calculated
 Stand Examiner: Craig Farrer
 Map Revised: 9/06/2007
 Map Phase: Pre-review



Legend

- Miris Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trails
- ORV Routes
- ORV Trails
- Snowmobile Trails
- Stand Boundaries
- 100 - Final Harvest
- 116 - Final Harvest/Planting
- 300 - Shelterwood-seed
- 316 = Shelterwood-seed/Planting
- 400 - Thinning

