



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 223 ENTRY YEAR: 2007

GIS Compartment Acreage: 1472 County: Crawford

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**Revision Date:** September 7, 2005

**Stand Examiner:** Patrick L. Potter

**Legal Description:** T26N R3W Sections 31, 32 and 33

**Management Goals:** The emphasis of management shall be on retaining and enhancing the natural beauty and biological diversity of the area, and enhancing wildlife habitat for both hunting and wildlife observation purposes while maintaining forest health, productivity, sustainability, species and structural diversity while providing for multiple use and visual management.

**Soil and Topography:** Predominately Grayling and Graycalm sands. Topography is mainly flat to rolling hills.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Compartment 223 consists of three contiguous sections of land, of which approximately 20% is privately owned. Section 31 and 32 are bisected by the I-75 freeway and rest area. Section 32 is bisected by a privately owned railroad right-of-way (ROW). The compartment also contains three leased r.o.w.'s for large overhead power lines. Also sections 32 and 33 are part of the Grayling Industrial Park as of 1998. Per a Memo of Understanding between the MDNR and Crawford County, lands in this compartment are subject to disposal for industrial development per an agreed upon expedited procedure. Land use in this area is rapidly undergoing commercial/industrial development. The compartment contains or is directly adjacent to AJD Forest Products mill, a Weyerhaeuser production plant; a Super 8 Motel, a truck stop, and Redi-Mix (cement) batch plant. In 2003, a 100' foot wide strip of land laying along the east side of the I-75 freeway r-o-w was conveyed to Grayling Township to use as a visual buffer along industrial park, and to serve as a recreational trail corridor. Plans for a trail have been proposed for this corridor but no development has occurred to date.

**Unique, Natural Features:** Hill's Thistle, a plant of special concern, was found throughout many of the grassy openings and jack pines stands in sections 32 and 33. The special concern boreal brachionyncha moth (*Brachionyncha borealis*) has been known to occur in section 32. The boreal brachionyncha inhabits dry-mesic oak-pine forests in the northern third of the LP. Adult flight dates are from late April to mid-May. Special concern species are not protected under endangered species legislation, but they are considered to be rare in Michigan. No archeological sites are known to exist in the area. Chestnut seedlings were planted in stand 415 a few years ago. 2-3 saplings were featured in the 1995 OI write-up. None were found to survive in 2004.

**Archeological, Historical, and Cultural:** Historic logging is evidenced by old railroad grades.

**Special Management Designations or Considerations:** Hill's Thistle, a plant of special concern, was found throughout many of the grassy openings and jack pines stands in sections 32 and 33.

**Watershed and Fisheries Considerations:** No waterways or fisheries potential exist in the compartment.

**Wildlife Habitat Considerations:** There is excellent wildlife habitat potential in this area. Sections 31 and 32 provide a great diversity in terms of forest types and a variety of ages, thus offering a lot of edge habitat. Several of the grassy openings in sections 31 and 32 have been mowed and /or planted in the past, but are not currently maintained due to the fact that the land is subject to industrial development.

**Mineral Resource and Development Concerns and/or Restrictions:** Sections 31 – 33, T26N-R3W, Crawford County-Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift is the Michigan Formation. The Michigan is quarried for gypsum elsewhere in the State. A gravel pit is located in Section 28 to the north and potential is good. The nearest production is Beaver Creek Field, located six miles to the southwest. The field has produced over 21 MBO from the Devonian Richfield and over 5 Bcf gas from the Ordovician Prairie du Chien. The Compartment is mostly leased for oil and gas development.

**Vehicle Access:** Most of the compartment is easily accessed from numerous trail roads and a snowmobile trail (#'s 7, 482, and 487) that intersect four mile road. Access is inhibited by the I-75 r.o.w and by the D & M railroad r.o.w. No roads have been Id for closure. We may need to close portions to eh snowmobile trail once it is re-routed.

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

**Recreational Facilities and Opportunities:** The compartment contains portions of the snowmobile trails #'s 7, 482, and 487) known as the Skyline-West Higgins snowmobile trail, and the Michigan Riding Hiking Trail. We have been asked to re-route the snowmobile trail out of the compartment to prevent future conflicts with the industrial park. To date, an acceptable re-route has not been located. It appears some easement may need to be purchased to develop a safe and feasible re-route. Numerous ground blinds were found in the compartment indicating heavy hunting pressure in the area. The extensive trail system in the compartment along with a large amount of dead oak scattered through the compartment makes the area very conducive to public fuelwood cutting.

**Fire Protection:** Current road system is adequate, and no timber conversion is needed.

**Additional Compartment Information:** Due to the compartment's its high recreational potential, they are many opportunities for educational and visual management. Section 31 is the site of a couple old oak research studies looking at patch-cuts and strip-cuts to regeneration oak. Due to frost and deer browse these small patches and narrow strips were relatively ineffective at getting oak reproduction. Section 33 contains a gypsy moth research plot.

**LOTS Compartment Acreage: 1411**

- **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: 223

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        | 220        |   |   |   |           |   |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |           |            |   |   | 220         |
| G Grass        |            |   |   |   | 77        |   |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |           |            |   |   | 77          |
| J Jack Pine    |            |   |   |   |           |   | 215        |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |           |            |   |   | 215         |
| O Oak          |            |   |   |   |           |   |            |   |   |   |   |   |   | 685        |   |   |   |   |   |   |   |   |           | 19         |   |   | 704         |
| U Upland Brush |            |   |   |   |           |   |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   | 37        |            |   |   | 37          |
| M Upland Hdwds |            |   |   |   |           |   |            |   |   |   |   |   |   | 65         |   |   |   |   |   |   |   |   |           | 154        |   |   | 219         |
| <b>Total</b>   | <b>220</b> |   |   |   | <b>77</b> |   | <b>215</b> |   |   |   |   |   |   | <b>750</b> |   |   |   |   |   |   |   |   | <b>37</b> | <b>173</b> |   |   | <b>1472</b> |

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: 223

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

| COMPARTMENT SUMMARY     |           |                             |          |
|-------------------------|-----------|-----------------------------|----------|
| TOTAL VOLUME            |           | CUT VOLUME                  |          |
| Hardwood                | 5717 Cds  | Hardwood                    | 1701 Cds |
| Hardwood                | 1639 Mbf  | Hardwood                    | 383 Mbf  |
| Softwood                | 2033 Cds  | Sum CutVol                  | 2467 Cds |
| Softwood                | 180 Mbf   |                             |          |
| Sum TotVol              | 11388 Cds |                             |          |
| <b>Total Cmpt Acres</b> |           | Acres Proposed For Cut..... | 193      |
| 1472                    |           |                             |          |

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 223 Entry Year: 2007**

| Stand   | Cover Type | Acres | Age | Site Index | Mgt Obj           | Condition  | Method Cut       | Harvest Priority | Cultural Need              | FDF Status |
|---|------------|-------|-----|------------|-------------------|------------|------------------|------------------|----------------------------|------------|
| 1   | O6         | 17    | 74  | 52         | oak               | mature     | final harvest    | 1                | natural regeneration       |            |
| comnts Fmd : Red Maple waiting in the understory. Individual and pockets of dead oak, only visible oak regen is in the patchcuts or strips. Heavy Gypsy Moth egg masses. Rolling terrain. Bracken fern and blueberry ground cover. Final harvest for stump sprouts.DO 5-SPOT PATCHCUT IN STD TO BEGIN REGEN OF OAK- CALL CUT STD #201, REMAINING UNCUT STD IS #1. Will accept mixed species of natural regeneration.  |            |       |     |            |                   |            |                  |                  |                            |            |
| 11  | O6         | 18    | 74  | 52         | oak               | mature     | shelterwood-seed | 1                | natural regeneration       |            |
| comnts Fmd : Red Maple waiting in the understory in places. Individual and pockets of dead oak, only visible oak regen is in the patchcuts or strips. Heavy Gypsy Moth egg masses. Rolling terrain. Bracken fern and blueberry ground cover. Shelterwood , with a few no-cut islands. DO 5-SPOT PATCHCUT IN STD TO BEGIN REGEN OF OAK- CALL CUT STD #201, REMAINING UNCUT STD IS #1. Will get a mixture of oak and red maple natural regeneration.  |            |       |     |            |                   |            |                  |                  |                            |            |
| 18  | O9         | 14    | 74  | 58         | oak               | mature     | seed tree        | 2                | natural regeneration       |            |
| comnts Fmd : Some very nice oak stems. Red maple understory mostly a few white pine, but not oak visible. A little ligher BA in the middle, looks like it was used for access to adjacent strip cuts. Stand is close to I-75 interstate highway, and snowmobile trail is in the adjacent stand. Seed tree and prescribed burn after harvest. Will result in a mixture of species with natural regeneration. If unable to burn within 3 years of the cut, then will accept the natural regen on site. Will plant low stocked area by planting a mix of pine species. |            |       |     |            |                   |            |                  |                  |                            |            |
| 21  | O6         | 19    | 73  | 58         | northern hardwood | two aged   | selection        | 2                | natural regeneration       |            |
| comnts Fmd : Stand is adjacent to a rest area along I-75. Selection cut remove most of the oak. Leave red maple and aspen for fall colors. Buleberry and bracken fern ground cover with plenty of witch hazal, very little deer browse. Old comments(TREAT IN 10-20 YRS W/ STD 23 OF COMPT 222(ADJ STD)- THEN REMOVE ALL ASPEN & RMAPLE). Will get a mix species of natural regeneration.   |            |       |     |            |                   |            |                  |                  |                            |            |
| 24  | U0         | 2     |     | 50         | upland brush      | nonstocked |                  | 0                | natural regeneration       |            |
| comnts Fmd : Serviceberry, and pin cherry. Check with wildlife see if they want to burn stand.  |            |       |     |            |                   |            |                  |                  |                            |            |
| 25  | A6         | 8     | 49  | 50         | aspen (upland)    | mature     | final harvest    | 1                | natural regeneration       |            |
| comnts Fmd : Hawthorn, mostly red maple with some oak in the understory. AJD did not clear all the way to their new property line. Aspen has heavy heart rot. Need to harvest now. Soil a mix of graycalm/grayling sand.  |            |       |     |            |                   |            |                  |                  |                            |            |
| 32  | A6         | 2     | 35  | 62         | aspen (upland)    | mature     | final harvest    | 2                | natural regeneration       |            |
| comnts Fmd : 20% of aspen hit with hypoxylon fungus. Stand is a little smaller diameter than some of the near by aspens stands.2-AGED STD,HEALTHY,HOLD 20 YRS   |            |       |     |            |                   |            |                  |                  |                            |            |
| 34  | O5         | 23    | 5   | 50         | oak               | high risk  | improvement      | 1                | other - specify in remarks |            |
| comnts Fmd : REMOVE DEAD/DYING OAK & ALL JP> 6" DBH- HOLD ALL REPRO, RP SI IN STD IS 62 AT 51 YRS, LEAVE SOME HEALTHY MATURE OAK. Stand harvested 4-2000. Used old SI Need to do a salvage cut harvest all dead and dying trees.  |            |       |     |            |                   |            |                  |                  |                            |            |
| 35  | A6         | 9     | 43  | 55         | aspen (upland)    | mature     | final harvest    | 2                | natural regeneration       |            |
| comnts Fmd : 30-40% hypoxylon, with lots of heart rot. Stand is located in two swells. Oak along the west edge.   |            |       |     |            |                   |            |                  |                  |                            |            |
| 56  | O6         | 16    | 74  | 52         | oak               | mature     | shelterwood-seed | 1                | natural regeneration       |            |
| comnts Fmd : Expect mixed species of oak, red maple, aspen for natural regeneration. Red Maple waiting in the understory. Individual and pockets of dead oak, only visible oak regen is in the patchcuts or strips. Heavy Gypsy Moth egg masses. Rolling terrain. Bracken fern and blueberry ground cover. Final harvest for stump sprouts.DO 5-SPOT PATCHCUT IN STD TO BEGIN REGEN OF OAK- CALL CUT STD #201, REMAINING UNCUT STD IS #1.   |            |       |     |            |                   |            |                  |                  |                            |            |
| 57  | O6         | 13    | 74  | 52         | oak               | mature     | seed tree        | 1                | natural regeneration       |            |
| comnts Fmd : Red Maple waiting in the understory. Individual and pockets of dead oak, only visible oak regen is in the patchcuts or strips. Heavy Gypsy Moth egg masses. Rolling terrain. Bracken fern and blueberry ground cover. Final harvest for stump sprouts.DO 5-SPOT PATCHCUT IN STD TO BEGIN REGEN OF OAK- CALL CUT STD #201, REMAINING UNCUT STD IS #1. Mixed species of regeneration is acceptable.  |            |       |     |            |                   |            |                  |                  |                            |            |
| 58  | O3         | 1     | 20  | 64         | oak               | immature   |                  | 0                | cleaning & weeding         |            |
| comnts Fmd : RMAPLE-OAK MIX,CUT UNDER RESEARCH STUDY,EXCELLENT REPRO. Oak is staying up with the red maple. Used old SI, should thin out the stump sprouts to one or two.   |            |       |     |            |                   |            |                  |                  |                            |            |
| 59  | O3         | 1     | 20  | 64         | oak               | immature   |                  | 0                | cleaning & weeding         |            |
| comnts Fmd : RMAPLE-OAK MIX,CUT UNDER RESEARCH STUDY,EXCELLENT REPRO. Oak is staying up with the red maple. Used old SI, should thin out the stump sprouts to one or two.   |            |       |     |            |                   |            |                  |                  |                            |            |

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 223**    **Entry Year: 2007**

| Stand   | Cover Type | Acres      | Age | Site Index | Mgt Obj | Condition  | Method Cut    | Harvest Priority | Cultural Need        | FDF Status |
|---|------------|------------|-----|------------|---------|------------|---------------|------------------|----------------------|------------|
| <b>60</b>   | <b>O6</b>  | 2          | 74  | 58         | oak     | mature     | final harvest | 1                | natural regeneration |            |
| comnts Fmd : Red Maple waiting in the understory. Individual and pockets of dead oak, only visible oak regen is in the patchcuts or strips. Heavy Gypsy Moth egg masses. Rolling terrain. Bracken fern and blueberry ground cover. Final harvest for stump sprouts.DO 5-SPOT PATCHCUT IN STD TO BEGIN REGEN OF OAK- CALL CUT STD #201, REMAINING UNCUT STD IS #1. Mixed species of natural regeneration is acceptable.              |            |            |     |            |         |            |               |                  |                      |            |
| <b>61</b>   | <b>O3</b>  | 1          | 20  | 64         | oak     | immature   |               | 0                | cleaning & weeding   |            |
| comnts Fmd : RMAPLE-OAK MIX,CUT UNDER RESEARCH STUDY,EXCELLENT REPRO. Oak is staying up with the red maple. Used old SI, should thin out the stump sprouts to one or two.   |            |            |     |            |         |            |               |                  |                      |            |
| <b>63</b>   | <b>O3</b>  | 1          | 20  | 64         | oak     | immature   |               | 0                | cleaning & weeding   |            |
| comnts Fmd : RMAPLE-OAK MIX,CUT UNDER RESEARCH STUDY,EXCELLENT REPRO. Oak is staying up with the red maple. Used old SI, should thin out the stump sprouts to one or two.   |            |            |     |            |         |            |               |                  |                      |            |
| <b>65</b>   | <b>O6</b>  | 3          | 74  | 58         | oak     | mature     | final harvest | 1                | natural regeneration |            |
| comnts Fmd : Red Maple waiting in the understory. Individual of dead oak, only visible oak regen is in the patchcuts or strips. Heavy Gypsy Moth egg masses. Rolling terrain. Bracken fern and blueberry ground cover. Shelterwood for stump sprouts. A little better quality trees. DO 5-SPOT PATCHCUT IN STD TO BEGIN REGEN OF OAK- CALL CUT STD #201, REMAINING UNCUT STD IS #1  |            |            |     |            |         |            |               |                  |                      |            |
| <b>72</b>   | <b>O9</b>  | 49         | 89  | 55         | oak     | two aged   | final harvest | 2                | natural regeneration |            |
| comnts Fmd : Ground cover mix of grass, some sweet fern, oak seedlings, raspberry, and red maple. Stand has pockets of advanced O3 (8-15 feet tall). Patches of red maple, and U2/grassy areas. Contains scattered areas of TA regeneration and a few mature JP. Can't find any old "TS" contracts but something went on here. Should do a final harvest, and because this is part of the industrial park let nature take over now. |            |            |     |            |         |            |               |                  |                      |            |
| <b>415</b>  | <b>G0</b>  | 9          |     | 55         | grass   | nonstocked |               | 0                | opening maintenance  |            |
| comnts Fmd : Filling with some aspen, and a little oak. Lots of sweet fern, with a little bit of bluestem.. An old homestead. Borders 4-mile road.. Per wildlife comments- Remove invading trees for opening and perform opening and maintenance as needed (mowing /fertilizing).   |            |            |     |            |         |            |               |                  |                      |            |
| <b>Total Acres.....</b>   |            | <b>208</b> |     |            |         |            |               |                  |                      |            |

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With Limiting Factors**

**Compartment: 223**    **Entry Year: 2007**

| Stand     | Cover Type | Acres | Age | Site Index | Mgt Obj | Condition | Method Cut | Harvest Priority | Cultural Need        | FDf Status |
|-----------|------------|-------|-----|------------|---------|-----------|------------|------------------|----------------------|------------|
| <b>19</b> | <b>O8</b>  | 36    | 78  | 52         | oak     | mature    |            | 0                | natural regeneration |            |

TREATMENT LIMITING FACTORS: Influence zones

comnts Fmd : 2-AGED STD,9"& 14" OAK- LARGER OAK DECLINING- OPEN STD W/ OAK POCKETS. Deer browse on what regeneration there is. Stand is adjacent to I-75 interstate highway, and has a snowmobile trail running through. Prescribed burn with stand 18 if possible. If unable to burn within 3 years of the cut, then will accept the natural regen on site. Will plant low stocked area with a mix of pine species

|           |           |     |    |    |     |          |  |   |                      |  |
|-----------|-----------|-----|----|----|-----|----------|--|---|----------------------|--|
| <b>46</b> | <b>O7</b> | 112 | 83 | 62 | oak | two aged |  | 0 | natural regeneration |  |
|-----------|-----------|-----|----|----|-----|----------|--|---|----------------------|--|

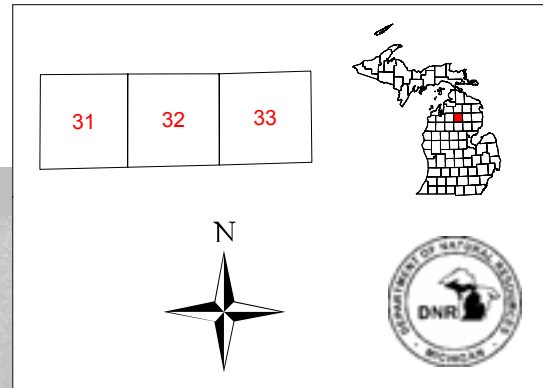
TREATMENT LIMITING FACTORS: Retention of stand for regeneration purposes (ie. shelterwood)

comnts Fmd : HEALTHY, AVE 10 BA OF DEAD OAK, RMAPLE-OAK-HAZEL. HORSE TRAIL RUNS THRU S PORTION OF STD-DO 30% CROWN CLOSURE THIN. Stand harvested 2000, marked to leave 30% crown closure. Red maple stumps sprouts, with deer browse everywhere. Have some nice oak stump spout, but the RM appears to be winning. Do a burn may help to slow down the maple give the oak a little better chance.

**Total Acres..... 148**

# Field Map

Compartment 223  
 T26N, R3W, Sec. 31-33  
 County: Crawford  
 Unit: Grayling  
 YOE: 2007  
 Acres: 1472 GIS Calculated  
 Stand Examiner: Patrick Potter  
 Map Revised: 9/26/2005  
 Map Phase: Pre-review



## Legend

- Miris Corners
- - - Poor Dirt Roads
- - - Snowmobile Trails
- Railroads
- Powerline
- Fence
- Survey Markers
- × Gates
- ☒ Snowmobile Trails
- ☒ Interstate Highway
- ☐ Stand Boundary
- ☐ 026 - Opening Maintenance
- ☐ 047 - Natural Regeneration/Prescribed Burning
- ☐ 061 - Cleaning-weeding/Hand tools
- ☐ 146 - Final Harvest/Natural Regeneration
- ☐ 246 - Seed tree/Natural Regeneration
- ☐ 247 - Seed tree/Natural Regeneration/Prescribed Burning
- ☐ 346 - Shelterwood-seed/Natural Regeneration
- ☐ 846 - Selection/Natural Regeneration
- ☐ 996 - Improvement/Other

Name Paved Roads

Name Poor Dirt Roads

