



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 241 ENTRY YEAR: 2009

Compartment Acreage: 1,508 County: Crawford

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**Revision Date:** September 4, 2007

**Stand Examiner:** Patrick Marolla

**Legal Description:** T28N R3W Sections 23, 26, 35 Maple Forest Township

**Management Goals:** To provide an area that allows for National Guard training while maintaining forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment.

**Soil and Topography:** This compartment consists of primarily flat to rolling terrain. Some moderately steep hills exist adjacent to Bear Lake road. The soils consist of the Blue Lake-Kalkaska-Feldhauser and the Rubicon-Kalkaska-Blue Lake associations. Most of this area is composed of outwash plains or sandy and loamy soils on remnant moraines.

### **Ownership Patterns, Development, and Land Use in and Around the Compartment:**

This area is under the 1935 long-term lease agreement L-1479 (Act 154 P.A. 1935) with the Michigan National Guard, Department of Military Affairs. The agreement provides for use by the military during their encampment, with no permanent buildings or improvements to be erected. Military needs take precedence over resource management needs on long-term lease lands. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs. This compartment is adjacent to several private parcels with year round homes on most of them. The most common land use activities within the compartment appear to be military training, ORV use, and hunting. There were areas in the northwest corner of section 35 that appeared to have been grazed by livestock. These areas were adjacent to a farm and no fence existed on the property line to keep livestock off of state land. Another land use activity that is common is firewood cutting, most of which is illegal. Standing live trees were found to be cut for firewood throughout the compartment.

**Unique, Natural Features:** Given the compartment's diversity of habitat types and its proximity to the East Branch of the AuSable River, there is potential for the occurrence of a number of uncommon species, including: goshawk, red-shouldered hawk, bald eagle, secretive locust, grizzled skipper, dusted skipper, red-legged spittlebug, Hill's thistle and Alleghany plum.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** Evidence of historic logging activity was found within the compartment.

**Special Management Designations or Considerations:** Long-term Military Lease Agreement.

### **Watershed and Fisheries Considerations:**

No open water exists within the compartment. The eastern edge of section 35 consists of various lowland types and is in the East Branch of the AuSable River's watershed.

**Wildlife Habitat Considerations:** This compartment provides a diverse range of habitats, including hardwoods, aspen, grassy openings, pine, and lowland types. Several mature aspen stands will be regenerated to increase the amount of browse and cover for grouse and deer. The lowland stands are adjacent to aspen and openings which provide excellent habitat for numerous wildlife species. Mast trees are common through the hardwood stands, providing a good source of food. The overall quality of the wildlife habitat for this compartment should be improved by the proposed management.

**Mineral Resource and Development Concerns and/or Restrictions:** A gravel pit exists in the southern end of section 26 adjacent to county road 612. This pit has not been recently used and is beginning to grow over with herbaceous plants. The gravel pit receives some illegal ORV use. Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. 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. The potential for gravel development is excellent on the upland areas. Section 35 is leased for oil and gas development.

**Vehicle Access:** The northern two sections of this compartment are heavily used by the military and there are plenty of roads. All stands in this area were accessible by open or overgrown roads. The southern section, 35, had only one passable road through it, however, every stand is within a quarter mile of a forest road or a county road. County roads within the compartment include Hartwick Pines Road, White Road, County Road 612 and Bear Lake Road.

**Survey Needs:** No survey work is necessary at this time for the proposed treatments. There are two areas with no survey or property line information: in the north end of section 35 around the private 40-acre parcel, and the 1-acre parcel with the house. Survey evidence was found in all other locations.

**Recreational Facilities and Opportunities:** This compartment offers ample hunting opportunities and the proposed management will increase the quality of the wildlife habitat for game species. No official ORV trails exist, but this area is frequently used by them. The northern two sections are military lease land and are closed periodically during the year which limits some recreational opportunities.

**Fire Protection:** Most of the compartment consists of forest types that are not prone to fire, such as hardwoods and aspen. There are enough roads and openings that access for fire protection would not be a problem.

**LOTS Compartment Acreage:** LOTS contained current, up-to-date information on all parcels within the compartment.

- **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: 241

Table 3

(acres shown in boxes)

STAND AGE CLASS

| COVER TYPE   | Not        | STAND AGE CLASS |            |       |          |           |       |            |       |           |       |         |         |         |         |         |         | All Aged | Total |            |             |
|--------------|------------|-----------------|------------|-------|----------|-----------|-------|------------|-------|-----------|-------|---------|---------|---------|---------|---------|---------|----------|-------|------------|-------------|
|              | 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 |          |       |            |             |
| Aspen        |            | 12              | 176        |       | 9        |           |       | 152        |       | 5         |       |         |         |         |         |         |         |          |       | 354        |             |
| Cedar        |            |                 |            |       |          |           |       |            |       | 20        |       |         |         |         |         |         |         |          |       | 20         |             |
| Grass        | 306        |                 |            |       |          |           |       |            |       |           |       |         |         |         |         |         |         |          |       | 306        |             |
| Lowlnd Brush |            |                 | 21         |       |          |           |       |            |       |           |       |         |         |         |         |         |         |          |       | 21         |             |
| Mx Swmp Cnfr |            |                 |            |       |          | 52        |       |            |       |           |       |         |         |         |         |         |         |          |       | 52         |             |
| Non Stocked  | 17         |                 |            |       |          |           |       |            |       |           |       |         |         |         |         |         |         |          |       | 17         |             |
| Red Pine     |            |                 |            |       |          |           |       | 23         |       |           |       |         |         |         |         |         |         |          |       | 23         |             |
| Upland Hdwds |            |                 |            |       |          |           |       | 14         |       | 42        |       |         |         |         |         |         |         |          |       | 615        | 671         |
| White Pine   |            |                 |            |       |          |           |       | 32         |       |           |       |         |         |         |         |         |         |          |       | 12         | 44          |
| <b>Total</b> | <b>323</b> | <b>12</b>       | <b>197</b> |       | <b>9</b> | <b>52</b> |       | <b>221</b> |       | <b>67</b> |       |         |         |         |         |         |         |          |       | <b>627</b> | <b>1508</b> |

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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: 241

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        | 354 |   |   |    |     |   |   |    |    |   |    |    |    |   |    |    |   |   |   |   |   |   |   |     |    |      | 354   |
| C Cedar        |     |   |   | 20 |     |   |   |    |    |   |    |    |    |   |    |    |   |   |   |   |   |   |   |     |    |      | 20    |
| G Grass        |     |   |   |    | 306 |   |   |    |    |   |    |    |    |   |    |    |   |   |   |   |   |   |   |     |    |      | 306   |
| L Lowlnd Brush |     |   |   |    |     |   |   | 21 |    |   |    |    |    |   |    |    |   |   |   |   |   |   |   |     |    |      | 21    |
| Q Mx Swmp Cnfr |     |   |   |    |     |   |   |    |    |   | 52 |    |    |   |    |    |   |   |   |   |   |   |   |     |    |      | 52    |
| X Non Stocked  |     |   |   |    |     |   |   |    |    |   |    |    | 17 |   |    |    |   |   |   |   |   |   |   |     |    |      | 17    |
| R Red Pine     |     |   |   |    |     |   |   |    |    |   |    |    |    |   | 23 |    |   |   |   |   |   |   |   |     |    |      | 23    |
| M Upland Hdwds |     |   |   |    |     |   |   |    |    |   |    |    |    |   |    |    |   |   |   |   |   |   |   | 671 |    |      | 671   |
| W White Pine   |     |   |   |    |     |   |   |    |    |   |    |    |    |   |    |    |   |   |   |   |   |   |   |     | 44 | 44   |       |
| <b>Total</b>   | 354 |   |   | 20 | 306 |   |   |    | 21 |   |    | 52 | 17 |   |    | 23 |   |   |   |   |   |   |   | 671 | 44 | 1508 |       |

AUSABLE STATE FOREST

GRAYLING FOREST MGT UNIT

CRAWFORD COUNTY

COMPARTMENT: **241**

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

| COMPARTMENT SUMMARY     |           |                             |          |
|-------------------------|-----------|-----------------------------|----------|
| TOTAL VOLUME            |           | CUT VOLUME                  |          |
| Hardwood                | 16109 Cds | Hardwood                    | 2787 Cds |
| Hardwood                | 1095 Mbf  | Hardwood                    | 207 Mbf  |
| Softwood                | 2142 Cds  | Softwood                    | 318 Cds  |
| Softwood                | 190 Mbf   | Sum CutVol                  | 3519 Cds |
| Sum TotVol              | 20821 Cds |                             |          |
| <b>Total Cmpt Acres</b> |           | Acres Proposed For Cut..... |          |
| 1508                    |           | 291                         |          |

| Stand  | Cover Type | Acres | Age | Site Index | Mgt Obj           | Condition  | Method Cut    | Harvest Priority | Cultural Need | FDf Status |
|--|------------|-------|-----|------------|-------------------|------------|---------------|------------------|---------------|------------|
| 2  | A5         | 78    | 67  | 50         | aspen (upland)    | sparse     | final harvest | 2                |               |            |
| <p>comnts Fmd : This stand is composed of several aspen clones of varying ages surrounded by U-type and G-type. The merchantable clones should be targeted for a final harvest. The older clones are declining and have signs of rot. The younger clones of should be left until they are merchantable. Leave 3-5% of the stand for retention purposes. A large area of this stand is U-type and G-type. These areas can be used for skid trails and landings. This stand is within National Guard Long-term lease land. There is at least 1 firing point within the stand. There are some scattered oak and white pine seedlings within the stand. Do not cut any of the pine or oak. The ground cover is mostly grasses, bracken fern, raspberry, and strawberry. Some of the declining aspen clones have moderate amounts of coarse woody debris. No survey corners were found however there was an old fence line. Need to ID military firing point in stand on map. Leave coarse woody debris in stand if possible. Leave retention patch in NW corner to screen vehicle and tank access near marker road to discourage military training and access off a county road.</p> |            |       |     |            |                   |            |               |                  |               |            |
| 4  | A6         | 39    | 64  | 54         | aspen (upland)    | mature     | final harvest | 1                |               |            |
| <p>comnts Fmd : This stand was split in half from the previous OI, the west half was had a higher proportion of aspen. The east half of the stand was combined with stand 7, the aspen in this area can be left for snags and coarse woody debris. The stand consisted of a mixture of quacking and big tooth aspen with poor quality hardwoods. The hardwoods are more common in the east half of the stand. Some areas may have no aspen and may be left as islands for retention. The understory was composed of mostly hardwoods such as beech. A final harvest is recommended to help to maintain the aspen component in this stand. The hardwoods should stump sprout to further aid in regeneration of this stand. There is a moderate amount of coarse woody debris within this stand. The ground cover is sparse due to the dense canopy. For retention guidelines, 3-5% of the stand should be left.</p>   |            |       |     |            |                   |            |               |                  |               |            |
| 20   | M6         | 43    |     | 72         | northern hardwood | unevenaged | thinning      | 3                |               |            |
| <p>comnts Fmd : This is a typical hardwoods stand on rolling terrain. Unlike the other hardwood stands in this compartment, hemlock was present throughout. The basal area should be reduced to 80 square feet per acre. Favor hard maple and create gaps in areas that have low quality or near less common mid-tolerate species such as yellow birch. Leave some of the mature aspen for future snags. The stand boundary should be placed as far is possible in all directions. The basal area begins to decrease to the north and to the east. This stand should be treated with stand 22.</p>   |            |       |     |            |                   |            |               |                  |               |            |
| 22   | M6         | 12    |     | 67         | northern hardwood | unevenaged | thinning      | 3                |               |            |
| <p>comnts Fmd : This is a typical hardwoods stand on rolling terrain. The basal area should be reduced to 80 square feet per acre. Favor hard maple and create gaps in areas that have low quality or near less common mid-tolerate species such as yellow birch. Leave some of the mature aspen for future snags. The overgrown road that circles most of the stand can be used for the stand boundary. There is a small pocket of poor quality aspen at the north end of the stand which can be included with the treatment. This stand should be treated with stand 20.</p>   |            |       |     |            |                   |            |               |                  |               |            |
| 29   | A6         | 5     | 83  | 64         | aspen (upland)    | immature   | final harvest | 1                |               |            |
| <p>comnts Fmd : This stand consists of mature aspen with some poor quality hardwoods. A final harvest is recommended to maintain the aspen component in the stand. One or too small areas should be left for retention guidelines. Per pre-review- do not leave retention in this stand when treated - is small, need to maximize regeneration.</p>  |            |       |     |            |                   |            |               |                  |               |            |
| 39   | R6         | 23    | 67  | 59         | red pine          | mature     | thinning      | 3                | planting      |            |
| <p>comnts Fmd : BUFFER STRIP FOR WHITE ROAD USE BY GUARD FOR TENTS TANKS ETC. (Old comment) This stand was planted as a buffer for county road 612 and white road. It is comprised of red, white, jack, and Scotch pine. Scotch pine dominates the understory and is regenerating within the stand and the neighboring opening. The overstory is primarily saw timber sized red pine with some white pine and Scotch pine. The stand is wider in the north with a more scotch pine planted. A combination of a removal and selection harvest is recommended. This treatment should eliminate Scotch pine and prevent future establishment of these trees. Also all jack pine should be removed. The red and white pine should be marked for removal where necessary. It is recommended that the area of Scotch pine be planted back to red pine.</p>   |            |       |     |            |                   |            |               |                  |               |            |
| 44   | M6         | 56    |     | 58         | northern hardwood | unevenaged | thinning      | 3                |               |            |
| <p>comnts Fmd : This is a typical hardwoods stand on rolling terrain. There is a closed canopy throughout most of the stand and little regeneration. The basal area should be reduced to 80 square feet per acre. Favor hard maple and create gaps in areas that have low quality or near less common mid-tolerate species. Leave some of the mature aspen for future snags. Do not allow any chipping to increase the structural diversity. Also the dead and down creation sale specification (5.2.4.2) should be used. The southwestern corner near the farm field has a high proportion of red maple and more aspen. This area also appeared to be grazed, possible from the neighboring farm. The private property adjacent to the stand look like it has been recently surveyed, several stakes and flagging was found.</p>  |            |       |     |            |                   |            |               |                  |               |            |
| 48   | A5         | 35    | 67  | 60         | aspen (upland)    | mature     | final harvest | 1                |               |            |
| <p>comnts Fmd : These are several aspen clones that are variable in size and density along the road and adjacent to the larger openings. All conifers should be left for residual and 3-5% of the area should be maintained for the retention guidelines.</p>  |            |       |     |            |                   |            |               |                  |               |            |

**GRAYLING FOREST MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 241    Entry Year: 2009**

| Stand  | Cover Type | Acres      | Age | Site Index | Mgt Obj | Condition  | Method Cut | Harvest Priority | Cultural Need       | FDf Status |
|--|------------|------------|-----|------------|---------|------------|------------|------------------|---------------------|------------|
| <b>438</b>   | <b>G0</b>  | 34         |     | 59         | grass   | nonstocked |            | 0                | opening maintenance |            |
| <p>comnts Fmd : This opening is beginning to convert to Scotch pine. Seedlings are relatively dense in areas and some larger trees are present. This stand should be burned to kill all the Scotch pine and restore the stand to a grassy opening. A medivac landing zone is located at the southwest corner of the stand.</p> <p>Wld : Per pre review agreed to burn grassy opening to remove scotcyh pine and restore G type. This area is used as a military medivac helizone. If military wants to improve the opening via burning, wildlife would support it. We do not have funds to restore opening- see if military is interested and can fund it.</p>   |            |            |     |            |         |            |            |                  |                     |            |
| <b>461</b>   | <b>G0</b>  | 19         |     | 59         | grass   | nonstocked |            | 0                | planting            |            |
| <p>comnts Fmd : The state does not own a 100 foot strip along county road 612. This appears to be an old farm field with some red and white pine beginning to become established. This stand would be very easy to establish a red pine plantation. (old comment) This is an even aged hardwood stand on rolling terrain. The predominate species are sugar maple, beech, and basswood. Basswood makes up a large proportion of the basal area in areas. It borders private property to the north. There is an old fence line; however it is about 10 feet north of the property line. A corner was found between stands 60 and 61 on the north property line. The east side of the stand has numerous pine stumps indicating that pine was once a component to this stand. The basal area is not high enough to justify a thinning at this time. There are only a few small areas that are in need of a thinning at this time. No treatment is recommended.</p> |            |            |     |            |         |            |            |                  |                     |            |
| <b>Total Acres.....</b>  |            | <b>344</b> |     |            |         |            |            |                  |                     |            |

**Proposed Treatments  
With Limiting Factors**

**Compartment: 241**

**Entry Year: 2009**

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| <b>Stand</b> | <b>Cover<br/>Type</b> | <b>Acres</b> | <b>Age</b> | <b>Site<br/>Index</b> | <b>Mgt<br/>Obj</b> | <b>Condition</b> | <b>Method<br/>Cut</b> | <b>Harvest<br/>Priority</b> | <b>Cultural<br/>Need</b> | <b>FD<br/>Status</b> |
|--------------|-----------------------|--------------|------------|-----------------------|--------------------|------------------|-----------------------|-----------------------------|--------------------------|----------------------|
|--------------|-----------------------|--------------|------------|-----------------------|--------------------|------------------|-----------------------|-----------------------------|--------------------------|----------------------|

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TREATMENT LIMITING FACTORS:

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

# Field Map

Compartment 241  
 T28N, R3W, Sec. 23, 26, 35  
 County: Crawford  
 Unit: Grayling  
 YOE: 2009  
 Acres: 1,508 GIS Calculated  
 Stand Examiner: Patrick Marolla  
 Map Revised: 8/21/2007  
 Map Phase: Pre-Review

|    |
|----|
| 23 |
| 26 |
| 35 |

N

**Legend**

- ◆ RLS Corners
- Miris Corners
- County Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Stand Boundary
- 016 - Planting
- 027 - Opening Maintenance/Prescribed Burning
- 100 - Final Harvest
- 400 - Thinning
- 416 - Thinning/Planting

