



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 243 ENTRY YEAR: 2013

Compartment Acreage: 1289 County: CRAWFORD

Revision Date: 7/24/11

Stand Examiner: Lucas Merrick

Legal Description: Maple Forest Township, T28N R03W sections 13 and 14

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: The terrain is gently rolling throughout much of the compartment. There is a steep slope down towards range 40 where the topography becomes flat. Soils are primarily Rubicon, Kalkaska, Blue Lake and Feldhauser loamy sands.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is comprised of Military Board Land. On these lands military training has precedence over resource management activities. The DNR will coordinate all prescribed activities with the National Guard to ensure they are compatible with military training needs.

Unique, Natural Features: Per Michigan Natural Features Inventory there is limited potential for dusted skipper, grizzled skipper, red-legged spittlebug, Henry's elfin, and secretive locust, in barrens. This compartment shows some potential for red-shouldered hawk and goshawk.

Plant species that may occur are rough fescue, pale agoseris, Hill's thistle, and Alleghany plum in pine barrens/dry sand prairie. False violet may occur in hummocky pine, hardwood, or aspen stands.

Archeological, Historical, and Cultural Features: None known at this time.

Special Management Designations or Considerations: Military Board Lands are considered special conservation areas (SCA). A portion of "Range 40", a fenced air to ground bombing range lies in the compartment. The range is not open to the public.

Watershed and Fisheries Considerations: None at this time

Wildlife Habitat Considerations: Promote the expansion of aspen and oak cover types. Protect mast producing shrubs whenever possible. Efforts should be made to enhance dead and down woody debris and standing snags.

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 800 and 1,000 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is within two miles to the south and potential is thought to be good in the upland areas. This is part of the State Military leased land. Section 14 is leased and has been developed for Antrim Shale gas production.

Vehicle Access: County and forest roads provide adequate access. Portions of trail roads are sandy and may require 4-wheel drive.

Survey Needs: None at this time.

Recreational Facilities and Opportunities: Dispersed recreation occurs throughout the compartment.

Fire Protection: Range 40 has frequent fire events, efforts are made to contain fires within the range complex. Grass types throughout the compartment will burn in the spring and dry weather conditions, the major cover type however is hardwood and limits fire behavior. Access for fire suppression is adequate.

➤ **The following reports are available:**

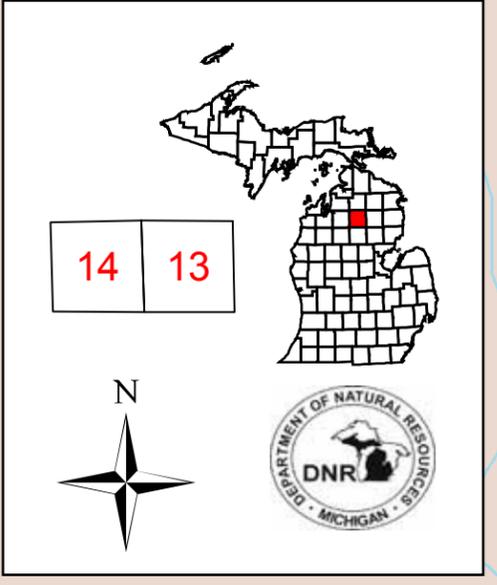
- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summaries**
- ◆ **Dedicated Conservation Area Details**
- ◆ **Listing of Forested Stands**
- ◆ **Listing of Non-Forested Stands**
- ◆ **Proposed Treatments with No Limiting Factor**
- ◆ **Proposed Treatments with Limiting Factors**

➤ **The following information is displayed, where pertinent, on the attached compartment maps:**

- ◆ **Base feature information, stand numbers, cover types, recreation trails and facilities**
- ◆ **Proposed treatments**
- ◆ **Dedicated & Proposed Special Conservation Areas**

Dedicated & Proposed Special Conservation Area Map

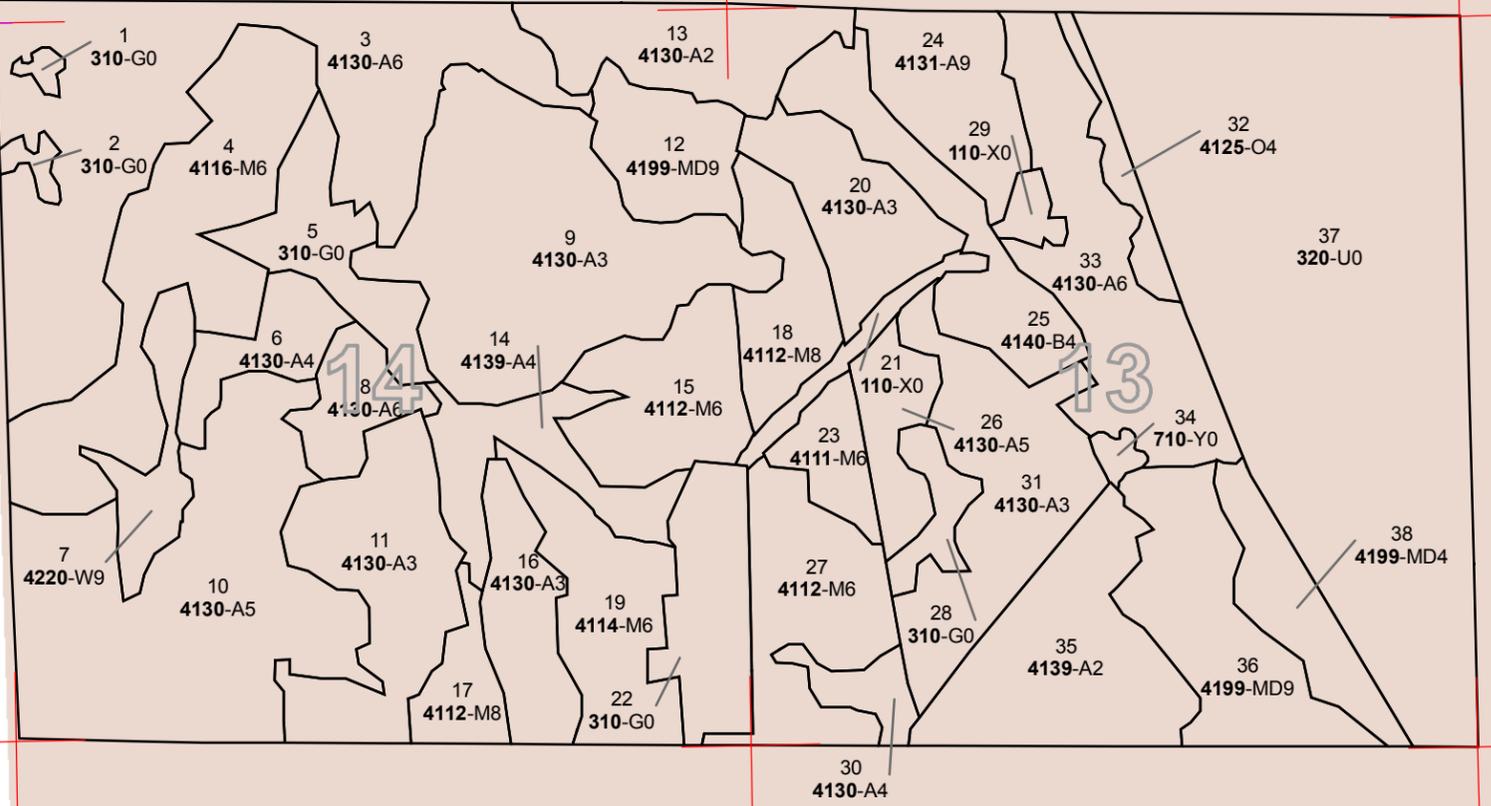
Compartment 243
 T28N, R03W, Sec. 13, 14
 County: Crawford
 Unit: Grayling
 YOE: 2013
 Acres: 1,289 GIS Calculated
 Stand Examiner: Lucas Merrick
 Map Revised: 9/08/2011
 Map Phase: Pre-Review



Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas**
- Cold Water Streams
- Research, Development, and Military Lands
- Natural Rivers Zoning District
- Natural Rivers Vegetative Buffer
- Forest Stands**
- Level 3
 - 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 414 - Other Upland Deciduous
 - 419 - Mixed Upland Deciduous
 - 422 - Natural Pines
- Non-Forest Stands**
- Level 3
 - 110 - Low Intensity Urban
 - 310 - Herbaceous Openland
 - 320 - Upland Shrub
 - 710 - Sand, Soil



44°50'0"N

44°49'0"N

44°50'0"N

44°49'0"N

84°39'0"W

84°38'0"W

84°35'0"W

84°39'0"W

84°38'0"W

84°37'0"W

84°36'0"W

84°35'0"W

Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneren Age
Aspen	0	183	119	110	15	65	8	161	0	0	0	0	0	0	0	660
Herbaceous Openland	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
Mixed Upland Deciduous	0	0	0	0	0	0	0	20	61	0	0	0	0	0	0	81
Northern Hardwood	0	0	0	0	0	0	0	0	169	0	0	0	0	0	37	205
Oak	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	8
Paper Birch	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	31
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Upland Shrub	214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214
Urban	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
White Pine	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
Total	289	183	119	110	15	65	8	189	244	31	0	0	0	0	37	1289



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2013

Compartment 243
Total Compartment Acres: 1289

Acres by Treatment Type

Commercial Harvest - 225	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen	203	0	0	0	0	0	203
Mixed Upland Deciduous	21	0	0	0	0	0	21
Total	225	0	0	0	0	0	225



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	72243006-Cut	14.8	4130 - Aspen	Low Density Pole	31	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest no retention. Try to expand the pockets of aspen as much as possible.									
<u>Specs:</u>									
<u>Other</u> Open areas throughout. Make attempts to enhance wildlife shrub component where possible (i.e. protect or cut for sprouts). Chipping will be									
<u>Comments:</u> mandatory and wood biomass will not be retained in order to facilitate military training.									
<u>Next</u> monitor regen									
<u>Steps:</u>									
10	72243010-Cut	96.3	4130 - Aspen	Medium Density Pole	60	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final Harvest, leave 3% in scattered islands. Rolling topo. Remove majority of conifer component.									
<u>Specs:</u>									
<u>Other</u> Outstanding wildlife shrub component Enhance where possible (i.e protect or cut for sprouts don't just run it over). Variable stand. Chipping will									
<u>Comments:</u> be mandatory and woody biomass retention will not be applied to facilitate military training needs.									
<u>Next</u> monitor regen									
<u>Steps:</u>									
12	72243012-Cut	21.1	4199 - Other Mixed Upland Deciduous	High Density Log	73	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Final harvest with retention, leave 3-5% in islands along with approx 5BA of healthy residual throughout. Identify 1-2 trees per acre to cut, drop, and leave within the sale area (entire tree).									
<u>Specs:</u>									
<u>Other</u> Chipping will be mandatory and woody biomass retention will not be applied to this sale to facilitate military training.									
<u>Comments:</u>									
<u>Next</u> monitor regen									
<u>Steps:</u>									
24	72243024-Cut	26.8	4131 - Aspen, Oak	High Density Log	65	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<u>Prescription</u> Final harvest with retention. Leave 3-5% in islands along with 5BA of oak throughout. Try to keep islands out of valleys since these will be the likely skid route with terrain and a winter cutting spec due to military constraints and oak wilt concerns.									
<u>Specs:</u>									
<u>Other</u> Chipping will be mandatory and woody biomass will not be applied to facilitate military training.									
<u>Comments:</u>									
<u>Next</u> monitor regen									
<u>Steps:</u>									
26	72243026-Cut	14.6	4130 - Aspen	Medium Density Pole	60	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest no retention. Do not shy away from edges of stand. Expand aspen where possible.									
<u>Specs:</u>									
<u>Other</u> Hdws found along western edge, oak in the north. Chipping will be mandatory and woody biomass will not be applied to facilitate military training.									
<u>Comments:</u>									
<u>Next</u> monitor regen									
<u>Steps:</u>									
33	72243033-Cut	50.9	4130 - Aspen	High Density Pole	40	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest, do not leave retention, this will maximize aspen regeneration.									
<u>Specs:</u>									
<u>Other</u> Majority of stand is on side of a ridge. Chipping will be mandatory and woody biomass will not be applied to facilitate military training.									
<u>Comments:</u>									
<u>Next</u> monitor regen									
<u>Steps:</u>									

**Table 3 -- Treatments Prescribed
with No Limiting Factor**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Total Treatment
Acreage Proposed: 224.5

Table 4 -- Treatments Prescribed with a Limiting Factor



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 0**

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Grayling Mgt. Unit

5 – Forested Stands

Compartment: 243
Year of Entry: 2013

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	4130 - Aspen	High Density Pole	109.8	27	51-80	A young aspen stand starting to reach merchantability. An Excellent wildlife understory. A few areas w/ more saplings than poles. Hdws in understory along eastern portions.
4	4116 - Mixed N. Hardwood - Aspen	High Density Pole	63.0	75	81-110	A poor quality hdwd stand.
6	4130 - Aspen	Low Density Pole	14.7	31		An open area filling in with aspen clones. Multiple pockets found throughout.
7	42200 - Natural White Pine	High Density Log	15.0	73	141-170	A natural white pine stand.
8	4130 - Aspen	High Density Pole	13.7	45	51-80	Mixed aspen stand.
9	4130 - Aspen	High Density Sapling	85.0	5		A regenerating aspen stand.
10	4130 - Aspen	Medium Density Pole	96.3	60	51-80	Excellent wildlife understory. Hilly. Many trees with dead tops. White pine is starting to establish throughout.
11	4130 - Aspen	High Density Sapling	44.5	16		Poor quality quaking aspen stand. Open areas found throughout.
12	4199 - Other Mixed Upland Deciduous	High Density Log	21.1	73	81-110	A poor quality hdwd stand.
13	4130 - Aspen	Medium Density	29.7	5		A regenerating aspen stand.
14	4139 - Aspen, Mixed Deciduous	Low Density Pole	23.2	60	1-50	Open areas filling in with trees.
15	4112 - Maple, Beech, Cherry Association	High Density Pole	30.1	73	51-80	Below average hdwd stand
16	4130 - Aspen	High Density Sapling	21.4	5		A regenerating aspen stand.
17	4112 - Maple, Beech, Cherry Association	Medium Density Log	11.2	73	51-80	A recently thinned hdwd stand with a thick beech understory, some white pine, black cherry, and basswood present in canopy.
18	4112 - Maple, Beech, Cherry Association	Medium Density Log	21.3	73	81-110	A recently thinned hdwd stand.
19	4114 - Beech, Hemlock	High Density Pole	31.5	73	81-110	A recently thinned hdwd stand
20	4130 - Aspen	High Density Sapling	26.7	16		A regenerating aspen stand cut in 1995.

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Grayling Mgt. Unit

5 – Forested Stands

Compartment: 243
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4111 - S.Maple, Hard Mast Association	High Density Pole	11.4	73	81-110	A recently thinned hdwd stand.
24	4131 - Aspen, Oak	High Density Log	26.8	65		A mature aspen oak stand. A harvest is recommended if current cover type is desired in the future.
25	4140 - Other Upland Deciduous	Low Density Pole	30.6	81	1-50	Birch overstory with a fully stocked understory of mixed deciduous
26	4130 - Aspen	Medium Density Pole	14.6	60	51-80	A poor quality aspen stand with a diverse understory.
27	4112 - Maple, Beech, Cherry Association	High Density Pole	36.5	Uneven Age	81-110	Pockets of open grown beech and ironwood.
30	4130 - Aspen	Low Density Pole	7.6	50	1-50	An open valley w/ road running through it. The stand is slowly filling in.
31	4130 - Aspen	High Density Sapling	47.8	16		A regenerating aspen stand.
32	4125 - Black, N. Pin Oak	Low Density Pole	8.1	60	1-50	This stand if frequently burned over by range 40 fires.
33	4130 - Aspen	High Density Pole	50.9	40		A variable quality aspen stand.
35	4139 - Aspen, Mixed Deciduous	Medium Density	47.2	2		A regenerating aspen stand.
36	4199 - Other Mixed Upland Deciduous	High Density Log	39.6	70	111-140	A hilly mast producing stand. Very hilly. Above average oak.
38	4199 - Other Mixed Upland Deciduous	Low Density Pole	20.1	65	1-50	This stand has been subjected to many ground fires.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3103 - Rubus-Fern	1.7	No	Unspecified	New stand added. An open area found within an aspen stand. On a hill side w/ a sw aspect.
2	3103 - Rubus-Fern	2.6	No	Unspecified	New stand added. Opening.
5	3101 - Poverty Grass, Cladonia	23.3	N/A	Unspecified	An old military staging area?
21	11 - Low Intensity Urban	7.1	N/A	Unspecified	Bear lk road.
22	3102 - Grass	25.5	N/A	Unspecified	Military clearing.
28	3103 - Rubus-Fern	8.4	N/A	Unspecified	An open area filling in w poor quality trees.
29	11 - Low Intensity Urban	4.1	N/A	Unspecified	Range 40 control tower.
34	710 - Sand, Soil	2.3	N/A	Unspecified	Observation point #6.
37	320 - Upland Shrub	214.0	N/A	Unspecified	Range 40 complex.



7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Stand	SCA Type	SCA Name	Acres	Comments



8 – 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	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
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.