



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 245 ENTRY YEAR: 2014

GIS Compartment Acreage: 1,726 County: Crawford

Revision Date: 08/27/2012

Stand Examiner: Patrick Mohney

Legal Description: T28NR3W, Sections 1, 2 and 3
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.

Soils and Topography: Soil types within the compartment consist of some Montcalm and Blue Lake Loamy sands, Rubicon-Graycalm Complex, Kalkaska sand, Graycalm-Grayling Complex and Crosswell sands on the upland areas. On the lowland areas, soils consist of Tawas-Leafriver Complex, Dawson and Loxley mucks.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Ownership within the compartment consists mostly of state and military board lands with some private residences around Section One Lake and Guthrie Lake. Section 1 and a portion of section 2 are military board land. The National Guard Air to Ground Range is located in section 1. The remainder of section 2 is leased to the National Guard under L-1479 allowing for usage by the military during their encampment with no permanent buildings or improvements to be erected. Section 3 has a private 80 acre parcel located within it and the state lands are leased to the National Guard under a 10 year management agreement to allow for camping and maneuvers, but does not allow use of heavy equipment or high intensity live ammunition firing. There are several residences surrounding the compartment on the west side and north side including those around Section One Lake and Guthrie Lake.

Unique, Natural Features: A unique and natural feature within the compartment is the Hill's Thistle.

Archeological, Historical, and Cultural Features: The east part of the compartment contains a small portion of the National Guard Air to Ground Range.

Special Management Designations or Considerations: Hill's Thistle is located within the compartment and needs special management considerations. Besides the small portion of the National Guard Air to Ground Range in the east part of the compartment, there are several military firing points along White Road, that runs north and south between section 2 and 3 of the compartment. These designated sites need special management considerations to meet the needs of the military. Two other special considerations within the compartment that need to be considered are the antrim gas well sites and visual management of stands along Sherman Road and around Section One and Guthrie Lakes.

Watershed and Fisheries Considerations: The compartment contains Marsh Lake; a large portion of Section One Lake, and a small portion of Gutherie Lake. Both Gutherie Lake and Section One Lake have access sites.

Wildlife Habitat Considerations: White-tailed Deer, Ruffed Grouse, Black Bear and Wild Turkey. Maintain Aspen types and improve the age distribution of these types within the compartment.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. Glacial drift thickness varies between 600 and 1,000 feet. There is elevation relief of approximately 150 feet in the compartment. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is located two miles to the west. Gravel potential is thought to be good in the upland areas. Part of the compartment is the State Military Reservation. Two-thirds of the compartment is leased and has been developed for Antrim Shale gas production. Section 3 contains several Antrim well sites and two processing facilities.

Vehicle Access: Sherman Road runs north and south along the west side of compartment. Krause Road runs east and west along the north side of compartment and Calker Road runs east and west along the south side of compartment. Several two-track trails branch off these roads into the compartment. White Road runs north and south between sections 2 and 3. Briggs Road runs along the west side of Section One Lake and a Tank trail runs along the fenced Air to Ground Range in Section 1. Roads leading to antrim well sites in section 3 are gated but the oil companies are not keeping gates closed and locked. All new roads constructed for timber sales are to be closed upon completion of the sale. No other trails have been identified for closure. Most trails appear to be actively used by the military.

Survey Needs: None.

Recreational Facilities and Opportunities: Recreational facilities within the compartment consist of a developed boating access site on the south end of Gutherie Lake that is managed by Parks and Recreation Bureau. An undeveloped access site is located on the southwest side of Section One Lake. Recreation opportunities include camping, boating, fishing and hunting. Note: There is heavy dispersed camping around section one lake. There is also a lot of illegal ORV trails and RDR's in this area as well.

Fire Protection: The east side of the compartment is somewhat susceptible to fires that escape from the National Guard Air to Ground Range. However, forest cover types within the compartment are less likely to cause any major fire problems or suppression efforts. Access to and within the compartment for fire equipment is not a problem and lakes within the compartment provide a good source of water supply.

Additional Compartment Information: None.

➤ **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**

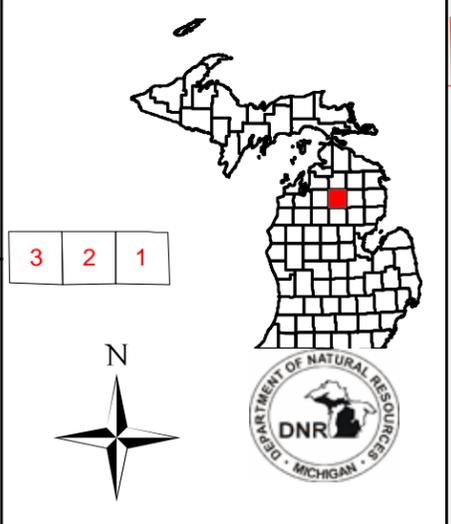
➤ **The following information is displayed, where pertinent, on the attached compartment maps:**

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

Compartment: 245
 T28N R03W Sec. 01, 02, 03
 County: Crawford
 Unit: Grayling
 YOE: 2014
 Acres: 1,726 GIS Calculated
 Examiner: Patrick Mohney
 Map Revised: 09/07/2012
 Map Phase: Pre-Review

Cover Type & Treatment Map

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



Legend

- Remonumented Section Corners
- Unclassified Corners
- Corners
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Pipe
- Power
- Boat Access Sites
- State Forest Land
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)

Forest Stands

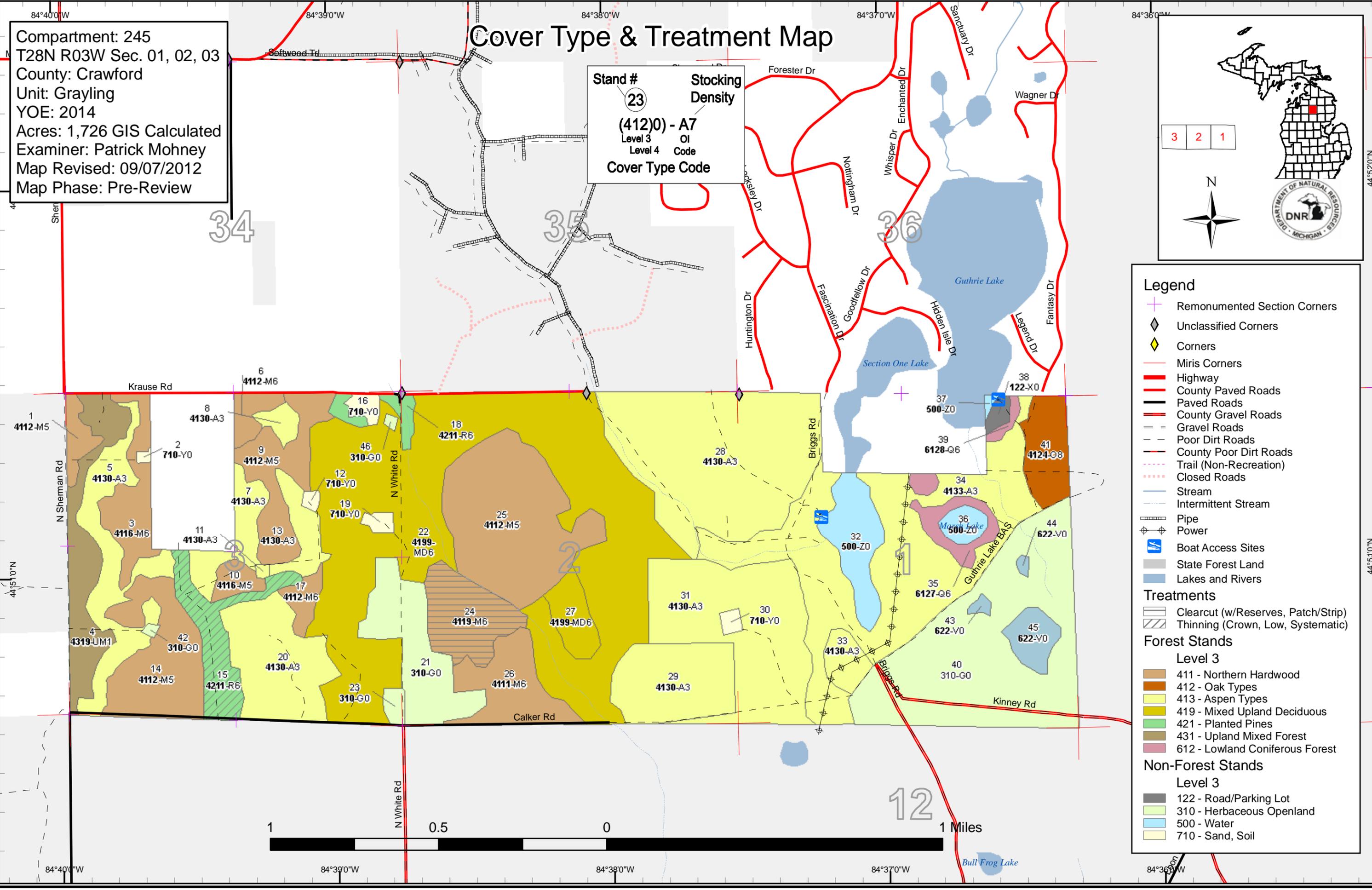
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

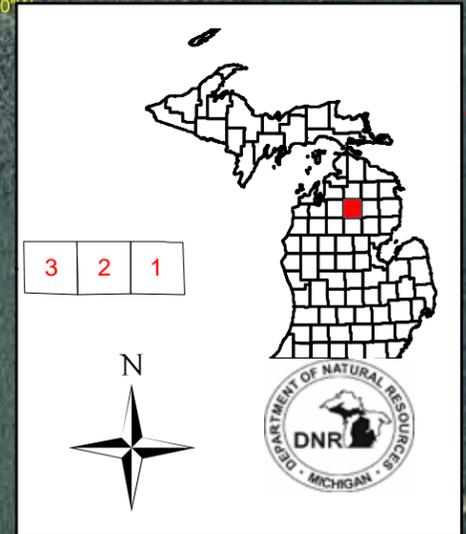
- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 500 - Water
- 710 - Sand, Soil



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Stand Boundary Map

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- Miris Corners
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- Pipe
- Power
- Stand Boundaries

Forest Stands

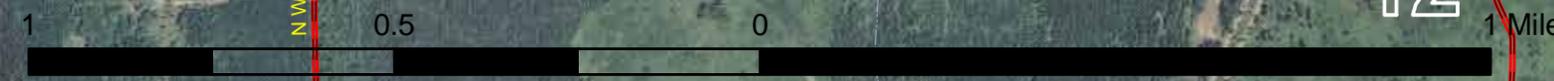
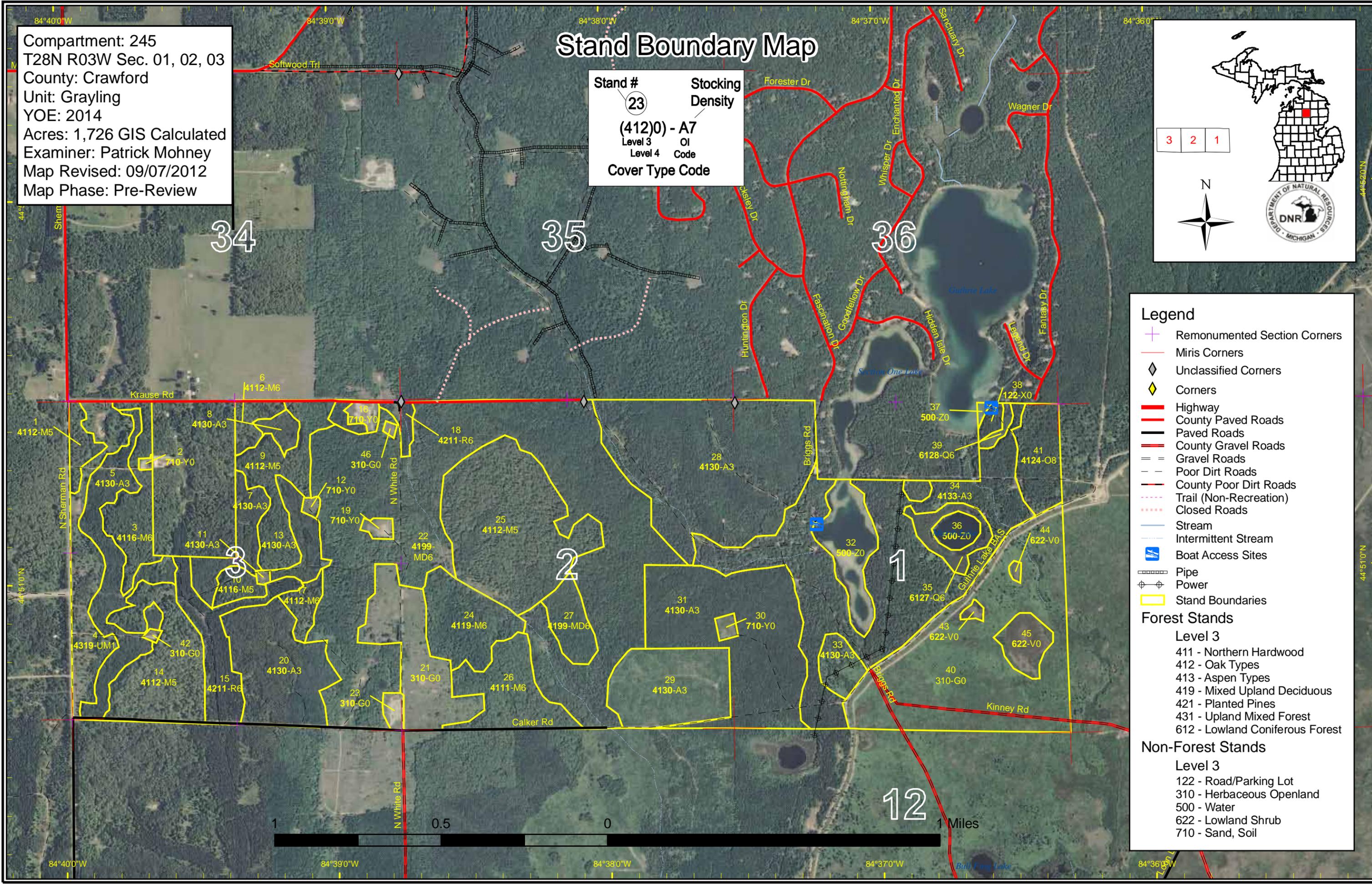
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Non-Forest Stands

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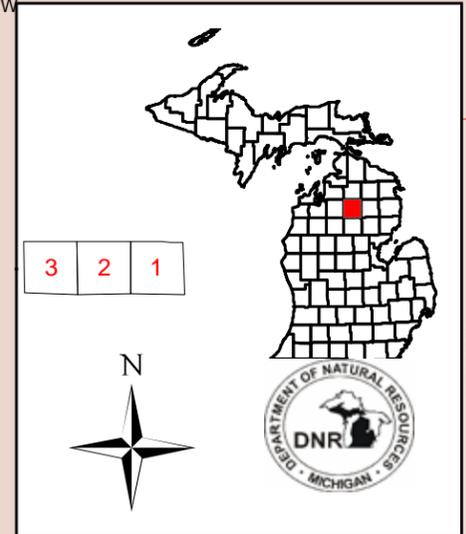


84°40'0"W 84°39'0"W 84°38'0"W 84°37'0"W

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Dedicated & Proposed Special Conservation Area Map

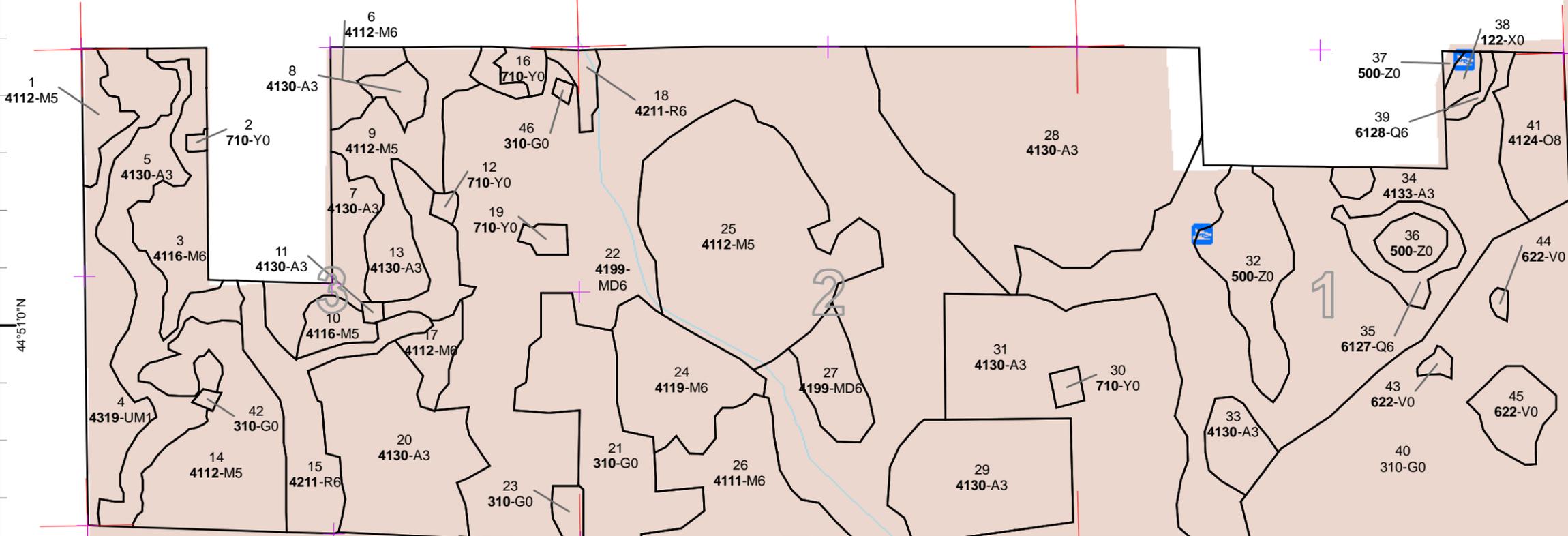
Stand #
23
Stocking Density
(412)0 - A7
Level 3 OI
Level 4 Code
Cover Type Code



34

35

36



Legend

- Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas**
- Cold Water Streams
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Boat Access Sites
- Research, Development, and Military Lands

Forest Stands

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- 411 - Northern Hardwood
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84°40'0"W 84°39'0"W 84°38'0"W 84°37'0"W 84°36'0"W

44°5'0"N

44°5'10"N

44°5'20"N

44°5'10"N

Table 1 – Total Acres by Cover Type and Age Class



	Age Class													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 +		Uneven Age
Aspen	51	420	163	0	0	0	0	0	0	0	0	0	0	0	634
Bog	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Herbaceous Openland	214	0	0	0	0	0	0	0	0	0	0	0	0	0	214
Lowland Conifers	0	0	0	3	0	16	0	0	0	0	0	0	0	0	19
Mixed Upland Deciduous	0	0	0	0	0	16	0	324	0	0	0	0	0	0	340
Northern Hardwood	0	0	9	0	103	48	174	0	0	0	0	0	0	0	335
Oak	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25
Red Pine	0	0	9	0	0	33	0	0	0	0	0	0	0	0	42
Sand, Soil	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Upland Mixed Forest	0	0	0	0	44	0	0	0	0	0	0	0	0	0	44
Urban	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Water	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Total	337	420	181	3	148	113	174	349	0	0	0	0	0	0	1726



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2014

Compartment 245
Total Compartment Acres: 1726

Acres by Treatment Type

Commercial Harvest - 70	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

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Northern Hardwood	37	0	0	0	0	0	37
Red Pine	0	0	0	0	33	0	33
Total	37	0	0	0	33	0	70

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



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
15	72245015-Cut	33.1	42110 - Planted Red Pine	High Density Pole	52	171-200	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Stand has already been 3rd row thinned. Mark stand to 120 sq ft. Stand has good access so operability should not be an issue.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2013

24	72245024-Cut	36.9	4119 - Mixed Northern Hardwoods	High Density Pole	40	51-80	Harvest	Clearcut with Reserves	4110 - Sugar Maple Association	Cmpt. Review Proposal
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Prescription Final Harvest stand. Follow standard retention guidelines. Use islands to meet retention.

Specs:

Other

Any combination of sugar maple, red maple, aspen or beech is acceptable.

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2013

**Total Treatment
Acreage Proposed: 70.0**

Table 4 -- Treatments Prescribed with a Limiting Factor



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Error

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

**Out of YOE -- Treatments
Prescribed with No Limiting Factor**

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
72269_OYOE_cc	2.0					Harvest	Clearcut	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest except leave any beech, ash, and conifers. No additional retention specified due to small stand size and the proximity of retention in comp 268 stand 28. Set up concurrent with compt 268 (2014 YOE) stand 28.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Natural regen survey. Natural regen goal is a mixture of aspen, oak and hardwoods.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
72272_OYOE_ccr	5.6					Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest except leave the RP & WP. No additional retention due to small stand size. Run the north & west boundary to include the operable transition ground (where the densest black spruce cover is) down to the swamp. Cut all JP & Scotch pine stems regardless of merchantability. Harvest concurrent with the adjacent comp 268 stand 6 (aquired through the same land transaction). When harvesting this stand's planted SP, site a secondary landing immediately adjacent to the plantation so that Scotch pine doesn't get dragged through the general stand area, distributing its weed seed. Add hare habitat improvement spec to fell the red-painted boundary line trees bordering the swamp.</p> <p><u>Other Comments:</u> Protect the survey monument and any witness trees associated with the north quarter corner of section 22. Borders the Lovells KW Unit, Management Block 56.</p> <p><u>Next Steps:</u> Trench and plant JP to KW specs. May need site prep treatments (that could include burning, herbicide, etc.) to control scotch pine regen before planting. Artificial regen surveys. Acceptable regen is JP at stockings suitable for KW habitat, with minor components of naturally-established mixed deciduous and native conifer species.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
72289_OYOE_cc	6.7					Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest, leaving any RP, WP and white oak. No additional retention due to small stand size. Treat concurrent with the adjacent comp 290 stand 26.</p> <p><u>Other Comments:</u> Protect the survey monument and witness trees associated with the quarter corner common to sections 26 & 27.</p> <p><u>Next Steps:</u> Trench and plant JP to KW specs. Artificial regen surveys. Acceptable regen is JP at stockings suitable for KW habitat, along with naturally-established oak and pine.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									

**Total Treatment
Acreage Proposed: 14.3**

S t a n d	Grayling Mgt. Unit		5 – Forested Stands			Compartment: 245	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
1	4112 - Maple, Beech, Cherry Association	Medium Density Pole	9.3	28			small diameter mixed hardwood stand. Has a fair amount of red maple and beech in it.
3	4116 - Mixed N. Hardwood - Aspen	High Density Pole	28.3	48	51-80		
4	4319 - Mixed Upland Forest	Low Density Sapling	44.5	40	1-50		Stand swapped from Non-Forested to Forested.
5	4130 - Aspen	High Density Sapling	50.1	17			great aspen regen .
6	4112 - Maple, Beech, Cherry Association	High Density Pole	9.3	55	51-80		Northern hardwood stand. Thinned to approx 70 BA in 2001.
7	4130 - Aspen	High Density Sapling	20.8	17			nice aspen regen
8	4130 - Aspen	High Density Sapling	6.2	17			Young aspen stand. Was cut in 1995.
9	4112 - Maple, Beech, Cherry Association	Medium Density Pole	38.6	55	51-80		small dia hardwood stand. lots of beech in understory. Do nothing at this time.
10	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	8.0	61	51-80		decent hardwood stand. some beech mortality. no sign of bbd.
11	4130 - Aspen	High Density Sapling	1.1	17			Stand swapped from Non-Forested to Forested.
13	4130 - Aspen	High Density Sapling	15.0	17			nice aspen regen.
14	4112 - Maple, Beech, Cherry Association	Medium Density Pole	55.9	60	51-80		large red and sugar maple. dense beech and blackberry understory in places.
15	42110 - Planted Red Pine	High Density Pole	33.1	52	171-200		red pine has been third row thinned. put on good growth after. rings are pretty tight. growth has slowed. could thin. has self pruned nicely. Spoke with wildlife about contacting adjacent landowner about potentially treating their red pine at the same time.
17	4112 - Maple, Beech, Cherry Association	High Density Pole	8.5	60	81-110		Hardwood stand, nothing needs to be done at this point. Re-visit in ten and could possibly thin.
18	42110 - Planted Red Pine	High Density Pole	8.8	28	81-110		red and white pine plantation.
20	4130 - Aspen	High Density Sapling	58.2	27			nice aspen regen.



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Grayling Mgt. Unit

5 – Forested Stands

Compartment: 245
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4199 - Other Mixed Upland Deciduous	High Density Pole	323.8	73	51-80	young hdwd stand. has some dense small pockets of aspen throughout. stand is huge but more or less very similar throughout. likely the same year of origin.
24	4119 - Mixed Northern Hardwoods	High Density Pole	36.9	40	51-80	maple and aspen stand with a very thick red maple understory. aspen is fair quality. could cut to regenerate. would have to run over rm to give it a chance. Couldnt get a very good idea on age due to the trees having soft centers when cored.
25	4112 - Maple, Beech, Cherry Association	Medium Density Pole	101.5	60	51-80	sugar/red maple stand with some large canopy oak. was thinned. not much regen except for beech.
26	4111 - S.Maple, Hard Mast Association	High Density Pole	38.2	48	51-80	hardwood stand with a fair amount of beech. most is pole size. some nice sugar maple. lots of nice 3" sugar maple in understory. could release.
27	4199 - Other Mixed Upland Deciduous	High Density Pole	16.4	56	51-80	decent sugar maple, lots of overmature poor quality aspen. Could cut, but it would convert to aspen. Might just want to leave it and let the aspen die to promote the hardwood.
28	4130 - Aspen	High Density Sapling	148.7	18		Young aspen stand, has some larger pine and oak within.
29	4130 - Aspen	High Density Sapling	50.7	5		good aspen regen.
31	4130 - Aspen	High Density Sapling	104.8	28		decent sized aspen good growth.
33	4130 - Aspen	High Density Sapling	11.9	12		aspen clearcut. good regen.
34	4133 - Aspen, Mixed Pine	High Density Sapling	166.4	10		small diam aspen with dense pockets of mixed pine throughout. mostly whitepine, pole sized. rolling hills throughout.
35	6127 - Lowland Pine	High Density Pole	15.9	50	51-80	mixed pine stand around a small lake.
39	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	2.9	30		Didnt make it to this stand and didnt realize it until I got past stage 1. According to past OI it is a lowland conifer stand.
41	4124 - Red with White Oak	Medium Density Log	25.2	75	51-80	Oak stand was thinned in 2006. Rolling terrain.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	710 - Sand, Soil	0.9	No	Low (NonForested)	Well site, lots of knapweed.
12	710 - Sand, Soil	1.7	No	Low (NonForested)	Well site. Lots of knapweed.
16	710 - Sand, Soil	4.6	No	Low (NonForested)	Well site, lots of knapweed.
19	710 - Sand, Soil	3.2	No	Low (NonForested)	well site. Lots of knapweed.
21	3102 - Grass	49.6	No	Low (NonForested)	Large open area with some scattered pine.
23	3102 - Grass	4.1	No	Low (NonForested)	Well site, lots of knapweed.
30	710 - Sand, Soil	2.5	No	Low (NonForested)	well site. lots of knapweed.
32	50 - Water	30.9	No	Unspecified	section one lake.
36	50 - Water	7.7	No	Unspecified	Marsh Lake
37	50 - Water	1.0	No	Unspecified	
38	122 - Road/Parking Lot	3.6	No	Unspecified	Public Access site. Has some red pine on it.
40	3102 - Grass	158.2	No	Unspecified	military range.
42	3102 - Grass	0.9			great aspen regen .
43	6225 - Bog	1.8	No	Lowland Mixed Forest	Bog inside of military range fence.
44	6225 - Bog	1.1	No	Lowland Mixed Forest	Big within the military range fence.
45	6225 - Bog	13.7	No	Lowland Mixed Forest	bog within the military range fence.
46	310 - Herbaceous Openland	0.8			young hdwd stand. has some dense small pockets of aspen throughout. stand is huge but more or less very similar throughout. likely the same year of origin.



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
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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.
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
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.