



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 170 ENTRY YEAR: 2012

GIS Compartment Acreage: 1,255 County: Crawford

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**Revision Date: June 15, 2010**

**Stand Examiner:** Patrick A. Mohney

**Legal Description:** T28N, R04W, Sections 7 and 8

### **Management Goals:**

To maintain forest health, productivity, sustainability, species diversification and structural diversity throughout the compartment while providing for multiple use and visual management.

**Soils and Topography:** Topography within this compartment is made mostly flat ground with some rolling hills becoming steeper as you travel through the eastern portion of the compartment. Along the river, there are steep banks which level off into flat areas. Soil types are a mixture of Rubicon, Blue Lake, Kalkaska, Croswell, Au Gres and Blue Lake Loamy Sands. There are also areas of Au Sable Bowstring Muck and Tawas Leaf-river Muck. The soils are well drained and pose minimal threat for wind throw. Soils and terrain present erosion concerns in steep areas in the compartment

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

This compartment has very little private property within its boundaries. There is a small two acre parcel owned by a private individual and another small parcel which is currently owned by Crawford Au Sable School District. A 4077 land acquisition form has been filed to try and acquire the parcel from the school district. This property was originally owned by D. Ward and was eventually turned over to the State of Michigan shortly after the logging era was coming to a close. The small town of Deward was located in this area and some of the roads and foundations can still be seen today. The land use is somewhat restricted due to it being within the Deward Area. There are no motorized vehicles off of designated roads. However management for timber and wildlife is still an option.

### **Unique, Natural Features (include only non-site specific and non-sensitive information):**

There is a potential for dry prairie plants in grassy openings. Hill's thistle, rough fescue, Alleghany plum and pale agoseris. There is also potential for rare grassland birds such as grasshopper sparrow, Henslow's sparrow and Eastern Massasauga rattle snake. Neighboring compartments have historically had Eastern Massasauga Rattle Snake.

### **Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):**

There is a historic stump field located within this compartment. There is also the historic town of Deward, which has numerous foundations within this compartment.

**Special Management Designations or Considerations:** This compartment is located within the Deward Tract. It is currently designated as an HCVA (High Conservation Value Area). There are camping restrictions, motorized vehicle restrictions and road closure procedures that are to be followed in this area.

**Watershed and Fisheries Considerations:** The Manistee River, which is a Natural River runs through the western portion of this compartment. There is a large woody debris project taking place along the Manistee River as well. Large amounts of woody debris is being added and anchored to the banks of the river in various locations to stabilize the soils and provide cover for fish.

**Wildlife Habitat Considerations:**

The main objective of this compartment is to start removing the red pine plantations while attempting to convert this area back to a natural pine and an oak dominated landscape. There are some aspen clones that can be expanded as well.

**Mineral Resource and Development Concerns and/or Restrictions:**

Sections 7 & 8, T28N - R04W, Crawford County

Surface sediments consist of glacial and ice-contact outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 1000 feet. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is two miles to the east, and gravel potential is thought to be good on the upland areas. Most of the State land in the compartment has been leased for oil and gas. The Antrim Shale and Niagaran Reefs are the producing formations in the area.

**Vehicle Access:** There is very good access throughout the compartment by way of county roads, forest roads and gas pipeline and well access roads. The compartment contains the following county designated roads: Manistee River Rd., Post Rd. and Deward Rd. State forest trails such as Wentworth Trail.

**Survey Needs:** Lacking survey corners in the interior of the compartment. These locations are not needed for treatments at this time.

**Recreational Facilities and Opportunities:**

There are no motorized ORV, motorcycle or snowmobile trails that go through this compartment.

**Fire Protection:** The current road system is adequate, timber conversion is not needed. Topography will be limiting for equipment in certain locations.

**Additional Compartment Information:**

**LOTS Compartment Acreage: 1,255 acres**

➤ **The following reports are available:**

- ◆ **Cover Type by Age Class**
- ◆ **Proposed Treatment Summaries**
- ◆ **Dedicated Conservation Area Details**
- ◆ **Listing of Forested Stands**
- ◆ **Listing of Non-Forested Stands**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**

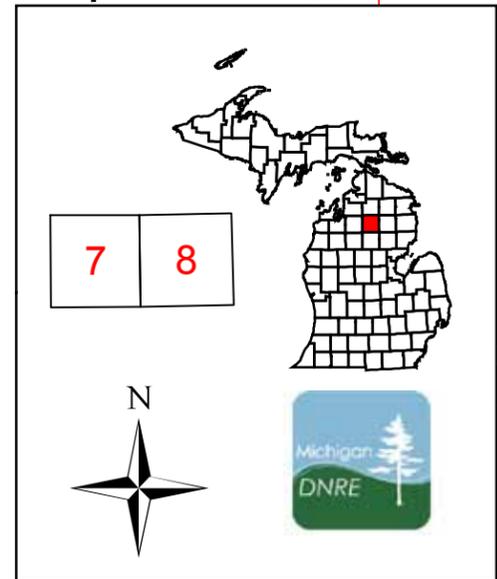
➤ **The following information is displayed, where pertinent, on the attached compartment maps:**

- ◆ **Base feature information, stand numbers, cover types, recreation trails and facilities**
- ◆ **Proposed treatments**
- ◆ **Proposed road access system**
- ◆ **Special Conservation areas**

# Cover Type & Treatment Map

Compartment 170  
 T28N, R04W, Sec. 07.08  
 County: Crawford  
 Unit: Grayling  
 YOE: 2012  
 Acres: 1,255 GIS Calculated  
 Stand Examiner: Patrick Mohney  
 Map Revised: 9/07/2010  
 Map Phase: Pre-Review

84°48'0"W



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

### Legend

- RIs Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Pipelines
- Trails
- Intermittent Stream/Drain
- Stream
- ORV Trails
- ORV Routes
- Snowmobile Trails

### Treatments

- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)

### Forest Stands

Level 3

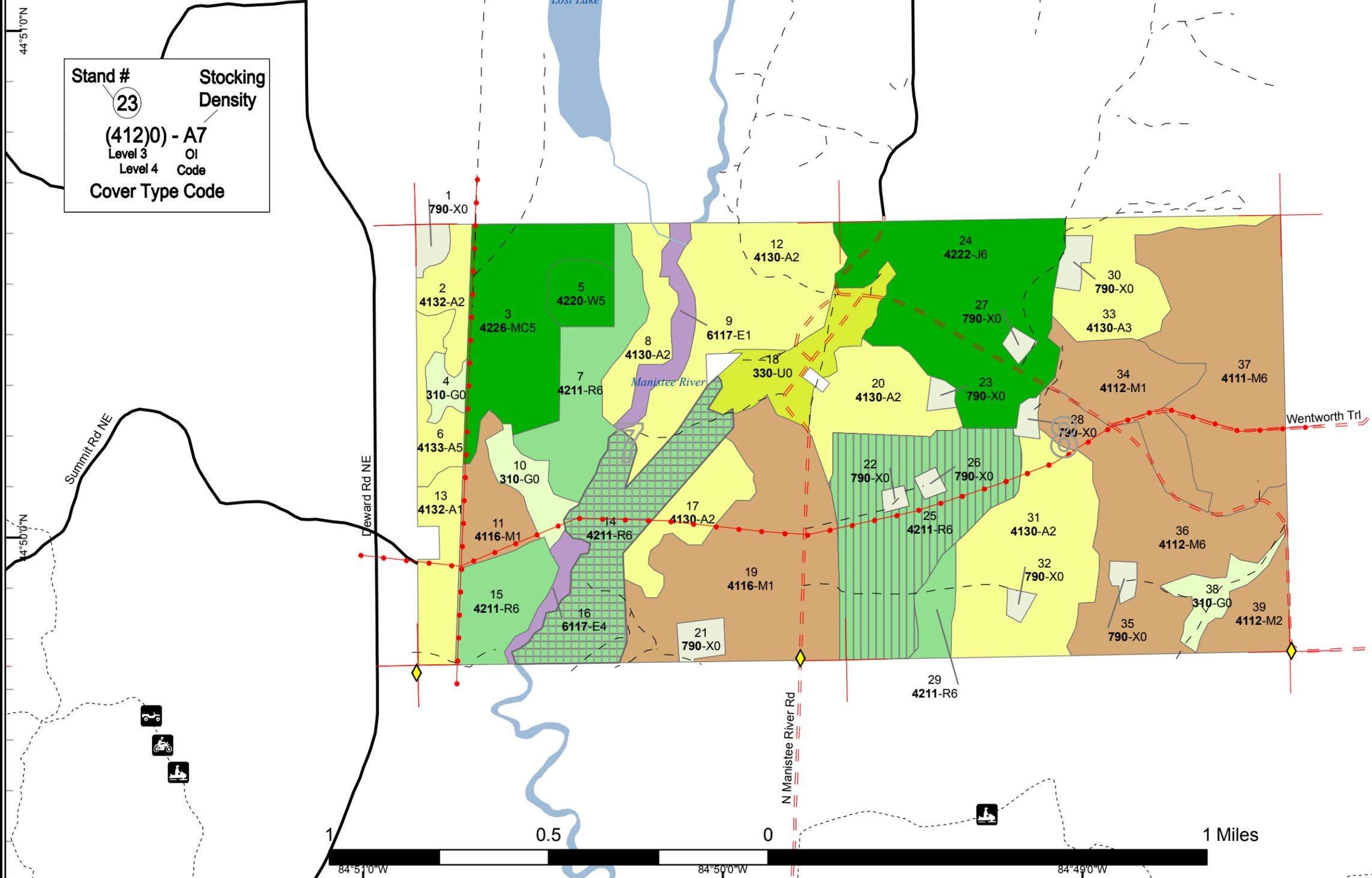
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest

### Non-Forest Stands

Level 3

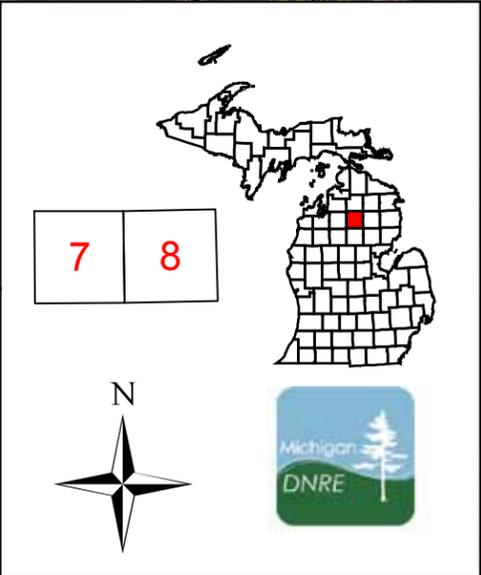
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 790 - Other Bare/Sparsely Vegetated

44°51'0"N  
44°50'0"N  
84°51'0"W  
84°50'0"W  
84°49'0"W  
84°48'0"W



# Stand Boundary Map

Compartment 170  
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 23  
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**Legend**

- RIs Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Pipelines
- Trails
- ORV Trails
- ORV Routes
- Snowmobile Trails
- Stand Boundaries

**Forest Stands**

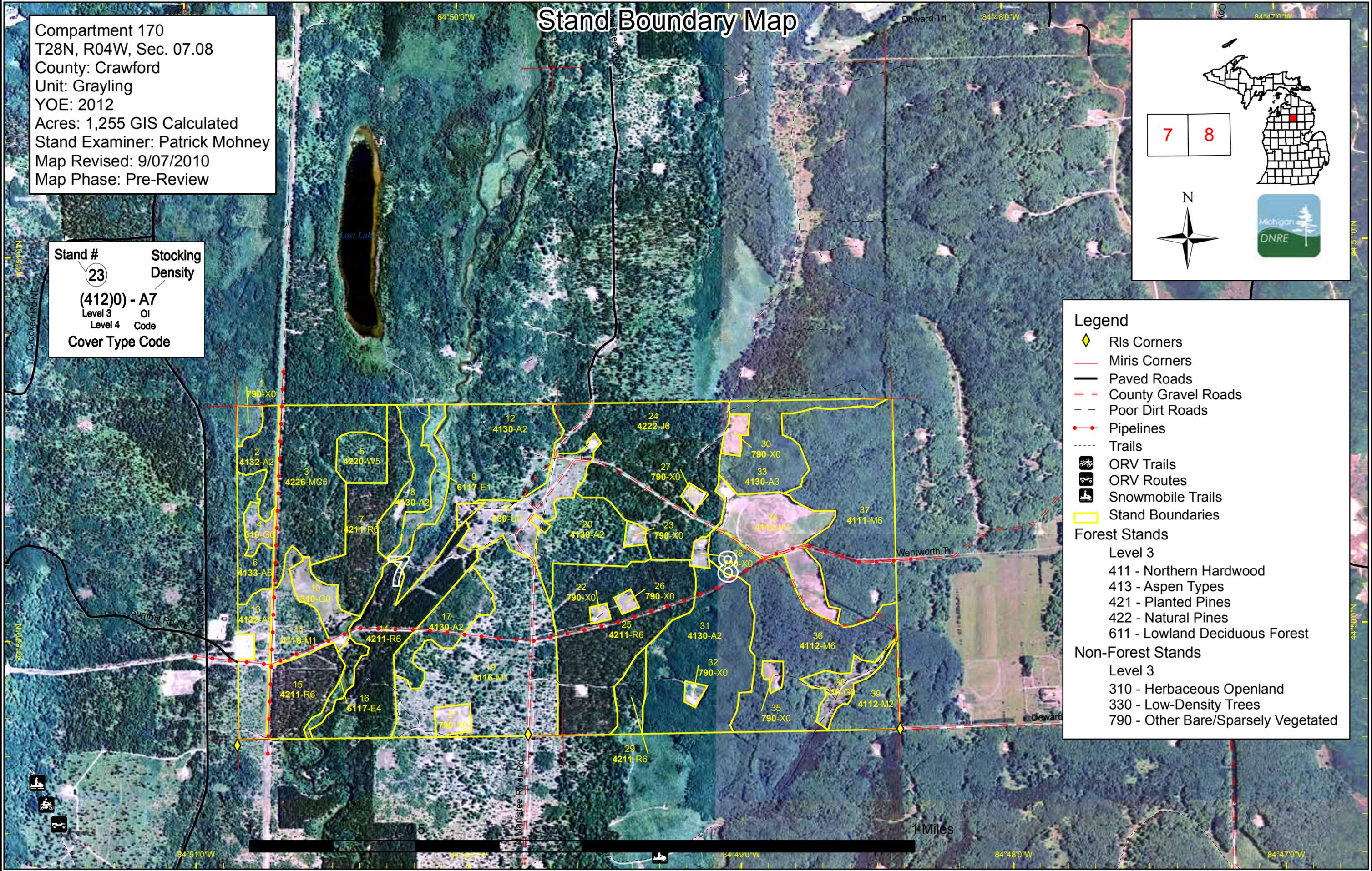
Level 3

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**Non-Forest Stands**

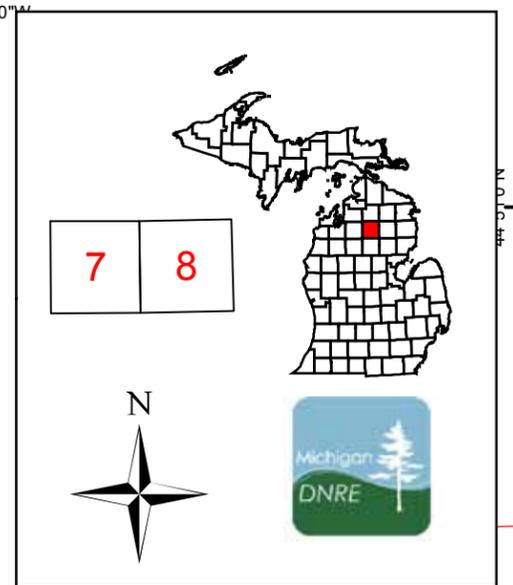
Level 3

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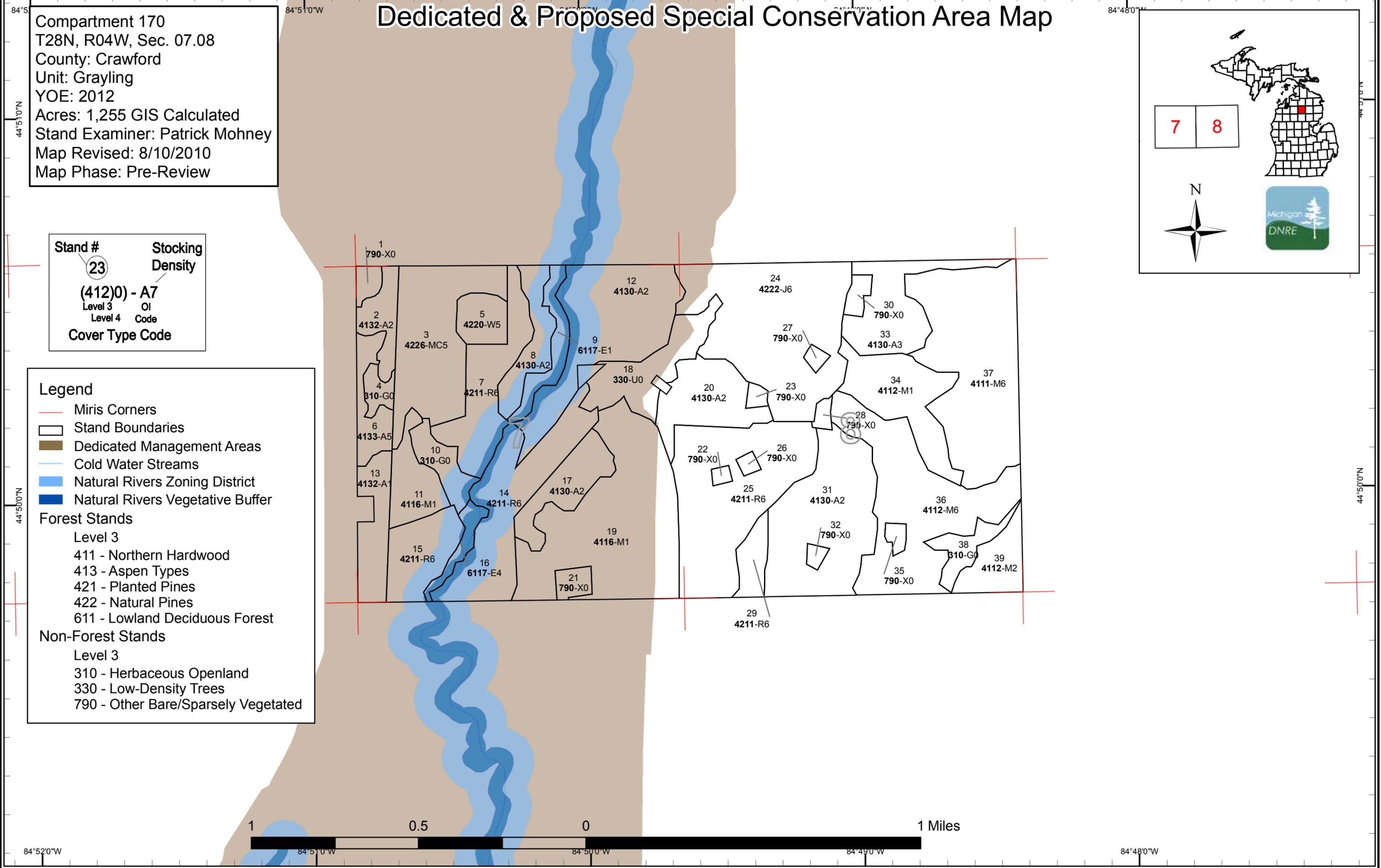
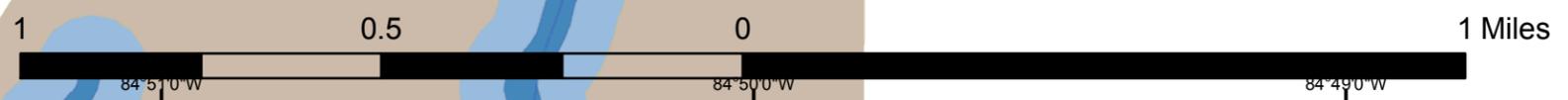
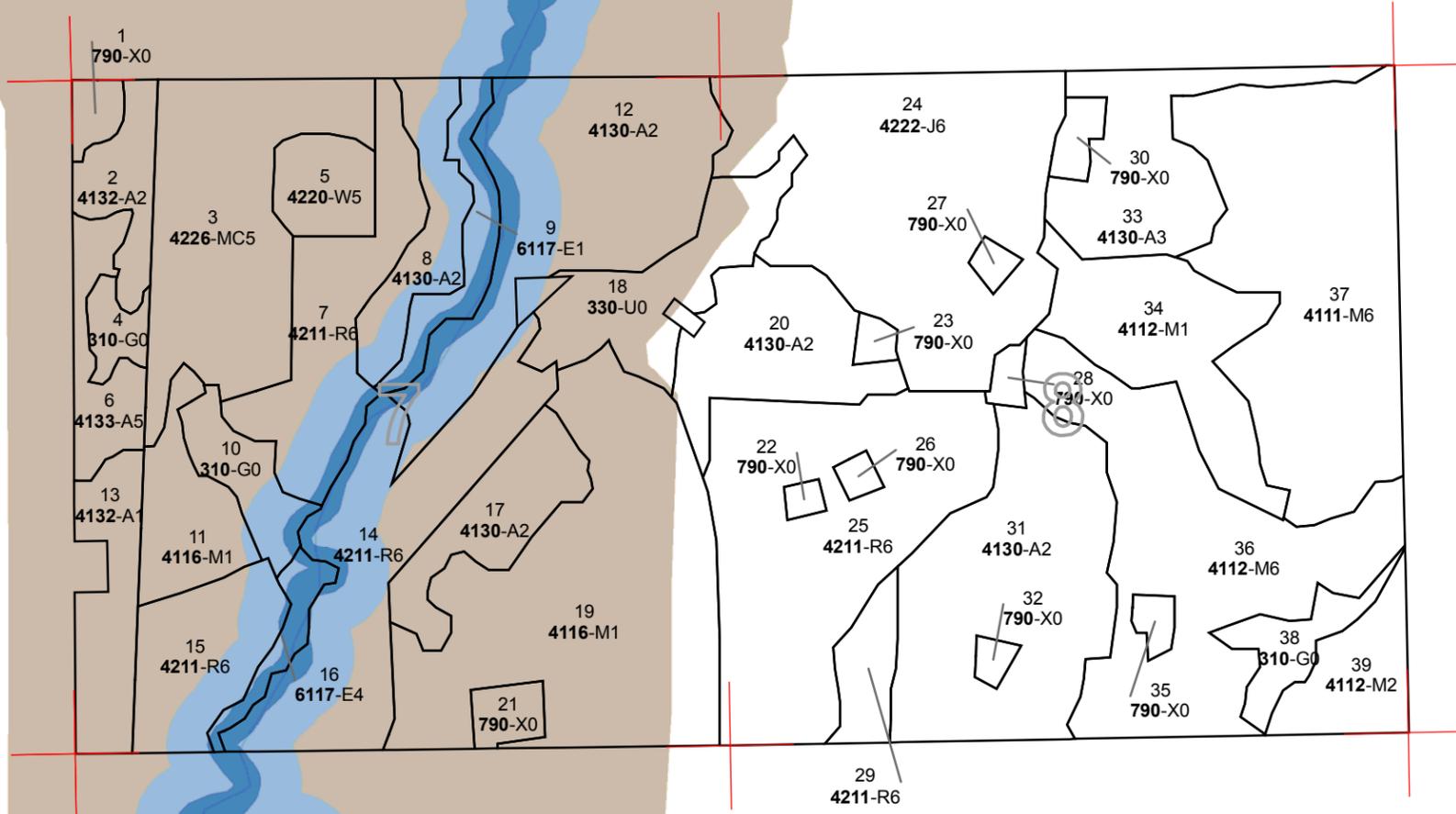
# Dedicated & Proposed Special Conservation Area Map

Compartment 170  
 T28N, R04W, Sec. 07.08  
 County: Crawford  
 Unit: Grayling  
 YOE: 2012  
 Acres: 1,255 GIS Calculated  
 Stand Examiner: Patrick Mohney  
 Map Revised: 8/10/2010  
 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 Management Areas
  - Cold Water Streams
  - Natural Rivers Zoning District
  - Natural Rivers Vegetative Buffer
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 413 - Aspen Types
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 611 - Lowland Deciduous Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
  - 330 - Low-Density Trees
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**Table 1 – Total Acres by Cover Type and Age Class**

Data updated before 2:00 PM



	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 +		Uneven Age
Aspen	0	0	38	99	0	147	24	16	0	0	0	0	0	0	0	324
Bare/Sparsely Vegetated	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Herbaceous Openland	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Jack Pine	0	0	0	0	0	108	0	0	0	0	0	0	0	0	0	108
Low-Density Trees	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Lowland Deciduous	0	0	0	0	0	15	8	0	0	0	0	0	0	0	0	22
Natural Mixed Pines	0	0	0	0	0	0	67	0	0	0	0	0	0	0	0	67
Northern Hardwood	0	0	42	0	0	256	89	0	0	0	0	0	0	0	0	387
Red Pine	0	0	0	0	0	0	237	0	0	0	0	0	0	0	0	237
White Pine	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	14
<b>Total</b>	<b>97</b>	<b>0</b>	<b>80</b>	<b>99</b>	<b>14</b>	<b>525</b>	<b>425</b>	<b>16</b>	<b>0</b>	<b>1255</b>						



## Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

**Grayling Mgt. Unit**  
**Year of Entry 2012**

**Compartment 170**  
**Total Compartment Acres: 1255**

### Acres by Treatment Type

Commercial Harvest - 155	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
Red Pine	0	0	64	91	0	0	155
<b>Total</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>155</b>

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Data updated before 2:00 PM

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14 72170014-Cut	63.7	42110 - Planted Red Pine	High Density Pole	55	Harvest	Seed Tree	Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription: Shelterwood Red Pine. Sale must be whole tree harvested, slash must be chipped. This is to establish stand as a comparison so the stands directly south in compartment 171. Mark large limby red pine with pink paint to double girdle for snag creation. Underplant oak acorns throughout stand to try and establish an oak component underneath the remaining red pine. Remove any maple or aspen in the stand, leave any oak. Randomly underplant white pine seedlings. When setting up stand boundary for the sale, be aware and exclude any portion of the sale area that relates to the old town of deWard. Example : Foundations, railroad grades, etc... This can be excluded from the stand boundary or protected through retention.

Other Comments: This is to attempt to re-establish white pine as a major component in the DeWard area.

Next Steps:

25 72170025-Cut	91.3	42110 - Planted Red Pine	High Density Pole	55	Harvest	Shelterwood	Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: Mark Red Pine to approx 30-50 BA. Mark for quality. Remove any aspen or maple that is in stand. Leave any oak. Mark 3-5 large diameter red pine (not white pine) per acre for snag creation

Other Comments:

Next Steps:

**Total Treatment  
Acreage Proposed: 155.0**



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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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#Error

Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Limiting Factor and No  
Treatment Reason

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**Total Treatment**  
**Acreage Proposed:        0**

Data updated before 2:00 PM

Out of YOE -- Treatments  
Prescribed with No Limiting Factor

Year of Entry: 2012



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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  
Comments:

Next  
Steps:

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**Total Treatment  
Acreage Proposed: 0**

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## Grayling Mgt. Unit

5 – Forested Stands  
Data updated before 2:00 PMCompartment: 170  
Year of Entry: 2012

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4132 - Aspen, Jack Pine	Medium Density	15.1	42	1-50	lots of small aspen throughout the stand. Some larger white pine scattered throughout.
3	42260 - Natural Pine, Mixed Deciduous	Medium Density Pole	67.0	50	1-50	This stand is mostly poor quality aspen with some white pine and black cherry scattered throughout. No sense in any treatments, I am not sure you would get any regeneration.
5	42200 - Natural White Pine	Medium Density Pole	13.7	30	1-50	A fair amount of smaller white pine. Mostly pole sized. The maple was removed in 1994, fair amount of understory regen present.
6	4133 - Aspen, Mixed Pine	Medium Density Pole	16.0	60	1-50	poor quality aspen, of the stuff that is merchantable most is only 1 or 2 sticks. Lots of small regen, all very poor quality. Lots of down woody debris, white pine is starting to move in along the edges. There is also no good access to this stand without building a road which will lead right to the river. Do nothing.
7	42110 - Planted Red Pine	High Density Pole	41.8	50	81-110	poor quality red pine. Short and limby. Third row thinned in 1998. Wait ten years and final harvest or seed tree/shelterwood.
8	4130 - Aspen	Medium Density	21.1	20		This stand has a fair amount of small diameter aspen and white pine mixed throughout. Some red maple as well.
9	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Sapling	14.7	40		This stand does not seem to have much growing along the river bank. Some aspen, some cherry brush, etc... It is within the natural river corridor, no prescription.
11	4116 - Mixed N. Hardwood - Aspen	Low Density Sapling	21.0	40		U type stand. Lots of cherry brush and some pockets of poor quality aspen. Some white pine mixed in here and there.
12	4130 - Aspen	Medium Density	73.4	44	1-50	poor qual aspen, mostly very small.
13	4132 - Aspen, Jack Pine	Low Density Sapling	23.5	40	1-50	Stand swapped from Non-Forested to Forested.
14	42110 - Planted Red Pine	High Density Pole	63.7	55	81-110	Poor quality, short and limby, poor site for red pine. Heavy thin. Mark to 50 along river, and mark to lower BA as you move away from river. Mark regen openings away from river. Whole tree harvest, no slash. Plant oak acorns at random spacing.
15	42110 - Planted Red Pine	High Density Pole	28.6	50	81-110	Poor quality, short and limby, poor site for red pine. Has been third row thinned. Wait ten years, could possibly clearcut or seed tree at that point.
16	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	7.6	55	1-50	natural rivers corridor, on banks of manistee, some larger aspen, mostly small red maple and aspen regen.
17	4130 - Aspen	Medium Density	24.4	57	1-50	small aspen, poor quality. could cut in the future to get some regen. Would be low volume.

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Grayling Mgt. Unit

## 5 – Forested Stands

Compartment: 170

Data updated before 2:00 PM

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4116 - Mixed N. Hardwood - Aspen	Low Density Sapling	112.3	40	1-50	Stand swapped from Non-Forested to Forested.
20	4130 - Aspen	Medium Density	34.7	44	1-50	small poor quality aspen. old village of deward.
24	42220 - Natural Jack Pine	High Density Pole	107.6	40	81-110	dense smaller jack pine, decent aspen component. large poor qual oak. Some larger Red Pine throughout. Could remove jack pine, oak and aspen, leave the red pine. Would come back as aspen and possibly some oak. Could try and burn to get some natural jack pine regen, but being in the deward area, the soils have been pretty abused by fire in the past.
25	42110 - Planted Red Pine	High Density Pole	91.3	55	81-110	third row thinned in 1998. still pretty small and limby could wait ten more years. Hardwood in stand was girdled.
29	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	11.4	55	51-80	poor quality aspen, oak and red pine. Some open areas.
31	4130 - Aspen	Medium Density	78.2	25	1-50	small poor quality aspen. some of it is reaching merchantable size. Could cut in the future to try and get better quality regen.
33	4130 - Aspen	High Density Sapling	37.5	17		
34	4112 - Maple, Beech, Cherry Association	Low Density Sapling	42.2	12		Stand swapped from Non-Forested to Forested.
36	4112 - Maple, Beech, Cherry Association	High Density Pole	89.0	55	81-110	nice stand. nice sugar maple. could be thinned in ten yrs possibly. steep terrain.
37	4111 - S.Maple, Hard Mast Association	High Density Pole	103.1	40	51-80	lots of nice sugar maple. all is very small and still non merch. some steep terrain in stand. similar to stand 1, just smaller dia.
39	4112 - Maple, Beech, Cherry Association	Medium Density	19.4	40	51-80	similar to stands 1 and 28, lots of non merch. could possibly thin in ten yrs. some steep terrain.



Stand	Cover Type	Acres	Gen Cmts:
1	790 - Other Bare/Sparsely Vegetate	4.7	lowland area, some tag alder, balsam, etc...
4	3105 - Mixed Upland Herbaceous	6.4	some aspen, cherry brush, some pine mixed in.
10	3105 - Mixed Upland Herbaceous	14.1	
18	3301 - Low Density Deciduous Tree	32.4	4077 has been submitted to acquire small parcel of land that is currently owned by the Crawford AuSable School District.
21	790 - Other Bare/Sparsely Vegetate	5.9	
22	790 - Other Bare/Sparsely Vegetate	1.8	wellpad
23	790 - Other Bare/Sparsely Vegetate	2.5	oil wellpad
26	790 - Other Bare/Sparsely Vegetate	2.0	wellpad
27	790 - Other Bare/Sparsely Vegetate	2.2	old well pad
28	790 - Other Bare/Sparsely Vegetate	2.8	
30	790 - Other Bare/Sparsely Vegetate	4.6	
32	790 - Other Bare/Sparsely Vegetate	2.2	wellpad
35	790 - Other Bare/Sparsely Vegetate	3.0	old well site
38	3105 - Mixed Upland Herbaceous	12.1	scattered cherry and sumac. deward road mix sale landing is in this stand.



### 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.

*Data updated before 2:00 PM*

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.

*Data updated before 2:00 PM*

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	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR.
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.