



## GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 236 ENTRY YEAR: 2011

GIS Compartment Acreage: 985 acres County: Crawford

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**Revision Date:** 8/11/09

**Stand Examiner:** Craig Farrer

**Legal Description:** T26N, R03W Section 1, 12 and 13, South Branch Township.

**Management Goals:** To manage and maintain species and structural diversity, forest health, productivity and sustainability throughout the compartment. At the same time, account for visual management; multiple use of the land, and give special consideration to Keystone State Forest Campground and the AuSable River, a Wild and Scenic / Natural River.

**Soils and Topography:** Soil types within this compartment consist mostly of Grayling sands, Graycalm sands, Croswell/Au Gres sands, Grayling/Graycalm sands and Lupton/Tawas muck in pockets along the Au Sable River. Topography is generally flat north of M-72 East with the exception of the Au Sable River Valley, and it gradually turns to rolling terrain south of M-72 East.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The compartment is comprised of approximately one-half state ownership and one-half private ownership. A small block of state land is located north of the Au Sable River in the northwest corner of section 1. The remaining state land is located south of the Au Sable River in sections 12 and 13 and is divided by M-72 East. The compartment is bisected by the Au Sable River and much of the river frontage is under private ownership. Many of the private landowners use state trails to access their private property. The compartment also contains Keystone Landing State Forest Campground.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** The Au Sable River, a Scenic and Wild/Natural River, is a unique and natural feature that flows through the compartment. The Hill's Thistle, a plant of special concern, has also been found within this compartment. There is also the potential for other plants and animals of special concern within this compartment.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** None known at this time.

**Special Management Designations or Considerations:** We will consider management of and protection of the Hill's Thistle, a plant of special concern. The Au-Sable River is a designated Scenic and Wild/Natural River and designated trout stream that needs special considerations along with Keystone Landing State Forest Campgrounds. Visual management is of concern within the compartment due to the major roads and private ownership.

**Watershed and Fisheries Considerations:** The Au Sable River flows through section 12 of this compartment. It is a designated natural river and is a designated trout stream.

**Wildlife Habitat Considerations:** To manage and maintain existing cover types within the compartment and to improve habitat conditions for a wide variety of non-game and game wildlife. Deer winter in the stands along the Au Sable River.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift are the Michigan Formation and the Marshall Sandstone. The Michigan is quarried for gypsum and the Marshall was used as a building stone elsewhere in the State. Gravel pits are not located in this area, but potential is good on the uplands. The Compartment is not currently leased for oil and gas development. All state ownership in section 1 and those adjacent to the Au Sable River in section 12 are classified as non-development for oil and gas development. The remaining lands in the compartment are classified as development.

**Vehicle Access:** Lands north of the river can easily be accessed from North Down River Road and Whirlpool Road, both county roads. Lands south of the river are easily accessible from county roads of M-72 East, Thendara Road, and Keystone Landing Road. Multiple trail roads exist in section 12, many of which provide access to private residences. Two main access routes appear to be used heavily in this area by private landowners. Several other trail roads in section 12 were closed and planted over last entry year due to trash dumping and fire problems experienced within the area. All new roads created in this compartment for treatment of stands are to be closed when treatment of those stand are completed.

**Survey Needs:** The establishment of survey corners and survey lines between state and private in the northeast of the southeast of section 12 is needed as does the east and west survey lines of section 13.

**Recreational Facilities and Opportunities:** Many recreational opportunities exist within this compartment, such as camping, canoeing, fishing and hunting. The compartment contains Keystone Landing State Forest Campground.

**Fire Protection:** This compartment contains dense and different age classes of jack pine along with grasses that are prone to fire. The road system within the compartment is adequate for fire equipment access and there is an adequate water source also within the compartment. The fire protection responsibility within this compartment falls with the Michigan DNR and the South Branch Volunteer Fire Department.

**Additional Compartment Information:**

**LOTS Compartment Acreage:**\_\_\_\_\_

- **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**

# Cover Type & Treatment Map™

Compartment 236  
 T26N, R03W, Sec. 1, 12, 13  
 County: Crawford  
 Unit: Grayling  
 YOE: 2011  
 Acres: 985 GIS Calculated  
 Stand Examiner: Craig Farrer  
 Map Revised: 9/03/2009  
 Map Phase: Pre-Review

1  
 12  
 13

N

Stand #  
 23  
 Stocking Density  
 (4120) - A7  
 Level 3 OI  
 Level 4 Code  
 Cover Type Code

### Legend

- Miris Corners
- Highways
- County Paved Road
- Paved Road
- Gravel Road
- Poor Dirt Road
- Intermittent Stream/Drain
- Stream
- Berms
- State Highway
- Lakes and Rivers

### Treatments

- Clearcut (w/Reserves, Patch/Strip)

### Forest Stands

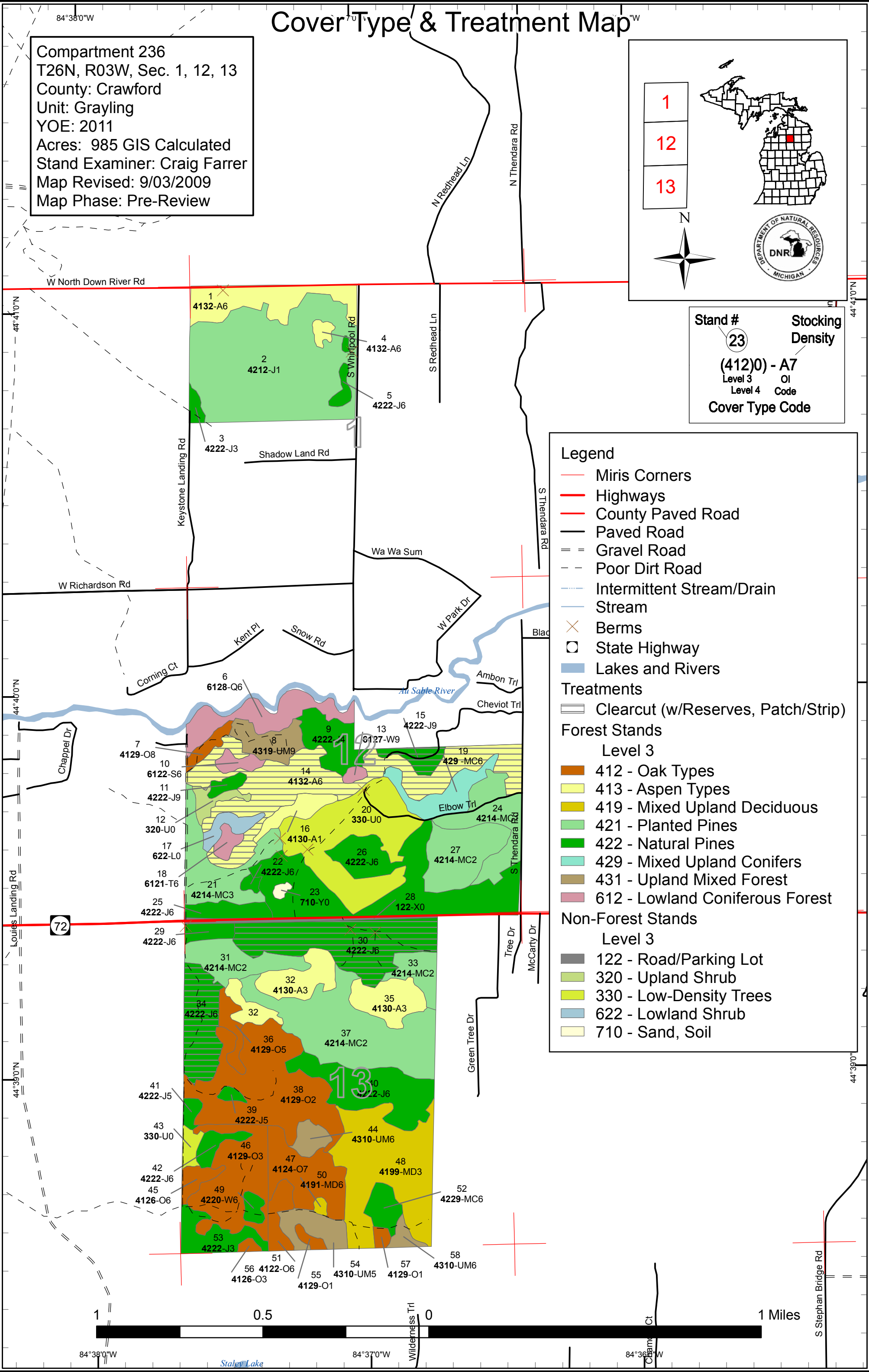
Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

### Non-Forest Stands

Level 3

- 122 - Road/Parking Lot
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 710 - Sand, Soil



# Stand Boundary Map

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**Stand #**  
 23  
**Stocking Density**  
 (4120) - A7  
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 Level 4 Code  
**Cover Type Code**

**Legend**

- Miris Corners
- Highways
- County Paved Road
- Paved Road
- = Gravel Road
- - Poor Dirt Road
- Intermittent Stream/Drain
- Stream
- ✕ Berms
- State Highway
- Stand Boundaries

**Forest Stands**

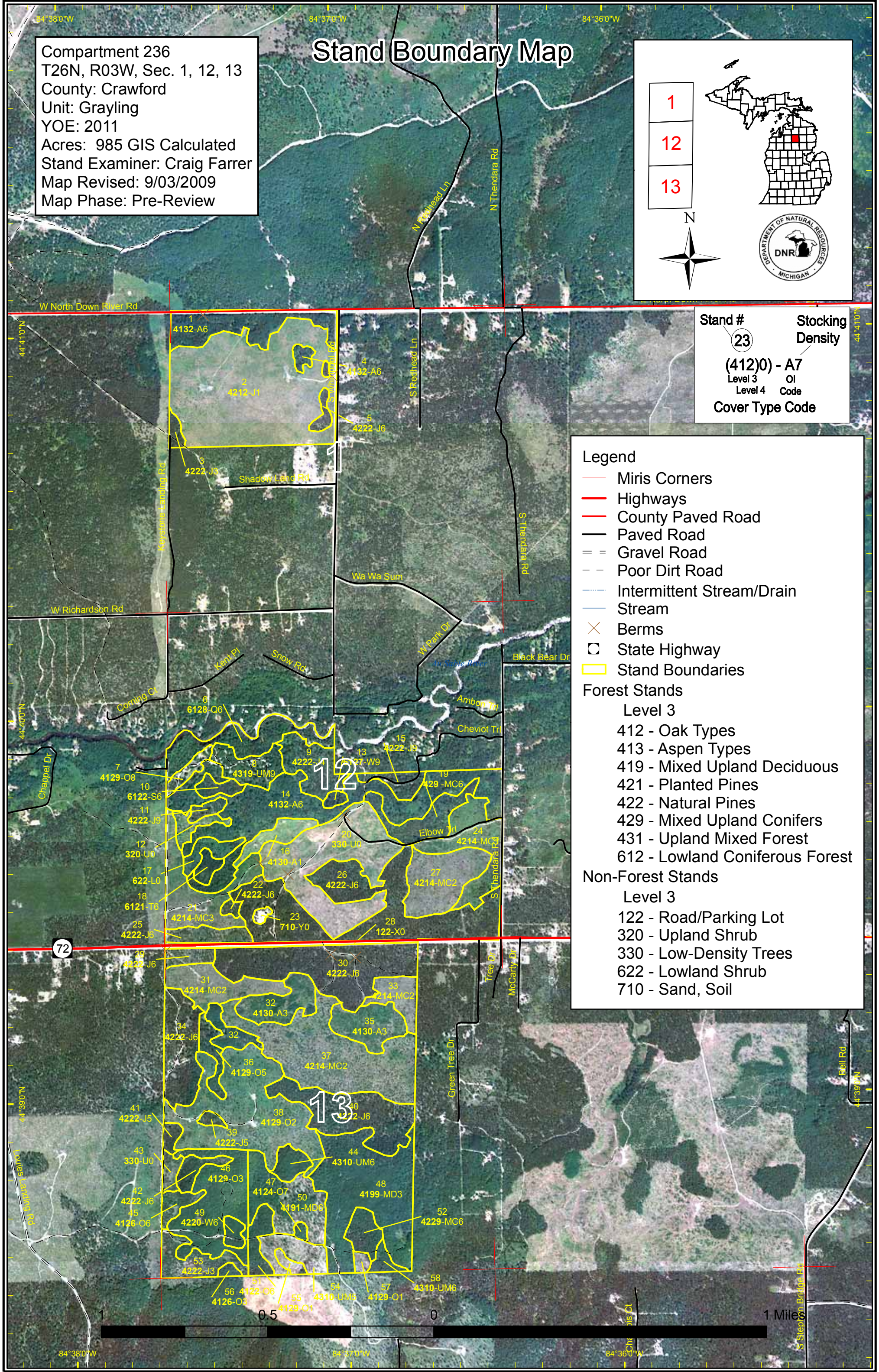
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**Non-Forest Stands**

Level 3

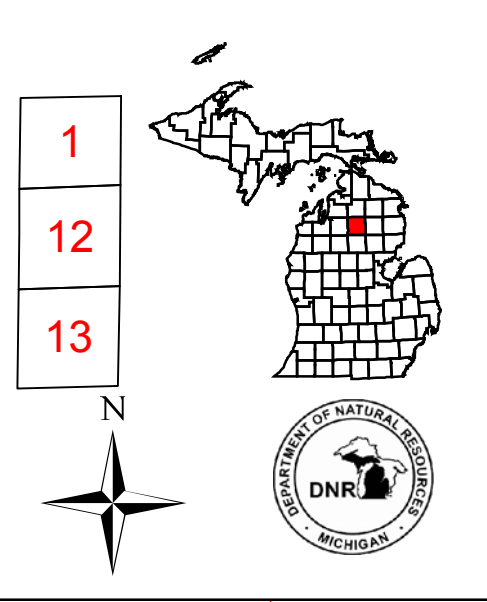
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# Dedicated & Proposed Special Conservation Area Map

84°35'0"W

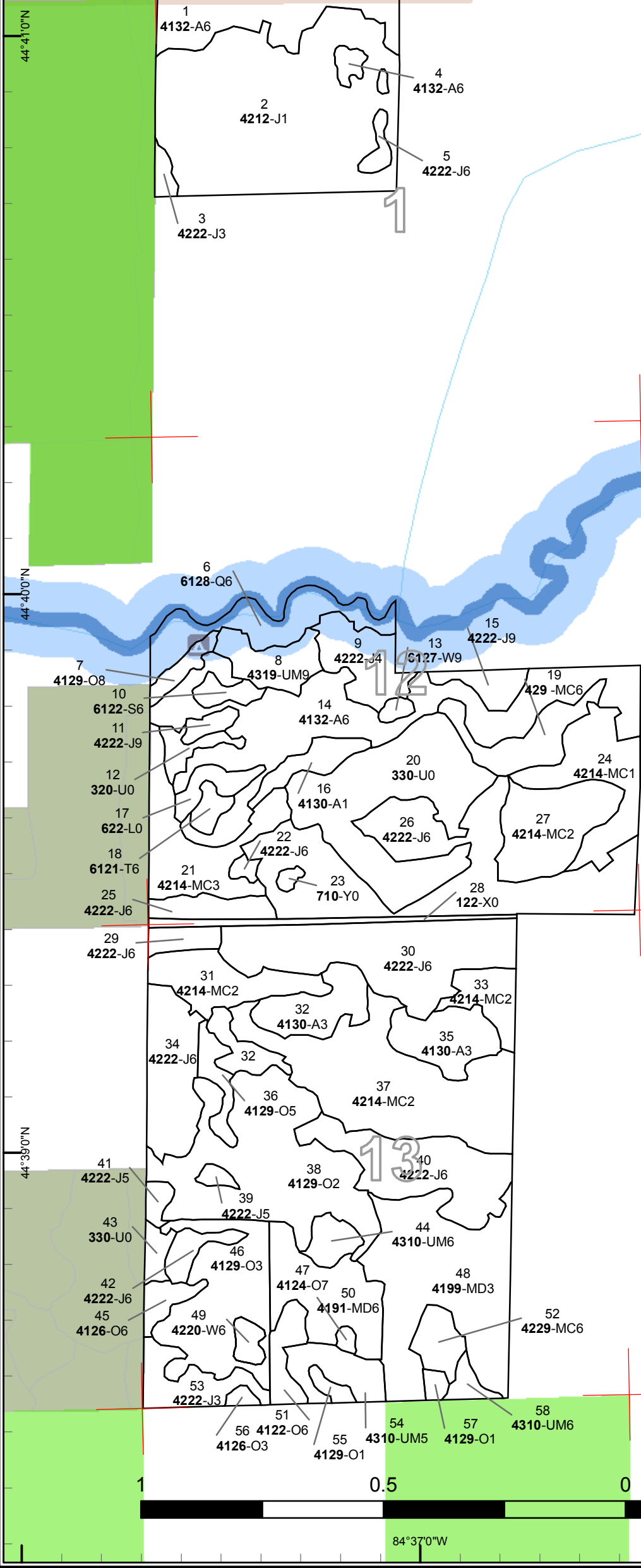
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Stand # **23**  
 Stocking Density  
**(4120) - A7**  
 Level 3 OI  
 Level 4 Code  
 Cover Type Code

### Legend

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas**
- Cold Water Streams
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Kirtland Warbler Habitat
- OI Special Conservation Areas
- Research, Development, and Military Lands
- ▲ Campgrounds
- Forest Stands**
- Level 3
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1 Miles

84°37'0"W

84°36'0"W

84°35'0"W

44°41'0"N

44°40'0"N

44°39'0"N

44°41'0"N

44°40'0"N

44°39'0"N

Grayling Mgt. Unit

**Covertime, Acres, and Age summary**  
(Level 3 Cover Type)

Compartment 236 Year of Entry 2011

Report Date: 09/03/2009



	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 Types	0	7	35	0	27	0	67	0	0	0	0	0	0	0	0	137
Low-Density Trees	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Lowland Coniferous Forest	0	0	0	0	0	4	0	0	0	0	2	3	0	21	0	30
Lowland Shrub	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Mixed Upland Conifers	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	14
Mixed Upland Deciduous	0	0	0	57	0	0	0	0	0	0	0	0	0	0	1	58
Natural Pines	0	0	15	14	2	47	34	122	0	9	0	0	0	0	0	243
Oak Types	0	64	0	40	0	7	0	0	6	24	4	0	0	0	0	145
Planted Pines	0	98	156	0	0	0	0	0	0	0	0	0	0	0	0	254
Road/Parking Lot	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Upland Mixed Forest	0	0	0	3	0	6	0	0	0	0	12	0	0	0	11	31
Upland Shrub	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<b>Total</b>	<b>73</b>	<b>169</b>	<b>207</b>	<b>113</b>	<b>29</b>	<b>78</b>	<b>101</b>	<b>122</b>	<b>6</b>	<b>33</b>	<b>18</b>	<b>3</b>	<b>0</b>	<b>21</b>	<b>12</b>	<b>985</b>

**PROPOSED TREATMENTS  
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
14 72236014-Cut	67.2	4132 - Aspen, Jack Pine	High Density Pole	52	Harvest	Clearcut with Reserves	Aspen, Mixed Conifer

Rev  
Cmnt:

Rev Final harvest all Apen, Red Maple and Jack Pine, but leave all White Pine, Spruce and Balsam Fir in this portion of the stand. Stand is on a high water table and should be cut in late fall or winter to avoid any rutting. Recommend leaving no Aspen, Red Maple or Jack pine retention in this portion of the stand. Treating a portion of this stand for age class diversity in Aspen, habitat management and regeneration purposes. Leave retention around the campground.

Next  
Steps: Evaluate in 3 years with an regeneration survey. Will accept a mix of species.

15 72236015-Cut	6.2	42220 - Natural Jack Pine	High Density Log	89	Harvest	Clearcut with Reserves	Natural White Pine
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Rev  
Cmnt: Corner and blue line partially in along private. Private landowner should be informed as to what we are doing.

Rev  
Spec: Cut all Jack Pine requardless of size, but leave Red Pine, White Pine Saw and Pole timber and protect as much of the White Pine regeneration.

Next  
Steps: Regeneration as to Work specifications. Will accept an other regeneration that comes into stand.

30 72236030-Cut	45.9	42220 - Natural Jack Pine	High Density Pole	65	Harvest	Clearcut with Reserves	Planted Jack Pine
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Rev  
Cmnt:

Rev  
Spec: Final harvest Jack Pine, Red Pine and Oak within the stand, accept leave all Red Pine within 5 chains from M-72 East. Include standard retention within the stand in the form of a patch or two of an acre in size. Leave the red pine in the strip along M-72 East

Next  
Steps: Ater harvest, trench and plant stand to Jack Pine.

34 72236034-Cut	22.3	42220 - Natural Jack Pine	High Density Pole	47	Harvest	Clearcut	Planted Jack Pine
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Rev  
Cmnt:

Rev  
Spec: Final harvest the Jack Pine and mixed Oak within the stand and use standard retention guidelines. Stand is some what rolling terrain and borders private property on the west side. Stand also includes a small bog in the south end of the it. Trench and plant over two track that runs through the stand.

Next  
Steps: After harvest is complete, stand needs to be next and planted to Jack Pine.

**Total Treatment  
Acreage Proposed: 141.5**

S  
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Grayling Mgt. Unit  
Inventory Method: IFMAP

**PROPOSED TREATMENTS  
WITH LIMITING FACTORS**

Compartment: 236      Entry Yr: 2011  
Date 09/03/2009



Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 1 of 1
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Limiting Factor  
and Comment:

Rev  
Cmnt:

Rev  
Spec:

Next  
Steps:

No Treatment  
Reason

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**Total Treatment  
Acreage Proposed:      0**



**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.

Inventory Method: IFMAP

Stand	SCA Name	Acres	Comments



**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
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
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	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.