

**CADILLAC FOREST MANAGEMENT UNIT****COMPARTMENT REVIEW PRESENTATION****COMPARTMENT # 101 ENTRY YEARS: 2010****Compartment Acreage (GIS Acres): 1827 County: Missaukee**

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**Revision Date: 12/01/2008 11:31 AM****Stand Examiner:** Steven Eisele. Forest Technician. Manton Field Office**Legal Description:** T21N, R5W, Sections, 22, 23, 24.**RMU (if applicable): 230****Management Goals:** Maintain species diversity. Address remaining mature jack pine areas. Continue to monitor regeneration in the jack pine areas that have been treated. Promote oak regeneration in the areas previously harvested.**Soil and Topography:** Rubicon and Grayling soil types. Steep areas in the western part of the compartment, Jack Pine areas to the east are mostly flat.**Ownership Patterns, Development, and Land Use in and Around the Compartment:** All state owned land except for a hunt club property in the south west section of 23. This would be a desirable acquisition. SWSW and SESW of 23.**Unique, Natural Features (include only non-site specific and non-sensitive information):** Muskegon River to the east of compartment. Old oxbow, meanders in the SESE area of section 24. Potential for Kirtland's warbler, prairie warbler, and dickcissel in openings of jack pine. Potential for dusted skipper, grizzled skipper and red-legged spittlebug in grassy openings. Potential for Hill's thistle and rough fescue in grassy openings of jack pine. Potential for bog bluegrass in swamp hardwoods.**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** Old fire tower location in NW of section 22. The foundation is all that remains and a location cap.**Special Management Designations or Considerations:** Manage the jack pine and continue to maintain age and species diversity.

**Watershed and Fisheries Considerations:** There is no water in the compartment.

**Wildlife Habitat Considerations:** Comp. 101

Priority wildlife species are deer, ruffed grouse, and woodcock. There are nine compartments in RMU 230. Agreements called for an increase of 300 acres in aspen, an increase of 40 acres in red/white pine, and a decrease of 300 acres in oak, and a decrease of 40 acres in jack pine. Major management objectives are to maintain a variety of cover types and age classes which favor a variety of game and non-game species. There have been major concerns with the regeneration of the oak type in these compartments. (L. Smith, 9/19/08)

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

**COMPARTMENT 101** Sections 22 - 24, T21N-R5W, Missaukee County

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift is the Pennsylvanian Saginaw Formation. The Saginaw is quarried for clay/shale in other parts of the State. Gravel pits are located in the area, and potential should be good on the uplands. The compartment is located four miles southeast of Prosper Field. The field has produced nearly 2 million BO from the Dundee Limestone. The Compartment is completely leased for oil and gas exploration.

**Vehicle Access:** A forest road access plan is detailed on the compartment map. Identified are state and county roads as well as forest roads and trails under the jurisdiction of the DNR. Also indicated are forest roads and trails under the jurisdiction of the DNR that are proposed for abandonment. These roads were determined to be in excess of the access needs in the area, are a threat to the resources, or are a concern environmentally.

Proposed new roads or roads recommended for substantial improvement are noted below:

**Survey Needs:** Every section has survey corners and the only area of private is the 80 acres in SW of section 23.

**Recreational Facilities and Opportunities:** Leota ORV trail runs through the entire compartment. Dispersed hunting is the other main activity in this compartment.

**Fire Protection:** This compartment is part of the Zone IV Dispatch area. Initial attack responsibilities are from the Houghton Lake Field Office, and other field offices for Zone Dispatch's.

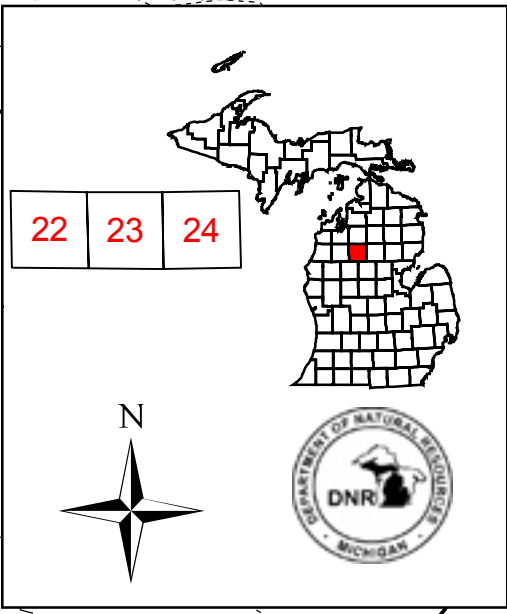
### **Additional Compartment Information:**

The following parcels are recommended for acquisition if they become available for sale: T21N R5W Section 23, SWSW, and SESW.

- **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 101  
 T33N, R03W, Sec. 6, 7, 18  
 County: Missaukee  
 Unit: Cadillac  
 YOE: 2010  
 Acres: 1,827 GIS Calculated  
 Stand Examiner: Steven Eisele  
 Map Revised: 9/25/2008  
 Map Phase: Pre-Review



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

**Legend**

- Miris Corners
- Paved Road
- Poor Dirt Road
- Intermittent Stream/Drain
- Stream
- Trails
- Lakes and Rivers All

**Treatments**

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Other Treatment - See Comments

**Forest Stands**

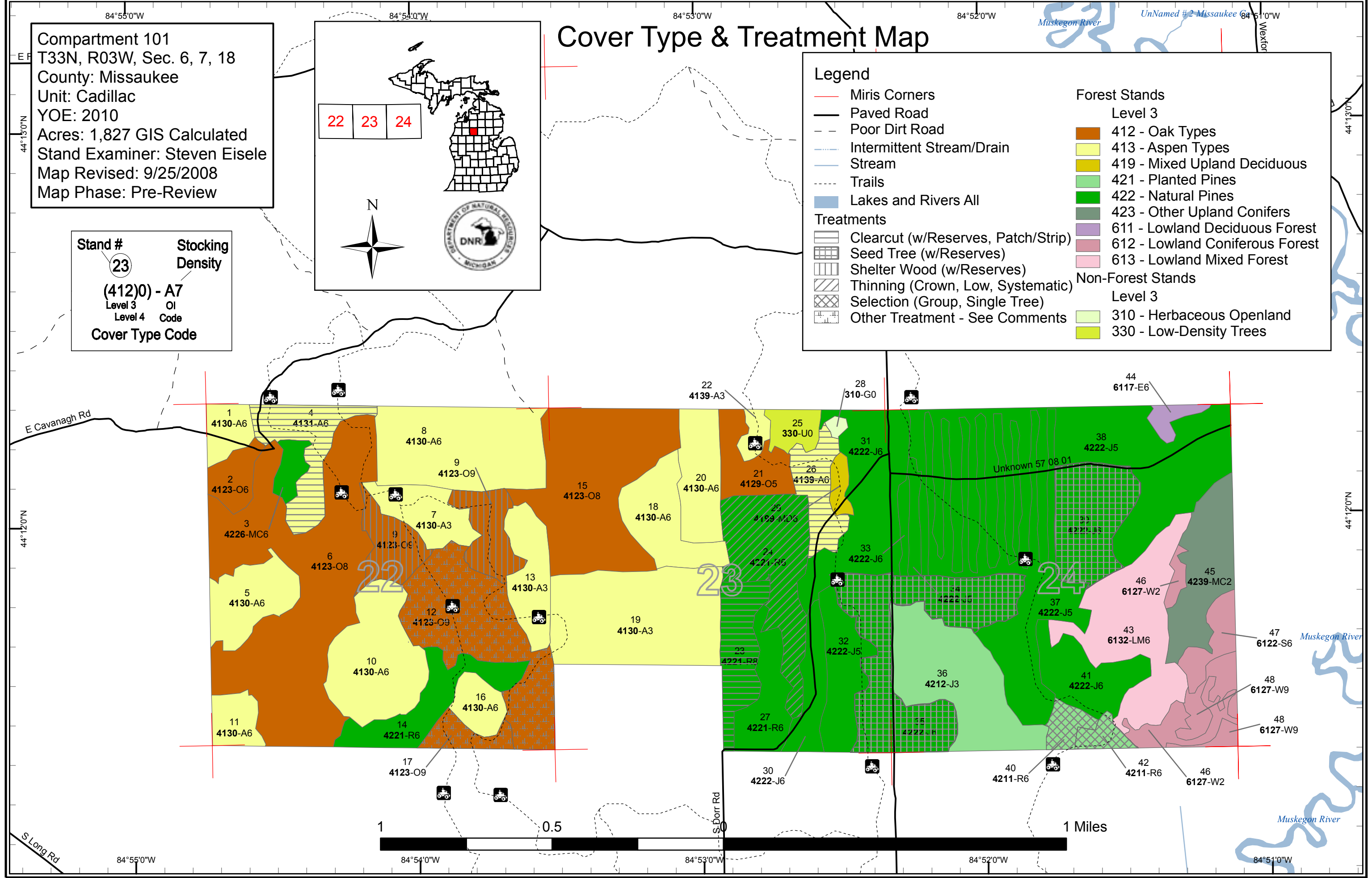
Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

**Non-Forest Stands**

Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees



# Stand Boundary Map

Compartment 101  
 T33N, R03W, Sec. 6, 7, 18  
 County: Missaukee  
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 Map Revised: 8/27/2008  
 Map Phase: Pre-Review

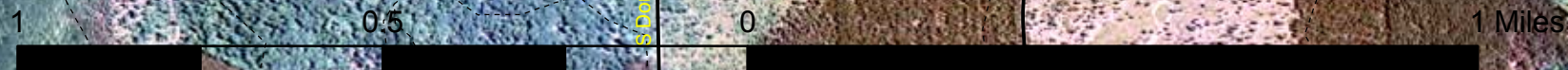
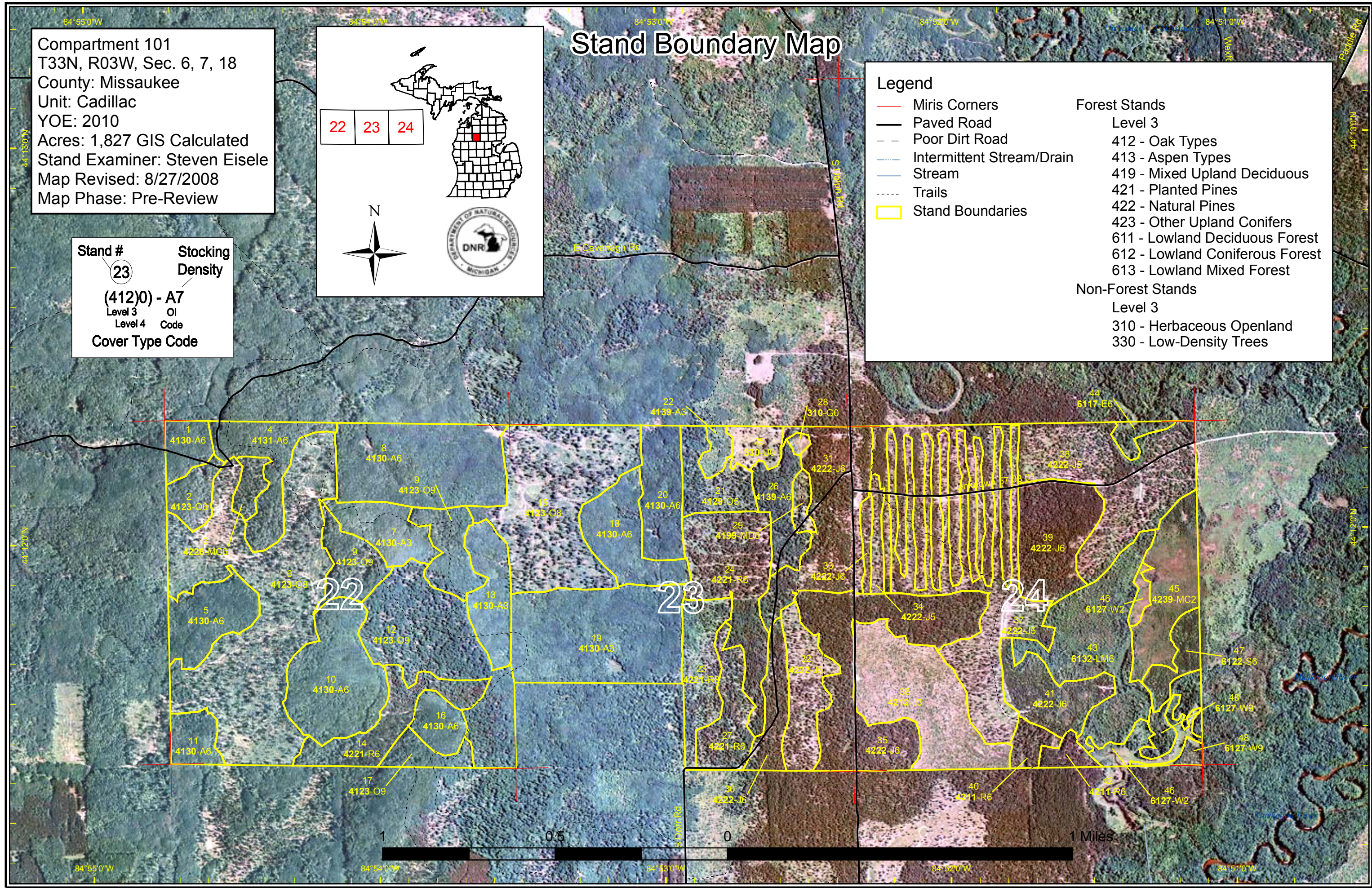
22 23 24

N  
 DEPARTMENT OF NATURAL RESOURCES  
 MICHIGAN

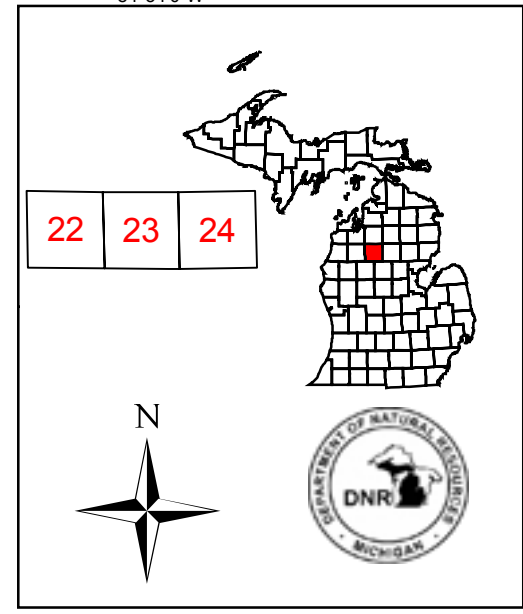
### Legend

— Miris Corners	Forest Stands
— Paved Road	Level 3
- - - Poor Dirt Road	412 - Oak Types
— Intermittent Stream/Drain	413 - Aspen Types
— Stream	419 - Mixed Upland Deciduous
- - - Trails	421 - Planted Pines
□ Stand Boundaries	422 - Natural Pines
	423 - Other Upland Conifers
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	613 - Lowland Mixed Forest
	Non-Forest Stands
	Level 3
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Stand #	Stocking Density
23	
(412)0 - A7	
Level 3 OI	
Level 4 Code	
Cover Type Code	



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# Dedicated & Proposed Special Conservation Area Map

**Legend**

- Miris Corners
- Stand Boundaries
- Potential Old Growth Stands

**Forest Stands**

Level 3

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- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
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**Non-Forest Stands**

Level 3

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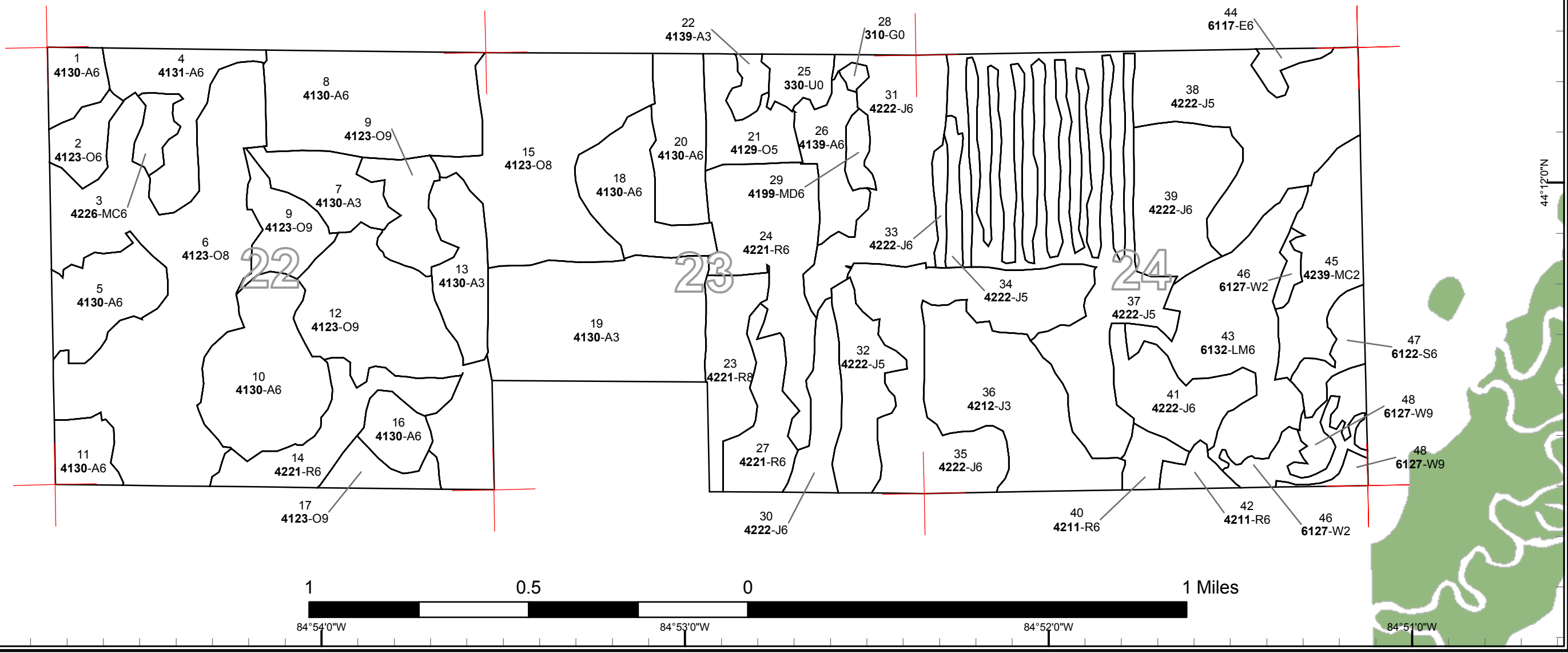
**Stand #**      **Stocking Density**

②③      OI

**(412)0 - A7**

Level 3      Level 4      Code

**Cover Type Code**



Cadillac Mgt. Unit

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

Compartment 101 Year of Entry 2010

Report Date: 09/26/2008



	Age Class															
	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	Total
Aspen Types	0	0	90.2	0	315.6	0	21.7	0	32.1	0	0	0	0	0	0	459.5
Herbaceous Openland	1.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8
Low-Density Trees	10.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.8
Lowland Coniferous Forest	0	0	0	0	18.1	0	0	13.6	0	0	0	0	0	0	17.0	48.6
Lowland Deciduous Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.0	6.0
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	67.8	0	0	0	0	67.8
Mixed Upland Deciduous	0	0	0	0	0	0	5.7	0	0	0	0	0	0	0	0	5.7
Natural Pines	0	0	0	194.3	0	88.7	314.9	0	0	0	0	0	0	0	82.6	680.4
Oak Types	0	0	0	0	0	0	0	0	423.4	0	0	0	0	0	0	423.4
Other Upland Conifers	0	0	0	40.4	0	0	0	0	0	0	0	0	0	0	0	40.4
Planted Pines	0	0	67.3	0	0	0	0	15.6	0	0	0	0	0	0	0	82.9
<b>Total</b>	<b>12.7</b>	<b>0</b>	<b>157.5</b>	<b>234.7</b>	<b>333.6</b>	<b>88.7</b>	<b>342.2</b>	<b>29.2</b>	<b>455.5</b>	<b>0</b>	<b>67.8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>105.6</b>	<b>1827.4</b>



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
4 63101004-Cut	32.1	4131 - Aspen, Oak	High Density Pole	70	Harvest	Clearcut with Reserves	Aspen, Oak

Rev Hilly with ORV trail in stand.

Cmnt:

Rev Remove aspen and red maple. Mark some oak to leave. Buffer ORV trail

Spec:

Next

Steps:

9 63101009-Cut	41.2	4123 - Red Oak	High Density Log	70	Harvest	Shelterwood	Red Oak
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Rev Nice straight red oak with a mix of aspen and red maple.

Cmnt:

Rev Do a shelterwood cut. Remove aspen and red maple, leave a retention island on n. end.

Spec:

Next

Steps:

23 63101023-Cut	28.8	42210 - Natural Red Pine	Medium Density Log	48	Harvest	Clearcut	Natural Red Pine
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Rev

Cmnt:

Rev Final harvest and plant to red pine

Spec:

Next

Steps: Have timber management specialist look at for planting to red pine.

24 63101024-Cut	56.9	42210 - Natural Red Pine	High Density Pole	53	Harvest	Crown Thinning	Natural Red Pine
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Rev Natural Red Pine that had all other species removed last time.

Cmnt:

Rev Remove poles and saw logs this time. Release smaller diameters.

Spec:

Next

Steps:

26 63101026-Cut	21.7	4139 - Aspen, Mixed Deciduous	High Density Pole	55	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous
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Rev

Cmnt:

Rev Clearcut with reserves. Leave small oak and mark some mature oak for mast. Buffer ORV trail.

Spec:

Next

Steps:

35 63101035-Cut	81.9	42220 - Natural Jack Pine	High Density Pole	55	Harvest	Seed Tree	Natural Jack Pine
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Rev Some mortality and top die back. Good oak regen in spots.

Cmnt:

Rev Seed tree cut west side of road. Buffer ORV trail. Consider final harvest east side of road and plant to Red Pine. Have silviculture and wildlife look at for final decision. Leave retention patches 10%

Spec:

Next

Steps: Manage by strip cuts harvest approximately 60% of stand.

**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
39 63101039-Cut	44.2	42220 - Natural Jack Pine	High Density Pole	55	Harvest	Seed Tree	Natural Jack Pine

Rev  
Cmnt:

Rev Do a seed tree cut like adjacent stands. Leave jp less than 6 inches dbh

Spec:

Next

Steps:

40 63101040-Cut	8.6	42110 - Planted Red Pine	High Density Pole	67	Harvest	Single Tree Selection	Planted Red Pine
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Rev Had jack pine removed last time Same as stand 42.

Cmnt:

Rev Thin out poles, move stand towards poles to final next time.

Spec:

Next

Steps:

42 63101042-Cut	7.0	42110 - Planted Red Pine	High Density Pole	65	Harvest	Single Tree Selection	Planted Red Pine
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Rev Same as stand 40

Cmnt:

Rev Thin red pine, take some poles and move stand towards poles to final next time.

Spec:

Next

Steps:

12 63101012-Other	77.9	4123 - Red Oak		70	Other	Unspecified	Red Oak
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Rev Good straight stem red oak. A lot of red maple regen

Cmnt:

Rev NO obvious oak regen yet. May want to consider burn or herbicide the red maple. Most of the regen right now is red maple stump sprouts. Have fire, silviculture and wildlife look at to see if a burn would benefit.

Spec:

Next

Steps:

17 63101017-Other	11.1	4123 - Red Oak		70	Other	Unspecified	Red Oak
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Rev This stand is the same as 12 with a little more conifer component.

Cmnt:

Rev Consider a burn in this stand to promote the oak/pine regeneration and knock back the red maple sprouts. Same reason as adjacent stand. Have fire, silviculture and wildlife determine if a burn would benefit.

Spec:

Next

Steps:

**Total Treatment  
Acreage Proposed: 411.3**

**PROPOSED TREATMENTS  
WITH LIMITING FACTORS**



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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
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**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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.