

**CADILLAC FOREST MANAGEMENT UNIT****COMPARTMENT REVIEW PRESENTATION****COMPARTMENT # 149 ENTRY YEAR: 2010****Compartment Acreage (GIS Acres): 2,131****County: Missaukee**

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**Revision Date: 10/13/2008 10:18 AM****Stand Examiner:** Andrew Church, District Forester, Cadillac OSC**Legal Description:** T24N R11W Sections 21-23, 27-29, 32-35.**RMU (if applicable):** 237

**Management Goals:** Maintain integrity of streams and channel feeding river. Use BMPs and buffers near streams and river. The RMU says the primary management emphasis is along the Manistee River. Also, the visual and recreational values along the Manistee River are to be preserved.

**Soil and Topography:** Kalkaska, Rubicon and Montcalm sands. Terrain: The majority of this compartment is flat except for steep banks above the streams and Manistee River.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Every section has private land in it with the exception of 27. Residence includes year round and seasonal homes. Some of the land acquired from Consumers Energy is landlocked and does pose an access problem for timber management. Solid state ownership along river.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** Wood turtle record to the North and West. Great Blue Heron rookery to the NE. Potential for Wood Turtle. Potential for Eagle, Osprey, Goshawk, and Great Blue Heron rookery.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** Old Indian trails throughout.

**Special Management Designations or Considerations:** Maintain integrity of streams and rivers. Use of BMPs during any logging activities near streams.

**Watershed and Fisheries Considerations:**

**Wildlife Habitat Considerations:**

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

Surface sediments consist of coarse-textured till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift are the Mississippian Marshall Sandstone and Coldwater Shale. The Marshall has been used as a building stone.

Gravel pits are located in the area and there should be potential. This area is located five miles southeast of the prolific Silurian Guelph (Niagaran) reef trend. Oil and gas has limited potential in the Compartment and none of the State lands are 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.

**Survey Needs:** None needed

**Recreational Facilities and Opportunities:** The Manistee River is heavily used for canoeing and fishing as well as dispersed camping. The feeder streams are also used for fishing, trapping and hunting. Indian Crossings Campground is closed. Recreation Division has an access site to river on SE side of Harvey Bridge.

**Fire Protection:** There is the potential for human caused fires, due to the heavy recreation use, and urban interface within the compartment. Some access may be difficult due to the terrain near the Manistee River & feeder streams.

#### **Additional Compartment Information:**

**The following parcels are recommended for acquisition if they become available for sale:**

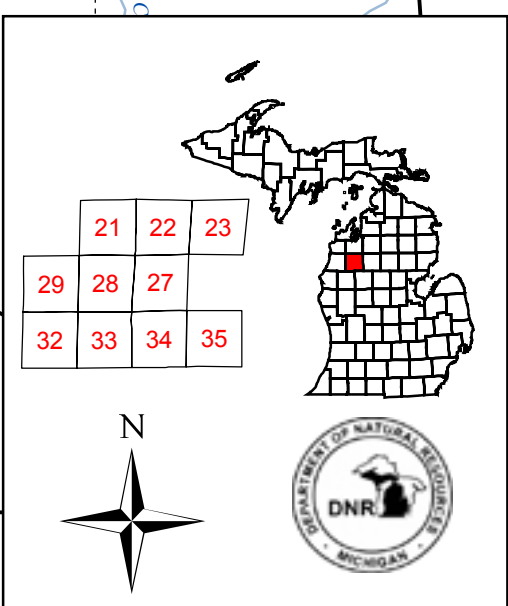
T24N R11W Section 35 SENW

- **The following 5 reports from the IFMAP System 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**

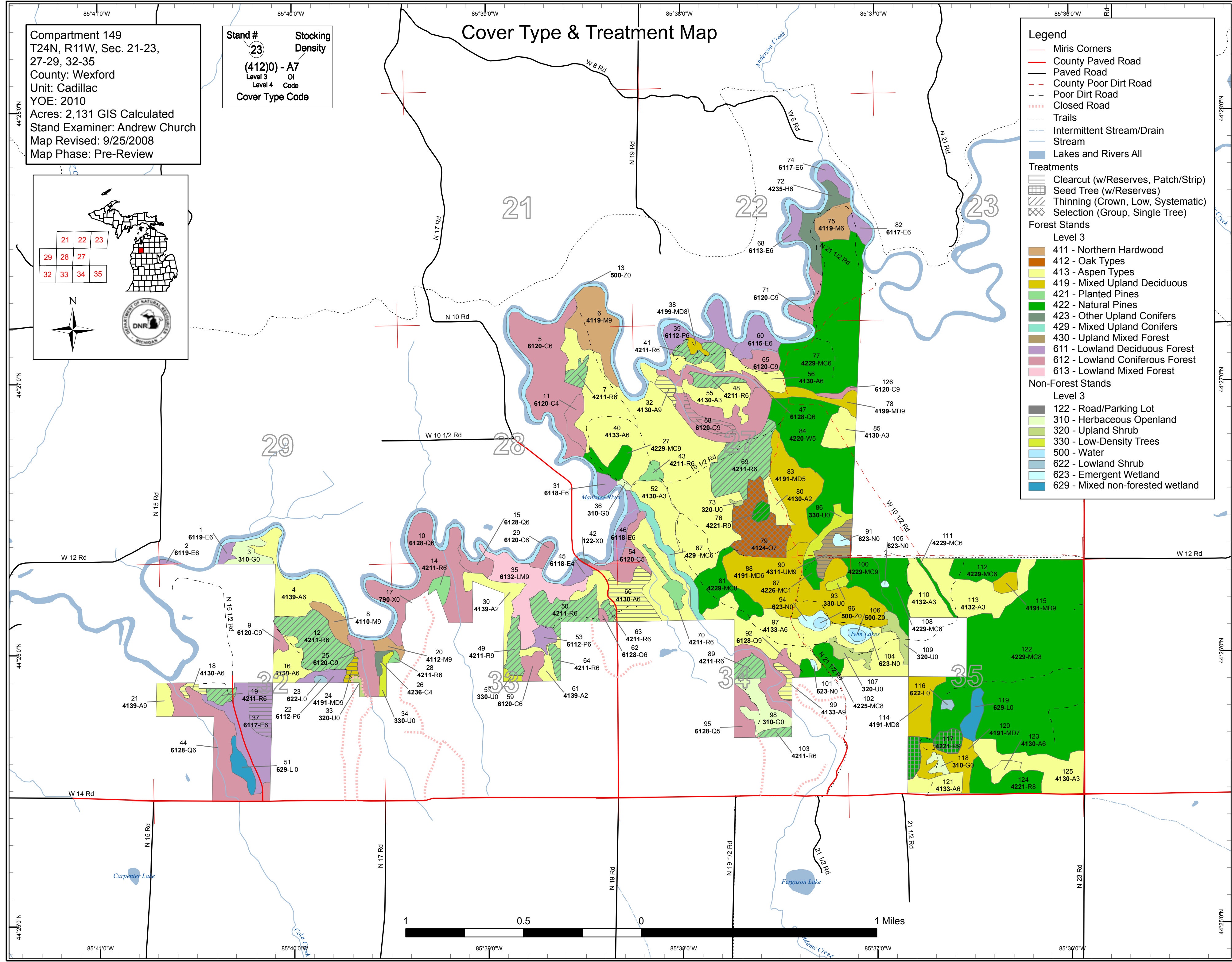
# Cover Type & Treatment Map

Compartment 149  
 T24N, R11W, Sec. 21-23,  
 27-29, 32-35  
 County: Wexford  
 Unit: Cadillac  
 YOE: 2010  
 Acres: 2,131 GIS Calculated  
 Stand Examiner: Andrew Church  
 Map Revised: 9/25/2008  
 Map Phase: Pre-Review

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



- Legend**
- Miris Corners
  - County Paved Road
  - Paved Road
  - - - County Poor Dirt Road
  - - - Poor Dirt Road
  - ..... Closed Road
  - ..... Trails
  - Intermittent Stream/Drain
  - Stream
  - Lakes and Rivers All
- Treatments**
- ▨ Clearcut (w/Reserves, Patch/Strip)
  - ▨ Seed Tree (w/Reserves)
  - ▨ Thinning (Crown, Low, Systematic)
  - ▨ Selection (Group, Single Tree)
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 423 - Other Upland Conifers
  - 429 - Mixed Upland Conifers
  - 430 - Upland Mixed Forest
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest
  - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland
  - 629 - Mixed non-forested wetland

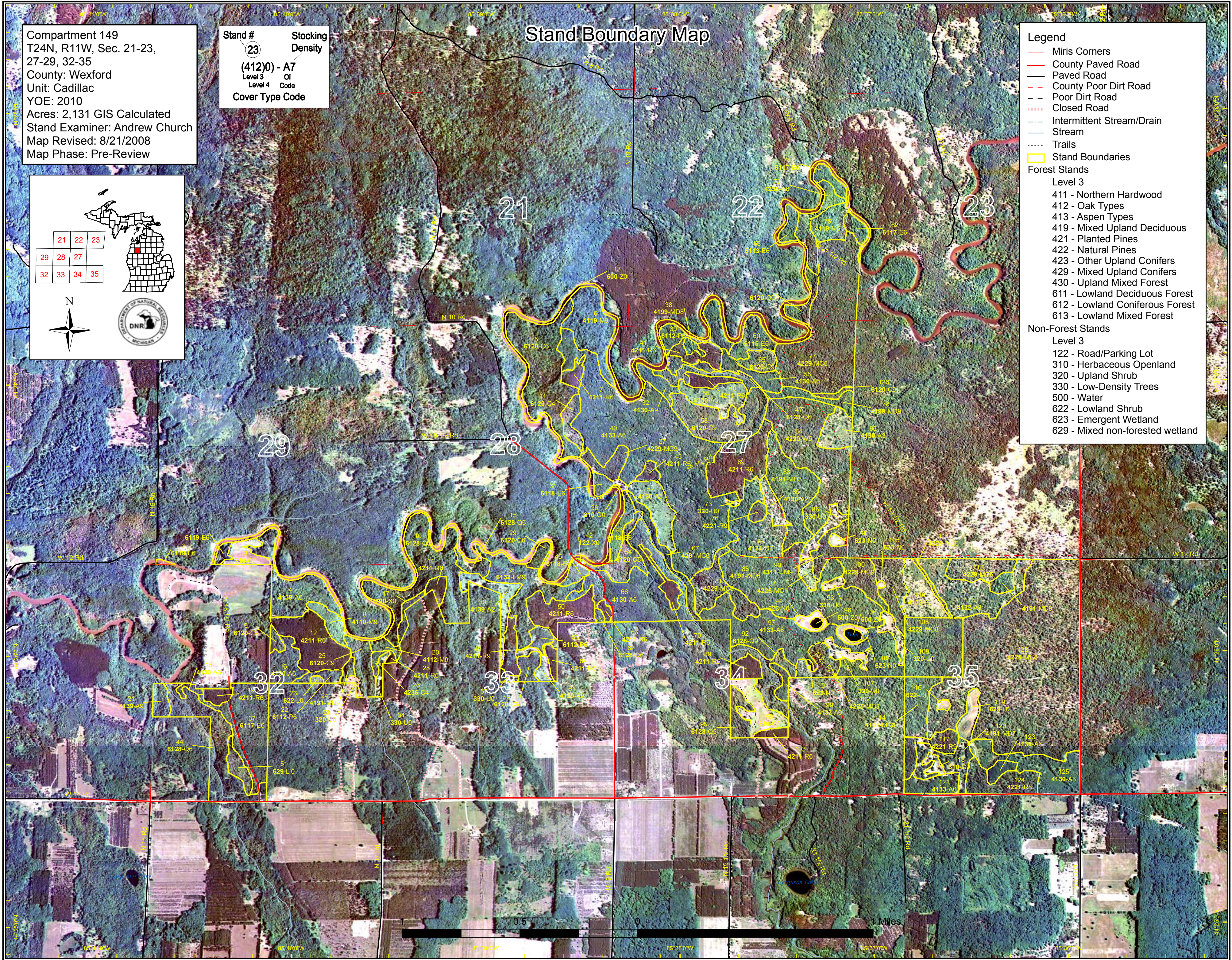
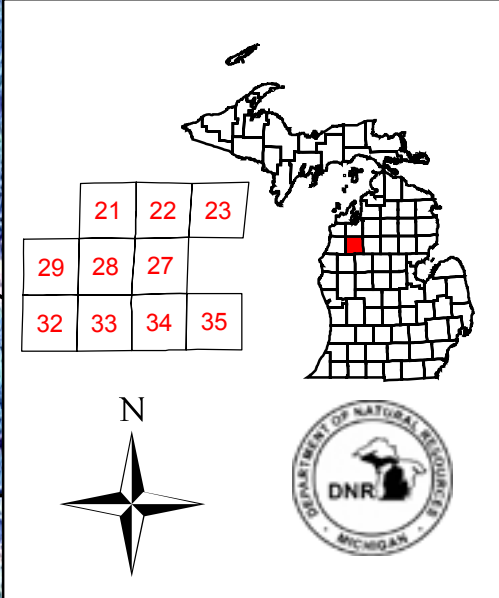


# Stand Boundary Map

Compartment 149  
 T24N, R11W, Sec. 21-23,  
 27-29, 32-35  
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 Stand Examiner: Andrew Church  
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Stand #  
**23**  
**(412)0 - A7**  
 Level 3  
 Level 4  
 Cover Type Code

- Legend**
- Miris Corners
  - County Paved Road
  - Paved Road
  - - County Poor Dirt Road
  - - Poor Dirt Road
  - ..... Closed Road
  - Intermittent Stream/Drain
  - Stream
  - ..... Trails
  - Stand Boundaries
- Forest Stands**
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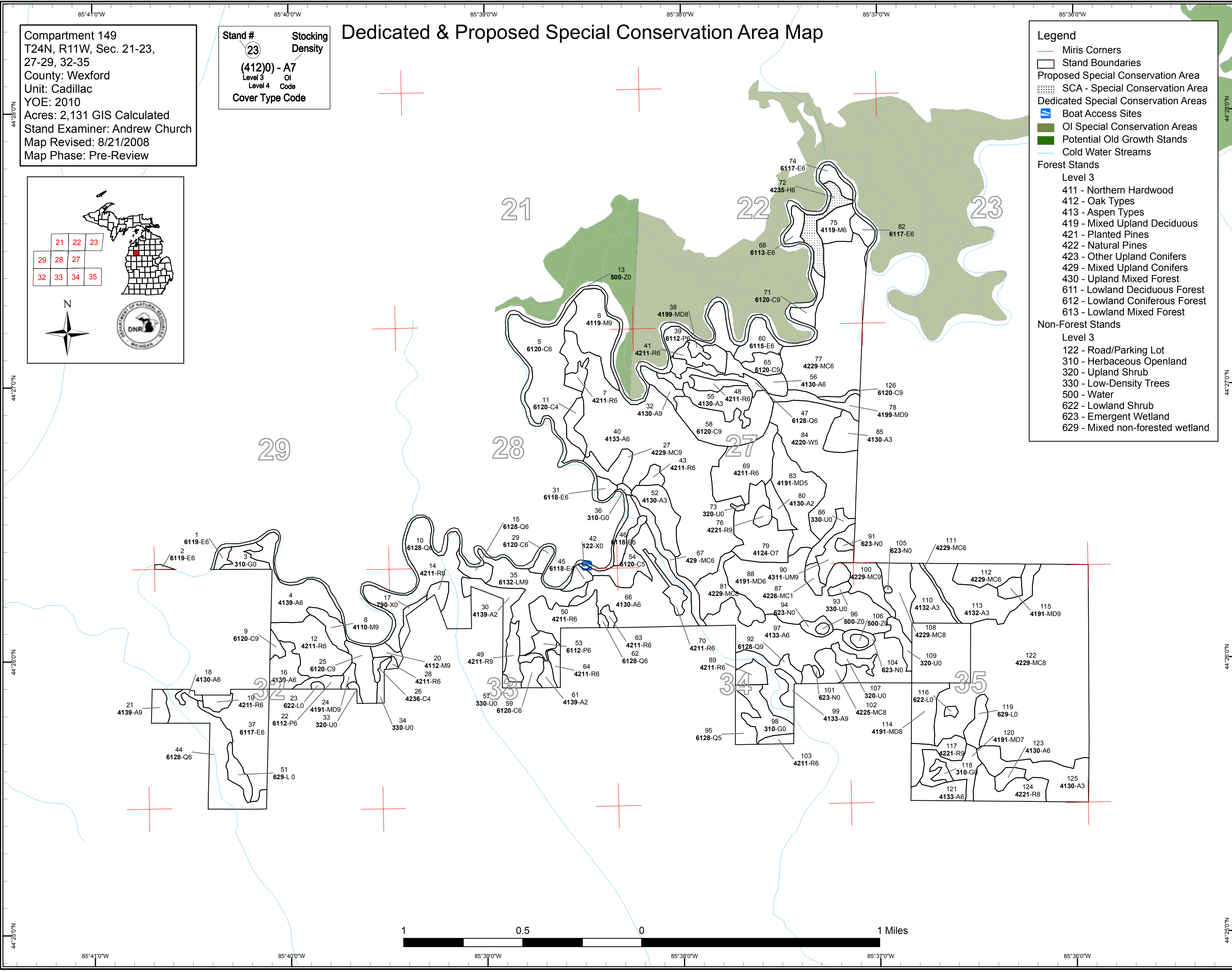
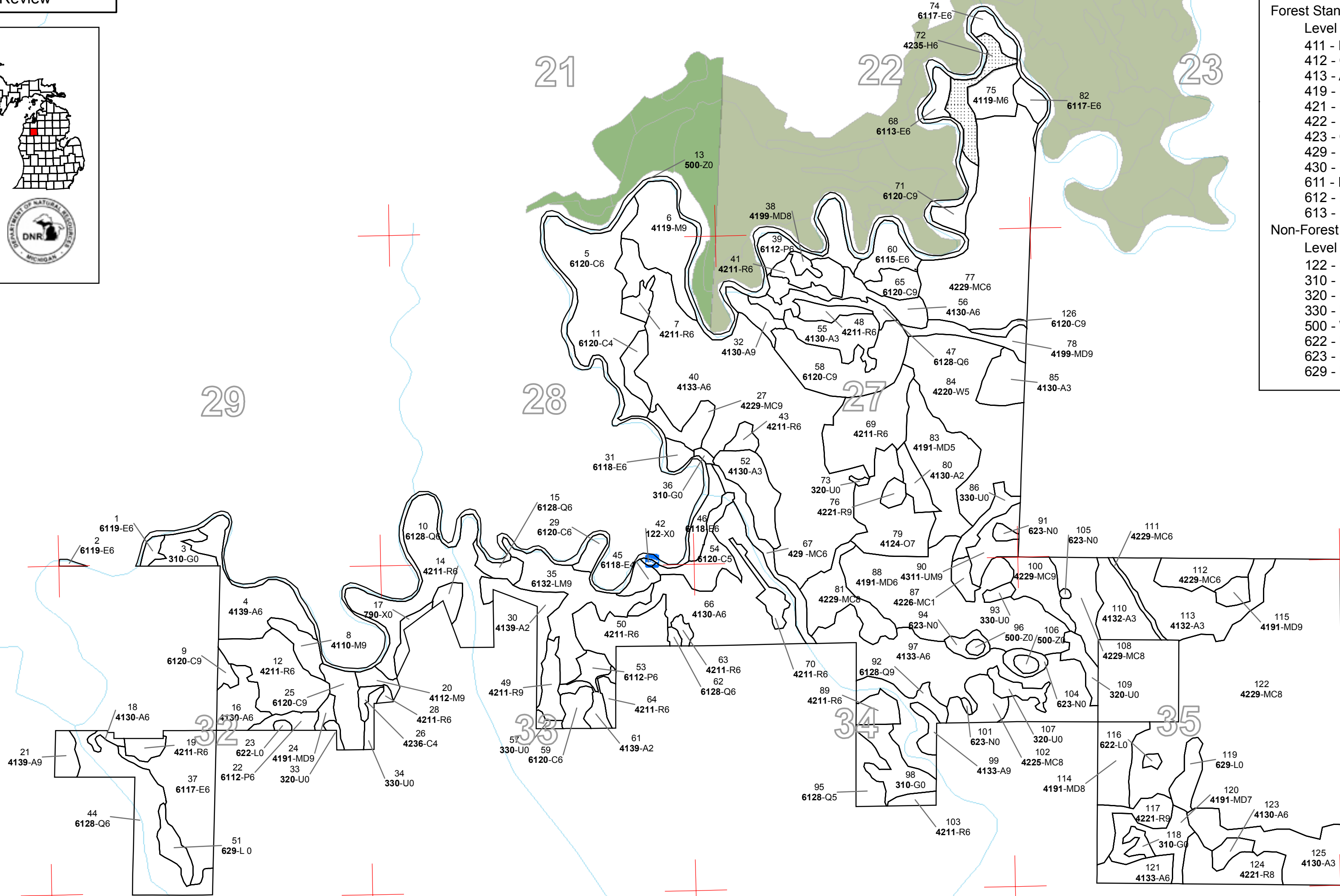
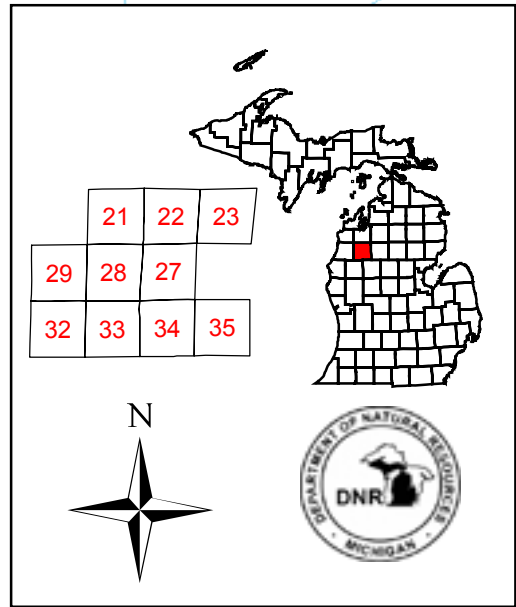


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Stand #  
 23  
 Stacking  
 Density  
 (412)0) - A7  
 Level 3  
 Level 4  
 Code  
 Cover Type Code

# Dedicated & Proposed Special Conservation Area Map

- Legend**
- Miris Corners
  - Stand Boundaries
  - ▨ Proposed Special Conservation Area
  - ▨ SCA - Special Conservation Area
  - ▨ Dedicated Special Conservation Areas
  - 🚤 Boat Access Sites
  - 🟩 OI Special Conservation Areas
  - 🟩 Potential Old Growth Stands
  - Cold Water Streams
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
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Cadillac Mgt. Unit

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

Compartment 149 Year of Entry 2010  
Report Date: 09/25/2008



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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
Total	167.2	78.3	85.0	0	208.3	97.3	272.4	146.4	112.8	203.9	186.1	15.7	13.7	0	543.5	2130.8

**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
7 63149007-Cut	4.8	42110 - Planted Red Pine	High Density Pole	54	Harvest	Low Thinning	Planted Red Pine

Rev  
Cmnt:

Rev 2nd Thin. Remove 25% at most due to windthrow concerns.

Spec:

Next

Steps:

18 63149018-Cut	2.1	4130 - Aspen	High Density Pole	64	Harvest	Clearcut with Reserves	Aspen
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Rev Work with Fisheries and Wildlife to determine appropriate buffers for proposed treatments.

Cmnt:

Rev Clearcut. Leave all Cedar and Hemlock.

Spec:

Next

Steps:

19 63149019-Cut	4.6	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Rev

Cmnt:

Rev 2nd Thinning.

Spec:

Next

Steps:

41 63149041-Cut	9.3	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Rev Work with Fisheries and Wildlife to determine appropriate buffers for proposed treatments.

Cmnt:

Rev 2nd Thinning. Light thinning due to windthrow concerns. Remove 25% at most.

Spec:

Next

Steps:

48 63149048-Cut	5.7	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Rev Work with Fisheries and Wildlife to determine appropriate buffers for proposed treatments.

Cmnt:

Rev 2nd Thinning.

Spec:

Next

Steps:

49 63149049-Cut	8.5	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	53	Harvest	Low Thinning	Planted Red Pine, Mixed Deciduous
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Rev

Cmnt:

Rev 2nd Thinning of Red Pine. Leave all Sugar Maple and Beech. Cut all Red Maple, and Cherry.

Spec:

Next

Steps:

**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
<b>50 63149050-Cut</b>	21.3	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine

Rev  
Cmnt:  
Rev 2nd Thinning.  
Spec:  
Next  
Steps:

<b>58 63149058-Cut</b>	5.4	6120 - Lowland Cedar	High Density Log	84	Harvest	Patch or Strip Clearcut	Lowland Cedar
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Rev Acceptable alternate regen would be swamp hardwoods.  
Cmnt:  
Rev Clearcut Strips. 2 Clearcut strips 1 chain wide. Orient strips East to West to protect from drying out soil too much. Do not cut live crown and do not crush tops to protect from browse. Winter or frozen conditions cut only. Buffer along drainage.  
Spec:  
Next  
Steps:

<b>63 63149063-Cut1</b>	2.2	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Rev  
Cmnt:  
Rev 2nd Thinning  
Spec:  
Next  
Steps:

<b>64 63149064-Cut</b>	3.4	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Rev  
Cmnt:  
Rev 2nd Thinning.  
Spec:  
Next  
Steps:

<b>66 63149066-Cut</b>	20.5	4130 - Aspen	High Density Pole	67	Harvest	Clearcut with Reserves	Aspen
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Rev Work with Fisheries and Wildlife to determine appropriate buffers for proposed treatments.  
Cmnt:  
Rev Clearcut. Winter cut only due to the small lowland pockets.  
Spec:  
Next  
Steps:

<b>69 63149069-Cut</b>	33.6	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Rev  
Cmnt:  
Rev 2nd Thinning.  
Spec:  
Next  
Steps:

**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
76 63149076-Cut	3.3	42210 - Natural Red Pine	High Density Log	82	Harvest	Low Thinning	Natural Red Pine

Rev  
Cmnt:

Rev Thin the Pine. Cut all Aspen and Red Maple. Leave all Oak

Spec:

Next

Steps:

79 63149079-Cut	30.8	4124 - Red with White Oak	Low Density Log	61	Harvest	Group Selection	Red with White Oak
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Rev Protect saplings/seedlings. No whole tree skidding.

Cmnt:

Rev Overstory removal. Cut all: Aspen, Red Maple, Jack Pine, White Pine greater than 8 inches DBH, Oak greater than 8 inches DBH. Reserve tree mark

Spec: some large diameter Oaks for wildlife.

Next

Steps:

90 63149090-Cut	11.3	4311 - Pine, Aspen Mix	High Density Log	70	Harvest	Clearcut with Reserves	Pine, Aspen Mix
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Rev Bill Sterrett: Leave more pine along pothole (St. 91).

Cmnt:

Rev Reserve tree mark Oak and Pine to approx. 20 sq.ft. RBA where Aspen regen is unlikely.

Spec:

Next

Steps:

117 63149117-Cut	11.8	42210 - Natural Red Pine	High Density Log	75	Harvest	Seed Tree	Natural Red Pine
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Rev SCARIFY SOIL. Mechanically, chemically, or repeated fires. Any method used to get to bare mineral soil.

Cmnt:

Rev Seed tree. Leave 10 sq.ft. per acre of Red Pine. Summertime harvest for scarification.

Spec:

Next

Steps: Plant to Red Pine if natural regen is not sufficient.

**Total Treatment  
Acreage Proposed: 178.4**

**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
37 63149037-Cut_small	13.5	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	54	Harvest	Clearcut	Mixed Lowland Deciduous Forest

Limiting Factor and Comment: 2F: Too wet

Rev Cmnt:

Rev Spec: Habitat cut approxiametly 12 acres.

Next Steps:

No Treatment Reason

99 63149099-Cut	4.2	4133 - Aspen, Mixed Pine	High Density Log	74	Harvest	Clearcut with Reserves	Aspen, Mixed Pine
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Limiting Factor and Comment: 3K: Water quality / BMPs

Rev Cmnt: Work with Fisheries and Wildlife to determine appropriate buffers for proposed treatments.

Rev Spec: Leave all Hemlock. Reserve tree mark Red Pine and Oak for diversity.

Next Steps:

No Treatment Reason

32 63149032-Cut	3.7	4130 - Aspen	High Density Log	54	Harvest	Clearcut with Reserves	Aspen
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Limiting Factor and Comment: 1F: Other dept or div proc/practices  
May not be able to harvest due to BMP's.

Rev Cmnt: Work with Fisheries and Wildlife to determine appropriate buffers for proposed treatments.

Rev Spec: Clearcut with Reserves. Leave all Oak, Cedar, and Hemlock. Buffer Creek on East side, and buffer Manistee River.

Next Steps:

No Treatment Reason May not be able to harvest due to BMP's.

**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
24 63149024-Cut	2.6	4191 - Mixed Upland Deciduous with Conifer	High Density Log	85	Harvest	Clearcut with Reserves	R.Maple, Conifer

Limiting Factor and Comment: 2A: Adjacent landowner denies access  
Access will be difficult.

Rev Cmnt: Bill Sterrett: Reserve tree mark some overstory shade trees to protect residual Cedar and Hemlock from sunscald.

Rev Spec: Final Harvest with Reserves Leave all Cedar and Hemlock.

Next Steps:

No Treatment Reason: Access will be difficult.

12 63149012-Cut	31.1	42110 - Planted Red Pine	High Density Pole	53	Harvest	Low Thinning	Planted Red Pine
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Limiting Factor and Comment: 2A: Adjacent landowner denies access  
Access very difficult. Setup for sale in 2001, never sold due to access.

Rev Cmnt: Work with contacting adjacent landowners for access.

Rev Spec: 2nd Thin.

Next Steps:

No Treatment Reason: Access very difficult. Setup for sale in 2001, never sold due to access.

103 63149103-Cut	3.2	42110 - Planted Red Pine	High Density Pole	55	Harvest	Systematic Thinning	Planted Red Pine
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Limiting Factor and Comment: 2A: Adjacent landowner denies access  
Access difficult.

Rev Cmnt: Work with contacting adjacent landowners for access.

Rev Spec: First Thinning. Remove every 3rd row, and thin from the sides in the remaining rows.

Next Steps:

No Treatment Reason: Access difficult.

89 63149089-Cut	7.1	42110 - Planted Red Pine	High Density Pole	55	Harvest	Systematic Thinning	Planted Red Pine
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Limiting Factor and Comment: 2A: Adjacent landowner denies access  
Access difficult.

Rev Cmnt: Work with contacting adjacent landowners for access.

Rev Spec: First Thin. Remove every 3rd row, and thin from the sides in the remaining rows.

Next Steps:

No Treatment Reason: Access difficult.

S  
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Cadillac Mgt. Unit  
Inventory Method: IFMAP

**PROPOSED TREATMENTS  
WITH LIMITING FACTORS**

Compartment: 149      Entry Yr: 2010  
Date 09/25/2008



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Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 3 of 3
Total Treatment Acreage Proposed:		65.5						



**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
72	63149072	13.7	Unique upland Hemlock/Cedar stand. SCA- Mesic Conifer Forest.



## 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	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	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.