

# CADILLAC FOREST MANAGEMENT UNIT



## COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 009 ENTRY YEAR: 2010

Compartment Acreage (GIS Acres): 1739 County: Lake

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**Revision Date:** 12/01/2008 11:28 AM

**Stand Examiner:** Cheryl Nelson, Forester

**Legal Description:** T19N R12W, Section 5  
T20N R12W, Sections 20, 29, 32

**RMU (if applicable):** 301

**Management Goals:** Maintain aspen, expand where possible and develop age class diversity. Area will continue to be managed with wildlife habitat being the guiding influence.

**Soil and Topography:** Crosswell, Lupton, Grayling-Graycalm loamy soils.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** State Land with Private holdings interspersed throughout. State land to the north, south, and west of this compartment. Private land to the east.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** The Michigan Natural Features Inventory lists the Eastern Massasauga Rattlesnake, Loon, Wood Turtle, Bald Eagle, and Dusted Skipper, Hills Thistle, and Poor Conifer Swamp as having occurred in this compartment. This compartment has the potential for the Eastern Massasauga Rattlesnake, Box Turtle, Wood Turtle, Blanding's Turtle, Hill's Thistle, and Bog Bluegrass.

Pine martens were released in the Voss swamp in 1986.

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

**Special Management Designations or Considerations:** This is a major deer yarding area. Regeneration of timber can be a problem. The area is isolated and rather inaccessible; therefore, visual management is not much of a constraint. The streams and their headwaters will be protected and their integrity maintained.

**Watershed and Fisheries Considerations:** The East and West Branches of Twin Creek, flow through Compartment 9. Both are Designated Trout Streams. The two branches combine just south of Compartment 9 to form Twin Creek, which is the highest quality tributary to the Little Manistee River. The West Branch of Twin Creek supports naturally reproducing populations of brown trout, brook trout, and likely steelhead as well. In the summer of 2007, a major fish cover habitat project was completed in both branches of Twin Creek just downstream from Compartment 9.

**Watershed and Fisheries Considerations (con't):** For timber operations near either branch of Twin Creek (Stands 47, 38), Best Management Practices should be followed with appropriate buffers left to protect these important trout streams.

**Wildlife Habitat Considerations:** Priority wildlife species are deer, ruffed grouse, and woodcock. This compartment is one of two in RMU 301. The RMU agreement called for no change in types and that wildlife habitat would be the guiding influence in management. The compartment is a southern part of a large deeryarding complex called Voss Swamp. Major management objectives are to maintain aspen and expand where possible and to develop age class and habitat diversity for a variety of game and non-game species. (L. Smith, 9/19/08)

**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 is the Mississippian Michigan Formation. The Michigan is quarried for gypsum in other areas of the State. A gravel pit is located two miles to the west and there is potential on the uplands. The nearest oil and gas production is Peacock Field, located three miles to the northwest. The Field has produced over 1.7 million BO from the Traverse Limestone.

An old oil/gas well site was located in stand 44.

**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 at this time.

**Recreational Facilities and Opportunities:** The Little Manistee ORV Trail and Route run through the southern two sections of this compartment. The ORV Trail and Route are each approximately 3 miles in length. The ORV Route is also used as a snowmobile trail. The area is mainly used for hunting and fishing.

**Fire Protection:** Human caused fires are a possibility within the compartment due to recreation opportunities, and urban interface. Much of the compartment would be difficult access due to low, wet areas. However, there are areas that would have good access, but these areas also have the potential for larger, or quicker moving fires due to the fuel types.

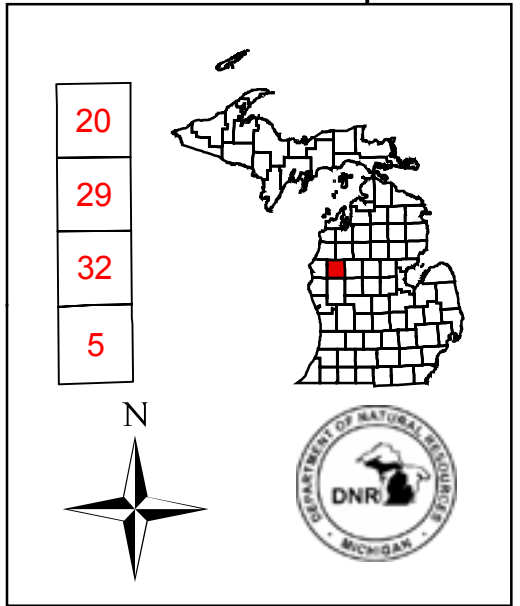
#### **Additional Compartment Information:**

- **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 9  
 T20N, R12W, Sec. 20, 29, 32  
 T19N, R12W, Sec. 5  
 County: Lake  
 Unit: Cadillac  
 YOE: 2010  
 Acres: 1,739 GIS Calculated  
 Stand Examiner: Cheryl Nelson  
 Map Revised: 9/25/2008  
 Map Phase: Pre-Review

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



**Legend**

- Miris Corners
- Highway
- County Paved Road
- Paved Road
- County Gravel Road
- Poor Dirt Road
- Stream
- Trails
- ORV Trails
- ORV Routes
- MCCCT Trails
- Snowmobile Trails
- Lakes and Rivers All

**Treatments**

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)

**Forest Stands**

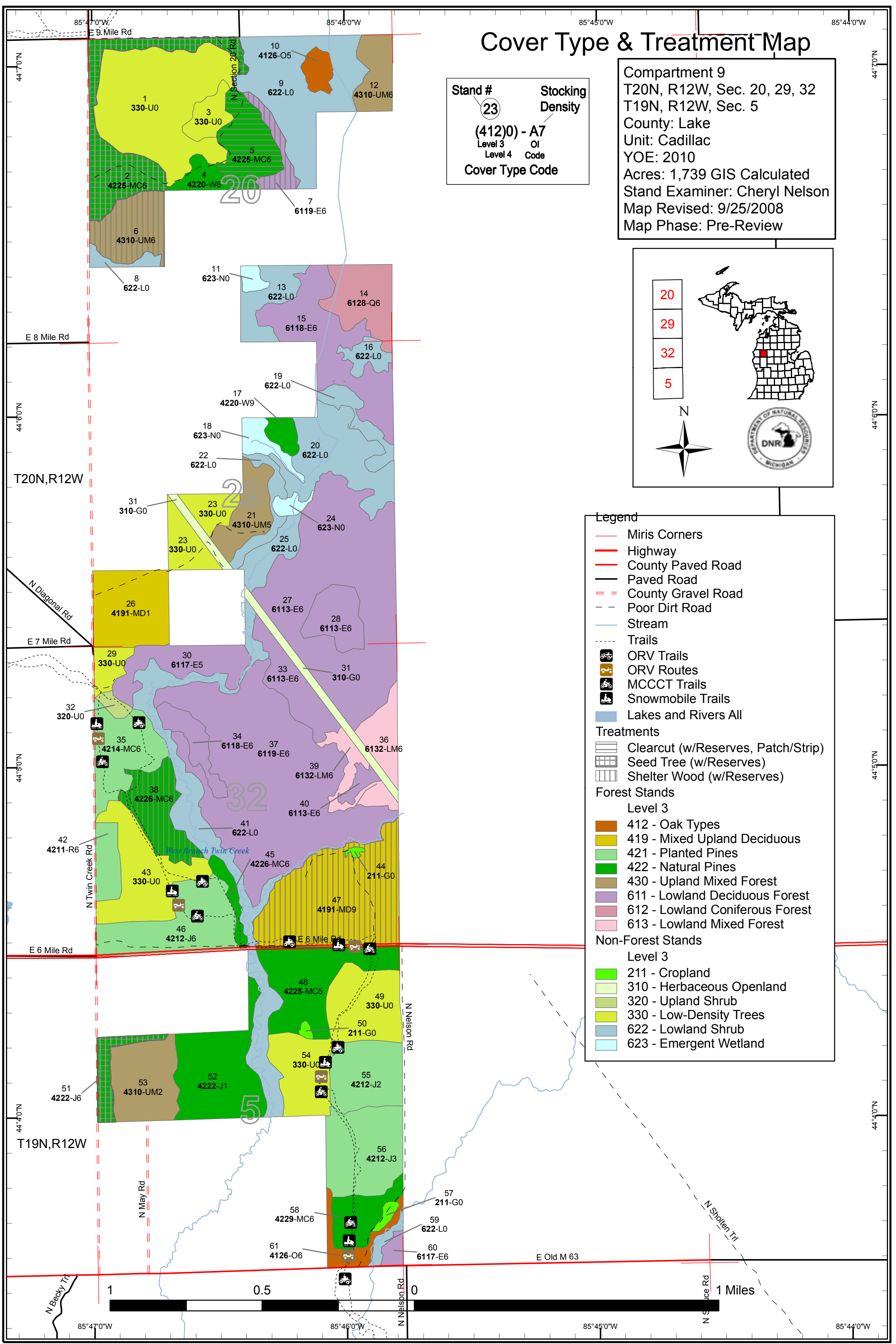
Level 3

- 412 - Oak Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

**Non-Forest Stands**

Level 3

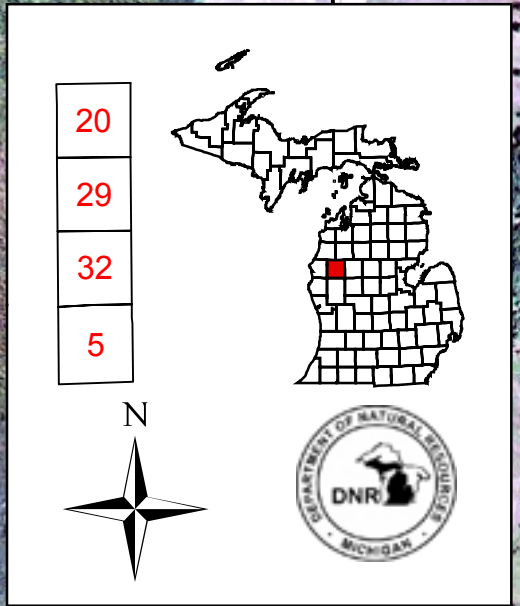
- 211 - Cropland
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland



# Stand Boundary Map

Compartment 9  
 T20N, R12W, Sec. 20, 29, 32  
 T19N, R12W, Sec. 5  
 County: Lake  
 Unit: Cadillac  
 YOE: 2010  
 Acres: 1,739 GIS Calculated  
 Stand Examiner: Cheryl Nelson  
 Map Revised: 8/28/2008  
 Map Phase: Pre-Review

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



**Legend**

- Miris Corners
- Highway
- County Paved Road
- Paved Road
- County Gravel Road
- Poor Dirt Road
- Trails
- Stream
- ORV Trails
- ORV Routes
- MCCCT Trails
- Snowmobile Trails
- Stand Boundaries

**Forest Stands**

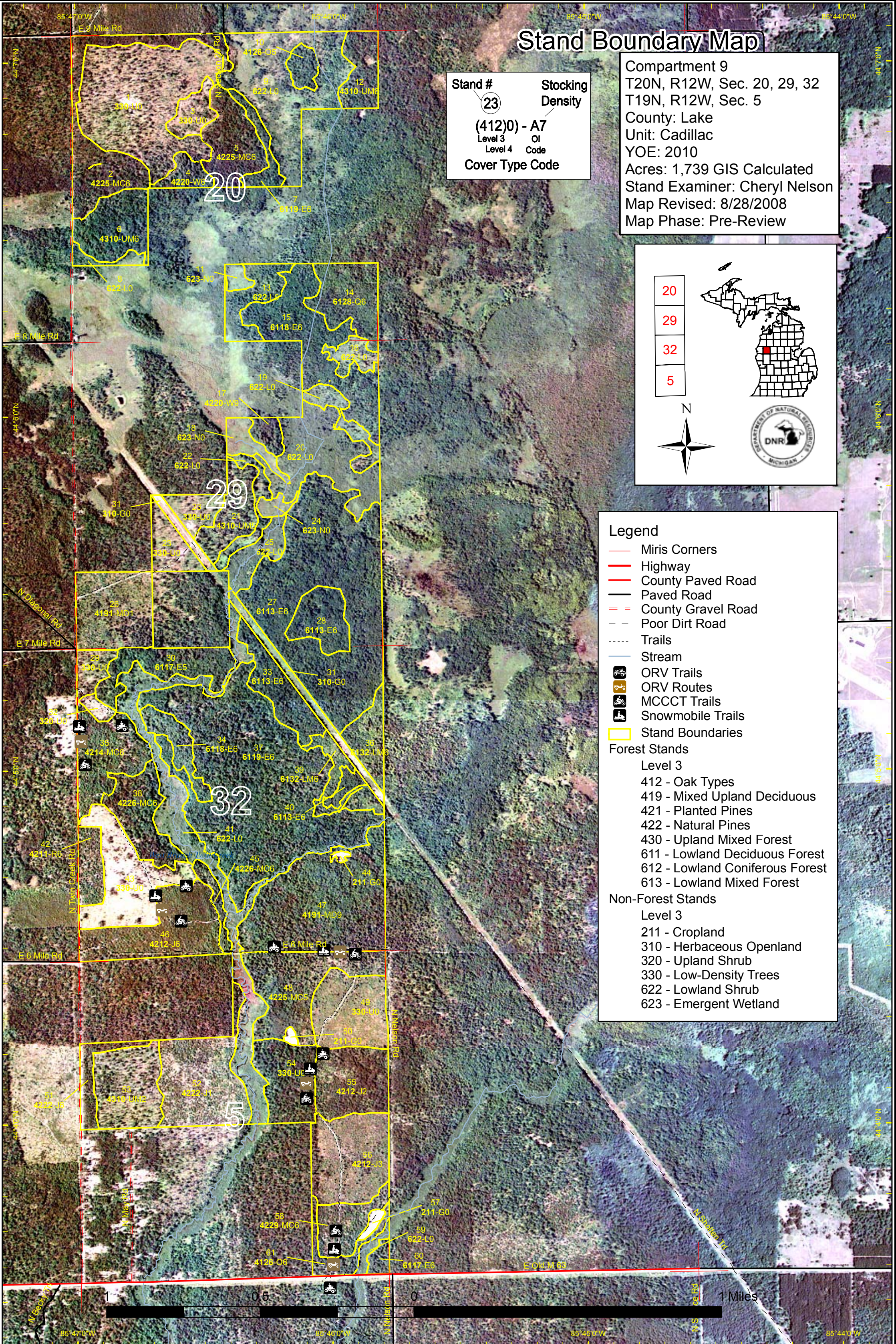
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# Dedicated & Proposed Special Conservation Area Map

85°47'0"W 85°46'0"W 85°45'0"W 85°44'0"W

44°7'0"N

44°7'0"N

44°6'0"N

44°6'0"N

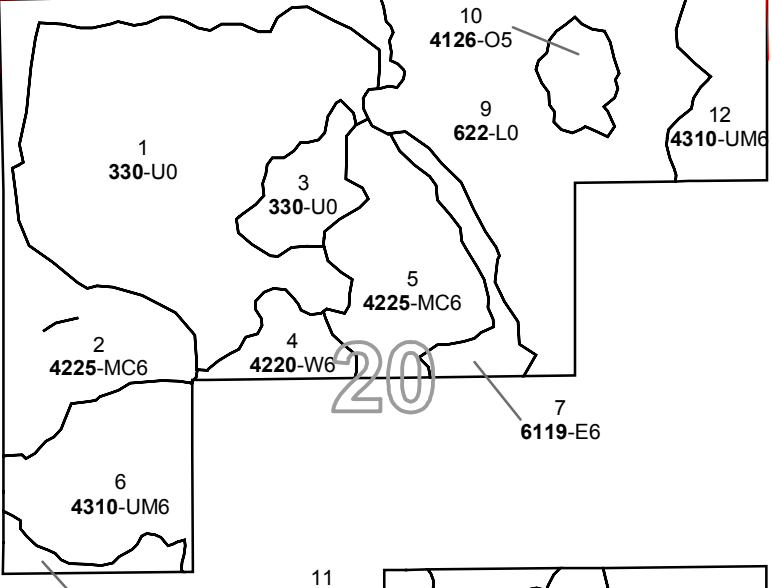
44°5'0"N

44°5'0"N

44°4'0"N

44°4'0"N

85°47'0"W 85°46'0"W 85°45'0"W 85°44'0"W



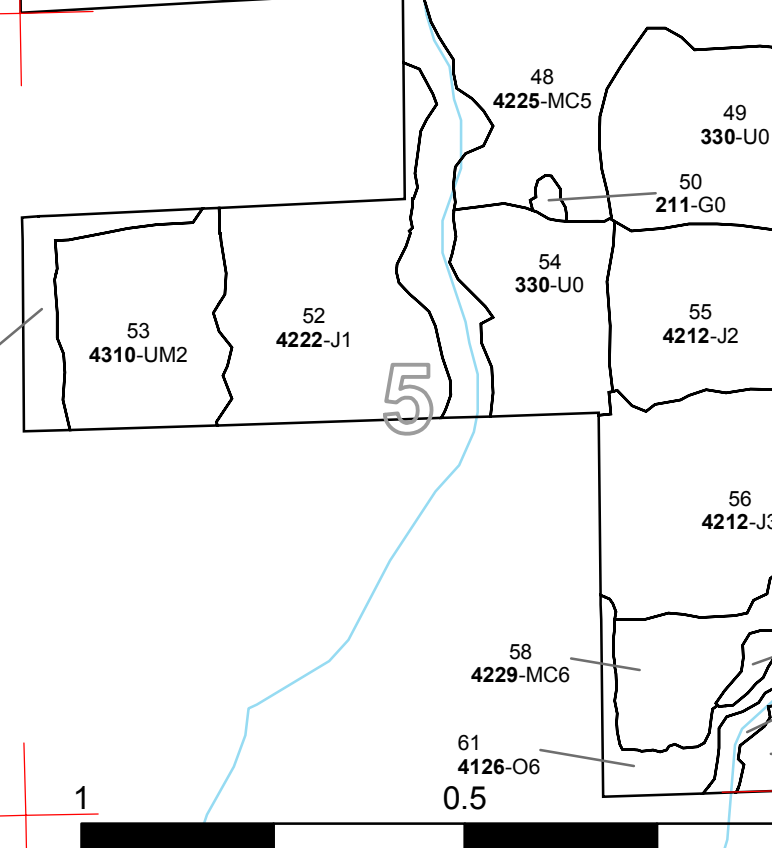
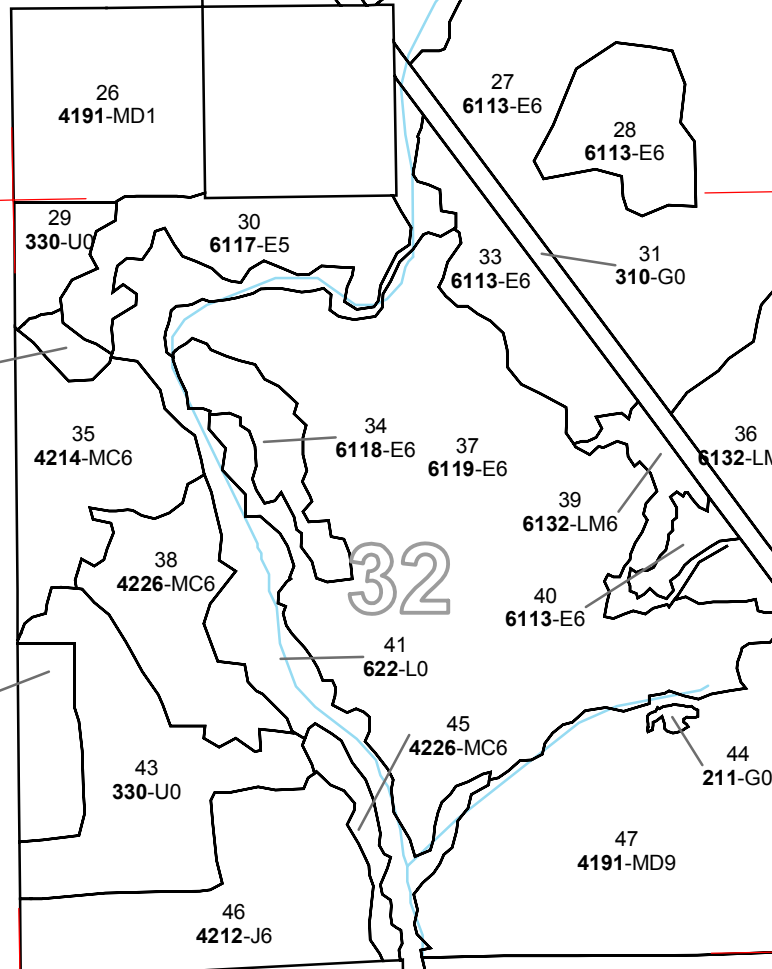
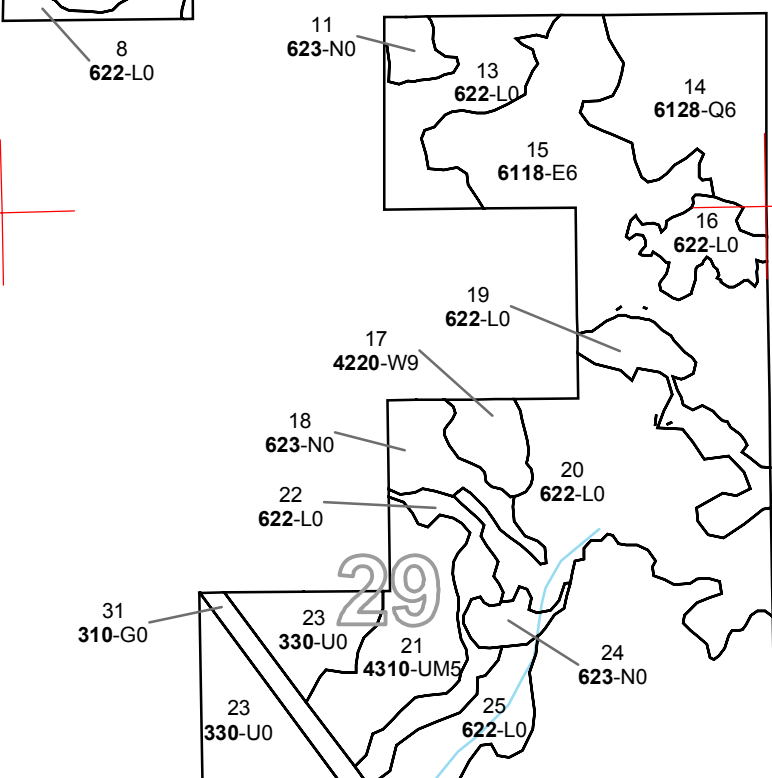
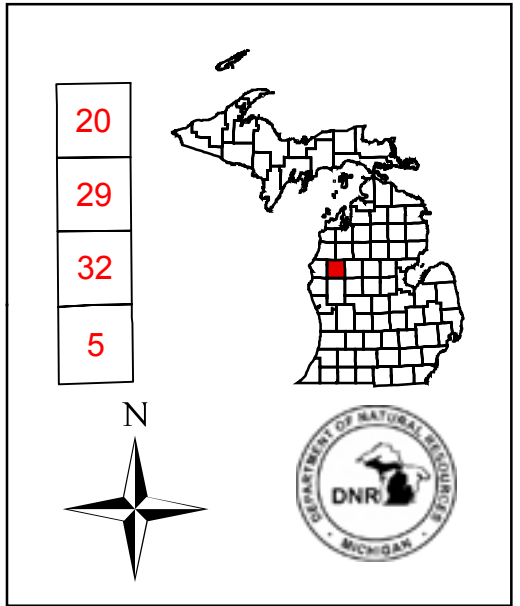
**Stand #**  
23

**Stocking Density**  
(4120) - A7

Level 3 OI  
Level 4 Code

**Cover Type Code**

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T20N, R12W, Sec. 20, 29, 32  
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YOE: 2010  
Acres: 1,739 GIS Calculated  
Stand Examiner: Cheryl Nelson  
Map Revised: 8/28/2008  
Map Phase: Pre-Review



**Legend**

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas
- Cold Water Streams

**Forest Stands**

Level 3

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Cadillac Mgt. Unit

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

Compartment 009 Year of Entry 2010

Report Date: 09/25/2008



	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
Cropland	4.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.5
Emergent Wetland	16.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16.9
Herbaceous Openland	18.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.6
Low-Density Trees	244.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	244.5
Lowland Coniferous Forest	0	0	0	0	0	0	0	0	28.9	0	0	0	0	0	0	28.9
Lowland Deciduous Forest	0	0	0	0	0	0	0	227.3	240.8	0	0	0	0	0	0	468.1
Lowland Mixed Forest	0	0	0	0	0	0	0	30.1	0	0	0	0	0	0	0	30.1
Lowland Shrub	254.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	254.8
Mixed Upland Deciduous	0	0	0	39.7	0	0	0	0	87.5	0	0	0	0	0	0	127.3
Natural Pines	0	0	0	97.3	0	35.3	0	11.3	0	62.5	36.7	6.4	0	0	0	249.7
Oak Types	0	0	0	0	0	0	0	0	0	17.6	0	0	0	0	0	17.6
Planted Pines	0	0	44.3	126.4	0	0	0	0	0	0	0	0	0	0	0	170.8
Upland Mixed Forest	0	35.6	0	17.6	0	28.8	0	0	0	21.5	0	0	0	0	0	103.6
Upland Shrub	3.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.6
<b>Total</b>	<b>543.1</b>	<b>35.6</b>	<b>44.3</b>	<b>281.1</b>	<b>0</b>	<b>64.1</b>	<b>0</b>	<b>11.3</b>	<b>257.4</b>	<b>458.8</b>	<b>36.7</b>	<b>6.4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1739.1</b>



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
2 C9_S02-Cut	44.1	42250 - Pine, Oak	High Density Pole	82	Harvest	Seed Tree	Oak, Pine

Rev Manage for a mix of oak and pine. Focus retention along county road and forest trails.  
Cmnt:

Rev Cut all trees except, mark to leave mature oak/jack pine mix to leave avg. 20BA.  
Spec:

Next Regen survey will be needed.  
Steps:

5 C9_S05-Cut	28.8	42250 - Pine, Oak	High Density Pole	47	Harvest	Clearcut with Reserves	Oak, Pine
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Rev Stand in decline. Jack pine and oak beginning to fall apart. Private land to south. Manage for an oak and pine mix with aspen clones and black cherry.  
Cmnt: Leave 3% BA retention in the form of marked trees.

Rev Cut all jack pine, aspen, oak, and black cherry. Cut all white pine 10" DBH and over. Mark oak to leave avg. 20-30 BA.  
Spec:

Next Regen survey will be needed.  
Steps:

6 C9_S06-Cut	28.8	4310 - Pine, Oak Mix	High Density Pole	48	Harvest	Shelterwood	Pine, Oak Mix
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Rev Private land to east. Manage for a mix of oak, maple, aspen, and pine. Leave 3% BA retention in the form of individually marked trees.  
Cmnt:

Rev Cut all jack pine, red maple, aspen. Remove low quality oak, especially around crop tree oaks. Do not cut white pine unless needed for equipment  
Spec: accessibility. Residual to avg. 30-40 BA.

Next  
Steps:

7 C9_S07-Cut	9.5	6119 - Mixed Lowland Deciduous Forest	High Density Pole	83	Harvest	Shelterwood	Mixed Lowland Deciduous Forest
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Rev Private land to south. Manage for a mix of maple, oak, aspen, ash, and elm. Leave 3% BA retention in the form of marked trees.  
Cmnt:

Rev Cut all trees except, mark to leave oak, quality red maple, and ash to avg 10-50 BA where possible.  
Spec:

Next Regen survey will be needed.  
Steps:

38 C9_S38-Cut	28.1	42260 - Natural Pine, Mixed Deciduous	High Density Pole	93	Harvest	Shelterwood	Pine, Oak
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Rev Mark stand for pine/oak mix. East side of stand contains some lowland aspen, red maple, white oak, white pine, and black ash. Manage for a mix of  
Cmnt: jack pine, oak, black cherry, red pine, white pine. Focus retention along recreational trails.

Rev Remove all aspen and red maple. Open up around mature oaks with seedlings present, thin in high BA pine areas for quality. Residual to avg. 30 BA.  
Spec:

Next Regen survey will be needed.  
Steps:

47 C9_S47-Cut	87.5	4191 - Mixed Upland Deciduous with Conifer	High Density Log	88	Harvest	Shelterwood	Mixed Upland Deciduous with Conifer
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Rev Stand in decline. Mark to keep quality. Manage for a mix of oak, maple, pine, and aspen. Focus retention along northern boundary. Use 50' buffer  
Cmnt: along stream edge.

Rev Cut all jack pine, red maple, and aspen. Cut all white pine and red pine over 14" DBH. Cut all oak under 10" DBH. Residual to avg. 30-40 BA.  
Spec:

Next  
Steps:

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Cadillac Mgt. Unit  
Inventory Method: IFMAP

**PROPOSED TREATMENTS  
NO LIMITING FACTORS**

Compartment: 009      Entry Yr: 2010  
Date 09/25/2008



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
51 C9_S51-Cut	11.3	42220 - Natural Jack Pine	High Density Pole	65	Harvest	Seed Tree	Pine, Oak Mix

Rev Cmnt: Private land to north and south. Manage for a pine and oak mix. Focus retention along county road.

Rev Spec: Cut all trees except, mark mature oak to leave avg. 20 BA.

Next Steps: Regen survey will be needed.

**Total Treatment  
Acreage Proposed: 238.1**

**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	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.