

## CADILLAC FOREST MANAGEMENT UNIT



### COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 018 ENTRY YEAR: 2013

Compartment Acreage (GIS Acres): 1527 County: Lake

---

**Revision Date:** 10/07/2011 10:14 AM

**Stand Examiner:** Michael Lesinski, Forester

**Legal Description:** T19N, R13W Sec. 25, 26, 35, and 36.

**Management Goals:** Mixed Use.

**Soil and Topography:** Compartment soils are primarily Rubicon sands. The topography ranges from rolling hills to slightly rolling hills.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The ownership around the compartment is mainly private recreation development (especially to the west and around Wolf Lake). Private development also occurs in the southern part of section 26 and the northern parts of sections 25 and 35.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** This compartment contains broad moraine ridges, few kettle lakes, and somewhat excessively drained sand. There is potential for Dusted Skipper and Great Plains Spittlebug in grassy openings. Additionally, the Eastern Box Turtle has been located in portions of section 36.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** There are no known significant historical features in this compartment.

**Special Management Designations or Considerations:** The management of this compartment should continue towards mixed use.

**Watershed and Fisheries Considerations:** There are no rivers or lakes within the boundaries of this compartment. However, Wolf Lake is located close to the west side of the compartment and offers good fishing opportunities for smallmouth bass, bluegill, and northern pike.

**Wildlife Habitat Considerations:** Priority Wildlife Species: Those species associated with early and mid-seral stage mesic forests.

Habitat Objectives: This compartment is in the Newaygo Outwash Plain Ecosystem, LTA 2211. Several soil associations occur in this LTA. Common soil textures include sand, loamy sand and sandy loam. Historically, red/white pine, jack pine or red/jack pine dominated the area. These forests were likely influenced by fire, which spread from adjacent outwash plains. Currently white pine is coming into the understory of many stands. Wildlife objectives are to maintain the oak communities, maintain and expand the aspen when possible and to maintain high structural diversity within stand age class diversity across the compartment.

**Mineral Resource and Development Concerns and/or Restrictions:** In this compartment, surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and coarse-textured end moraine and glacial till. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan Formation is quarried for gypsum in other areas of the State. The nearest gravel pit is one-half mile to the south and potential in the compartment is considered to be good, especially the south half. The nearest oil and gas production is Peacock Field located two miles to the northwest. The Peacock Field has produced over 1.6 million BO from the Devonian Traverse Limestone. None of the compartment is currently under lease.

**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.

**Survey Needs:** There are no known survey needs in this compartment.

**Recreational Facilities and Opportunities:** The Little Manistee Snowmobile/ORV route and motorcycle trail run through section 36, providing motorized recreational opportunities year round. In the summer, the route is heavily used by ORV's and cycles. In winter, the Route is used by snowmobilers. Additionally, the area is used by hunters, berry pickers, and other recreational users (BET 08/2011).

**Fire Protection:** Fuel type within this compartment would not support a crown fire. The mixture of private and state land ownership would be an urban interface concern. The compartment is divided with county and forest roads, making access good for fire equipment (BET 08/2011).

#### **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**



	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	172	95	24	39	13	0	0	0	0	0	0	0	0	0	343
Cropland	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Low-Density Trees	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90
Mixed Upland Deciduous	0	26	102	0	26	0	14	12	11	0	0	0	0	0	0	191
Natural Mixed Pines	0	0	59	0	6	0	0	18	0	0	0	0	0	0	0	84
Oak	0	60	74	32	0	0	0	18	179	306	0	0	0	0	8	677
Red Pine	0	8	0	11	0	0	0	0	0	0	0	0	0	0	0	19
White Pine	0	0	0	35	44	18	0	0	0	0	0	0	0	0	0	97
<b>Total</b>	<b>117</b>	<b>266</b>	<b>330</b>	<b>103</b>	<b>115</b>	<b>31</b>	<b>14</b>	<b>49</b>	<b>190</b>	<b>306</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>1527</b>



## Table 2 – Proposed Treatment Summaries

**Cadillac Mgt. Unit**  
**Year of Entry 2013**

**Compartment 018**  
**Total Compartment Acres: 1527**

### Acres by Treatment Type

Commercial Harvest - 180	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

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
<b>Mixed Upland Deciduous</b>	0	0	11	0	0	0	11
<b>Oak</b>	24	12	0	124	0	0	159
<b>White Pine</b>	0	0	0	0	10	0	10
<b>Total</b>	24	12	11	124	10	0	180



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	63018003-Cut	33.7	4126 - White, Black, N. Pin Oak	High Density Log	83	Harvest	Shelter Wood with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
<u>Prescription</u> Remove approximately 50% of crown cover (harvesting to 40 to 50 BA). Leave trees should be a mix of representative species. Expand aspen <u>Specs:</u> clones where applicable.									
<u>Other</u> Retention: Residual stand BA. <u>Comments:</u>									
<u>Next</u> <u>Steps:</u>									
12	63018012-Cut	22.6	4126 - White, Black, N. Pin Oak	High Density Log	86	Harvest	Shelter Wood with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
<u>Prescription</u> Harvest to a residual BA of 30 to 50 square feet. Leave a mix of oak and pine. Expand aspen clones where applicable. <u>Specs:</u>									
<u>Other</u> Retention: Residual stand BA. <u>Comments:</u>									
<u>Next</u> <u>Steps:</u>									
15	63018015-Cut	38.6	4126 - White, Black, N. Pin Oak	High Density Log	81	Harvest	Shelter Wood with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
<u>Prescription</u> Remove approximately 50% of crown cover (thinning to 40 to 50 BA). Leave trees should be a representative mix of species. Expand aspen <u>Specs:</u> clones where applicable.									
<u>Other</u> Retention: Residual stand BA. <u>Comments:</u>									
<u>Next</u> <u>Steps:</u>									
20	63018020-Cut	29.1	4126 - White, Black, N. Pin Oak	High Density Log	86	Harvest	Shelter Wood with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
<u>Prescription</u> Stand is variable in quality and composition. Harvest areas that are higher in quality to half of canopy cover (40 to 50 BA). In poorer quality <u>Specs:</u> areas, harvest to 30 to 40 BA. Expand aspen clones where applicable.									
<u>Other</u> Retention: Residual stand BA. <u>Comments:</u>									
<u>Next</u> <u>Steps:</u>									
27	63018027-Cut	23.6	4126 - White, Black, N. Pin Oak	High Density Log	86	Harvest	Clearcut with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
<u>Prescription</u> Throughout harvest area, clearcut strips 2 to 3 chains wide depending on topography and species composition. Follow each clearcut strip with a <u>Specs:</u> reserve strip of equal width. Thin reserve strips to 60 to 70 BA (focusing on the removal of suppressed or poor formed trees).									
<u>Other</u> Retention: Residual BA in reserve strips. <u>Comments:</u>									
<u>Next</u> <u>Steps:</u>									

S  
t  
a  
n  
d

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
29 63018029-Cut	11.8	4125 - Black, N. Pin Oak	High Density Log	72	Harvest	Single Tree Selection	4129 - Mixed Oak	Cmpt. Review Proposal

Prescription Thin stand to 60 to 70 BA. Remove trees of poor quality/form.

Specs:

Other Retention: Residual stand BA.

Comments:

Next

Steps:

38 63018038-Cut	9.6	42100 - Planted White Pine	High Density Pole	40	Harvest	Systematic Thinning	42100 - Planted White Pine	Cmpt. Review Proposal
-----------------	-----	----------------------------	-------------------	----	---------	---------------------	----------------------------	-----------------------

Prescription Remove approximately 50% of stand volume through row thinning (take two, leave two).

Specs:

Other Retention: Residual stand BA.

Comments:

Next

Steps:

70 63018070-Cut	11.1	4199 - Other Mixed Upland Deciduous	High Density Log	76	Harvest	Seed Tree with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
-----------------	------	-------------------------------------	------------------	----	---------	-------------------------	------------------	-----------------------

Prescription Harvest to a target BA of 20 to 30 square feet. Residual trees should be a representative mix of species with good crowns/form.

Specs:

Other Retention: Residual stand BA.

Comments:

Next

Steps:

**Total Treatment  
Acreage Proposed: 180.1**

**Table 4 -- Treatments Prescribed with a Limiting Factor**



S  
t  
a  
n  
d

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
----------------	-------	------------------	--------------	-----------	----------------	------------------	----------------------	-----------------

#Error

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

**Total Treatment Acreage Proposed: 0**

**Out of YOE -- Treatments  
Prescribed with No Limiting Factor**

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
63102_OutOfY OE_1-Cut	7.2				Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Final harvest plant to red pine								
<u>Specs:</u>								
<u>Other</u>								
<u>Comments:</u>								
<u>Next</u> Write FTP								
<u>Steps:</u>								
<b>Total Treatment Acreage Proposed:</b>		<b>7.2</b>						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4131 - Aspen, Oak	Low Density Pole	19.4	15	51-80	Scattered pockets of aspen, white pine, red maple, and oak. Several small openings in stand.
3	4126 - White, Black, N. Pin Oak	High Density Log	33.7	83	81-110	Average Lake County oak stand. There are some recent clear cuts on private land to the west of the stand.
4	4130 - Aspen	High Density Pole	21.0	19		19 year old aspen stand. Small stems. No management needed at this time.
5	4125 - Black, N. Pin Oak	High Density Log	70.5	70	111-140	Large oak/pine stand. Some areas with dense pine.
8	4126 - White, Black, N. Pin Oak	High Density Log	18.1	68	81-110	Stand meets silvicultural criteria, but there is a recent clear cut across the road and fairly young regen to the south. Stand appears healthy, and can wait until the next inventory cycle.
9	4122 - Oak, Pine	High Density Log	8.4	Uneven Age	81-110	Bordered by two clear cuts. Very thick white pine understory.
11	4130 - Aspen	Medium Density	24.6	9	1-50	9 year old aspen regen. Some super canopy oak on north end of stand.
12	4126 - White, Black, N. Pin Oak	High Density Log	25.1	86	111-140	
13	4130 - Aspen	Medium Density	12.0	11	1-50	
14	42260 - Natural Pine, Mixed Deciduous	Medium Density Pole	59.0	18	1-50	Stand was previously harvested as a shelterwood cut. The majority of the oak and some pine was removed, with the retention being mainly a white/red pine mix. The canopy gaps are regenerating to a mix of black oak and red maple.
15	4126 - White, Black, N. Pin Oak	High Density Log	58.2	81	81-110	Split stand. Consider intermediate thinning or shelterwood.
16	4199 - Other Mixed Upland Deciduous	Low Density Sapling	12.5	7		Stand has some scattered log sized oak trees.
17	42110 - Planted Red Pine	Low Density Sapling	7.9	6		Small planted stand. Mix of red pine and jack pine.
18	4199 - Other Mixed Upland Deciduous	Medium Density	9.2	12	1-50	Young stand. Some scattered large black oak in overstory.
19	42110 - Planted Red Pine	High Density Pole	11.0	29	141-170	Younger plantation. Borderline on need for thinning.
20	4126 - White, Black, N. Pin Oak	High Density Log	29.1	86	81-110	Manage in conjunction with pre-inventory stand # 71. Manage as a poorer quality oak stand.
21	4130 - Aspen	High Density Sapling	11.7	7	1-50	Seven year old aspen regeneration.

S t a n d	Cadillac Mgt. Unit		5 – Forested Stands			Compartment: 018 Year of Entry: 2013	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		
22	42100 - Planted White Pine	High Density Pole	7.9	41	141-170	Small white pine plantation.	
23	4126 - White, Black, N. Pin Oak	High Density Log	21.7	73	81-110	Stand adjoins recent clear cut.	
25	42100 - Planted White Pine	High Density Pole	35.2	24	111-140	Timber is not large enough for a commercial harvest.	
26	42100 - Planted White Pine	High Density Pole	31.7	35	141-170	Plantation adjoins several regenerating oak stands.	
27	4126 - White, Black, N. Pin Oak	High Density Log	110.1	86	111-140	Poorer quality oak. Split stand to break up acreage. Focus treatment on NW corner of stand.	
29	4125 - Black, N. Pin Oak	High Density Log	11.8	72	111-140	Some areas have high concentration of pole sized oak. Timber quality is above average for Lake County. Consider intermediate thinning.	
31	4130 - Aspen	High Density Sapling	5.6	7	1-50	7 year old aspen regen.	
32	4126 - White, Black, N. Pin Oak	High Density Log	35.8	86	51-80	Previous shelterwood.	
33	42250 - Pine, Oak	Medium Density Log	6.3	39	51-80	Stand was previously thinned. Heavy oak and red maple understory.	
34	4130 - Aspen	High Density Sapling	14.5	15	1-50		
36	4130 - Aspen	High Density Sapling	23.0	7	1-50	Seven year old aspen regeneration.	
37	4126 - White, Black, N. Pin Oak	High Density Log	29.8	78	111-140	Stand meets criteria for harvest, but is surrounded by recent clear cuts. Recommend holding until next inventory cycle.	
38	42100 - Planted White Pine	High Density Pole	9.6	40	171-200	Canopy closed. Stand could be thinned.	
39	4130 - Aspen	High Density Pole	38.7	36	111-140	Highly variable stand diameter.	
40	4130 - Aspen	High Density Sapling	27.8	12	51-80	12 year old aspen regeneration.	
41	4199 - Other Mixed Upland Deciduous	Medium Density	13.3	5		5 year old oak/aspen regeneration.	
43	4130 - Aspen	High Density Sapling	48.7	7	51-80	Young aspen stand.	





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	4125 - Black, N. Pin Oak	Medium Density	74.1	17	1-50	Shelterwood cut in 1994. Mixed regeneration of black oak and red maple. Some scattered white pine in the understory.
45	4122 - Oak, Pine	Low Density Sapling	25.8	7	1-50	Previous shelterwood harvest. Scattered openings mixed with oak regeneration and variable sized white pine.
48	4199 - Other Mixed Upland Deciduous	High Density Pole	26.1	36	81-110	Edges of stand are heavier to aspen, but the majority of the stand is oak and red maple.
51	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	12.1	62	51-80	Mixed oak and pine stand. Not ready for treatment.
53	42100 - Planted White Pine	High Density Pole	12.2	39	111-140	Planted whit pine. Not ready to harvest.
55	4130 - Aspen	High Density Pole	13.4	46	111-140	Borderline on harvestability. Nice pole stand. Recommended to hold until next inventory cycle to consider harvest with preinventory stand #36.
56	4199 - Other Mixed Upland Deciduous	High Density Log	13.9	57	111-140	
57	42290 - Natural Mixed Pine	Low Density Log	18.5	62	1-50	5 year old shelter wood harvest. Oak was harvested and a mix of pine was left (some former plantation). Decent oak regeneration (stump sprouts) in many of the openings. Some pockets of mature mixed pine.
58	4131 - Aspen, Oak	Low Density Sapling	58.0	4		Stand final harvested in 2007.
59	4125 - Black, N. Pin Oak	High Density Log	13.4	85	81-110	Stand could be harvested, but is in good shape. Due to proximity of other harvests, it is recommended to hold this stand until next inventory cycle.
60	4126 - White, Black, N. Pin Oak	High Density Pole	31.9	27	51-80	27 year old oak stand. Well stocked and growing well.
62	4125 - Black, N. Pin Oak	High Density Log	21.9	74	200+	Stand meets silvicultural criteria for harvest but could also wait. Stand appears healthy, and bordering stands were recently harvested. Aspen was found in a few clones on the north end of the stand. Timber is smaller in diameter to the south.
65	4126 - White, Black, N. Pin Oak	High Density Log	23.1	73	81-110	Long and narrow stand surrounded by recent clear cuts. Stand appears healthy and will be able to wait 10 years.
66	4125 - Black, N. Pin Oak	Low Density Sapling	27.4	4	1-50	4 year old regen.
68	4191 - Mixed Upland Deciduous with Conifer	Medium Density	92.6	17		Young stand: oak/ aspen/ red maple regen. ORV trail splits stand. Small strip of white pine on west side of stand.
69	4131 - Aspen, Oak	High Density Pole	24.5	21		Pole sized aspen stand. Not ready for treatment.

S  
t  
a  
n  
d

Cadillac Mgt. Unit

5 – Forested Stands

Compartment: 018  
Year of Entry: 2013



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
70	4199 - Other Mixed Upland Deciduous	High Density Log	11.1	76	111-140	Lower quality oak. Stand qualifies for a regeneration harvest, but it may be advisable to leave through one more inventory cycle due to proximity of several recent oak treatments. If a treatment is to take place, consider a seedtree harvest, and expand aspen clones wher applicable.
71	4125 - Black, N. Pin Oak	Low Density Sapling	7.0	6	1-50	Regenerating oak stand. Regen is mainly stump sprouts. Stand was CC approximately 6 years ago, with a strip of the original stand left in the middle of the harvest.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3301 - Low Density Deciduous Tree	2.0	No	Unspecified	
6	3301 - Low Density Deciduous Tree	3.9	No	Unspecified	
7	330 - Low-Density Trees	8.5	No	Unspecified	
10	3302 - Low Density Conifer Trees	1.9	No	Unspecified	
24	3301 - Low Density Deciduous Tree	5.5	Natural Regen	Unspecified	
28	2113 - Forage Crops	6.1	Yes	Unspecified	
30	3303 - Mixed Low Density Trees	11.7	Yes	Oak	
35	3301 - Low Density Deciduous Tree	6.0	Natural Regen	Oak	
42	3301 - Low Density Deciduous Tree	20.4	Natural Regen	Unspecified	
46	2113 - Forage Crops	2.8	Yes	Unspecified	
47	3303 - Mixed Low Density Trees	7.7	Natural Regen	Mixed Upland Deciduous	
49	2113 - Forage Crops	2.1	Yes	Unspecified	
50	3301 - Low Density Deciduous Tree	4.5	Natural Regen	Unspecified	
52	2113 - Forage Crops	0.8	Yes	Unspecified	
54	3105 - Mixed Upland Herbaceous	8.9	No	Unspecified	Non planted opening. Mix of sweetfern and grasses. Some areas heavy to knapweed. Small patch of pragmites at east end of opening.
61	2113 - Forage Crops	2.2	Yes	Unspecified	
63	3301 - Low Density Deciduous Tree	13.4	Natural Regen	Unspecified	
64	3301 - Low Density Deciduous Tree	4.6	No	Unspecified	Small oak stand. Non forested due to acreage.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
67	2113 - Forage Crops	4.0	Yes	Unspecified	



### 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.

Stand	SCA Type	SCA Name	Acres	Comments
-------	----------	----------	-------	----------



### 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.

ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

<b>Conservation Area</b>	<b>Type</b>	<b>Description</b>
--------------------------	-------------	--------------------

---

---

Compartment 18  
 T19N, R13W, Sec. 25,26,35,36  
 County: Lake  
 Unit: Cadillac  
 YOE: 2013  
 Acres: 1,527 GIS Calculated  
 Stand Examiner: Mike Lesinski  
 Map Revised: 10/4/2011  
 Map Phase: Pre-Review

# Cover Type & Treatment Map

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

### Legend

— Miris Corners	Motorcycle Trails (DNR License)	<b>Forest Stands</b>
⊕ Remonumented Section Corners	Snowmobile Trails	Level 3
□ State Highway	<b>Treatments</b>	412 - Oak Types
■ State Forest Land	Clearcut (w/Reserves, Patch/Strip)	413 - Aspen Types
■ Lakes and Rivers	Seed Tree (w/Reserves)	419 - Mixed Upland Deciduous
	Shelter Wood (w/Reserves)	421 - Planted Pines
	Thinning (Crown, Low, Systematic)	422 - Natural Pines
	Selection (Group, Single Tree)	<b>Non-Forest Stands</b>
	<b>Non-Forest Regeneration</b>	Level 3
	<b>Planned Regeneration</b>	211 - Cropland
	Natural	310 - Herbaceous Openland
		330 - Low-Density Trees





