

CADILLAC FOREST MANAGEMENT UNIT

COMPARTMENT REVIEW PRESENTATION

COMPARTMENT #097 ENTRY YEAR: 2013

Compartment Acreage (GIS Acres): 1251 County: Missaukee

Revision Date: 10/07/2011 10:18 AM

Stand Examiner: Jim Malloy, Forester

Legal Description: T22N-R5W, Sections 27, 35, and 36

Management Goals: To manage for a diverse timber and age class to provide for recreational opportunities

for the public. The Muskegon River Floodplains are a major component of this area.

Soil and Topography: Loamy sands, muck, frequently flooded. Mostly flat, wet and low terrain.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Mostly State ownership surrounds the compartment to the north and east. Blocks of private recreational land with seasonal and year-round residents to the south and west. The remaining areas of section 35 are recommended for acquisition to help fill-in State ownership and access. All State lands in section 27 are currently being considered for potential disposal. The state owned properties in section 27 are land locked. Access for previous management activities were through the private, Hi-Lo Ranch.

Unique, Natural Features (include only non-site specific and non-sensitive information): Wood turtle to west. Blanding's turtle to NE. Osprey, bald eagle, and great blue heron to SE and elsewhere in vicinity. Massasauga to S. Secretive locust to SW and SE. Grasshopper sparrow to N. Yellow rail to NE. Bigmouth shiner, rainbow (mussel) and slippershell mussel in Muskegon River and tributaries in vicinity. Alleghany plum to E. Potential for secretive locust and ebony boghaunter in bogs. Potential for wood turtle and other riverine species: bigmouth shiner, rainbow (mussel), and slippershell mussel. Potential for massasauaga, Blanding's turtle, and box turtle. Potential for eagle, osprey, and great blue heron rookery. Potential for redshouldered hawk. Limited potential for marsh birds: American bittern, least bittern, yellow rail, black tern, common moorhen, and marsh wren. Potential for calypso and ram's head lady slipper in cedar swamps. Limited potential for rare plants of forested floodplains: ginseng, beak grass, and broad-leaved puccoon.

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

Special Management Designations or Considerations: The Houghton Lake Wildlife Research Area; Porter Ranch, is directly adjacent to the north of this compartment. Retain all oak acreage for mast production.

Watershed and Fisheries Considerations: No Fisheries comments at this time.

Wildlife Habitat Considerations: <u>Priority Wildlife Species:</u> Species associated with early succession deciduous forest and mature swamp conifer and lowland hardwood forests. Of particular concern are critical habitats for bear, bobcat and furbearers.

<u>Habitat Objectives:</u> This compartment is located within the Highplains Ecosystem, Grayling Outwash Plain Subsection LTA's 5149 and 3111. Soils are predominately very poorly drained peats and mucks with M:\FMU_Common\Cadillac\Compartment_Info\YOE 2013\97\Compt 97.doc

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inclusions of poorly drained and excessively drained sands. Historically, this area was composed of a matrix of emergent wetlands, lowland conifer swamps and mesic northern forest. This swamp complex and associated uplands are key black bear habitat and part of a large deer wintering complex. Objectives are to continue to manage for high structural diversity within stands and age class diversity across the compartment. RUM agreements had called for no change in major cover types but to date, with eight compartments involved, large acreages of aspen have been lost and a large increase in pine acreage has occurred. (AH 9/29/11)

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and fine-textured glacial till. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw is quarried for clay/shale in other parts of the State. Gravel pits are located within one-half mile to the east of this compartment, but potential is considered limited, except the NE of Section 36. This area is located three miles east of South Prosper Field. Production of over 1 million BO is primarily from the Devonian Dundee Limestone. All state lands are currently leased for oil and gas development, and there may be Collingwood Formation potential.

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: The above paragraph is to be included in each write-up. As noted above the road plan is on the map and any new roads or improvements should be listed here.

Survey Needs: N/A

Recreational Facilities and Opportunities: Houghton Lake Snowmobile Trail and a FMD non-motorized pathway pass through the compartment. The Muskegon River flows through the compartment allowing usage by canoes and fishermen. Area heavily used by canoes, hunters, snowmobilers, and campers. 9-01-2011 BET

Fire Protection: The area is a wet lowland marshy area. This would make wildfire control difficult for most of the suppression forces. The Muskegon River may provide for dispersed camping and remote campfires. 9-01-2011 BET

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

Compartment 097 Year of Entry 2013

Cadillac Mgt. Unit
James Malloy : Examiner



Age Class

							Age v										
	No.	A SE	8,/	0°.0°	2.2.	, S	D. L. C.	N. S. C.	8 /	10.	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	8 /	00,00/	,70,7 ₀	70 [×] 30°		,
Aspen	0	0	14	31	152	9	22	15	23	0	0	0	0	0	0	266	ſ
Cedar	0	0	0	0	0	0	0	0	0	0	74	0	0	0	0	74	j
Jack Pine	0	0	0	0	0	13	7	0	0	0	0	0	0	0	0	19	j
Low-Density Trees	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76	
Lowland Aspen/Balsam Poplar	0	0	21	67	0	0	0	0	0	0	0	0	0	0	0	88]
Lowland Conifers	0	0	0	0	0	0	13	4	0	16	0	0	0	0	0	33	
Lowland Deciduous	0	0	0	0	0	0	0	0	94	15	0	0	0	0	0	109	
Lowland Mixed Forest	0	0	0	0	0	0	0	0	11	0	85	30	0	0	0	126	
Lowland Shrub	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	
Marsh	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	
Mixed Upland Deciduous	0	0	0	0	0	61	0	0	0	0	0	0	0	0	45	106	
Red Pine	0	0	0	0	0	0	0	26	10	0	0	0	0	0	18	55	
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	21	
Upland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
White Pine	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4]
Total	353	0	35	98	152	86	41	45	138	31	179	30	0	0	63	1251	



Table 2 – Proposed Treatment Summaries

Cadillac Mgt. Unit

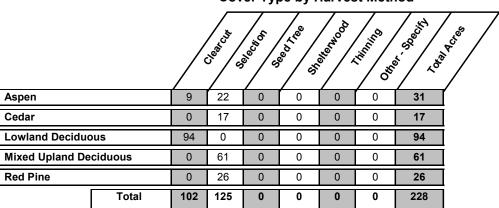
Compartment 097 Year of Entry 2013 **Total Compartment Acres: 1251**

Acres by Treatment Type

Commercial Harvest - 228 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



S t			dillac Mgt. Unit			atments Pre imiting Fac		Compartment: 097 Year of Entry 2013	DNR DNR		
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status		
29	63097029-Cut	93.6	6113 - Lowland Maple	High Density Pole	79	Harvest	Clearcut with Reserves	6113 - Lowland Maple	Cmpt. Review Proposal		
	Prescription Final harvest areas that are accessable by machines. Specs:										
Othe Com			esable areas as need and berry producing sh				ozen winter conditions or	nly due to wet condition	s. Focus on		
Next Step											
47	63097047-Cut	21.9	4131 - Aspen, Oak	High Density Log	52	Harvest	Group Selection	4131 - Aspen, Oak	Cmpt. Review Proposal		
Pres Spec			n and maple. Leave a ng mast and berry pro		woods if	needed for acce	ess. Apply dead and dov	wn creation spec for gro	ouse habitat.		
Othe Com	<u>er</u> ments:										
Next Step											
48	63097048-Cut	60.5	4199 - Other Mixed Upland Deciduous	High Density Pole	42	Harvest	Group Selection	4131 - Aspen, Oak	Cmpt. Review Proposal		
	<u>Prescription</u> Thin scattered hardwood and oak. remove all aspen and red maple to expand aspen where possiable. Leave all pine. Apply dead and down creation spec for grouse habitat. Focus on retaining mast and berry producing shrubs.										
Othe Com	<u>er</u> ments:										
Next Step											
50	63097050-Cut	16.7	6120 - Lowland Cedar	High Density Log	96	Harvest	Single Tree Selection	6120 - Lowland Cedar	Cmpt. Review Proposal		

Proposal Cedar Cedar

<u>Prescription</u> Work with wildlife to devlpoment treatment prescription to maxamize cedar regen. Specs:

Use fence if possible to limit browse on regen. Other_ Comments:

<u>Next</u>

Steps:

42211 - Natural Red Pine, Mixed 63097052-Cut 26.4 High Density Log 68 Harvest **Group Selection** 4112 - Maple, Cmpt. Review 52 Beech, Cherry Proposal Deciduous Association

Prescription heavy maple regen. remove overstory pine to release maple. Focus on retaining mast and berry producing shrubs. Retain oaks for mast and seed source. Specs:

Other_

Comments:

<u>Next</u> Steps:

Cadillac Mgt. Unit

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 097
Year of Entry 2013

DNR DNR	COURCE
nproval	

t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	63097053-Cut	8.8	4139 - Aspen, Mixed Deciduous	High Density Log	48	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal

<u>Prescription</u> final harvest leave oaks and scattered pine. Apply dead and down creation spec for grouse habitat. Focus on retaining mast and berry producing <u>Specs:</u> shrubs.

Other Comments:

s

Next Steps:

Total Treatment

Acreage Proposed: 227.9

Cadillac Mgt. Unit Table 4 -- Treatments Prescribed with Compartment: 097 a Limiting Factor s Year of Entry 2013 t **Treatment Cover Type** n Treatment **Acres** Stage1 Size Stand **Treatment Approval** Name CoverType Density Method Objective Status Age Type d #Error **Prescription** Specs: <u>Other</u> Comment: <u>Next</u> Steps:

Total Treatment
Acreage Proposed:

<u>Limiting Factor and No</u> <u>Treatment Reason</u>

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
Prescription Final Specs:	al harvest p	lant to red pine						
Other Comments:								
<u>Next</u> Wri <u>Steps:</u>	te FTP							

Total Treatment

Acreage Proposed: 7.2

S	Cadillac Mgt. Offit			0 10	orcotca ota	Year of Entry: 2013
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6132 - Mixed Lowland Forest with Cedar	High Density Pole	55.6	94		Stand is a mix of lowland species along a drainage toward the river.
3	42110 - Planted Red Pine	High Density Pole	8.5	71		Red pine stand that transitions to jack pine as it moves south. Retain for cover and diversity
4	42200 - Natural White Pine	High Density Pole	3.6	43		scattered white pine with maple scattered throughout stand.
5	4130 - Aspen	High Density Pole	68.9	31		aspen mixed with widely scattered pine and oaks.
7	42120 - Planted Jack Pine	High Density Pole	1.9	42	81-110 small patch of jack pine. used as cover by wildl	
8	4130 - Aspen	High Density Pole	82.6	35	51-80	mixed aspen and scattered white pine and oaks.
9	42110 - Planted Red Pine	High Density Log	1.1	72		Small pocket of red pine within large red pine stand. Retain for cover and diversity.
10	6112 - Lowland Aspen	High Density Sapling	5.4	19		Habitat cut in 1992
11	42110 - Planted Red Pine	High Density Pole	0.4	72		Small red pine patch in middle of aspen stand. Leave for cover and diversity.
12	42120 - Planted Jack Pine	High Density Pole	0.5	58		Small patch of jack pine within large aspen stand. Retain for diversity and cover.
13	4319 - Mixed Upland Forest	High Density Pole	20.6	93		
14	4130 - Aspen	High Density Sapling	13.8	16		stand was habitat cut by wildlife in 1993
15	42120 - Planted Jack Pine	High Density Pole	6.0	58	81-110	
17	4130 - Aspen	High Density Log	23.2	74		
19	4131 - Aspen, Oak	High Density Log	15.1	65	81-110	
21	6119 - Mixed Lowland Deciduous Forest	High Density Log	12.7	82	111-140	lowland hardwood stand that is underwater at times due to river floodplain.
26	6139 - Mixed Lowland Forest	High Density Pole	10.9	72		Stand is located east off of Jeffs Rd.

5 - Forested Stands

Cadillac Mgt. Unit

Compartment: 097

S t				5 – For	rested Sta	nds Compartment: 097 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	6113 - Lowland Maple	High Density Pole	2.3	84		Small pockey of swamp hardwoods
29	6113 - Lowland Maple	High Density Pole	93.6	79	81-110	Wet areas with maple and scattered aspen pockets.
30	6132 - Mixed Lowland Forest with Cedar	High Density Pole	29.6	108		Wet, areas of balsam and cedar. Heavy deer use.
33	6124 - Lowland Spruce- Fir	High Density Pole	8.3	52	51-80	Mix of various conifer species. Letherleaf in understory.
34	6132 - Mixed Lowland Forest with Cedar	High Density Pole	29.4	94		Heavy deer use. Heavy browse on reproduction.
35	42220 - Natural Jack Pine	High Density Pole	11.0	49		
37	6112 - Lowland Aspen	High Density Pole	66.8	28		Stand was cut in 1983. Good aspen mixed with scattered lowland brush areas and some water
38	4130 - Aspen	High Density Pole	31.2	28		Stadn cut in 1983. some scattered wet areas.
39	6112 - Lowland Aspen	High Density Sapling	15.5	16		Habitat cut in 1996
40	6124 - Lowland Spruce- Fir	High Density Pole	4.5	56		Looks to be amix of black spruce and balsam fir.
42	6129 - Mixed Coniferous Lowland Forest	High Density Pole	3.5	65		small pocket surrounded by wet swamp.
43	4199 - Other Mixed Upland Deciduous	High Density Log	45.1	Uneven Age	1-50	Northern portion cut by wildlife in 1996. Left all oak. Stad is wetter to the southern portion.
46	6129 - Mixed Coniferous Lowland Forest	High Density Log	16.3	82		Big white pine with balsam, birch, and spruce. scattered cedar to the south.
47	4131 - Aspen, Oak	High Density Log	21.9	52	81-110	Mix of oak, aspen and a few scattered hardwoods.
48	4199 - Other Mixed Upland Deciduous	High Density Pole	60.5	42	51-80	
49	42210 - Natural Red Pine	High Density Log	18.2	Uneven Age		overstory red pine with aspen and maple removed last entry.
50	6120 - Lowland Cedar	High Density Log	73.6	96	111-140	straight cedar mixed with scattered black spruce, paper birch, red maple and white pine.
 52	42211 - Natural Red Pine, Mixed Deciduous	High Density Log	26.4	68	81-110	

5 - Forested Stands

S t	Cadilla		5 – Fo	orested Stands	Compartment: 097 Year of Entry: 2013	DNR DNR	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	MICHIGAN .
53	4139 - Aspen, Mixed Deciduous	High Density Log	8.8	48	81-110	New stand added.	

6 - Nonforested Stands

Compartment: 097 Year of Entry: 2013



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	320 - Upland Shrub	1.6	N\A	Unspecified	
6	330 - Low-Density Trees	4.3	N\A	Unspecified	
16	622 - Lowland Shrub	7.6	N\A	Unspecified	
18	622 - Lowland Shrub	5.0	N\A	Unspecified	Old oxbows of the Muskegon River
20	122 - Road/Parking Lot	2.4	N\A	Unspecified	
22	622 - Lowland Shrub	5.5	N\A	Unspecified	
23	622 - Lowland Shrub	2.4	N\A	Unspecified	
24	3301 - Low Density Deciduous Tree	6.9	N\A	Unspecified	
25	3303 - Mixed Low Density Trees	22.7	N\A	Unspecified	
28	622 - Lowland Shrub	64.8	N\A	Unspecified	
31	330 - Low-Density Trees	42.2	N\A	Unspecified	regen cut flooded out. lots of shrub witha few scattered trees.
32	623 - Emergent Wetland	3.1	N\A	Unspecified	
36	622 - Lowland Shrub	50.0	N\A	Unspecified	
41	623 - Emergent Wetland	12.6	N\A	Unspecified	
44	622 - Lowland Shrub	12.4	N\A	Unspecified	
45	622 - Lowland Shrub	107.0	N\A	Unspecified	
51	623 - Emergent Wetland	2.3	N\A	Unspecified	

Cadillac Mgt. Unit Compartment: 097

Year of Entry: 2013

DNR MICHIGAN

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

Cadillac Mgt. Unit

Compartment: 097 Year of Entry 2013



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.

Conservation Area	п Туре	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area				
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial				
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife And Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grasslan openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.					
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,000 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research, and over 144,000 acres of Military Lands.	0 acre Houghton Lake Wildlife Research at includes most of Garden Island, all of x and North Fox Islands), the Cusino				

