

CADILLAC FOREST MANAGEMENT UNIT



COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 119 ENTRY YEAR: 2007

Compartment Acreage (GIS Acres):3483 County: Missaukee

Revision Date: 10/31/2005 4:06 PM

Stand Examiners: Jason Hartman - Forester

Legal Description: T24N R7W: Sections 4, 5, 8, 9, 16, 17

RMU : Mixed Use

Management Goals: Maintain and enhance forest health, wildlife habitat, recreational opportunities, timber production, historical places, and unique communities. This compartment fills the needs of various natural resource values. The tremendous recreational and historical value in this compartment combined with the potential for both barrens and old-growth communities indicate that a special designation that would be in conjunction with long-term regional planning may be appropriate.

Soil and Topography: Soils are composed of rubicon sands. Site quality increases nearer the Manistee River and Hopkins and Ham Creeks. The lowest site indices are within the oak-pine barrens restoration area.

Ownership Patterns, Development, and Land Use in and Around the Compartment: A large portion of this compartment was formerly owned by Consumers Power and was acquired by the State in the ten years since this compartment was last inventoried. Two parcels with cabins and current leases still exist. These leases encompass stands 5, 107, and 108.

Past trespass cases resulted in the sale of small parcels of state land 40 ft. south of Moorsetown Road near Lucas Rd. The sale of these parcels slightly changed the compartment boundary.

Overall, the compartment is mostly solid state ownership. Desirable parcels for acquisition would be the 80 acre parcel in the southeast corner of the compartment.

Unique, Natural Features: This compartment contains oak-pine barrens and northern wet meadow communities. Evidence of wood turtle has been identified and potential exists for Blanding's turtle in the Hopkins and Ham Creeks. Potential exists for massasauga and prairie warbler in the upland brush areas.

Archeological, Historical, and Cultural Features: Numerous Native American archeological sites have been documented. The high banks area bordering the Manistee River was used as log rollaways in the late 1800's pine logging era.

Special Management Designations or Considerations: A large portion of this compartment is being managed as shrub and herbaceous openland through the use of prescribed fire. Several areas have high concentrations of invasive species such as knapweed and St. Johns wort. A systematic evaluation of flora for each stand prescribed for burning still needs to be accomplished. Future goals for this openland are to maintain a fire return interval that enhances wildlife habitat, blueberry production, and vegetation associated with barrens. Some of the pine plantations with low site indices that are contiguous to the burn area have been prescribed to thin and eventually incorporate into the burn units after future entries. Some lowland

conifer stands in the northwest part of the compartment were designated as having the potential to be managed for old-growth. Prescriptions were designated in some of these lowland conifer stands to enhance gap dynamics and retain vigor in the cedar component, but most of the area will not be able to be treated due to Natural Rivers Guidelines. Both the lowland and barrens areas are being considered for designation as High Conservation Value Areas (HCVA's). All of the Natural Rivers corridors are already designated as HCVA's. Therefore, the overlook and the surrounding pine plantation is also being considered for special designation thereby connecting the two HCVA's

Watershed and Fisheries Considerations: The mainstream of the Manistee, Hopkins Creek and Ham Creek flow through this compartment. Extensive past beaver activity has been documented along Ham and Hopkins Creeks. Occupied dens and some blockage were identified near the north edge of the compartment. Both Ham and Hopkins Creeks are designated tributaries under the Upper Manistee River State Natural River designation. The Upper Manistee River Natural River Plan has very specific native vegetation buffers for the mainstream and tributaries (pages 40-42, inclusive.) The mainstream buffer is 175 feet, except if the proposed treatment meets one of the eight criteria. On Ham Creek the buffer would be 100 feet, if the slope is 0-10%; 115 feet, if the slope is 11-20%; 135 feet, if the slope is 21-32%; and 155 feet, if the slope is 33+%. On Hopkins Creek, in addition to the above standards, there is a 100foot no cut zone, unless it meets one of the (a) through (h) criteria in the plan.

Wildlife Habitat Considerations: This compartment offers a wide variety of valuable wildlife habitats. The river and creek corridors are valuable deer winter areas. They provide excellent habitat and travel areas for bear and bobcat. The central portion of the area provides a valuable grassland, blueberry, and fruit bearing shrub area for songbirds and turkey. The surrounding oak, aspen, and pine areas provide adjacent food and cover for many different species. By maintaining this variety of cover types and age classes, this compartment can continue to provide valuable habitats to deer, ruffed grouse, woodcock, turkey, bear, bobcat, and numerous songbirds. (L. Smith, 7/19/05)

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact outwash sand and gravel, an end moraine of coarse-textured till and minor coarse-textured 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. Gravel pits are located in Section 13 & 18 and potential is good. The compartment is located southwest of Cannon Creek Field. The field has produced from the Stray Sandstone and Detroit River Sour Zone. There are no State leases currently in the Compartment, but State land to the northeast is leased.

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. There is currently a forest two-track that was previously used to ford Ham Creek near the north edge of the compartment. Due to significant erosion of the banks of the creek at the fords, and the detrimental effects this is having on the stream quality of this sensitive and important stream, this road will be blocked and road rendered impassable.

Survey Needs: This compartment is almost solid state ownership. No surveying is needed at this time. The compartment boundary along the west edge of section 5 follows a bluff line heading north. This property line is very irregular and does not head straight north.

Recreational Facilities and Opportunities: There is access to the Manistee River on Lucas Road. Hopkins Creek Campground is located within this compartment. Portions of this campground is a

designated equestrian camp. Portions of the Shore to Shore Horse Trail are located in the compartment. The North Missaukee ORV Trail, and the MissKal Snowmobile Trail also have segments located in this compartment. There are numerous fishing and hunting opportunities. This area also has many dispersed camping sites, which are used frequently. There is good blueberry picking available in the compartment. The area near Hopkins Creek Campground is managed for blueberries.

Fire Protection: The areas of red pines provide the potential for large fire growth. There are some urban area concerns within the compartment. The potential for poor access exists, with the varying terrain within the compartment. An area near Hopkins Creek Campground is managed for blueberries, by prescribed fire. These areas were burned on a 5 year rotation, to set back woody vegetation, in each of the 11 burn units. In most of the burn units, the rotation will be changed to burning every 7-10 years, after the woody vegetation has been set back.

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

PERE MARQUETTE STATE FOREST

CADILLAC MGT UNIT

MISSAUKEE COUNTY

COMPARTMENT: 119

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	All Aged	Total
Aspen	20	57	129		36	167	11	56	20										496
Black Spruce																		4	4
Bog or Marsh	11																		11
Cedar										113	24				18				155
Grass	5																		5
Jack Pine								3											3
Lowland Brush	27																		27
Marsh	159																		159
Mx Swmp Cnfr						75			15		105							65	260
Non Stocked	61																		61
Oak									127	34	198								359
Red Pine					18	131	503	15										44	711
Spruce Fir						5	23	29											57
Swamp Hrdwds										7	4								11
Treed Bog	45																		45
Upland Brush	568																		568
Upland Hdwds	6				10	10		26					6					280	338
Water	23																		23
White Pine									98	21								71	190
Total	925	57	129		64	388	537	129	260	175	331		6		18			464	3483

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

PERE MARQUETTE STATE FOREST

CADILLAC MGT UNIT

MISSAUKEE COUNTY

COMPARTMENT: 119

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total
A Aspen	494																										496
S Black Spruce		4																									4
V Bog or Marsh			11																								11
C Cedar				151							4																155
G Grass					5																						5
J Jack Pine							3																				3
L Lowlnd Brush									27																		27
N Marsh											159																159
Q Mx Swmp Cnfr												260															260
X Non Stocked													61														61
O Oak														359													359
R Red Pine																711											711
F Spruce Fir																			40							17	57
E Swamp Hrdwds																				11							11
D Treed Bog																							45				45
U Upland Brush																								568			568
M Upland Hdwds	10															196								29	103	338	
Z Water																									23	23	
W White Pine																										190	190
Total	504	4	11	151	5		3		27		163	260	61	359		907			40	11		45	597	103	23	207	3483

PERE MARQUETTE STATE FOREST

CADILLAC MGT UNIT

MISSAUKEE COUNTY

COMPARTMENT: 119

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	12183 Cds	Hardwood	5841 Cds
Hardwood	2333 Mbf	Hardwood	749 Mbf
Softwood	36578 Cds	Softwood	8825 Cds
Softwood	873 Mbf	Softwood	222 Mbf
Sum TotVol	55173 Cds	Sum CutVol	16608 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	
3483		1176	

CADILLAC MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 119 Entry Year: 2007

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
7	A6	2	45	47	aspen (upland)	two aged	final harvest	2		
comnts Fmd : final harvest. Two-aged. Questionable whether low SI is from offsite interaction or from past high grading. It appears that red maple not cut last time. Same sale with stand 8.										
8	Q6	19	89	30	mixed swamp conifer	old growth (potential or actual)	selection	3		
comnts Fmd : Very similar to stand 6 with a few more large aspen. Transitions into upland. Low priority winter cut. Shortwood only. Spec cut aspen, balsam, and red maple to promote vigor on hemlock and cedar. Mark hollow aspen to leave for snags Leave all birch. Some yellow birch present. Good area for landing in sw corner.										
9	R6	6	50	65	red pine	immature	thinning	1		
comnts Fmd : good site. Already 3rd row thinned. Mark to cut defect and suppressed.										
11	M6	6	108	50	northern hardwood	two aged	selection	1		
comnts Fmd : standard crop tree marking and target red maple. Shortwood same sale with stand 8.										
13	A6	3	50	65	aspen (upland)	mature	final harvest	2		
comnts Fmd : shortwood. Leave tops for habitat. Same sale with 8.										
16	A6	7	44	70	aspen (upland)	mature	final harvest	2		
comnts Fmd : Scattered balsam, birch, white pine, and a few supercanopy red pine. Leave cedar and hemlock.										
17	A6	8	53	65	aspen (upland)	mature	final harvest	2		
comnts Fmd : Mark a few trees to leave out by Lucas Rd.										
18	M5	10	40	55	aspen (upland)	low quality	final harvest	2		
comnts Fmd : Red maple stand with thick fir understory. Final harvest and try to get aspen to spread in from adjacent stands.										
19	Q6	16	89	30	mixed swamp conifer	two aged	selection	3		
comnts Fmd : Overtopped hemlock and cedar. Future stand will eventually become hemlock dominated. Spec cut aspen and rm. Shortwood only. Leave birch and mark a few aspen or rm to leave in spots where hemlock could benefit from partial canopy cover.										
20	R6	11	49	60	red pine	immature	thinning	1		
comnts Fmd : 3rd row thinned between 1989-92. SE corner is more of an R9 that was thinned heavier last time. Mark defect and suppressed crowns to cut. Be careful. Some smaller diameter stems have good form and crown. May want to pluck poles from above next time.										
35	U2	4			upland brush	nonstocked	improvement	3	planting	
comnts Fmd : Mantistee overlook. Needs bank stabilization and some road closures. Potentially a railing and turnaround; pile brush in eroded bank; plant some trees?										
39	A6	7	45	70	aspen (upland)	mature	final harvest	1		
comnts Fmd : Final harvest. Losing some of the quaking aspen component. Probably high graded last time. Close eroded portion of road on south edge. Southern stand line follows elevation change where bigtooth aspen becomes more abundant.										
40	R6	21	48	58	red pine	immature	thinning	1		
comnts Fmd : 2nd thin. Mark to cut leaving quality stems. Some smaller diameter stems have good crowns and form. May want to pluck poles from above next time. Leave BA a little high in spots where necessary.										
41	R6	7	48	55	red pine	immature	thinning	3		
comnts Fmd : 3rd row thinned between 1989-92. Thinned heavier and more of an R9 in some spots. Mark defects to cut. Could hold if necessary.										
44	R9	22		70	red pine	unevenaged	selection	2	natural regeneration	
comnts Fmd : Natural stand. Stand alone pole sale. Pole timber is 1950 origin. Very good SI in spots with high water table Stand contains 3 age classes in spots. Openings contain R1. Mark defect to cut in areas without u-poles. Spec aspen to cut. Consider prescribed burning and wet line around established desirable regen. Include in burn with stands to the north.										
45	R6	4	40	72	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin. Very nice wood. May want to diam limit spec cut other two rows if including in burn to get rid of all pulpwood. Re-visit this stand. Site index is ridiculously high. Not sure about wanting to include this with a burn. Considering the height and age rows may be too close together to 3rd row thin.										

CADILLAC MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 119 Entry Year: 2007

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
47	W6	13		65	white pine	unevenaged	selection	2	natural regeneration	
comnts Fmd : Spec cut balsam, red maple, and aspen, and mark pine to cut. Leave a black spruce component. Prescribe burn to promote pine reproduction, kill balsam, benefit blueberry, and promote black spruce vegetative reproduction.										
49	R6	22	49	60	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin most of stand. Fingers to the south should be marked to cut. A 3rd row spec would take much of the best wood in these areas.										
51	W6	37		60	white pine	unevenaged	selection	1		
comnts Fmd : Three age classes: mature white pine, mature aspen and white pine poles, and understory balsam and rm. Age classes are not evenly distributed throughout the stand. Age on quality wp stems is 66 with good height. Mark pine to cut and clean up some 1/4 acre openings for aspen regeneration. Spec cut rm, aspen, and balsam, but mark some quality red maple to leave outside of openings.										
52	A6	13	70	48	aspen (upland)	mature	final harvest	1		
comnts Fmd : clear-cut with reserves. Leave all oak. Leave all white pine less than 10" dbh. Buffer creek to distance decided at review. Appears to be some creek blockage. Den identified just to south.										
53	R6	2	45	63	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin and cut all trees <6" dbh in remaining two rows. T-sale should include two stands to the north in Kalkaska Unit. They will not have access.										
54	W6	8	78	55	white pine	immature	selection	2		
comnts Fmd : spec cut all aspen, red maple, and balsam and mark pine to cut. Leave birch. Fir understory. Past beaver activity has removed most aspen.										
56	R9	5	56	65	red pine	two aged	selection	2		
comnts Fmd : natural red pine stand. Pluck u-poles leaving two-aged stand. Understory contains R1, W1, A1. Jack pine on south edge is overmature. Spec cut jack pine, but mark some to leave for seed source. South side has F1/blueberry/leatherleaf understory. Summer harvest only. Haul out through Kalkaska FMU.										
68	R8	7	48	58	red pine	sparse	selection	3		
comnts Fmd : Natural red pine stand. Mark high risk and defect to cut and treat with stand 69.										
69	R6	5	47	60	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin. Treat small stand of red pine plantation in stand 67 to the south as well.										
72	R6	11	47	60	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin the solid area of plantation and mark to cut the fingers to the west.										
73	A6	23	40	60	aspen (upland)	immature	final harvest	3		
comnts Fmd : stand is solid aspen. Could hold till next YOE depending on age class distribution. Thick understory of red maple and cherry. Has some older clones left from last harvest.										
74	R8	16		60	red pine	sparse		0	natural regeneration	
comnts Fmd : Do a late summer prescribed burn to promote natural pine regeneration.										
76	F6	17	61	55	white pine	low quality	removal	2		
comnts Fmd : Spec cut balsam, red maple, and aspen.										
77	C4	4	85	40	marsh	sparse	removal	3		
comnts Fmd : cedar salvage. Use foot path leading from turnaround in stand 76.										
81	J9	3	62	60	jack pine	high risk	seed tree	2		
comnts Fmd : Mark some leave trees. Leave tops.										
82	R6	1	47	60	red pine	immature	thinning	2		
comnts Fmd : 3rd row thin										
85	R6	3	47	60	red pine	immature	thinning	2		
comnts Fmd : 3rd row thin										

CADILLAC MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 119 Entry Year: 2007

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
90	R6	3	49	50	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin										
93	R6	16	44	50	red pine	immature	thinning	2	opening maintenance	
comnts Fmd : one of a group of six block type red pine plantations that have low site indeces, are overtopped in many areas, and have decent small adv. oak regeneration. 3rd row thin, cut all red pine < 6" dbh, and incorporate them into the burn cycle for the Hopkins barrens management area										
94	R6	19	44	50	red pine	immature	thinning	2	opening maintenance	
comnts Fmd : one of a group of six block type red pine plantations that have low site indeces, are overtopped in many areas, and have decent small adv. oak regeneration. 3rd row thin, cut all red pine < 6" dbh, and incorporate them into the burn cycle for the Hopkins barrens management area										
95	R6	13	44	50	red pine	immature	thinning	2	opening maintenance	
comnts Fmd : one of a group of six block type red pine plantations that have low site indeces, are overtopped in many areas, and have decent small adv. oak regeneration. 3rd row thin, cut all red pine < 6" dbh, and incorporate them into the burn cycle for the Hopkins barrens management area										
97	M5	6			upland brush	low quality	final harvest	0		
comnts Fmd : incorportate into stand 98										
98	U1	37			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : burned in 1996 and 2002. Prescribed for 2010.										
99	R6	46	49	50	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin. Low SI. Following a second or third thinning this stand could be included with the other block red pine plantations that have low site indeces for long term barrens management by incorporating into the burn prescriptions..										
100	U1	48			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : last burned in 1999. Scheduled for 2005.										
101	R6	39	49	53	red pine	immature	thinning	2		
comnts Fmd : 3rd row thin. Rows headed N/S. Patch clearcut poor form and overtopped areas.										
104	R6	236	49	50	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin and cut all accessible red maple. Patch clearcut poor formed and overtopped areas. Better site index to the north. After a few thinnings the southern part of this stand could be incorporated into the Hopkins burn area and managed as pine barrens with a blueberry understory.										
109	R6	29	49	50	red pine	immature	thinning	1		
comnts Fmd : 3rd row thin and cut all accessible red maple.										
114	U1	9			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : last burned in 2000. Scheduled for 2005.										
115	U1	9			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : last burned in 2000. Scheduled for 2005.										
116	R6	31	44	50	red pine	immature	thinning	2	opening maintenance	
comnts Fmd : one of a group of six block type red pine plantations that have low site indeces, are overtopped in many areas, and have decent small adv. oak regeneration. 3rd row thin, cut all red pine < 6" dbh, and incorporate them into the burn cycle for the Hopkins barrens management area										
117	R6	11	44	50	red pine	immature	thinning	2	opening maintenance	
comnts Fmd : one of a group of six block type red pine plantations that have low site indeces, are overtopped in many areas, and have decent small adv. oak regeneration. 3rd row thin, cut all red pine < 6" dbh, and incorporate them into the burn cycle for the Hopkins barrens management area										
118	R6	15	44	50	red pine	immature	thinning	2	opening maintenance	
comnts Fmd : one of a group of six block type red pine plantations that have low site indeces, are overtopped in many areas, and have decent small adv. oak regeneration. 3rd row thin, cut all red pine < 6" dbh, and incorporate them into the burn cycle for the Hopkins barrens management area										
119	U1	61			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : last burned in 2000. Scheduled to burn again in 2008.										

CADILLAC MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 119 Entry Year: 2007

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
121	M6	34		57	red pine	sparse	final harvest	2		
comnts Fmd : Mostly older red maple stump sprouts that are merchantable to be chipped. Some of the scattered aspen clones may fall apart before next entry. Clear-cut with reserves. Mark oak to leave in groups. Plow islands around aspen clones. Plant red pine on wide spacing around oak groups and aspen pockets and areas with good shrub components. Eventually start burning following early thinning and when most pine and oak are large enough not to torch.										
136	O9	34	78	50	oak	high risk	shelterwood-prep	1		
comnts Fmd : Prescribed, but not treated last YO. Spec cut aspen and red maple and mark oak to cut. Mark oak heavily in areas dominated by aspen.										
139	O8	10	77	55	oak	mature	seed tree	3	planting	
comnts Fmd : Contains less aspen than stand 123. It is already sparse in some spots. Mark healthy oak to leave in groups. Advanced oak regen marginal to good in some spots and absent in others. Regen below browse line has poor form. Consider planting pine to train oak and leave oak sprouts less susceptible to browsing. If stocking doesn't meet standard after 3 years supplement with red pine.										
140	A6	56	61	57	aspen (upland)	mature	final harvest	1		
comnts Fmd : Northwest corner is has less aspen, but has some high risk clones. Clear-cut with reserves. Mark groups of oak to leave and mark more in areas with less aspen. Has some well-established advanced oak regen that are above browse line in spots.										
141	O8	10	77	55	oak	mature	shelterwood-seed	3		
comnts Fmd : Mark as a shelterwood to leave. Protect oak and pine regeneration during harvest.										
142	O8	14	77	55	oak	mature	shelterwood-seed	3		
comnts Fmd : Contains less aspen than stand 123. It is already sparse in some spots. Mark healthy oak to leave in groups. Advanced oak regen marginal to good in some spots and absent in others. Regen below browse line has poor form. Consider planting pine to train oak and leave oak sprouts less susceptible to browsing. If stocking doesn't meet standard after 3 years supplement with red pine.										
146	A5	4	68	56	aspen (upland)	mature	final harvest	2		
comnts Fmd : spec cut all aspen and red maple and mark oak and pine to leave due to travel influence.										
147	A5	3	68	56	aspen (upland)	mature	final harvest	2		
comnts Fmd : mark oak and pine to leave due to travel influence.										
151	M6	135		57	red pine	sparse	final harvest	1	planting	
comnts Fmd : Mostly older red maple stump sprouts that are merchantable to be chipped. Some of the scattered aspen clones may fall apart before next entry. Clear-cut with reserves. Mark oak to leave in groups. Plow islands around aspen clones. Plant red pine on wide spacing around oak groups and aspen pockets and areas with good shrub components. Eventually start burning following early thinning and when most pine and oak are large enough not to torch. Firewood theft area. Close plow lines.										
152	M4	23		57	upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Burned in 1998 and in 2001. Scheduled to burn again in 2009. Incorporate the east half of stand 153 into this burn once 153 is harvested										
153	M8	27		57	red pine	sparse	final harvest	2	opening maintenance	
comnts Fmd : Wolfy red maple and white oak Leave all oak. Control red maple stump sprouts via burning or herbicide or combination of both. High concentration of white pine understory near road on western edge. Higher density of witch hazel understory east of road. Incorporate portion east of road with burn for stand 152 once 153 is harvested.										
154	U1	59			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Last burned in 1996 and 2002. Scheduled to burn again in 2010.										
155	U1	49			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Last burned in 1997 and 2003. Scheduled to burn again in 2011. Has a white pine overstory component.										
156	U1	101			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Last burned in 1997 and 2003 and 2004. Scheduled to burn again in 2012. Has a white pine overstory component on west side.										
157	U1	87			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Last burned in 1996 and 2001. Scheduled to burn again in 2009.										

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Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
158	U1	79			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Last burned in 1997 and 2003. Scheduled to burn again in 2011.										
159	U1	25			upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Last burned in 1998 and 2004. Scheduled to burn again in 2012.										
Total Acres.....		1721								

CADILLAC MGT UNIT

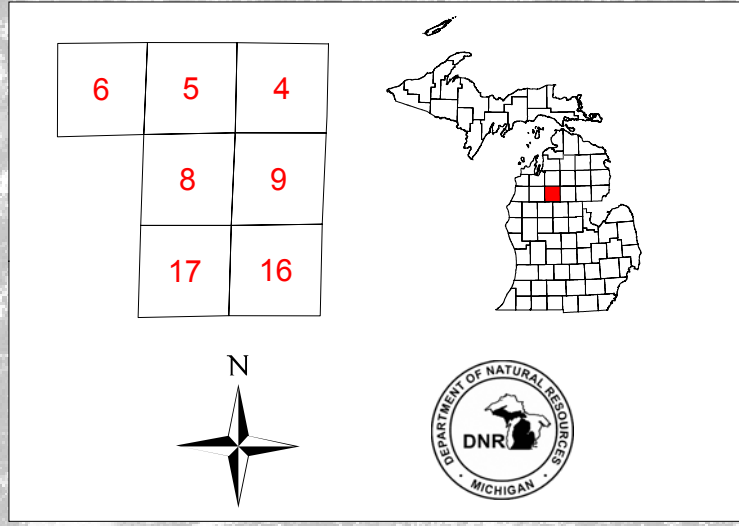
**Proposed Treatments
With Limiting Factors**

Compartment: 119 **Entry Year: 2007**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
6	Q6	18	89	30	mixed swamp conifer	old growth (potential or actual)	selection	3		
<p>TREATMENT LIMITING FACTORS: Potential or designated old growth Water quality/bmps</p> <p>comnts Fmd : Some natural gap dynamics already taking place. Strip of windthrow bordering red pine stands. Some pockets of E-type present. Low priority winter cut. Stay out of small windthrow area and E-type. Shortwood only. Spec cut aspen, balsam, and red maple to promote vigor on hemlock and cedar. Leave all birch. Some yellow birch present. 175 ft buffer needed. Factored out.</p>										
10	Q6	19	89	35	mixed swamp conifer	old growth (potential or actual)	selection	3		
<p>TREATMENT LIMITING FACTORS: Potential or designated old growth Water quality/bmps</p> <p>comnts Fmd : contains windthrow and patch dynamics. Becoming uneven-aged, but mostly balsam responding. More of a cedar n. hdwd mix to the east and more of a lowland mix with aspen to the west. Differing prescription from stands 6 and 7. GPS some small group selections where cedar is stagnant due to balsam competition. Leave cedar within groups and make groups relatively small to prevent cedar windthrow. 175 ft. buffer needed. Factored out.</p>										
149	W6	21		45	white pine	unevenaged	selection	3		
<p>TREATMENT LIMITING FACTORS: Water quality/bmps</p> <p>comnts Fmd : Nearest the creek this is mostly a cedar an hemlock stand, but overall comes out to a W6. Low priority. Winter cut only. Two units on either side of creek. Spec cut aspen and red maple and mark hemlock, cedar, and white pine to cut. Mark potential snags to girdle and leave. Make sure no dead or down wood is harvested. Factored out due to Natural Rivers buffer.</p>										
Total Acres.....		58								

Field Map

Compartment 119
 T24N, R8W, Sec. 4-6, 8, 9, 16, 17
 County: Missaukee
 Unit: Cadillac
 YOE: 2007
 Acres: 3,483 GIS Calculated
 Stand Examiner: Jason Hartman
 Map Revised: 10/14/2005
 Map Phase: Pre-review



Legend

- Miris Corners
 - County Dirt Roads
 - Forest Roads
 - Trails
 - Powerlines
 - Water Features
 - Campground
 - Public Access Site
 - Natural Material
 - Snowmobile Trails
 - ORV Routes
 - Stand Boundary
 - Biodiversity/Old Growth Area
 - 027 - Opening Maintenance/Prescribed Burning
 - 047 - Natural Regeneration/Prescribed Burning
 - 100 - Final Harvest
 - 117 - Final Harvest/Planting/Prescribed Burning
 - 127 - Final Harvest/Opening Maintenance/Prescribed Burning
 - 200 - Seed Tree
 - 216 - Seed Tree/Planting
 - 300 - Shelterwood-seed
 - 400 - Thinning
 - 427 - Thinning/Opening Maintenance/Prescribed Burning
 - 500 - Removal
 - 700 - Shelterwood-prep
 - 800 - Selection
 - 847 - Selection/Natural Regeneration/Prescribed Burning
 - 911 - Improvement/Planting/Hand Tools
- Name County Gravel Roads
 Name County Dirt Roads
 Name Trails
 Name Water Features

