

**CADILLAC FOREST MANAGEMENT UNIT****COMPARTMENT REVIEW PRESENTATION****COMPARTMENT # 023 ENTRY YEAR: 2006****Compartment Acreage (GIS Acres): 2512 County: Lake**

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**Revision Date: 11/06/2006 2:31 PM****Stand Examiner:** Cheryl Nelson, Forester**Legal Description:** T18N, R11W, Sec. 17, 18, 19, 30**RMU (if applicable):** 304 (contains more than one compartment)**Management Goals:** This RMU will be managed primarily for timber production.

**Soil and Topography:** Mostly Rubicon-Montcalm-Graycalm: Nearly level to steep, somewhat excessively drained and well drained sandy soils on moraines, till plains, and outwash plains. Small area in northwest of compartment consists of Grayling-Graycalm: Nearly level to moderately steep, excessively drained and somewhat excessively drained sandy soils on outwash plains, till plains, and low moraines. Small area in center of compartment consists of Tawas-Croswell-Lupton: Nearly level and undulating, very poorly drained and moderately well drained mucky and sandy soils in bogs, depressions, and drainageways and on low flats and benches.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Large block of state-ownership in the compartment. Within the RMU there are scattered private holdings and some residences, but not many. Most of the private ownership is undeveloped.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** Sanborn Creek flows through section 19 from east to west.

The Michigan Natural Features Inventory lists the Eastern Box Turtle as having occurred in the compartment. Eastern Box Turtle, Great Plains Spittlebug, Karner Blue Butterfly, Massasauga Rattlesnake and a Great Blue Heron Rookery are listed as having occurred in sections surrounding the compartment. The compartment has the potential for the Goshawk, Red-shouldered Hawk, Eastern Box Turtle, Eagle, Osprey, Wood Turtle, and Great Blue Heron Rookeries.

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

**Special Management Designations or Considerations:** The integrity of Sanborn Creek will be maintained. Visual management techniques will be applied where necessary. The aspen acreage will be maintained and upland brush areas will be created from the oak types. Sanborn Creek is

**Watershed and Fisheries Considerations:** Sanborn Creek flows through Compartment 23. Sanborn Creek is a tributary to the Baldwin River in the Pere Marquette River watershed. It is a Designated Trout Stream with naturally reproducing populations of brook trout, brown trout, and possibly steelhead, coho salmon, and Chinook salmon.

**Wildlife Habitat Considerations:** One of 6 compartments in RMU 304. The RMU agreement called for -330 acres of oak and +300 acres of upland brush/grass. Actual acreage changes since the RMU agreement has resulted in -676 acres of aspen, +678 acres of white pine/red pine. Featured wildlife species are deer, turkeys, and ruffed grouse. There have been numerous problems in regenerating oak in the high quality oak stands. (L. Smith 11/2/06)

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of an end moraine of coarse-textured till. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Pennsylvanian Saginaw Formation. The Saginaw is quarried for clay/shale products in other areas of the State. A gravel pit is located in Section 28 and potential is considered good. The nearest production is at Peacock Field located ten miles to the northwest. The Field produced nearly 1,700,000 BO from the Traverse Limestone. Section 18 & 19 are currently leased for oil and gas exploration. Savoy has a well permitted in Section 19. Drilling began in spring of 2006 and ended approximately 2 months later with no product being obtained. Savoy has removed the drill rig and the site has been prepared for seeding with a grass mix.

**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:

**Survey Needs:** None known at this time.

**Recreational Facilities and Opportunities:** The Tin Cup ORV Trail and Route run through sections 17 and 18. The ORV Trail is approximately 4.5 miles in length and the Route is approximately 3 miles in length. There is a spur trail accessing Frank Smith road from the Tin Cup Trail. This spur should either be eliminated from the trail system or developed as a trailhead.

There is a Horse Riding Trail which runs through sections 17 and 18. The compartment is used for hunting and fishing.

**Fire Protection:** This area would have the potential for moderate to large fire growth. Terrain would allow for good access for suppression equipment. There are some urban interface areas within the compartment.

#### **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**



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

PERE MARQUETTE STATE FOREST

CADILLAC MGT UNIT

LAKE COUNTY

COMPARTMENT: 23

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	698																										698
V Bog or Marsh			13																								13
C Cedar				88																							88
G Grass					20																						20
J Jack Pine							241																				241
Q Mx Swmp Cnfr												47															47
O Oak														1069													1069
R Red Pine																121											121
W White Pine																										215	215
<b>Total</b>	<b>698</b>		<b>13</b>	<b>88</b>	<b>20</b>		<b>241</b>					<b>47</b>		<b>1069</b>		<b>121</b>										<b>215</b>	<b>2512</b>

PERE MARQUETTE STATE FOREST

CADILLAC MGT UNIT

LAKE COUNTY

COMPARTMENT: 23

**Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS**

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	9778 Cds	Hardwood	6870 Cds
Hardwood	4335 Mbf	Hardwood	1718 Mbf
Softwood	7164 Cds	Softwood	1920 Cds
Softwood	684 Mbf	Softwood	388 Mbf
Sum TotVol	26980 Cds	Sum CutVol	13002 Cds
<b>Total Cmpt Acres</b>		Acres Proposed For Cut.....	1134
2512			

**CADILLAC MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 23**

**Entry Year: 2008**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
1	O9	96	90	65	oak	mature	seed tree	1	other - specify in remarks	
comnts Fmd : Understory M3 = red maple. Would like to break this stand up into thirds and try different techniques to encourage oak regen such as harvesting more oaks to reduce BA, scarifying, and burning. Very small amount of oak regen scattered. Heavy red maple stump sprouts. Moderate amount of black cherry saplings. Small amount of white pine pulp was left during the sale. High quality red oak. Previous Info: Stand was treated in 2001/2002. Oak was thinned to an average of 80 BA, red maple cut to 2", everything else cut to 4.5". SALE # 208-98-01. MOC = 9? REGENERATION: Will monitor the techniques to see if natural oak regen will occur and plan accordingly. Possibly do more burns and/or scarification. If natruel regen does not occur, an oak, red maple, and aspen mix is acceptable.										
2	W6	30	16	60	white pine	immature	thinning	1		
comnts Fmd : White pine released in 1990. Large white pine scattered throughout stand. Cut all sawlog wp, mark to thin pulp. Open up around areas of oak seedlings/saplings. Do not cut red pine.										
5	R6	35	49	50	red pine	low quality	thinning	1		
comnts Fmd : Understory M2 = red maple. Stand is a Red Pine plantation (FTP #8, October 1957), with an area of jack pine to the east. U2 understory = black cherry. Thin Red Pine to an average of 90 BA, cut all Jack Pine. Red pine looks stunted, some forking. Stand thinned t-sale 028-99-01.										
9	R6	26	37	43	red pine	immature	thinning	1		
comnts Fmd : FTP #127, May 1967. Thin red pine, open up areas of oak regen. Ground cover = leaves and needles. Remove other species as necessary to open up around oak regen. Red pine not as heavy south of 24th street.										
15	O9	18	90	63	oak	mature	seed tree	2	natural regeneration	
comnts Fmd : Understory M2 = red maple. Mix of high quality oak and aspen. Green mark oak to leave. REGENERATION: natural regen is expected. If this does not occur, an oak, red maple, and aspen mix will be acceptable.										
19	R6	14	49	50	red pine	immature	thinning	1		
comnts Fmd : FTP #12, Sept. 1957. Understory X0 = no understory. Small amount of jack pine pulp and black cherry pulp in the stand. Cut all jack pine and black cherry. Ground cover = needles. Third row thin.										
21	A6	3	47	50	aspen (upland)	mature	final harvest	1		
comnts Fmd : Understory M2 = red maple. This stand was originally part of stand 11 but was not cut during the timber sale #218-98-01. Small amount of white oak and red maple sawlogs. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with aspen clones, black cherry, and red maple is acceptable.										
22	A6	10	31	50	aspen (upland)	low quality	final harvest	1	other - specify in remarks	
comnts Fmd : Commercial or habitat cut. Areas of mature aspen falling out of stand. Some cedar and hemlock on edge of stand, do not cut cedar or hemlock. Cut all aspen, red maple, and black cherry. Cut all pine over 8" DBH. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with aspen clones, black cherry, and red maple is acceptable.										
23	J6	50	65	58	jack pine	immature	final harvest	1	natural regeneration	
comnts Fmd : Very mixed species and sizes. Pockets of aspen, jack pine, and white pine. Understory varies with pocket species from the overall W2 to an O1, R1, M1(red maple), and black cherry. Occasional sawlog oak tree. Final harvest. Leave all oak. REGENERATION: Natural regen is expected. If this does not occur, a jack pine, aspen, and oak mix is acceptable.										
24	A6	6	35	65	aspen (upland)	low quality	final harvest	1	natural regeneration	
comnts Fmd : Understory M2 = red maple. Few large diameter mixed oak and white oak not in plots. Mark oak GREEN to keep. Small area of good oak regen by cycle trail crossing (one measured 15' in height with 21 rings). REGENERATION: Natural regen is expected. If this does not occur, an aspen, red maple, and black cherry mix is acceptable.										
25	R6	22	49	60	red pine	immature	thinning	1		
comnts Fmd : Understory M2 = red maple. Red pine plantation (FTP #11, Sept. 1957). There is an opening running between two red pine areas. This opening was not planted and consists of a few poor quality black cherry pulp, jack pine pulp, oak pulp, and aspen trees. Some scattered oak log trees within the red pine area that are falling apart. Thin red pine. Cut all species within opening except oak.										
26	J6	59	67	65	jack pine	low quality	final harvest	1	natural regeneration	
comnts Fmd : Small amount of oak did not show up in plots. Do not cut any oak. REGENERATION: Natural regen is expected. If this does not occur, a jack pine and oak mix is acceptable.										
28	R6	12	49	55	red pine	immature	thinning	1		
comnts Fmd : Understory U1 = black cherry. Plantation RP. FTP#4, 08-15-1957.										

**CADILLAC MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 23**

**Entry Year: 2008**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
31	A6	6	36	50	aspen (upland)	low quality	final harvest	2	other - specify in remarks	
comnts Fmd : Understory U2 = witch hazel, musclewood, hawthorne. Commercial or habitat cut. Final harvest. There are a few scattered hemlock in stand, do not cut any hemlock. Old red line can be seen, apparently this was previously set up for a harvest but harvest was never completed. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with aspen clones, black cherry, and red maple is acceptable.										
32	A6	9	90	65	aspen (upland)	mature	final harvest	1	natural regeneration	
comnts Fmd : Understory M3 = red maple. Final harvest. Do not cut oak. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with oak, aspen clones, black cherry, and red maple is acceptable.										
34	O6	9	96	50	oak	mature	seed tree	1	natural regeneration	
comnts Fmd : Understory M2 = red maple. Oak beginning to die back. Areas of moderate amount of oak seedlings. Cut all aspen, red maple, and oak, EXCEPT mark oak sawlogs to keep and avoid areas of oak seedlings. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with oak, aspen clones, black cherry, and red maple is acceptable.										
37	C6	44	90	46	cedar	mature	selection	1	other - specify in remarks	
comnts Fmd : Understory X0 = no understory. Habitat cut hardwoods. Estimate 6 acres to be cut and determined by wildlife. Observe 50' buffer along unnamed intermittent drainage. Species' densities vary throughout stand. Do not cut cedar or hemlock. Cut all pine 8" and over.										
38	O6	45	90	60	oak	mature	seed tree	1	natural regeneration	
comnts Fmd : Understory M2 = red maple. Areas of excellent amount of oak seedlings where firewood cutters have been. Moderate amount of oak sapling regen. Mark to keep oak heavier around frost pockets. Create group openings in other areas. REGENERATION: Natural regen is expected. If this does not occur, an oak, red maple, black cherry, and aspen mix is acceptable.										
39	A6	50	31	50	aspen (upland)	immature	final harvest	2		
comnts Fmd : Understory U2 = black cherry. Very small amount oak saplings. Stand has different age and size classes from previous timber sale(s). Timber sale data could not be found. Commercial harvest about 1/2 the stand following the different age and size class distribution. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with aspen clones, black cherry, and red maple is acceptable.										
41	W6	24	16	60	white pine	immature	thinning	1		
comnts Fmd : White pine released in 1990. Large white pine scattered throughout stand. Cut all sawlog wp, mark to thin pulp. Open up around areas of oak seedlings/saplings. Do not cut red pine.										
43	O6	26	92	57	oak	mature	seed tree	1	natural regeneration	
comnts Fmd : Understory M2 = red maple. Pockets of oak seedling/saplings avg. 2-3' tall. Open up around pockets. REGENERATION: Natural regen is expected. If this does not occur, an oak, red maple, black cherry, and aspen mix is acceptable.										
44	R6	6	49	60	red pine	low quality	thinning	2		
comnts Fmd : Understory U2 = black cherry. Poor quality. Thin, or possibly final harvest due to poor form. Stand 44 originally part of stand 54, new stand number due to distance from stand 54.										
47	O9	111	98	50	oak	mature	seed tree	1	natural regeneration	
comnts Fmd : Understory M2 = red maple. Stand contains both red oak and pin oak, heavier to pin. There are pockets of oak seedlings and saplings avg. 1-3' in height. Open up areas of regen. REGENERATION: Natural regen is expected. If this does not occur, an upland brush and grass mixed with oak, aspen clones, black cherry, and red maple is acceptable.										
48	O9	86	100	45	oak	mature	seed tree	1	other - specify in remarks	
comnts Fmd : Understory M2 = red maple. Mix of both good red oak and pin oak (mixed oak). Green mark oaks to leave. Post-harvest average of 10-20 BA should be aimed for. Pre-harvest burn in southern part of stand. Mark trees for identification of areas with seedling oaks and areas of no oak regen at all to gauge fire effects. REGENERATION: Will monitor burn to see if natural oak regen will occur and plan accordingly. Possibly do more burns and/or scarification. If natural regen does not occur, an oak, red maple, and aspen mix is acceptable.										
49	A6	6	90	55	aspen (upland)	mature	final harvest	2	natural regeneration	
comnts Fmd : Final harvest. Do not cut any oak. REGENERATION: Natural regen is expected. If this does not occur, an oak, aspen, red maple, and black cherry mix is acceptable.										
53	A6	28	57	55	aspen (upland)	mature	final harvest	1	natural regeneration	
comnts Fmd : Understory M2 = red maple. Final harvest. Green mark oak to leave for seed and mast. REGENERATION: Natural regen is expected. If this does not occur, an aspen, oak, red maple, and black cherry mix is acceptable.										
54	R6	6	49	60	red pine	low quality	thinning	2		
comnts Fmd : Understory U2 = black cherry. Poor quality. Thin, or possibly final harvest due to poor form.										

**CADILLAC MGT UNIT**

**Proposed Treatments  
With NO Limiting Factors**

**Compartment: 23**

**Entry Year: 2008**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
57	O9	124	86	60	oak	mature	seed tree	1	natural regeneration	
comnts Fmd : Understory also has a heavy Witch Hazel component. Pockets of aspen in stand. Cut all aspen, red maple. Red pine pulp scattered throughout stand. Do not cut red pine pulp. White pine sawlogs and pulp in pocket. Cut all white pine 10" and over. Oak seedlings and saplings in pockets throughout stand. Saplings up to about 15' in height. Thin and open up around oak seedlings/saplings. Green mark oaks to leave. REGENERATION: Natural regen is expected. If this does not occur, an oak, red maple, black cherry, aspen, and red pine mix is acceptable.										
60	W6	18	36	60	white pine	immature	thinning	2		
comnts Fmd : Cut all jack pine. Thin white pine to open up around areas of oak seedlings/saplings. Do not cut any oak.										
62	O9	107	92	57	oak	in process of regeneration	seed tree	1	other - specify in remarks	
comnts Fmd : Understory M2 = red maple. Would like to break stand up and try a burn and harvest more trees. Stand treated 2001 sale # 2099801. Lots of red maple stump sprouts. Small amount red oak stump sprouts. REGENERATION: Will monitor the techniques to see if natural oak regen will occur and plan accordingly. Possibly do more burns and/or scarification. If natrual regen does not occur, an oak, red maple, black cherry, and aspen mix is acceptable.										
63	C6	24	90	46	cedar	mature	selection	1	other - specify in remarks	
comnts Fmd : Understory X0 = no understory. Habitat cut hardwoods. Estimate 2-3 acres to be determined and cut by wildlife. Observe 150' buffer along Sanborn Creek. Species' densities vary throughout stand. Do not cut hemlock or cedar. Cut all pine 8" and over.										
64	C9	20	90	46	cedar	mature	selection	1	other - specify in remarks	
comnts Fmd : Understory X0 = no understory, some ironwood. Habitat cut hardwoods. Estimate 2-3 acres to be cut and determined by wildlife. Observe 50' buffer along un-named intermittent drainage. Species' densities vary throughout stand. Do not cut cedar or hemlock. Cut all pine 8" and over.										
65	A6	4	90	46	aspen (upland)	mature	final harvest	2	other - specify in remarks	
comnts Fmd : Understory U2 = beech, ironwood, muscledwood. Commercial or habitat cut. Do not cut oak. Observe 150' buffer from Sanborn Creek. REGENERATION: Natural regen is expected. If this does not occur, an aspen, oak, red maple, and black cherry mix is acceptable.										
<b>Total Acres.....</b>		<b>1134</b>								

**Proposed Treatments  
With Limiting Factors**

**Compartment: 23**

**Entry Year: 2008**

<b>Stand</b>	<b>Cover Type</b>	<b>Acres</b>	<b>Age</b>	<b>Site Index</b>	<b>Mgt Obj</b>	<b>Condition</b>	<b>Method Cut</b>	<b>Harvest Priority</b>	<b>Cultural Need</b>	<b>FD Status</b>
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TREATMENT LIMITING FACTORS:

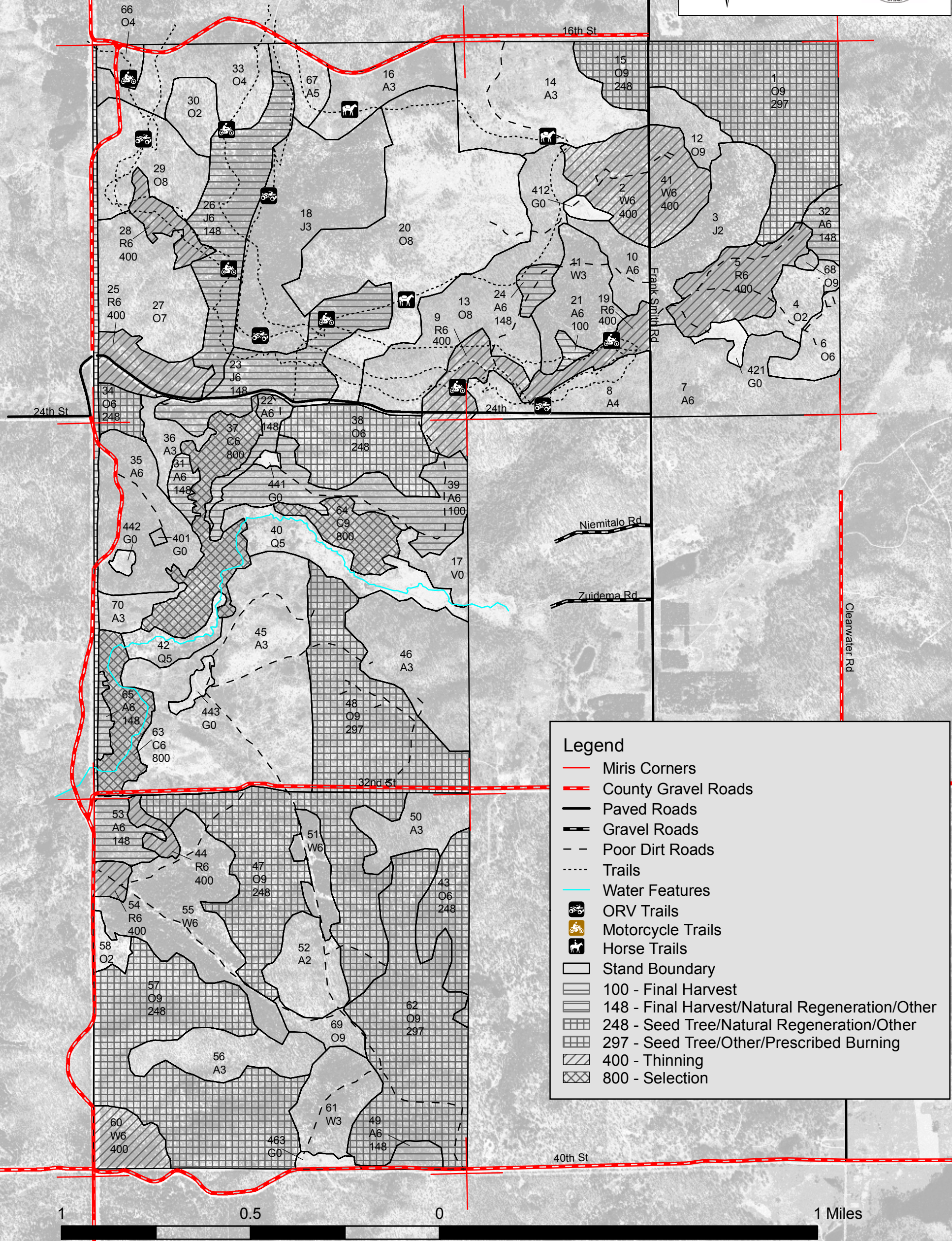
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Total Acres..... 0

Compartment 23  
 T18N, R11W, Sec. 17-19, 30  
 County: Lake  
 Unit: Cadillac  
 YOE: 2008  
 Acres: 2,512 GIS Calculated  
 Stand Examiner: Cheryl Nelson  
 Map Revised: 11/02/2006  
 Map Phase: Pre-review

# Field Map

18	17
19	
30	



**Legend**

- Miris Corners
- - - County Gravel Roads
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trails
- Water Features
- ORV Trails
- Motorcycle Trails
- Horse Trails
- Stand Boundary
- 100 - Final Harvest
- 148 - Final Harvest/Natural Regeneration/Other
- 248 - Seed Tree/Natural Regeneration/Other
- 297 - Seed Tree/Other/Prescribed Burning
- 400 - Thinning
- 800 - Selection

