



**TRAVERSE CITY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 145 ENTRY YEAR: 2009

Compartment Acreage: 1768 County: Kalkaska

Stand Examiner: Dave Johnson

Legal Description: T25N, R6W, Sec. 19-21

Management Goals: Kirtland's Warble Management Area.

Soil and Topography: Rubicon sand and Lupton muck. The topography is mostly flat with some relief near the wet areas.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Mainly state ownership with 2 private holdings in the compartment. Land use in and around the compartment is hunting, fishing and camping.

Unique, Natural Features (include only non-site specific and non-sensitive information): This compartment falls within landtype associations (LTAs) **3111**, **5111**, **5131**, and **5149** of sub-subsection VII.2.2. **LTA 5111**, which occurs throughout the compartment, is characterized by broad flat outwash plains with few kettle lakes and excessively drained sand. **LTA 5149**, which occurs in the southern half of section 20, is a broad outwash plain with very poorly drained peat or muck. For a brief description of the vegetation circa 1800, current land cover, and prevalent disturbance of **LTAs 5111**, and **5149** please refer to the comments for **Compartment 51 (LTA 5111)** and **Compartment 104 (LTA 5149)**. **LTA 3111**, which occurs along the southeast corner of the compartment, is characterized by irregular ice-contact ridges, few kettle lakes, and excessively drained loamy sand. Almost 90% of **LTA 3111** supported conifer forests or barrens at the time of the General Land Office survey. The plant composition of the forests resulted from a variety of soil conditions and fire frequencies. Forest types ranged from mixtures of eastern hemlock and white pine to pine and oak/pine barrens. The most common forest types contained red pine, either mixed with white pine, oak, jack pine, or locally in pure stands. Finally, where fires were least frequent, forests of beech and sugar maple occurred; this was on about 8% of the LTA. Pine forests, which covered much of the LTA at the time of the General Land Office survey, now cover only about 12%. Another 30% of the area supports aspen/white birch forests, which did not occur here in Michigan circa 1800. Finally, northern and central hardwood forests (both dominated by beech and sugar maple but the later type with more oak) have increased from 8% cover to about 45% today. GLO surveyors reported wildfires and windthrows, sometimes in combination, within **LTA 3111**. Evidently, wildfires often spread into this LTA type from adjacent outwash plains. **LTA 5131** is a broad flat outwash plain with poorly drained sand or loamy sand; this LTA occurs in the northwest corner of the compartment. The variety of circa 1800 vegetation types which occur reflect the LTA 5131's complexity. Forests of hemlock, usually mixed white pine or American beech, were common on poorly drained sands whereas mixed conifer swamps dominated very poorly drained organic soils. Finally, well drained inclusions supported northern hardwood forests of American beech and sugar maple while forests of mixed red and white pine occurred on excessively drained, fire-prone areas within the LTA. The LTA has become quite fragmented and 23% of its surface area supports cover types with less than 5% individual cover. Hemlock dominated forests have been virtually eliminated whereas aspen/white birch forests, rare

circa 1800, have become the predominant cover type. Conifer dominated wetlands, which covered more than one quarter of the LTA circa 1800, have been reduced to about 8% cover, while formerly absent hardwood and shrub/scrub swamps now collectively cover 24% of the area. The remaining northern hardwood forests, which now occur on only about 5% of the LTA, are second growth, often fragmented, woodlots that lack the original white pine or hemlock component. Finally, another 6% of the LTA is in old fields. Kirtland's warbler.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):

Special Management Designations or Considerations: Kirtland's Warbler management area. Follow the Kirtland's Warbler Management Plan.

Watershed and Fisheries Considerations: Big Cannon Creek and a tributary to Little Cannon Creek flow through Compartment 145. Both are Designated Trout Streams. Big Cannon Creek has naturally reproducing populations of brook, brown, and rainbow trout. For treatments close to either of these streams, the Natural Rivers (and MDNR BMP) buffer of 100' should be adhered to.

Wildlife Habitat Considerations: Compartment 145 is part of a broad, flat outwash plain, comprised mainly of excessively drained soils. Grayling sand predominates, creating a flat, drought-prone landscape adapted to frequent wildfires. The Sharon Area Kirtland's Warbler (KW) Management Unit includes most of Compartment 145, making habitat management for KWs a priority in this compartment. Management is guided by the Kirtland's Warbler Recovery Plan, developed by State and Federal agencies, academics, and other interested parties in 1976 and updated in 1985. It is currently undergoing a third revision to facilitate management efforts to increase the Kirtland's warbler populations throughout their limited range. These jack pine stands also provide habitat for the upland sandpiper, Eastern bluebird, white tailed deer, black bear, snowshoe hare, and for several protected prairie plants, including the Allegheny plum, Hill's thistle, and rough fescue. Prescribed burning, hand felling, along with some potential seeding of native forage grasses have been proposed to maintain important herbaceous cover. Elements of coarse woody debris, mast bearing residual trees, and/or cover islands should be incorporated into the proposed timber sales to provide key habitat components in the resulting stands.

A small patch of poorly drained soils (LTA 5149) is located in the south central part of the compartment. These mucky soils support a stand of lowland aspen and a sizeable stand of lowland conifer that extends south into the next compartment. Wildlife utilizing these lowland communities include: white-tailed deer, bobcat, black bear, snowshoe hare, alder flycatcher, Eastern milk snake, and wood turtle.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 100 and 400 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum elsewhere in the State. A gravel pit is located in Section 17 and there should be potential. The Garfield 14 & 15 Fields are located to the east of the Compartment. The fields produce from the Devonian Richfield and the Ordovician PdC. None of the State's minerals are leased in this Compartment.

Vehicle Access: Beaver Dam, Naples and Cannon Bridge are the county roads that run through the compartment.

Survey Needs: None needed at this time.

Recreational Facilities and Opportunities: The recreational opportunities are hunting, fishing and unorganized camping along Big Cannon Creek. ORV route and trail just south of compartment.

Fire Protection:

Additional Compartment Information:

****** Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

**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 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

TRAVERSE CITY FOREST MGT UNIT

KALKASKA COUNTY

COMPARTMENT: 145

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									14										14
Bog or Marsh	3																		3
Grass	5																		5
Jack Pine		382	309	229	15	115	23	54	10										1137
LowInd Brush	2																		2
LowInd Poplr					54														54
Mx Swmp Cnfr									94										94
Oak		132								9	39	15							195
Red Pine									24									2	26
Upland Brush	131																		131
Upland Hdwds		12																	12
White Pine					27					33	35								95
Total	141	526	309	229	96	115	23	54	142	42	74	15						2	1768

PERE MARQUETTE STATE FOREST

TRAVERSE CITY FOREST MGT UNIT

KALKASKA COUNTY

COMPARTMENT: 145

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	14																										14
V Bog or Marsh			3																								3
G Grass					5																						5
J Jack Pine							1137																				1137
L Lowlnd Brush									2																		2
P Lowlnd Poplr										54																	54
Q Mx Swmp Cnfr												94															94
O Oak														195													195
R Red Pine																26											26
U Upland Brush																								131			131
M Upland Hdwds																									12		12
W White Pine																										95	95
Total	14		3		5		1137		2	54		94		195		26								131	12	95	1768

PERE MARQUETTE STATE FOREST

TRAVERSE CITY FOREST MGT UNIT

KALKASKA COUNTY

COMPARTMENT: **145**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	1587 Cds	Hardwood	400 Cds
Hardwood	452 Mbf	Hardwood	107 Mbf
Softwood	4496 Cds	Softwood	513 Cds
Softwood	825 Mbf	Softwood	63 Mbf
Sum TotVol	8637 Cds	Sum CutVol	1253 Cds
Total Cmpnt Acres		Acres Proposed For Cut.....	98
1768			

TRAVERSE CITY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 145 **Entry Year: 2009**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
8	A9	14	72	58	aspen (upland)	mature	final harvest	1		
comnts Fmd : A8W7M4 - fianl harvest leaving scattered WP and mature aspen along P type t the west										
10	R8	13	72	58	red pine	immature	selection	1		
comnts Fmd :										
12	O9	39	96	56	oak	mature	shelterwood-prep	1		
comnts Fmd : O9J4A4W7										
46	J6	32	0	58	jack pine	mature	final harvest	1		
comnts Fmd : Natural stand of Jack - White mix should natually regenerate to mix of jack and white										
Total Acres.....		98								

**Proposed Treatments
With Limiting Factors**

Compartment: 145

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FD Status
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








TREATMENT LIMITING FACTORS:

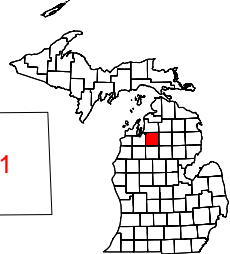
Total Acres..... 0

Compartment: 145
 T25N, R06W, Sec. 19, 20, 21
 County: Kalkaska
 Unit: Traverse City
 YOY: 2009
 Acres: 1,768 GIS Calculated
 Stand Examiner: David Johnson
 Map Revised: 10/08/2007
 Map Phase: Pre-review

Field Map

Legend

-  Miris Corners
-  Paved Roads
-  County Gravel
-  Poor Dirt
-  Water Features
-  Stand Boundary
-  100 - Final Harvest
-  700 - Shelterwood - prep
-  800 - Selection



19

20

21

N

