



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

COMPARTMENT # 221 ENTRY YEAR: 2009

Compartment Acreage: 1459 County: Kalkaska

Stand Examiner: Donna Hagan

Legal Description: T26N, R5W, Sec. 2, 3, 10, 11 & 15

Management Goals: Visual management along the Manistee River corridor, along with erosion control.

Soil and Topography: Rubicon and Emmet sands, Blue Lake loamy sands, Lupton muck and Rifle peat. Topography ranges from flood plain, lowlands, to rolling uplands and steep sand bluffs.

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

Mixed ownership, consisting of intermingled state, private and acquired Consumer's leases, are the ownership patterns in and around the compartment. The private lands range from undeveloped to developed, timbered to open grass areas, seasonal to permanent homes. The old Livingstone property, stand 69, is located in this compartment. Land use is mainly canoeing, fishing, hunting, ORVing and snowmobiling.

Unique, Natural Features (include only non-site specific and non-sensitive information):

This compartment falls within landtype associations (LTAs) **3121** and **5111** of sub-subsection VII.2.2. **LTA 3121**, which occurs in the northwest portion of the compartment, is characterized by large irregular ice-contact ridges, few kettle lakes, and well drained loamy sand. **LTA 5111**, which occurs throughout the compartment, is characterized by broad flat outwash plains with few kettle lakes and excessively drained sand.

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

Special Management Designations or Considerations: The Manistee River and its tributaries are under the Natural Rivers Act and also fall under HCVA (High Conservation Value Area). All prescriptions within 400 feet of the river and tributaries further the conservation goals of these HCVA's. There are 2 Consumer's Lease parcels (stands 37, 38, 61 and 62), which expire in 2011. This area is also a major deer wintering complex. The AT&T fiber Optic line runs along Riverview Road in this compartment. Extreme care needs to be used in any timber sale operations crossing this line.

Watershed and Fisheries Considerations: The Manistee River and one unnamed tributary flow through Compartment 221. Both are Designated trout streams. The Manistee River is a nationally-known trout stream with naturally reproducing populations of brook, brown, and rainbow trout. In any operations near these streams, all BMPs and Natural Rivers rules should be followed. Per Natural Rivers rules, the buffer for the Manistee River should be at least 175' (could be more depending on slopes) and for the tributary 100' (again could be more depending on slopes).

Wildlife Habitat Considerations: Compartment 221 is located along the Manistee River on the east side of Kalkaska County. Habitat types found within this compartment of State Forest are influenced by two types of glacial formations. An outwash plain (LTA 5111), consisting of excessively drained sands, supports

various pine stands, both natural and plantation, aspen, oak, and upland brush communities. Fire was a major disturbance on these dry soils and should be considered a valuable tool in perpetuating these fire driven ecosystems. However, several wetland inclusions do exist on this landscape, particularly near the river. Several of these wetland areas support lowland conifers, which are important to wintering deer and other wildlife species. The hillier region in the north portion is comprised of steep, broken ice contact ridges (LTA 3121). The sandy soils found on these ridges have moderately low fertility and low available moisture. Even though much of this area was probably once covered with various northern hardwood communities, the dry soils did allow occasional wildfires on this landscape.

Forest treatments should maintain a variety of successional stages of pine-oak-aspen forest and grass-shrub openings, with some mid to late successional forest in places, which is typical of a fire prone landscape. Aspen harvests should be designed to mimic wildfires of various intensities, when possible. This creates a mosaic of age classes and increases structural diversity within an area. The creation of dead and downed logs should be incorporated into timber prescriptions within to provide habitat for various wildlife species. Standing dead timber is usually left during harvest operations unless deemed a safety hazard. Considerations for northern hardwood stands include maintaining tree species diversity, the protection of den/nesting trees & snags, coarse woody debris (CWD), and maintaining a scattering of mast-producing trees/shrubs. This will insure use by many species of wildlife.

Several upland brush stands have been prescribed for burning to set back woody encroachment and stimulate native herbaceous vegetation. A variety of species make use of habitats found on these dry sandy soils, including: Kirtland's warbler, deer, ruffed grouse, smooth green snake, eastern box turtle, and badger. Several small forest openings have been scheduled for hand felling to set back woody encroachment and/or planting of herbaceous vegetation for wildlife food and cover.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. The Coldwater does not have a current economic use. Gravel pits are located in Section 3 and there is potential on the uplands. This area is located seven miles southeast of the Niagaran reef trend. There are no leases currently in the Compartment.

Vehicle Access: The main roads that run through this compartment are Wishbone, Riverview and Yellowtrees. Numerous trails run throughout the compartment off of these roads.

Survey Needs: Southwest 1/4 of section 10.

Recreational Facilities and Opportunities: Over 3 miles of the Kalkaska ORV Trail and Route run through this compartment. Fishing and canoeing/kayaking are also high use recreational activities that exist for this 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: 221

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		129	59	38	260	17	52	45											600
Black Spruce									6										6
Bog or Marsh	4																		4
Cedar									15	74									89
Grass	32																		32
Jack Pine					35	76													111
Lowlnd Brush	129																		129
Non Stocked						1													1
Oak								31											31
Red Pine					32	164			91	8									295
Swamp Hrdwds							4	15											19
Upland Brush	4				11														15
Upland Hdwds																		31	31
Water	22																		22
White Pine					29		35					10							74
Total	191	129	59	38	367	258	91	91	112	82		10						31	1459

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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: 221

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	600																										600
S Black Spruce		6																									6
V Bog or Marsh			4																								4
C Cedar				89																							89
G Grass					32																						32
J Jack Pine							103								8												111
L LowInd Brush									129																		129
X Non Stocked													1														1
O Oak														31													31
R Red Pine															295												295
E Swamp Hrdwds																			19								19
U Upland Brush																								15			15
M Upland Hdwds																								31			31
Z Water																									22		22
W White Pine																										74	74
Total	600	6	4	89	32		103		129				1	31	303				19				15	31	22	74	1459

PERE MARQUETTE STATE FOREST

TRAVERSE CITY FOREST MGT UNIT

KALKASKA COUNTY

COMPARTMENT: **221**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	4113 Cds	Hardwood	1081 Cds
Hardwood	278 Mbf	Hardwood	11 Mbf
Softwood	8419 Cds	Softwood	2478 Cds
Softwood	1707 Mbf	Softwood	24 Mbf
Sum TotVol	16502 Cds	Sum CutVol	3629 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	252
1459			

TRAVERSE CITY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 221 **Entry Year: 2009**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
6	A5	22	52	52	aspen (upland)	mature	final harvest	1	natural regeneration	
comnts Fmd : Aspen clones scattered throughout an U type. Leave all oak and pine. Clearcut with retention.										
18	R6	7	39	55	red pine	immature	final harvest	1	planting	
25	A6	2	48	65	aspen (upland)	mature	final harvest	1	natural regeneration	
comnts Fmd : Leave any oak. Clearcut with retention.										
40	A6	41	59	50	aspen (upland)	mature	final harvest	1		
comnts Fmd : Leave any pine and oak. Clearcut with retention. Retention areas could be where there are triangles of the trail roads through the stand - 2 areas.										
43	R6	19	43	55	red pine	immature	thinning	2		
comnts Fmd : 2007 - Hagan - The southern 1/4 of stand falls within HCVA - Within 400 feet of designated Natural River and its tributaries.										
45	R6	41	43	55	red pine	immature	thinning	1		
46	A5	7	49	50	aspen (upland)	two aged	selection	1	natural regeneration	
comnts Fmd : Take out aspen and jack pine. Follow retention guidelines.										
48	A5	4	59	50	aspen (upland)	mature	final harvest	1	natural regeneration	
comnts Fmd : 2007 - Hagan - The east 1/2 of stand falls within HCVA - Within 400 feet of designated Natural River and its tributaries. Stand is too small for retention.										
50	J4	8	39	45	red pine	low quality	final harvest	1	planting	
comnts Fmd : This is actually planted Scott Pine, it is half dead. Cut with adjacent stand and replant to red pine. No retention.										
51	R6	8	39	55	red pine	immature	thinning	2		
55	U0	9	32	48	upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Part of an old timber sale #? mostly choke cherry.										
56	U0	2	32	48	upland brush	nonstocked		0	opening maintenance	
comnts Fmd : Part of an old timber sale #? mostly choke cherry.										
58	R6	1	39	55	red pine	immature	thinning	2		
59	R6	30	39	55	red pine	immature	final harvest	1	planting	
60	R6	12	31	52	red pine	immature	final harvest	1	planting	
comnts Fmd : Planted red pine. Goes from blueberry to no ground cover.										
73	R6	35	39	55	red pine	immature	thinning	2		
74	R6	15	31	52	red pine	immature	thinning	1		
comnts Fmd : Planted red pine. Goes from blueberry to no ground cover.										
403	G0	9			grass	nonstocked		0	planting	
comnts Fmd : 2007 - Hagan - Small islands of pine and aspen. Plant rye.										

TRAVERSE CITY FOREST MGT UNIT

Proposed Treatments
With NO Limiting Factors

Compartment: 221

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
Total Acres.....		272								

**Proposed Treatments
With Limiting Factors**

Compartment: 221

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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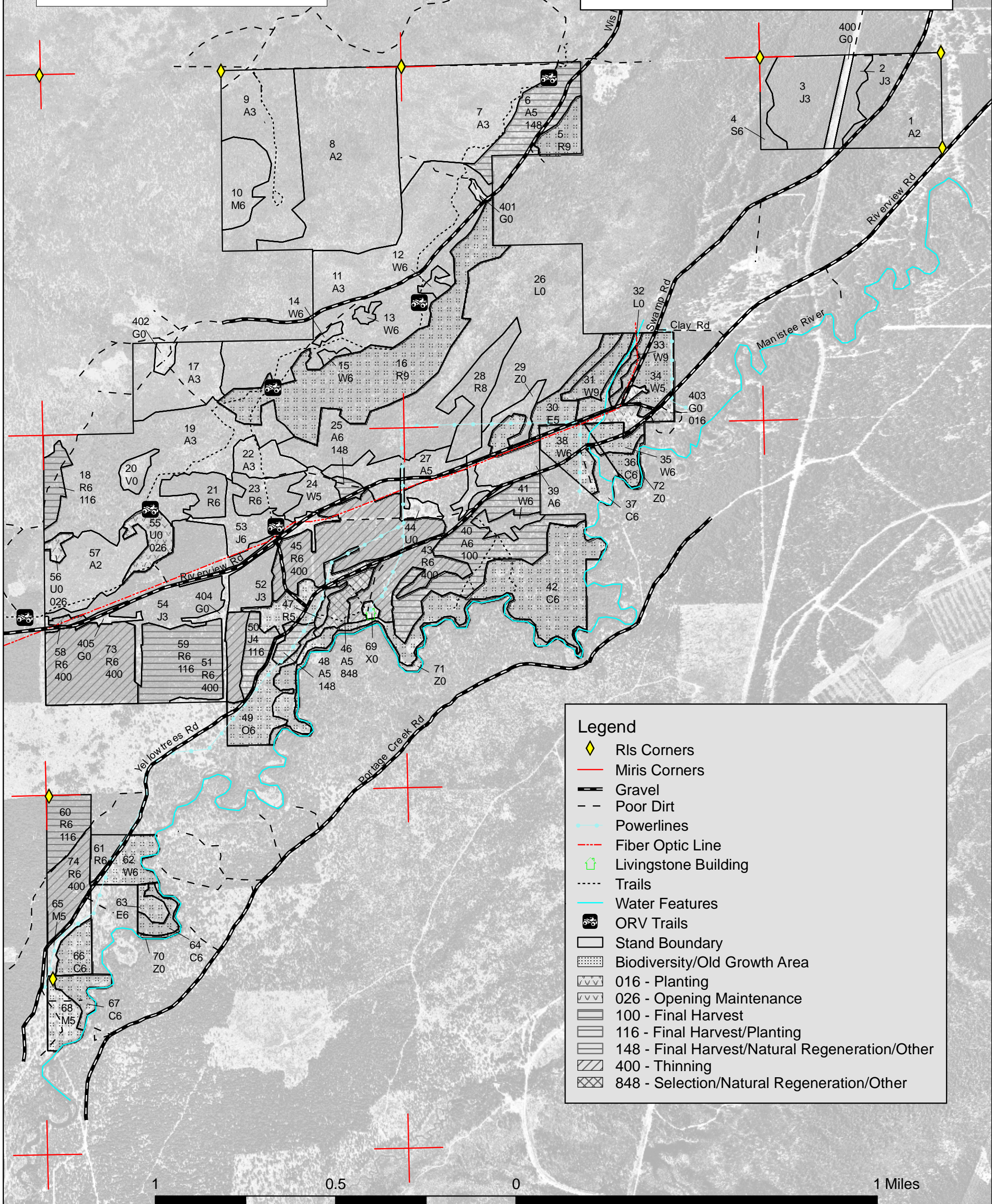
TREATMENT LIMITING FACTORS:

Total Acres..... 0

Compartment 221
 T26N, R05W, Sec. 2, 3, 10, 11, 15
 County: Kalkaska
 Unit: Traverse City
 YOE: 2009
 Acres: 1,459 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 10/24/2007
 Map Phase: Pre-review

Field Map

03	02	01
10	11	
15		



Legend

- RIs Corners
- Miris Corners
- Gravel
- Poor Dirt
- Powerlines
- Fiber Optic Line
- Livingstone Building
- Trails
- Water Features
- ORV Trails
- Stand Boundary
- Biodiversity/Old Growth Area
- 016 - Planting
- 026 - Opening Maintenance
- 100 - Final Harvest
- 116 - Final Harvest/Planting
- 148 - Final Harvest/Natural Regeneration/Other
- 400 - Thinning
- 848 - Selection/Natural Regeneration/Other

