



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

COMPARTMENT # 246 ENTRY YEAR: 2010

Compartment Acreage: 2055 County: Kalkaska

Stand Examiner: G.R.Grieve

Legal Description: T25N, R7W, Sec. 25, 26, 35 & 36

Management Goals: Mixed Use

Soil and Topography: Mostly upland and dry except along the Manistee River. The large river valley hills along the river occur within the compartment on the north side of the river. On the south side the hills are just beyond the compartment in Missaukee County. There is a flat area elevated from the river but still in the flood plan called The Big Low Flats. This area extends out of the compartment to the east. In this compartment most all of the flats has been planted to red pine. Along the river there are low wet areas and high banks. There are two islands in the river. One is relatively dry, the other wet. North of the river is an Emmet sand. The Big Low Flats is a Rubicon sand.

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

With the exception of four in holdings, the compartment is in block ownership. Large state holdings are found to the east, south & west. Solid private ownership is to the north.

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

No known MNFI features. Some concerns of fauna along the Manistee River.

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

Special Management Designations or Considerations: Manistee River is Natural Rivers Act river.

Watershed and Fisheries Considerations: The Manistee River flows through Compartment 246. It is a Designated Trout Stream, and it is also a Natural River. The Manistee River is co-operatively stocked with brown trout by the Walton Junction Sportsman's Club. In addition to hosting good fishing for brown trout, this stretch of the river also has good naturally reproducing populations of rainbow trout, walleye, northern pike, and smallmouth bass. For timber operations near the Manistee River, Natural Rivers buffers must be adhered to.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of an end moraine of coarse-textured till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum elsewhere in the State. Gravel pits are located in Section 26 and there is good potential on the uplands. This area is located seven miles southeast of the Niagaran reef

trend. There are no leases currently in the Compartment, primarily because we do not own the mineral rights of most of the Compartment.

Vehicle Access: No new roads needed at this time. . Road closures: Sec. 35; There is a rarely used road just north of the county line. This road runs between two other roads. Both are within a 1/8 mile. Closure by logging operations. Sec. 36; Just south of the river there is a 2-track following the high banks & at one point going into the flood plain. Most of this road was the result of logging operations ten years ago. At that time the road were closed. About five years ago these 2-tracks started to be opened up. Camping is now happening along the river. Reclose the roads by destruction of the road. These roads have been reclosed many times but keep being opened up. At this time they are closed. Sec. 25; Private landowners are posting state in this area. This has been going on for years. Has been turned over to the CO's & proposed timber sale should take care of this problem.

Survey Needs: None needed at this time.

Recreational Facilities and Opportunities: An ORV Trail runs through Sec. 36 S1/2SE, SESW. Miss-Kal Snowmobile Trail is south in Missaukee County. A relationship with Springfield township has developed an over view platform on the Manistee River in section 25. A dog sled trail is also being developed with the township.

Fire Protection: DNR Fire Protection is from the Kalkaska Field Office, and VFD protection is from the Garfield Twp. Fire Dept. Travel time from the Kalkaska office is a factor, and access can be an issue, particularly with the Manistee River within the compartment. Camping along the river can be a source of remote/abandoned fires. Pine plantations can be a source of intense fire, and travel time/access can contribute to that.

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: 246

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		60		55	8	567	9	3	17		5							36	760
Bog or Marsh	3																		3
Grass	26																		26
Jack Pine					2			2											4
Lowlnd Brush	6																		6
Mx Swmp Cnfr									22			4	109						135
Non Stocked	1																		1
Oak										33									33
Red Pine						728												21	749
Sand Dune	3																		3
Spruce Fir																		14	14
Swamp Hrdwds								13											13
Treed Bog	11																		11
Upland Brush	3																		3
Upland Hdwds							2			51								174	227
Water	43																		43
White Pine								7										17	24
Total	96	60		55	10	1295	11	25	39	84	5	4	109					262	2055

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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: 246

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	760																										760
V Bog or Marsh			3																								3
G Grass					26																						26
J Jack Pine							4																				4
L Lowlnd Brush									6																		6
Q Mx Swmp Cnfr												135															135
X Non Stocked													1														1
O Oak														33													33
R Red Pine															749												749
Y Sand Dune																		3									3
F Spruce Fir																			14								14
E Swamp Hrdwds																				13							13
D Treed Bog																						11					11
U Upland Brush																								3			3
M Upland Hdwds																								227			227
Z Water																									43		43
W White Pine																										24	24
Total	760		3		26		4		6			135	1	33	749			3	14	13		11	3	227	43	24	2055

PERE MARQUETTE STATE FOREST

TRAVERSE CITY FOREST MGT UNIT

KALKASKA COUNTY

COMPARTMENT: **246**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	13822 Cds	Hardwood	3784 Cds
Hardwood	1585 Mbf	Hardwood	49 Mbf
Softwood	28765 Cds	Softwood	16039 Cds
Softwood	1109 Mbf	Softwood	221 Mbf
Sum TotVol	47975 Cds	Sum CutVol	20363 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	
2055		861	

TRAVERSE CITY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 246 Entry Year: 2010

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
3	A6	58	46	73	aspen (upland)	mature	final harvest	1		
<p>comnts Fmd : 9/3/2008 Wildlife would like to retain all cherry, oak & beech through out the stand. In the areas next to the northern hardwood stand where these trees become much more prominent, the mast barring tree will be thinned out. Two one acre leave islands will be left in the interior of the sale. (Grieve) 12/11/2007 Nice stand & really growing well. Clearcut this time around. Transition stand between hardwoods & poorer soils to the south. This cut will also solve a continuing property line problem to the north & east. This was part of a larger stand in the past inventory which is now stand # 2. (Grieve) 12/98 (Grieve) Nice looking aspen stand. Residual red maple was left from last cut. Break stand up into two or three cutting blocks 10 years apart. 10/88 A3 south of road. Mixed with much overstory of assorted species; red maple, oak, white pine. Some Red Maple, red oak, birch in understory as well. (Bakker)</p>										
24	A5	2	39	64	aspen (upland)	immature	final harvest	1	natural regeneration	
<p>comnts Fmd : 12/10/2007 Same as stand 21 just on other side of power line. Cut with compartment to the west. (Grieve) 12/98 (Grieve) Cut 1/3 of this stand in 10 years. Cut another 1/3 in 20 years, & cut the last 1/3 in 30 years. This large aspen stand needs to be put in a better age distribution. Some of the stand is progressing faster than other parts, so this shouldn't be to difficult to do. Stand # 19 is a part of this aspen group.</p> <p>10/88 (Bakker) A3- varries from scraggly A5 over A3 to north with opennings & small A3, to thick A3. 2" dbh and 20 ft high, to A3 with more E3, some overstory of hardwoods & balsam, as head south to river.</p>										
33	A6	45	39	74	aspen (upland)	immature	final harvest	1		
<p>comnts Fmd : 9/3/2008 Wildlife would like all oak & cherry retained. Retention pockets should be left along the river corridor. (Grieve) 12/10/2007 Stand has been divided from last inventory. This 1/3 is to be cut this time around. Northern stand line can not be determined from photo's. This will need to be done at the time of sale. (Grieve) 12/98 (Grieve) Cut 1/3 of this stand in 10 years. Cut another 1/3 in 20 years, & cut the last 1/3 in 30 years. This large aspen stand needs to be put in a better age distribution. Some of the stand is progressing faster than other parts, so this shouldn't be to difficult to do. Stand # 19 is a part of this aspen group.</p> <p>10/88 (Bakker) A3- varries from scraggly A5 over A3 to north with opennings & small A3, to thick A3. 2" dbh and 20 ft high, to A3 with more E3, some overstory of hardwoods & balsam, as head south to river.</p>										
39	R6	24	46	53	red pine	immature	thinning	1		
<p>comnts Fmd : 12/3/2007 Was not treated last time around. This area is known locally as the Big Low Flats. Will treat this are to a third row thinning, stands 68 & 39. Will clearcut "red pine project" stands 82, 62 & 67, than re-plant to red pine. Also, the plantings to the east of this compartment (251) are also to be treated with these timber sales. (Grieve) 12/98 (Grieve) Some of this stand is ready some is not. Can't pick out what is ready. This all comes and goes. Consumers Power Forester told me it had been hit by frost and spittle bug when young. Go for 3rd row thinning this time around. Best to wait for five more years. ORV Trail goes through stand at southern end. Wildlife would like to create 3 -3 acre or larger openings (non-maintained).</p>										
43	A6	30	38	60	aspen (upland)	immature	final harvest	1		
<p>comnts Fmd : 12/4/2007 Mixed stand. Retention along ridge edge. Also, some of the 150 ft from ridge can be harvested as a selection cut, either marked or species harvested. Have divided this stand in to three from last inventory. Will leave the middle third & clearcut the north & south thirds. This will break up a stand which is a mile long. Also, add some age diversity. Scattered oak & red maple logs through out. Old stand is now stands 43, 51 & 59. (Grieve) 12/98 (Grieve) Like Hell the SI is this high. Look at to cut in ten years. May want to hold for 20. It would be best to cut in ten. That way there would be a better age spread in the aspen types. The stand to the south is to be cut in 20 years. (stand # 28)</p>										
44	J6	2	62	39	jack pine	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : 12/4/2007 High risk. Falling down. Let go for natural re-seeding, if it turns into an opening, that would work well also. To small to manage. (Grieve) 12/98 (Grieve) Junk! Looks like it is only 30 years old.</p>										
59	A6	19	38	60	aspen (upland)	immature	final harvest	1		
<p>comnts Fmd : 12/4/2007 Mixed stand. Retention along ridge edge. Also, some of the 150 ft from ridge can be harvested as a selection cut, either marked or species harvested. Have divided this stand in to three from last inventory. Will leave the middle third & clearcut the north & south thirds. This will break up a stand which is a mile long. Also, add some age diversity. Scattered oak & red maple logs through out. Old stand is now stands 43, 51 & 59. (Grieve) 12/98 (Grieve) Like Hell the SI is this high. Look at to cut in ten years. May want to hold for 20. It would be best to cut in ten. That way there would be a better age spread in the aspen types. The stand to the south is to be cut in 20 years. (stand # 28)</p>										

TRAVERSE CITY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 246 Entry Year: 2010

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
62	R6	131	46	53	red pine	immature	final harvest	1	planting	
<p>comnts Fmd : 9/3/2008 Wildlife would like all aspen cut in this stand at the time of harvest. (Grieve) 12/3/2007 Was not treated last time around. This area is known locally as the Big Low Flats. Will treat this are to a third row thinning, stands 68 & 39. Will clearcut "red pine project" stands 82, 62 & 67, than re-plant to red pine. Also, the plantings to the east of this compartment (251) are also to be treated with these timber sales. (Grieve) 12/98 (Grieve) Some of this stand is ready some is not. Can't pick out what is ready. This all comes and goes. Consumers Power Forester told me it had been hit by frost and spittle bug when young. Go for 3rd row thinning this time around. Best to wait for five more years. ORV Trail goes through stand at southern end. Wildlife would like to create 3 -3 acre or larger openings (non-maintained).</p>										
63	A4	3	23	42	aspen (upland)	immature	final harvest	1		
<p>comnts Fmd : 9/3/2008 Wildlife would like to have the aspen in this stand harvested at this time with the red pine for improved habitat. (Grieve) 12/3/2007 Pot hole frost pocket. One row of red pine planted east-west through stand. Poor quality A-5 on south side, grass on north side. Will call it A-4. Leave for diversity. Lots of sweatfern in stand. Red Pine on all sides. (Grieve) 12/98 (Grieve) Pot hole with A-3 . 10/88 (Bakker) Pothole frost pocket. Those red pine that were planted here are stunted, chlorotic, witches brooms.</p>										
65	A5	1	23	48	aspen (upland)	immature	final harvest	1		
<p>comnts Fmd : 9/3/2008 Wildlife would like to cut the aspen in this stand for habitat improvement at the same time as the red pine is harvested. (Grieve) 12/6/2007 Pot hole frost pocket A5 (Grieve) 12/98 (Grieve) Pot hole with A-3 . 10/88 pothole steep, grassy opening, some aspen, probably wet inspring (Bakker)</p>										
67	R6	59	46	53	red pine	immature	final harvest	1	planting	
<p>comnts Fmd : 9/3/2008 Wildlife would like all aspen cut in this stand at the time of harvest. (Grieve) 12/3/2007 Was not treated last time around. This area is known locally as the Big Low Flats. Will treat this are to a third row thinning, stands 68 & 39. Will clearcut "red pine project" stands 82, 62 & 67, than re-plant to red pine. Also, the plantings to the east of this compartment (251) are also to be treated with these timber sales. (Grieve) 12/98 (Grieve) Some of this stand is ready some is not. Can't pick out what is ready. This all comes and goes. Consumers Power Forester told me it had been hit by frost and spittle bug when young. Go for 3rd row thinning this time around. Best to wait for five more years. ORV Trail goes through stand at southern end. Wildlife would like to create 3 -3 acre or larger openings (non-maintained). 12/98 (Grieve) 1/4 fargo corner at SW corner of section 35 in 1st row of pine. Dug & found butter dish, placed yellow carsinite marker.</p>										
68	R6	353	46	53	red pine	immature	thinning	1		
<p>comnts Fmd : 9/3/2008 For Wildlife management clearcut half of the small aspen clones in this stand. This can be done by cutting the entire clone or by cutting a part of each clone. This must be evenly distributed and can be logger choice. (Grieve) 12/3/2007 Was not treated last time around. This area is known locally as the Big Low Flats. Will treat this are to a third row thinning, stands 68 & 39. Will clearcut "red pine project" stands 82, 62 & 67, than re-plant to red pine. Also, the plantings to the east of this compartment (251) are also to be treated with these timber sales. (Grieve) 12/98 (Grieve) Some of this stand is ready some is not. Can't pick out what is ready. This all comes and goes. Consumers Power Forester told me it had been hit by frost and spittle bug when young. Go for 3rd row thinning this time around. Best to wait for five more years. ORV Trail goes through stand at southern end. Wildlife would like to create 3 -3 acre or larger openings (non-maintained).</p>										
82	R6	134	46	53	red pine	immature	final harvest	1	planting	
<p>comnts Fmd : 9/3/2008 Wildlife would like all aspen cut in this stand at the time of harvest. (Grieve) 12/3/2007 Was not treated last time around. This area is known locally as the Big Low Flats. Will treat this are to a third row thinning, stands 68 & 39. Will clearcut "red pine project" stands 82, 62 & 67, than re-plant to red pine. Also, the plantings to the east of this compartment (251) are also to be treated with these timber sales. (Grieve) 12/98 (Grieve) Some of this stand is ready some is not. Can't pick out what is ready. This all comes and goes. Consumers Power Forester told me it had been hit by frost and spittle bug when young. Go for 3rd row thinning this time around. Best to wait for five more years. ORV Trail goes through stand at southern end. Wildlife would like to create 3 -3 acre or larger openings (non-maintained).</p>										

Total Acres..... 861

**Proposed Treatments
With Limiting Factors**

Compartment: 246

Entry Year: 2010

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:

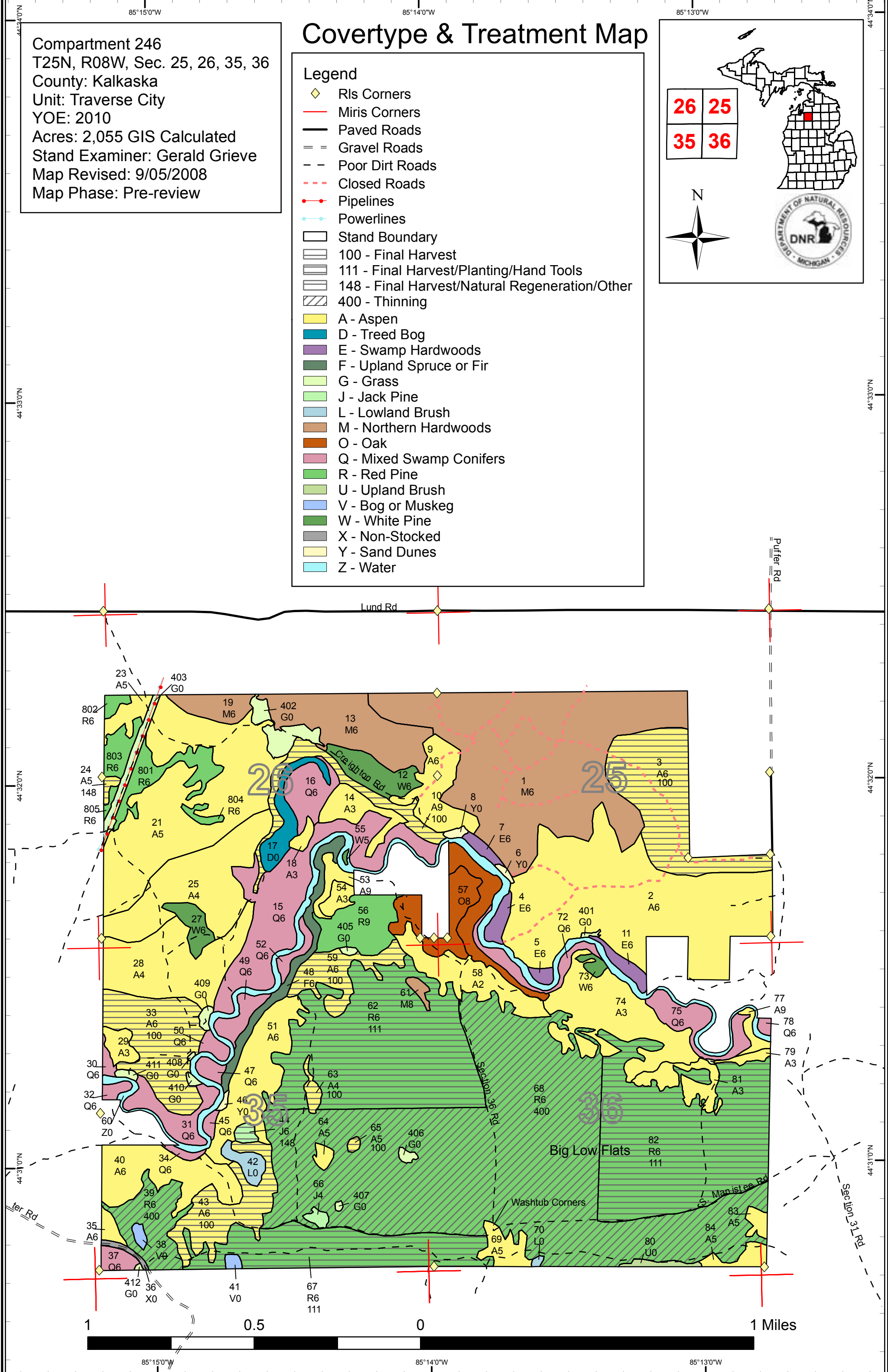
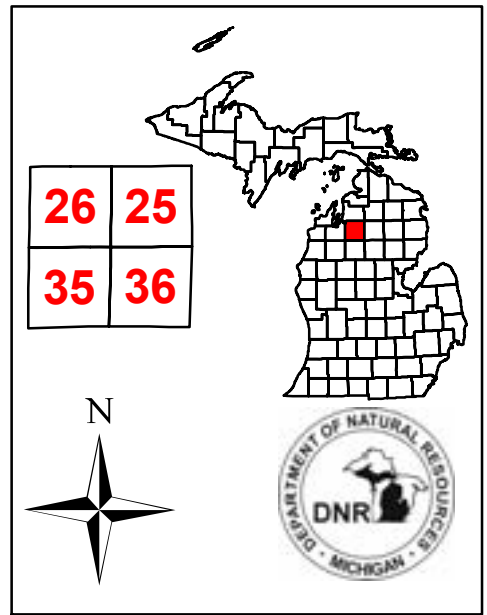
Total Acres..... 0

Compartment 246
 T25N, R08W, Sec. 25, 26, 35, 36
 County: Kalkaska
 Unit: Traverse City
 YOY: 2010
 Acres: 2,055 GIS Calculated
 Stand Examiner: Gerald Grieve
 Map Revised: 9/05/2008
 Map Phase: Pre-review

Covertime & Treatment Map

Legend










-  RIs Corners
-  Miris Corners
-  Paved Roads
-  Gravel Roads
-  Poor Dirt Roads
-  Closed Roads
-  Pipelines
-  Powerlines
-  Stand Boundary
-  100 - Final Harvest
-  111 - Final Harvest/Planting/Hand Tools
-  148 - Final Harvest/Natural Regeneration/Other
-  400 - Thinning
-  A - Aspen
-  D - Treed Bog
-  E - Swamp Hardwoods
-  F - Upland Spruce or Fir
-  G - Grass
-  J - Jack Pine
-  L - Lowland Brush
-  M - Northern Hardwoods
-  O - Oak
-  Q - Mixed Swamp Conifers
-  R - Red Pine
-  U - Upland Brush
-  V - Bog or Muskeg
-  W - White Pine
-  X - Non-Stocked
-  Y - Sand Dunes
-  Z - Water

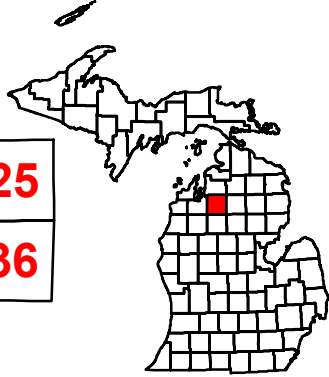


Compartment 246
 T25N, R08W, Sec. 25, 26, 35, 36
 County: Kalkaska
 Unit: Traverse City
 YOE: 2010
 Acres: 2,055 GIS Calculated
 Stand Examiner: Gerald Grieve
 Map Revised: 8/19/2008
 Map Phase: Pre-review

Stand Boundary Map

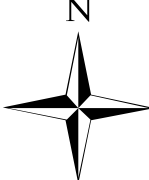

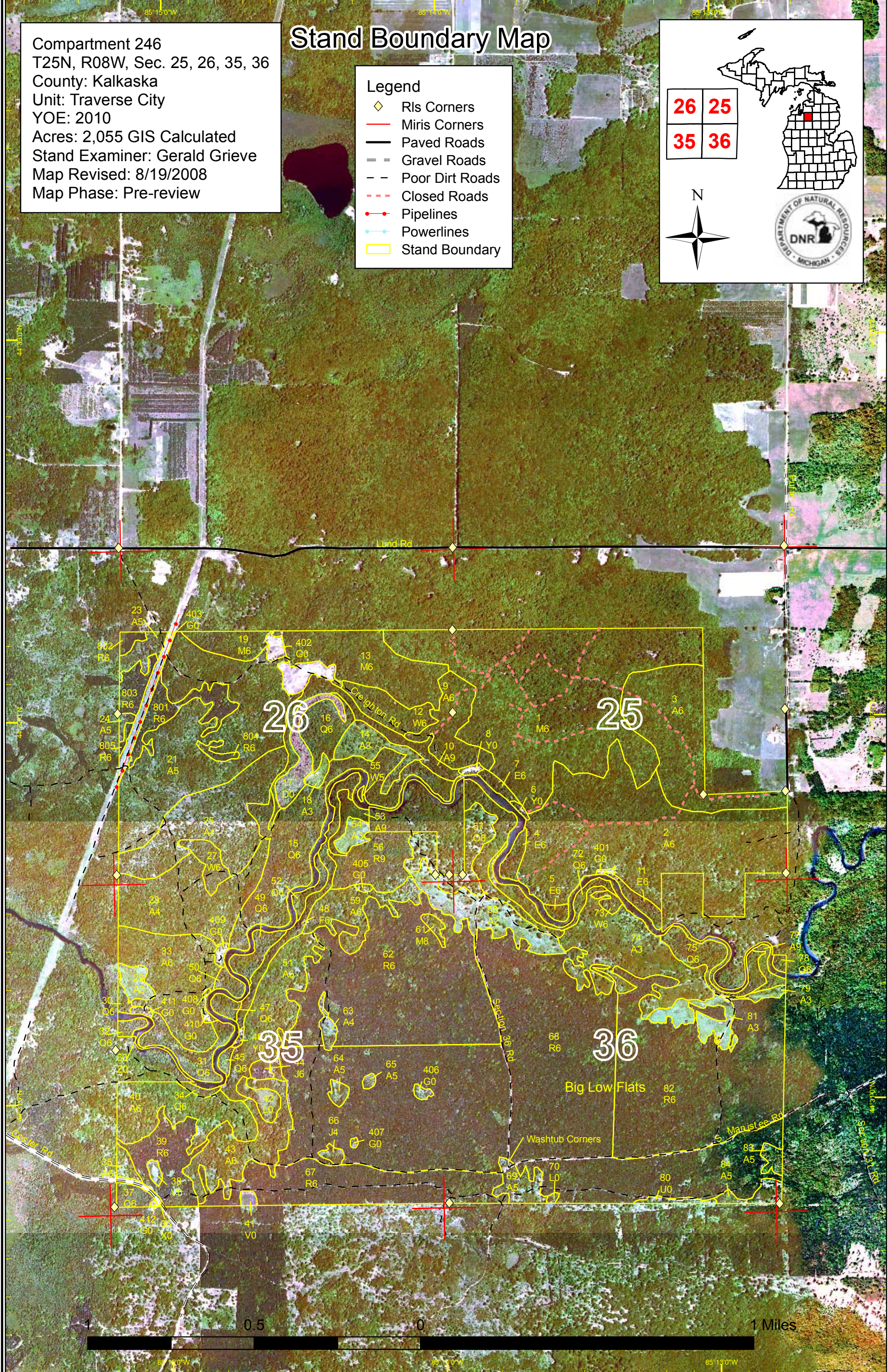
Legend

-  RIs Corners
-  Miris Corners
-  Paved Roads
-  Gravel Roads
-  Poor Dirt Roads
-  Closed Roads
-  Pipelines
-  Powerlines
-  Stand Boundary



26	25
35	36






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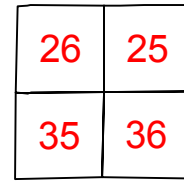




Dedicated & Proposed Special Conservation Area Map

Compartment 246
 T25N, R08W, Sec. 25, 26, 35, 36
 County: Kalkaska
 Unit: Traverse City
 YOE: 2010
 Acres: 2,055 GIS Calculated
 Stand Examiner: Gerald Grieve
 Map Revised: 8/19/2008
 Map Phase: Pre-review

Legend

-  Miris Corners
-  Stand Boundary
- Dedicated SCA**
-  Cold Water Streams
-  Natural Rivers Vegetative Buffer
-  Natural Rivers Zoning District



22

23

24

19

27

26

25

30

34

35

36

31

3

1

0.5

0

1

1 Miles

6

85°15'0"W

85°14'0"W

85°13'0"W

44°33'0"N

44°32'0"N

44°31'0"N

44°33'0"N

44°32'0"N

44°31'0"N



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.

ERA = Ecological Reference Area
 HCVA = High Conservation Value Area
 SCA = Special Conservation Area

Conservation Area	Type	Description
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.