



**PIGEON RIVER COUNTRY MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 39 ENTRY YEAR: 2010

Compartment Acreage: 1912 County: Otsego

Revision Date: 8/20/2008

Stand Examiner: Don Mittlestat

Legal Description: T32N R1W Sections 22, 23, and 24

RMU (if applicable):

Management Goals:

Maintain the current species mix and apply appropriate management techniques to mature stands of timber that are in need of treatment.

Soil and Topography:

With the exception of lowland organic soil types along Hardwood Creek and Lloyd Lake, this compartment consists predominately of upland sands and sandy loams.

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

This compartment is a solid block of state land.

Unique, Natural Features:

MFNI records indicate occurrences of both red-shouldered hawks and pine marten in this compartment

Archeological, Historical, and Cultural Features:

Stand 404 is the site of an old camp. No formal archeological inventory has ever been initiated.

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

Lloyd Lake is a small lake in Section 24 with no inlet or outlet. Hardwood creek flows out of the southeast corner of Section 23 and the southwest corner of Section 24

Wildlife Habitat Considerations:

See wildlife comments.

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of coarse-textured glacial 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 Devonian Antrim Shale that is quarried for cement products elsewhere in the State. Gravel pits are located in the area and potential is considered to be very good. This area was previously leased for Niagaran oil and gas development and one active lease remains and is still in production in Section 22. The Antrim Shale is present and has potential, but will not be developed under the Management Plan. The closest Antrim production is four miles to the east.

Consistent with the objectives of the Concept of Management there are no plans to engage in mining activities (sand, gravel, stone, etc.) in this Compartment. Consistent with the “Final Drilling Plan” for Unit 1, no additional oil and gas development will occur, including in the Antrim Shale.

Vehicle Access:

There is good access to this compartment. A couple of berms need to be redone as vehicles are driving over or around them.

Survey Needs:

None

Recreational Facilities and Opportunities:

The High Country Pathway and the North Spur of the Shore to Shore horse trail pass through this compartment.

Fire Protection:

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

MACKINAW STATE FOREST

PIGEON RIVER COUNTRY MGT UNIT

OTSEGO COUNTY

COMPARTMENT: 39

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				105	7	34	14				7								167
Grass	31																		31
Jack Pine						10													10
LowInd Brush	5																		5
LowInd Poplr				18		3					3								24
Marsh	26																		26
Mx Swmp Cnfr														144					144
Non Stocked	2																		2
Oak										8	54								62
Paper Birch			9			27		12											48
Red Pine										61			1						62
Swamp Hrdwds									61										61
Upland Brush	3			12															15
Upland Hdwds						21			36	437	305								799
Water	4																		4
White Pine		22		26	3	25	4			372									452
Total	71	22	9	161	10	120	18	12	97	878	369		1	144					1912

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

MACKINAW STATE FOREST

PIGEON RIVER COUNTRY MGT UNIT

OTSEGO COUNTY

COMPARTMENT: 39

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	167																										167	
G Grass					31																						31	
J Jack Pine							10																				10	
L LowInd Brush									5																		5	
P LowInd Poplr										24																	24	
N Marsh											26																26	
Q Mx Swmp Cnfr												144															144	
X Non Stocked													2														2	
O Oak														62													62	
B Paper Birch	12														36												48	
R Red Pine	13															49											62	
E Swamp Hrdwds																				61							61	
U Upland Brush																								15			15	
M Upland Hdwds																								799			799	
Z Water																									4		4	
W White Pine	42																									410	452	
Total	234				31		10		5	24	26	144	2	62	36	49				61				15	799	4	410	1912

MACKINAW STATE FOREST

PIGEON RIVER COUNTRY MGT UNIT

OTSEGO COUNTY

COMPARTMENT: **39**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	10617 Cds	Hardwood	1340 Cds
Hardwood	3932 Mbf	Hardwood	54 Mbf
Softwood	3741 Cds	Softwood	576 Cds
Softwood	3897 Mbf	Softwood	1093 Mbf
Sum TotVol	30016 Cds	Sum CutVol	4210 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	296
1912			

PIGEON RIVER COUNTRY MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 39

Entry Year: 2010

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
4	W8	38	78	55	white pine	immature	final harvest	3		
comnts Fmd : 2008 UNDERSTORY IS A MIXED BAG OF U (SOME OF IT LEATHERWOOD), M1, W1, AND SOME OAK. FAIRLY HEAVY BROWSING. LEAVE ONE TO 3 ACRES FOR RETENTION. THERE MAY BE SOME ASPEN COME INTO THIS STAND WHEN CUT. WILL CONVERT TO U, PINE , M AND ASPEN.										
12	U1	12	26	50	upland brush	sparse		0	opening maintenance	
comnts Fmd : 1998 Very heavy browsing in the past has wiped out the aspen regen. 2008 YES! AGREE WITH 1998 COMMENT.										
18	A6	11	50	60	aspen (upland)	immature	final harvest	2		
comnts Fmd : 2008 Aspen, red maple, and soft wood species would be expected to reproduce in this stand										
25	A6	7	95	60	aspen (upland)	mature	final harvest	2		
comnts Fmd : 2008 Aspen, red maple, and soft wood species would be expected to reproduce in this stand										
28	R9	5	78	60	red pine	immature	shelterwood-seed	2		
comnts Fmd : 2008 leave some aspen for wildlife trees. Red and white pine as well as aspen and red maple would be expected to regenerate the stand.										
32	B6	27	43	55	paper birch	immature	final harvest	3		
comnts Fmd : 2008 BUFFER ST 31 AND PUSH THIS STAND INTO STANDS 29 AND 30. Aspen, red maple, and soft wood species would be expected to reproduce in this stand										
38	M6	32	90	60	northern hardwood	immature	thinning	1		
44	R9	19	78	60	red pine	immature	selection	2		
comnts Fmd : 2008 LEAVE OAK AND ASPEN DO GROUP SELECTION TO ENCOURAGE WHITE PINE. RED AND WHITE PINE AS WELL AS SOME ASPEN AND RED MAPLE WOULD BE EXPECTED TO REGENERATE THE STAND.										
56	W9	15	78	55	white pine	immature	final harvest	2		
comnts Fmd : 2008 LEAVE THE SOUTH ARM AS RETENTION. Aspen, red maple, and birch as well as white and red pine would be expected to regenerate in this stand										
64	W9	71	78	55	white pine	immature	selection	2		
comnts Fmd : 2008 thin and do group selection to encourage white pine. Leave most of aspen for wildlife. White jack and red pine as well as aspen and some hardwoods would be expected to regenerate the stand.										
66	R9	14	78	60	red pine	immature	seed tree	1		
comnts Fmd : 1998 Thin by selectively marking. Try to favor red pine where possible. Leave nice quality oak as well. 2008 MARK ANOTHER 5 BA OF BOTH RED AND WHITE PINE TO GET THE RESIDUAL DOWN TO ABOUT 30 BA. Red and white pine as well as aspen and red maple would be expected to regenerate the stand.										
88	R9	13	78	60	aspen (upland)	immature	final harvest	2		
comnts Fmd : 2008 leave some aspen for wildlife trees. No retention trying to get as much aspen regen as possible. Aspen, red maple, birch and soft wood species would be expected to reproduce in this stand										
89	W8	23	78	60	aspen (upland)	immature	final harvest	3		
comnts Fmd : 2008 SAME STAND AS STAND 37 TO THE SOUTH BUT NOT AS HEAVILY STOCKED. APPEARS THAT MORE TREES WERE TAKEN OUT . THERE ARE PLACES WHERE ASPEN IS IN THE UNDERSTORY WHERE IT HAS NOT BEEN BROWSED OTHERWISE IT IS WHITE PINE. Expect aspen, red maple as well as red, white pine to reproduce in the stand.										
90	W8	9	78	60	white pine	immature	final harvest	3		
comnts Fmd : 2008 SAME STAND AS STAND 37 TO THE SOUTH BUT NOT AS HEAVILY STOCKED. APPEARS THAT MORE TREES WERE TAKEN OUT . THERE ARE PLACES WHERE ASPEN IS IN THE UNDERSTORY WHERE IT HAS NOT BEEN BROWSED OTHERWISE IT IS WHITE PINE. CLEARCUT THE NORTHEN PORTION OF THE STAND LEAVE HEMLOCK AND OAK. CONVERT THIS STAND TO A MIXED STAND OF PINE, U TYPE, M TYPE AND PINE.										
400	G0	2			grass	nonstocked		0	planting	
comnts Fmd : Abandoned well pad.										
401	G0	15			grass	nonstocked		0	opening maintenance	
comnts Fmd : Managed wildlife opening.										

PIGEON RIVER COUNTRY MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 39

Entry Year: 2010

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status	
402	G0	5			grass	nonstocked		0	planting		
comnts Fmd : Managed wildlife opening.											
403	G0	2			grass	nonstocked		0	opening maintenance		
406	G0	6			grass	nonstocked		0	opening maintenance		
comnts Fmd : Managed wildlife opening.											
Total Acres.....		326									

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDI Status
54	B6	12	65	60	aspen (upland)	immature	final harvest	3		

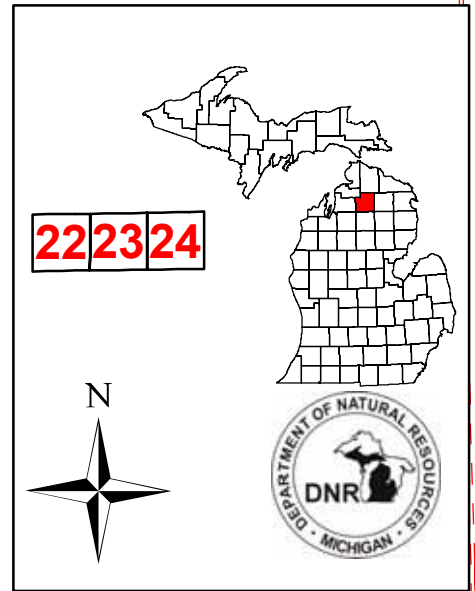
TREATMENT LIMITING FACTORS: Too steep

comnts Fmd : 2008 Look at this stand to se if there is a way to log . It is on a fairly steep slope leading to the swamp. Leave hemlock and some of the steeper areas for retention. Leave trees marked to be cut after sale for hare habitat. Aspen, red maple, and soft wood species would be expected to reproduce in this stand

Total Acres..... 12

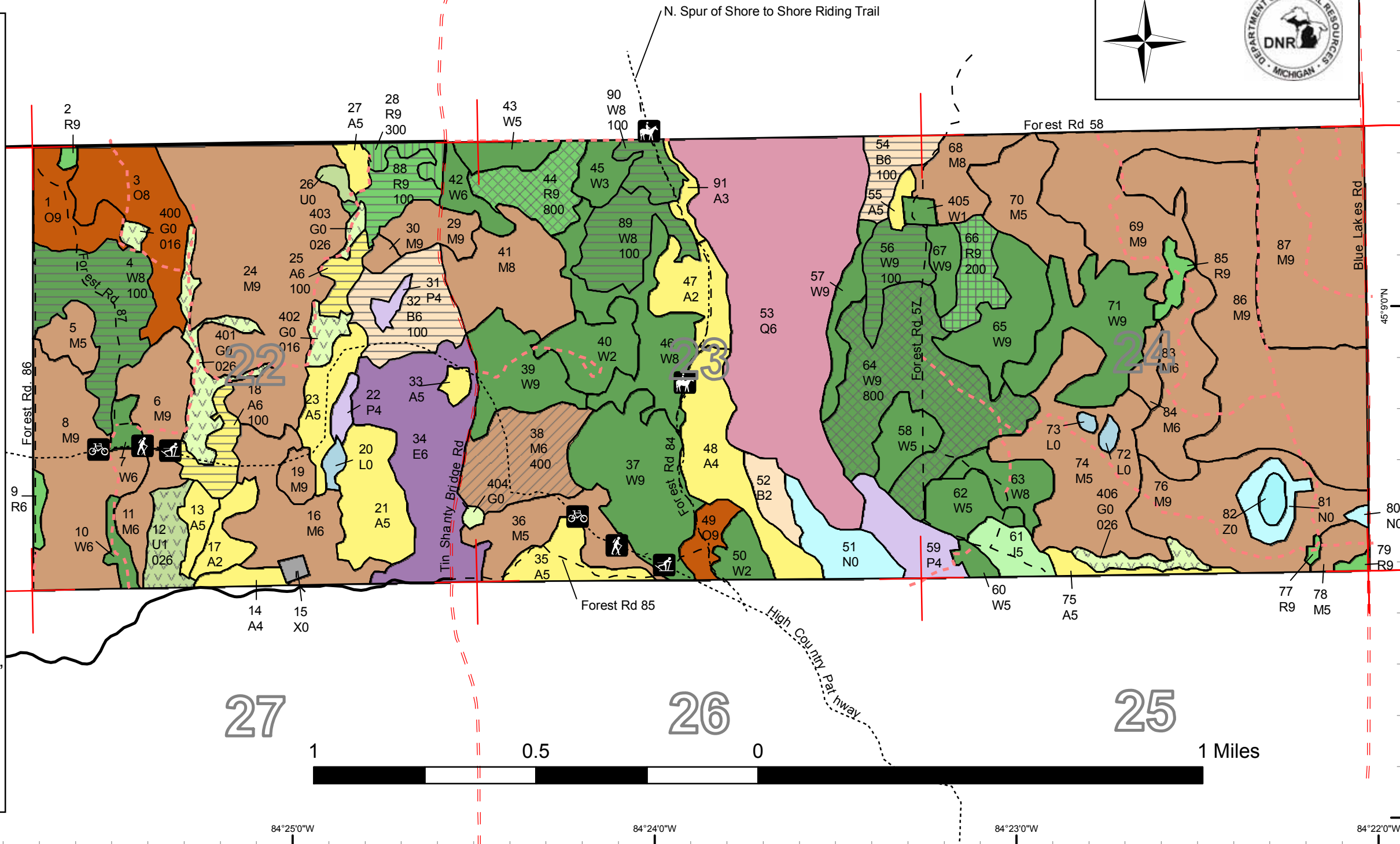
Compartment 39
 T32N, R01W, Sec. 22, 23, 24
 County: Otsego
 Unit: Pigeon River Country
 YOE: 2010
 Acres: 1,912 GIS Calculated
 Stand Examiner: Don Mittlestat
 Map Revised: 6/03/2008
 Map Phase: Pre-review

Cover Type and Treatment



Legend

- Miris Corners
- - - County Gravel Roads
- Paved
- Open Forest Roads
- Closed Roads
- Trails
- Ski Trails
- Bike Trails
- Hiking Trails
- Horse Trails
- Stand Boundary
- 016 - Planting
- 026 - Opening Maintenance
- 100 - Final Harvest
- 200 - Seed Tree
- 300 - Shelterwood - Seed
- 400 - Thinning
- 800 - Selection
- A - Aspen
- B - Paper Birch
- E - Swamp Hardwoods
- G - Grass
- J - Jack Pine
- L - Lowland Brush
- M - Northern Hardwoods
- N - Marsh
- O - Oak
- P - Balsam Poplar, Swamp Aspen, Swamp White Birch
- Q - Mixed Swamp Conifers
- R - Red Pine
- U - Upland Brush
- W - White Pine
- X - Non-Stocked
- Z - Water



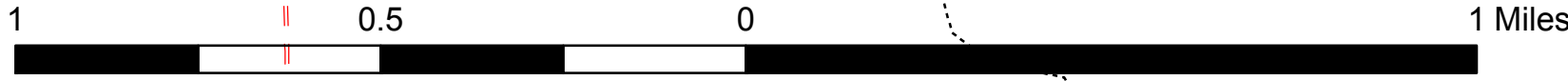
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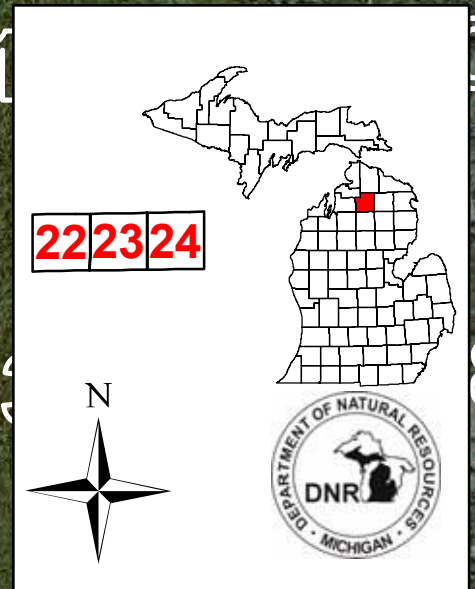
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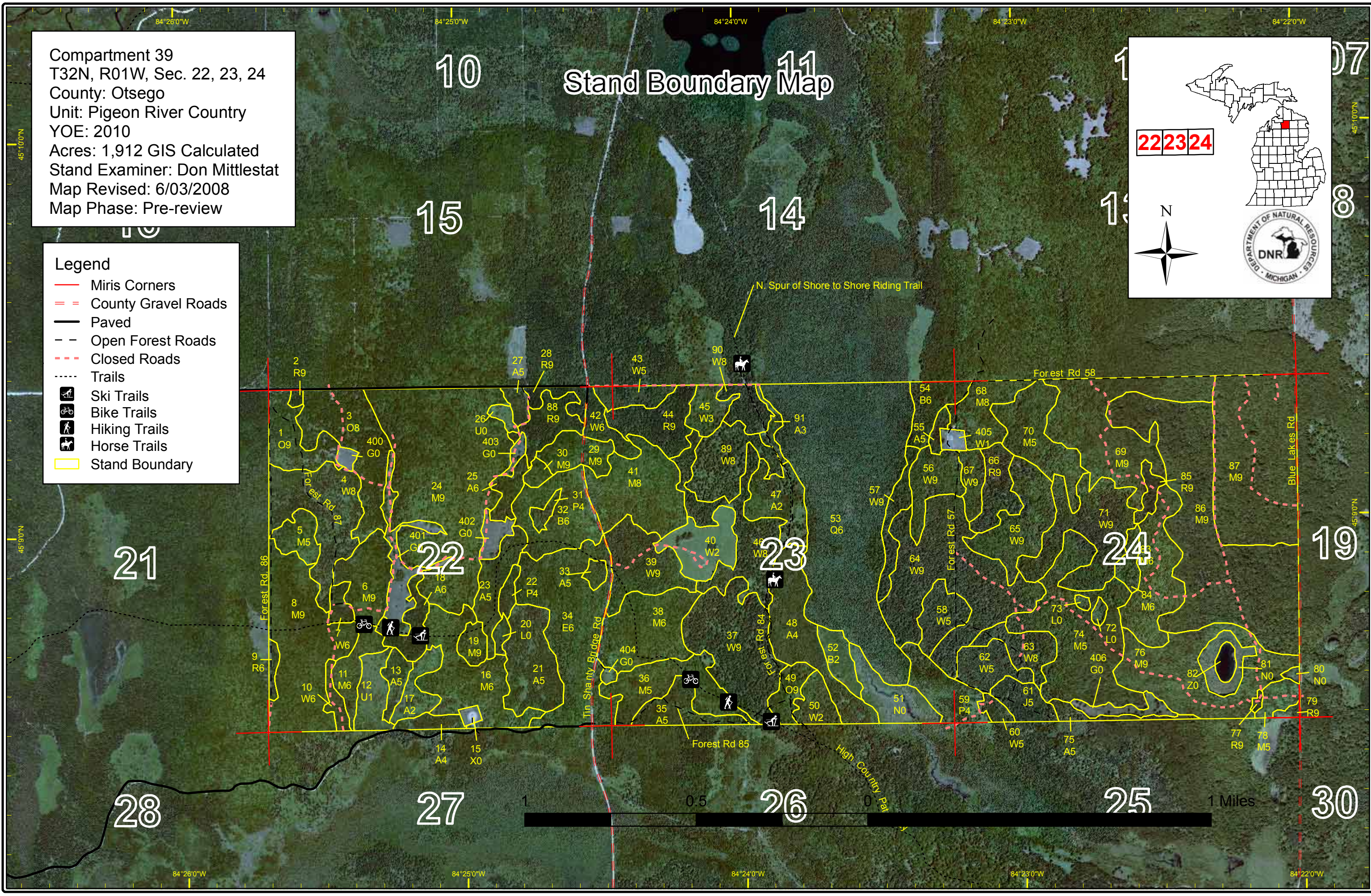
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Stand Boundary Map



Legend

- Miris Corners
- = County Gravel Roads
- Paved
- - Open Forest Roads
- - - Closed Roads
- - - - Trails
- Ski Trails
- Bike Trails
- Hiking Trails
- Horse Trails
- Stand Boundary

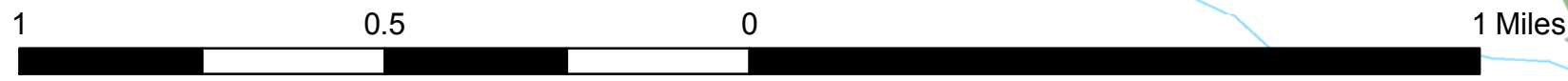
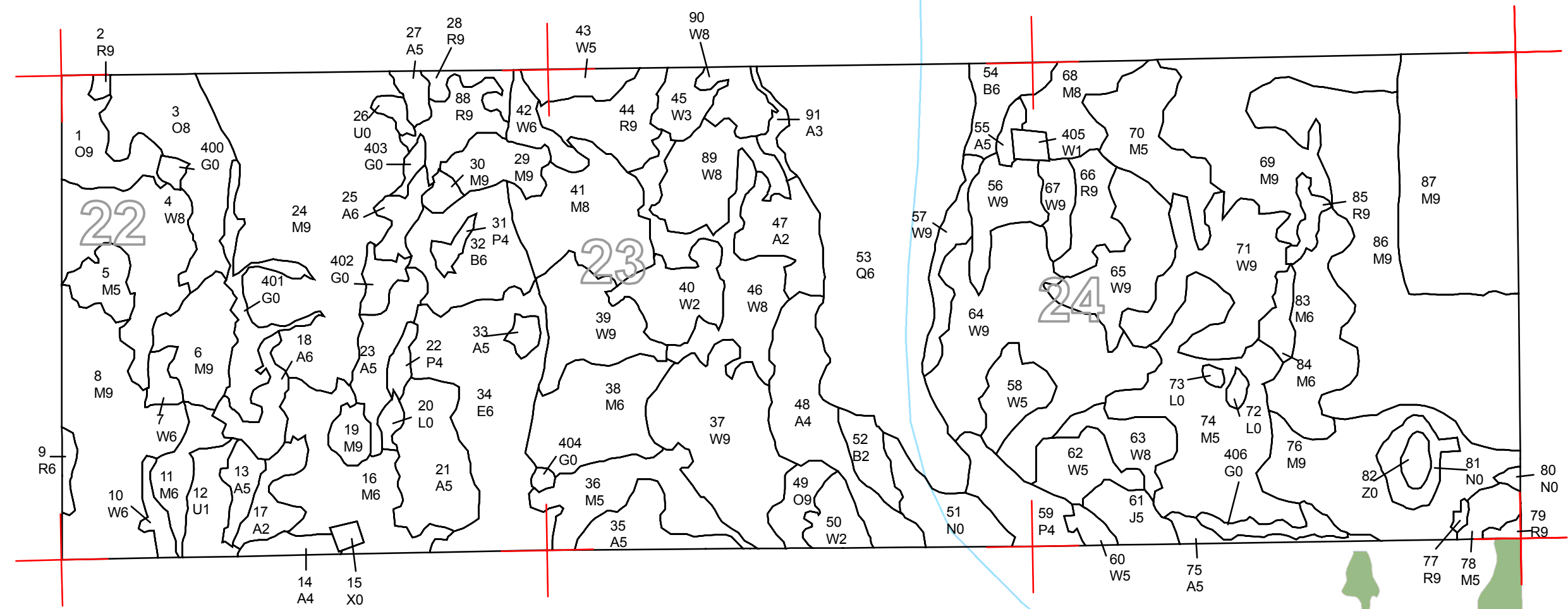


Compartment
 T32N, R01W, Sec. 22, 23, 24
 County: Otsego
 Unit: Pigeon River Country
 YOE: 2010
 Acres: 1,912 GIS Calculated
 Stand Examiner: Don Mittlestat
 Map Revised: 6/16/2008
 Map Phase: Pre-review

Dedicated & Proposed Special Conservation Area Map

Legend

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



84°26'0"W 84°25'0"W 84°24'0"W 84°23'0"W 84°22'0"W

45°10'0"N

45°9'0"N

45°10'0"N

45°9'0"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
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.
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.