SHINGLETON FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 163 ENTRY YEAR: 2011

Compartment Acreage: 1981 County: Schoolcraft

Revision Date: 10/30/09

Stand Examiner: Rick-James Hill

Legal Description: T47N R16W Sections 24-26 and 34-36

Management Goals: To manage the compartment in accordance with the principles of sustainable forest ecosystem management, with emphasis on timber production, maintaining & enhancing wildlife habitat, and protection of riparian areas.

Soil and Topography: This area is Outwash transition with Flat Terrain. Soils vary from peat and muck in the wet areas of the compartment to sand and loam on the outwash transition.

Ownership Patterns, Development, and Land Use in and Around the Compartment: There are no in holdings in the compartment there is about 40 acres on the edge of Worchester Lake. There is some Forest Land Group property around the compartment there are also a few camps in the area.

Unique, Natural Features (include only non-site specific and non-sensitive information): There are high quality Patterned Fens and Rich Shrub herb fens are widespread thought the compartment. There is potential for the common loon to occur in Worchester Lake, which borders stand 1. In addition, there is potential for osprey in this compartment. The juxtaposition of northern hardwood stands and an extensive wetland complex also indicates potential for red-shouldered hawk.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There are no known features.

Special Management Designations or Considerations: The Creighton Marsh Patterned Fen ERA represents a high-quality example of a patterned fen. A management plan for it is currently being developed.

Watershed and Fisheries Considerations: Marsh Creek is found in this compartment and is a warm-water stream. Cusino Lake and Worchester Lake are also included. BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations: This compartment is located south of Wolf Lake Road at the transition zone between the large marsh/conifer ridge complex to the south and the northern hardwood forest to the north. The area receives a substantial amount of moose activity. Most of this compartment is marsh or lowland forest; northern hardwoods are mainly at the northern end. Roughly half of the compartment lies within a patterned fen ecological reference area. The wildlife goals in this compartment include protection of the marsh habitat, maintaining the canopy values associate with hemlock, and maintaining age and structural diversity within the northern hardwoods.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of peat & muck, glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien subcrops below the glacial drift. These rocks could be used for stone. A gravel pit is located one mile to the northwest and there could be some potential. There is no commercial oil and gas production in the UP.

Vehicle Access: There is limited county road frontage on a small portion of the compartment. There is limited access on two tracks to most of the compartment. The bridge over marsh creek is suitable for only ORV and Passenger Cars. Most of the two tracks that access the compartment travel though Forest Land Group property.

Survey Needs: None at this time.

Recreational Facilities and Opportunities: There is a boat access to Worcester Lake. This compartment is also utilized for dispersed outdoor activities like hunting and trapping.

Fire Protection: This compartment is on the north end of the Seney fire as a result there is some young jack pine and black spruce.

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

LAKE SUPERIOR STATE FOREST | SHINGLETON FOREST MGT UNIT | SCHOOLCRAFT COUNTY | COMPARTMENT: **163**

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		35			13					19									67
Black Spruce					115				45		35	22							217
Bog or Marsh	3																		3
Hemlock												16						48	64
Jack Pine					212														212
Lowlnd Brush	90				26														116
Lowlnd Poplr						30				15									45
Marsh	527																		527
Mx Swmp Cnfr						33				13	5		280						331
Paper Birch										13									13
Swamp Hrdwds																		159	159
Tamarack																28			28
Upland Hdwds																		196	196
Water	3																		3
Total	623	35			366	63			45	60	40	38	280			28		403	1981

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

LAKE SUPERIOR STATE FOREST | SHINGLETON FOREST MGT UNIT | SCHOOLCRAFT COUNTY | COMPARTMENT: **163**

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	67																										67
S Black Spruce		217																									217
V Bog or Marsh			3																								3
H Hemlock						64																					64
J Jack Pine							212																				212
L Lowlnd Brush									116																		116
P Lowlnd Poplr										45																	45
N Marsh											527																527
Q Mx Swmp Cnfr												331															331
B Paper Birch															13												13
E Swamp Hrdwds	17																			142							159
T Tamarack																					28						28
M Upland Hdwds																								196			196
Z Water																									3		3
Total	84	217	3			64	212		116	45	527	331		13						142	28			196	3		1981

LAKE SUPERIOR STATE FOREST | SHINGLETON FOREST MGT UNIT | SCHOOLCRAFT COUNTY | COMPARTMENT: **163**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY

TOTAL VOLUME		CUT VOLUME	
Hardwood	4983 Cds	Hardwood	1053 Cds
Hardwood	558 Mbf	Softwood	2053 Cds
Softwood	7078 Cds	Softwood	70 Mbf
Softwood	383 Mbf	Sum CutVol	3246 Cds
Sum TotVol	13943 Cds		

Total Cmpt Acres

1981

Acres Proposed For Cut..... 201

SHINGLETON FOREST MGT UNIT | **Proposed Treatments With NO Limiting Factors** | **Compartment: 163** | **Entry Year: 2011**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
3	**M6**	69		53	northern hardwood	unevenaged	selection	2	planting	

comnts Fmd **:** This stand is primarily red maple with some cherry, beech, hemlock and white pine. This stand was probably a hemlock white pine stand pre settlement. Thin to 70 SF marking to release crop trees also make canopy gaps where possible. Retention will be included in the residual stand. Also look into planting of white pine or hemlock in the understory of this stand. Species code 99 includes black cherry and beach pulpwood.

Wld **:** Leaev a beech component, and leave most cherry. Maintain species and structural diversity in the stand, including leaving some large wolfy trees. Agree with planting hemlock and white pine per FMFM comments.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
9	**Q6**	7	84	47	mixed swamp conifer	mature	final harvest	3		

comnts Fmd **:** This is a mixed swamp conifer type is heavy to spruce with a mix of balsam fir white pine and paper birch present on the site. If access could be found a harvest would be warranted so long as the other islands in the area could be cut as well to add volume to the sale.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
22	**A3**	35	5	55	aspen (upland)	in process of regeneration		0	natural regeneration	

comnts Fmd **:** This stand was clearcut last entry period the aspen is responding well. [4/4/03] This stand is under contract TS #025-01 Marsh Creek Contract.
[01/08/05] RFT Sale is now closed TCR dtd 12/06/04. See FTP # W41-1046 (aspen TSI.)

Total Acres..... **111**

SHINGLETON FOREST MGT UNIT | **Proposed Treatments With Limiting Factors** | **Compartment: 163** | **Entry Year: 2011**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
8	**Q6**	6	84	47	mixed swamp conifer	two aged	final harvest	2		

TREATMENT LIMITING FACTORS: Inadequate volume due to small acreage
Road needed (resources not presently available)

comnts Fmd **:** This stand has a white pine overstory with codoment spruce, paper birch and red maple there is a well developed understory of spruce, pine and maple. This stand could be harvested if access can be found for it and some other islands in the area. If access can not be found the understory will continue to gain dominance as the current overstory slowly dies.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
10	**S6**	19	94	40	black spruce-swamp	mature	final harvest	3		

TREATMENT LIMITING FACTORS: Road needed (resources not presently available)
Inadequate volume due to small acreage
Water quality/bmps

comnts Fmd **:** This stand heavy to spruce with a mix of balsam fir white pine and paper birch present on the site. If access could be found a harvest would be warranted so long as the islands in the area could be cut as well to add volume to the sale. Species code 98 includes balsam fir and white pine

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
12	**S6**	16	94	40	black spruce-swamp	mature	final harvest	3		

TREATMENT LIMITING FACTORS: Inadequate volume due to small acreage
Road needed (resources not presently available)

comnts Fmd **:** This Q type is heavy to spruce with a mix of balsam fir white pine and paper birch present on the site. If access could be found a harvest would be warranted so long as the islands in the area could be cut as well to add volume to the sale.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
16	**S6**	2	99	40	black spruce-swamp	mature	final harvest	2		

TREATMENT LIMITING FACTORS: Road needed (resources not presently available)
Inadequate volume due to small acreage
Water quality/bmps

comnts Fmd **:** Species code 99 is red maple and birch
Species code 98 includes balsam fir and white pine

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
18	**E6**	17		58	aspen (upland)	unevenaged	final harvest	3		

TREATMENT LIMITING FACTORS: Road needed (resources not presently available)

comnts Fmd **:** An area of poor red maple a few beach some aspen and birch as well as balsam fir and hemlock with a few black spruce on the edge of the stand. This stand is mature and is starting to lose the early sectional component and should be clearcut. This area is bordered by forest land group and open mash with no apparent roads to the stand so access will be an issue resulting in a limiting factor on this stand.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
25	**S6**	45	74	45	black spruce-swamp	immature	final harvest	2	natural regeneration	

TREATMENT LIMITING FACTORS: Existing bridge out or unsafe
Road needed (resources not presently available)
Inadequate volume due to small acreage

comnts Fmd **:** This is a nice stand of spruce It needs significant road work and a bridge to cut this entry period It should be cut next entry period as there will be a temporary bridge over mash creek and sale activity in adjacent hardwood stand. Species code 99 is red maple and birch

Wld **:** Cedar is co-dominant in this stand, with good ground flora on wet soils. Leave stand to provide cover for moose and other species, and review at next entry.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
27	**S6**	7	99	40	black spruce-swamp	mature	final harvest	2		

TREATMENT LIMITING FACTORS: Road needed (resources not presently available)
Inadequate volume due to small acreage
Water quality/bmps

comnts Fmd **:**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
54	**S6**	8	99	40	black spruce-swamp	mature	final harvest	2		

TREATMENT LIMITING FACTORS: Water quality/bmps
Inadequate volume due to small acreage
Road needed (resources not presently available)

comnts Fmd **:** White pine and balsam fir are also present in this stand this would be a nice stand to cut if access could be gained to other stands nearby.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
56	**S6**	5	99	40	black spruce-swamp	mature	final harvest	2		

TREATMENT LIMITING FACTORS: Road needed (resources not presently available)
Water quality/bmps

comnts Fmd **:** Species code 99 includes red maple and birch
Species code 98 includes balsam fir and white pine

Total Acres..... **125**

Covertype & Treatment Map

Legend

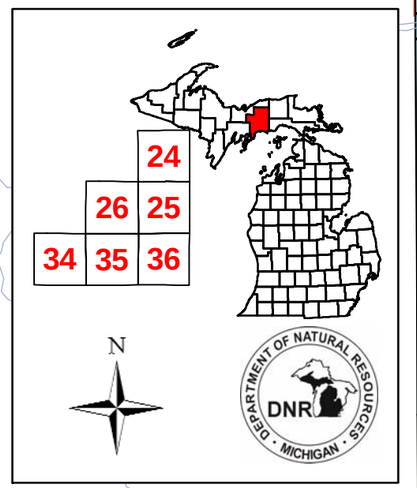
- Miris Corners
- Paved Roads
- Poor Dirt Roads
- Water Features
- Stand Boundaries
- A - Aspen
- B - Paper Birch
- E - Swamp Hardwoods
- H - Hemlock
- J - Jack Pine
- L - Lowland Brush
- M - Northern Hardwoods
- N - Marsh
- P - Balsam Poplar, Swamp Aspen, Swamp White Birch
- Q - Mixed Swamp Conifers
- S - Black Spruce Swamp
- T - Tamarack
- V - Bog or Muskeg
- Z - Water

Treatments

- 100 - Final harvest
- 148 - Final harvest/Natural regeneration/Other (see comments)
- 811 - Selection/Planting/Hand tools

Wolf Lake Rd

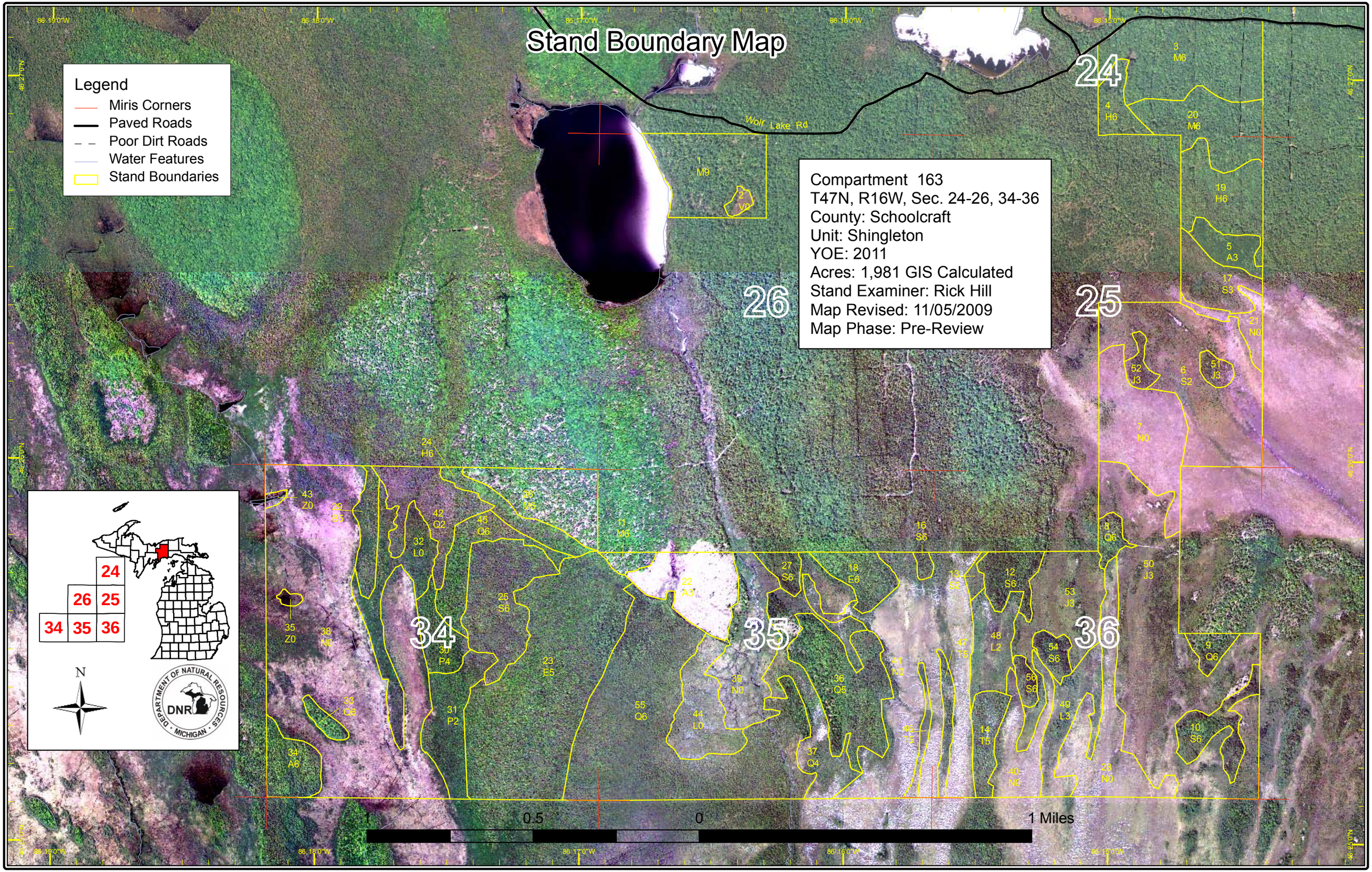
Compartment 163
T47N, R16W, Sec. 24-26, 34-36
County: Schoolcraft
Unit: Shingleton
YOE: 2011
Acres: 1,981 GIS Calculated
Stand Examiner: Rick Hill
Map Revised: 11/05/2009
Map Phase: Pre-Review



1 0.5 0 1 Miles

86°19'0"W 86°18'0"W 86°17'0"W 86°16'0"W 86°15'0"W 86°14'0"W
46°27'0"N 46°26'0"N

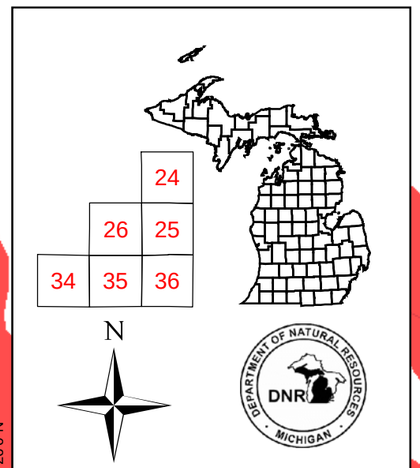
Stand Boundary Map



Compartment 163
T47N, R16W, Sec. 24-26, 34-36
County: Schoolcraft
Unit: Shingleton
YOE: 2011
Acres: 1,981 GIS Calculated
Stand Examiner: Rick Hill
Map Revised: 11/05/2009
Map Phase: Pre-Review

Dedicated & Proposed Special Conservation Area Map

Compartment 163
T47N, R16W, Sec. 24-26, 34-36
County: Schoolcraft
Unit: Shingleton
YOE: 2011
Acres: 1,981 GIS Calculated
Stand Examiner: Rick Hill
Map Revised: 11/05/2009
Map Phase: Pre_Review



Legend
- Miris Corners
- Stand Boundaries

Proposed SCA
- Proposed SCA - Special Conservation Area

Dedicated Special Conservation Areas
- Ecological Reference Areas
- Campgrounds
- OI Special Conservation Areas
- Potential Old Growth Stands
- Cold Water Streams

Wolf Lake Rd

1 M9
2 V0
3 M6
4 H6
20 M6
19 H6
5 A3
17 S3
21 M0
52 J3
6 S2
51 J3
7 N0
24 H6
43 Z0
29 B5
42 Q2
45 Q6
26 M6
32 L0
11 M6
16 S6
8 Q6
50 J3
35 Z0
38 N0
25 S6
22 A3
27 S6
18 E6
13 S2
12 S6
53 J3
30 P4
23 E5
39 N0
36 Q5
41 N0
47 T5
48 L2
54 S6
56 S6
9 Q6
33 Q6
31 P2
55 Q6
44 L0
46 T5
14 T5
49 L3
10 S6
34 A6
37 Q4
40 N0
28 N0

34 35 36 24 25 26

1 0.5 0 1 Miles

86°19'0"W 86°18'0"W 86°17'0"W 86°16'0"W 86°15'0"W
46°27'0"N 46°26'0"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
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.
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.