FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 030 **ENTRY YEAR:** 2010

Compartment Acreage: 1342 **County:** Menominee

Last Revision: July 24, 2008

Stand Examiner: Dustin Salter, FMFMD; Bill Rollo and Craig Albright, Wildlife Division

Legal Description: T34N R28W Sections 8, 9, 10, and 11

Management Goals: This compartment has an equal mix of upland and lowland cover types. The upland stands consist primarily of mixed hardwood, oak, and aspen. The lowland areas consist of lowland hardwoods, mixed conifer, and lowland brush. There are seven mixed hardwood stands that are prescribed to be treated this decade. Five of the hardwood stands will be thinned managing for sawlog production and maintaining species diversity. The other two stands are to final harvested. These two stands have been harvested in the past with shelterwood harvests to convert them to pine, spruce, and fir. The conifer regeneration is now 15' feet and taller. It is time to release the regeneration before it becomes stagnated. There are two lowland conifer stands that are mature and will be final harvested, leaving only a mix of scattered seed trees. These stands will regenerate with a mix of lowland conifer species. There is a lowland ash/maple stand that will receive its first shelterwood harvest to begin to regenerate a mix of conifer species. There is also a mature red pine stand that will be final harvested, leaving some red pine seed trees to naturally regenerate the stand.

Soil and Topography: The topography is level with a few rolling hills. The lowland portions of the compartment consist primarily of black loam/muck over sand. In the upland portions it is mainly fine sand and loamy sand over sandy loam. The main soil series are: Arnheim-Moquah complex, Lupton-Tawas association, Amasa, Mancelona-Nadeau complex, and Rousseau.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment lies at the southern end of a band of state land that is about 20 miles long and 8 miles wide. The entire southern border of the compartment borders the Menominee River. To the north of this compartment it is primarily private land. This area has a few year round residences, but mostly there are a number of camps. Recreation is the primary activity in this compartment and the lands around it.

Unique, Natural Features: There are three miles of Menominee River footage within this compartment.

Archeological, Historical, and Cultural Features: There is an old logging camp site along the river in section 10.

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: This compartment lies adjacent to the Menominee River and contains several types of hardwood forest: northern, floodplain, and lowland. Many of these stands exhibit tremendous species diversity not seen in other portions of the Forest Unit. For example, hickory, butternut, and silver maple occur in some stands, and red oak is a common component. In addition to the Menominee

River, Snakey Lake, Woesner Lake, and numerous floodplain and vernal pools provide aquatic habitat for species such as bald eagles, wood ducks, frogs, and salamanders. A 5-chain buffer has been designated a "Special Conservation Area" along the Menominee River and the small lakes and drainages to promote closed-canopy, large tree conditions with abundant snags and dead woody debris for riparian zone wildlife. Most proposed treatments this decade are hardwood stands that will be thinned or final harvested to release advanced white pine regeneration. Maintenance of vegetative diversity is a key emphasis for wildlife in these stands, particularly favoring oak for retention.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured till with drumlins and lacustrine (lake) sand and gravel. The glacial drift thickness varies between 10 and 50 feet. The Cambrian Munising and Trempealeau Formations underlie the glacial drift. The Trempealeau could be quarried for dolostone. The Munising may have been used as a building stone previously and it overlaps Precambrian aged rocks, which may have metallic and nonmetallic mineral potential. None of the State land has been previously leased for metallic mineral exploration. Gravel pits are located in the area and there should be potential on the uplands. No economic oil and gas production has been found in the UP. There is one small gravel pit in this compartment.

Vehicle Access: This compartment has good access via the Sturgeon Landing and Snakey Lake roads. There are a number of two-track roads that branch off of the Snakey Lake road that lead you into different parts of the compartment.

Survey Needs: Possibly one or two corners will need to be set.

Recreational Facilities and Opportunities: There is a state maintained boat launch on the Menominee River in section 8. There is a rough boat launch on Snakey Lake where you can put in a small aluminum boat or canoe. This area receives a high number of deer hunters.

Fire Protection: There is very little potential for wildfires in this compartment; except in the spring before green up. Most of the upland portions are surrounded by drainages or floodings. There is an abundance of water drafting locations.

Additional Compartment Information: Stand 23 had a shelterwood harvest in the past to convert that stand to a mix of pine, spruce, and fir. The regeneration is at the point where it needs to be released before it becomes stagnated. This stand currently is a SCA. Stand 3 is very similar to the east half of stand 27. Large diameter red maple and green ash that is in need of a thinning.

****** 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

ESCANABA RIVER STATE FOREST | ESCANABA FOREST MGT UNIT | MENOMINEE COUNTY | COMPARTMENT: **30**

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	147																										147
C Cedar				26																							26
G Grass					2																						2
Q Mx Swmp Cnfr												28															28
X Non Stocked													2														2
O Oak														122													122
R Red Pine																13											13
F Spruce Fir																			39								39
E Swamp Hrdwds																				391							391
M Upland Hdwds																								507		43	550
Z Water																									22		22
Total	147			26	2							28	2	122		13			39	391				507	22	43	1342

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

ESCANABA RIVER STATE FOREST | ESCANABA FOREST MGT UNIT | MENOMINEE COUNTY | COMPARTMENT: **30**

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			37	61	49														147
Cedar												13	10	3					26
Grass	2																		2
Mx Swmp Cnfr			8		4					16									28
Non Stocked	2																		2
Oak																		122	122
Red Pine										13									13
Spruce Fir			8	24	7														39
Swamp Hrdwds										19	356		16						391
Upland Hdwds										86				30				434	550
Water	22																		22
Total	26		53	85	60					134	356	13	26	33				556	1342

ESCANABA RIVER STATE FOREST | ESCANABA FOREST MGT UNIT | MENOMINEE COUNTY | COMPARTMENT: **30**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY

TOTAL VOLUME		CUT VOLUME	
Hardwood	13268 Cds	Hardwood	3206 Cds
Hardwood	2343 Mbf	Hardwood	260 Mbf
Softwood	1910 Cds	Softwood	476 Cds
Softwood	183 Mbf	Softwood	111 Mbf
Sum TotVol	20230 Cds	Sum CutVol	4424 Cds

Total Cmpt Acres

1342

Acres Proposed For Cut..... 357

ESCANABA FOREST MGT UNIT | **Proposed Treatments With NO Limiting Factors** | **Compartment: 30** | **Entry Year: 2010**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
2	**M6**	63		50	northern hardwood	unevenaged	thinning	2		

comnts Fmd : The majority of the A, B, and conifers were cut out of this stand in the early 80's. But, the hardwood has never been thinned. The diameters of the hardwoods are on the small side, this stand needs to be opened up to allow the better quality hardwood tree's to add size. So, thin this stand down to 80 to 90 BA,; removing the poor quality stems and releasing the crop trees. This should be done by marking some of all hardwood species and in all size classes. Also, cut all A and P. There are not many conifers within the stand, so the majority of them will be retained. After pre-review RX is good, except save hemlock and try to retain most of the oak.

Wld : No cut hemlock. Save most of the oaks for retention. Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
8	**M6**	5		60	northern hardwood	unevenaged	thinning	2		

comnts Fmd : This stand was thinned in 1993 and is ready for another light thinning. This is a good quality hardwood stand. Reduce the BA down to 80 to 90, by marking some of all hardwwod species and in all size classes to cut. After pre-review try to retain most oak.

Wld : Only 10 BA of oak found within this stand. Retain most of the oak for retention. Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
9	**Q6**	9	83	45	mixed swamp conifer	mature	seed tree	2	natural regeneration	

comnts Fmd : This is a very poor quality stand. The edges of the stand have thicker and better quality timber, but the middle of the stand is very sparce. Most of the cedar volume will be pulpwood. The tamarack is the best quality specie within the stand. Therefore, the stand should be harvested and managed for a mix of Q, E, and P. Tamarack will probably seed in the best. But, any mix of the above species is acceptable. Seed tree harvest this stand, cutting all species; except leave a mix of the current overstory species.

Wld : Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
15	**M6**	32	80	50	northern hardwood	mature	seed tree	2	natural regeneration	

comnts Fmd : Stand was on contract 023-96-01 to cut, but was never cut because of warm winters and eagle nest restrictions. The eagle's nest is no longer present. I could not find it when I did the inventory. This stand has very poor quality hardwoods. Most of the stand is on higher ground, but there are some lower pockets included with it. In portions of the stand there is advanced F and W regen, that should be released. This stand should be final harvested, except leave some seed trees scattered throughout the stand. The seed trees should be a mix of the current overstory, but the bulk of the seed trees should be the pine and large diameter oaks. This stand should regenerate to a mix of M, B, Oak, A, and F. Any combination of these species is acceptable. After pre-review RX is good, except make sure there is a portion of the seed trees that are B, C, and oak.

Wld : Retention should be a creative mix of all species present, including birch. Cedar and oak should be retained nearly in their entirety. Favor retention of some super-canopy white pine within this compartment due to proximity to the Menominee River and the tendency of bald eagles nesting here. Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
21	**Q6**	7	83	40	mixed swamp conifer	mature	seed tree	1	natural regeneration	

comnts Fmd : The eastern portion of this stand was originally part of a timber sale that was cut in 1996 (Stand 29), but because of a warm winter only a portion of this stand was harvested. This stand is the remains of that sale and part of stand 14 that meets silvicultural criteria. The remainder of stand 14 is not ready to be harvested, so I included the far eastern portion with this stand to cut now. The stand is variable in its stocking densities, with each of its different species. But, overall the stand is a Q type, with E mixed in. Final harvest this stand, leaving a mix of seed trees. This stand should regenerate to a mix of Q, C, and E.

Wld : Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
26	**M6**	17		70	northern hardwood	unevenaged	thinning	1		

comnts Fmd : This stand was coded to be thinned last decade, but it never was. The stand is need of a thinning. This is a nice quality hardwood stand. The BA should be reduced down to 80 to 90. Thin this stand by marking some of all of the hardwood species and in all size classes. Focus should be on removing the poor qulity trees and releasing the crop trees. Also, cut all A, P, and Fb. The mixed hardwood volume contains a mix of hickory species, for which there is no code.

Wld : Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
27	**M6**	123		55	northern hardwood	unevenaged	thinning	1		

comnts Fmd : This stand contains two distinct hardwood stands. I kept them as one stand, because they are in need of the same treatment and will eventually be similar in size. The east half of the stand could be called an M9, with Mr being the dominant species. This portion is lower and wetter and the average diameter is 13. The west half is a M6 with sugar maple and red oak being the dominant species. This area is higher and drier, and the maple averages 9 inches in diameter. This stand is need of a thinning. This should be done by marking some of all hardwood species and in all size classes. The BA should be lowered to 80 to 90. The poor quality trees should be removed and the crop trees should be released. The east half of this stand will need to be harvested during the winter or during a dry summer. After pre-review Rx good, except save hemlock and favor retention of oak.

Wld : No cut hemlock. Favor oak retention within this stand. Favor retention of some super-canopy white pine within this compartment due to proximity to the Menominee River and the tendency of bald eagles nesting here. Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
31	**M6**	26	81	50	northern hardwood	immature	thinning	1		

comnts Fmd **:** Fair quality hardwood stand that has never been thinned. It is in need of a thinning. The stand should be marked to reduce the BA down to 70 to 80. Mark some of all hardwood species and in all size classes to cut. Also, cut all A and P. Retain a component of all the minor hardwood species. Manage this stand for sawlogs. There are a number of the minor species that don't show up in the volume tables.

Wld **:** Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
33	**R9**	13	85	50	red pine	two aged	seed tree	2	natural regeneration	

comnts Fmd **:** The pine was thinned and all other species were cut out of this stand, except oak in 1981. The pine is mature and balsam is filling in the understory. We should final harvest this stand now, leaving some R, W, and oak seed trees. The understory of balsam will have to be eliminated to allow red pine to seed in. Possibly add a spec to the contract that all balsam 2 inches and larger must be cut. The oak is very poor quality, cut all of it leaving only a few scattered large diameter ones. There is not much pine in this landscape, so I feel it is important to retain as much as possible. After pre-review Rx is good, except wildlife would like to retain a higher percentage of oak seed trees than pine. After harvest scarify site with anchor chains. This is a site we could do a dozer refresher on.

Wld **:** As discussed in pre-review, it is ok to discriminate against the fir regeneration within this stand. WLD would like 1/2 the oaks to be retained, with focus on retaining the large diameter mast producing trees. Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
39	**M6**	28	80	55	white pine	two aged	final harvest	1	natural regeneration	

comnts Fmd **:** Stand was thinned in '95-'96 under contract #43-95-1. The purpose of the cut was to enhance W. This was very successful, the majority of the stand has W2/W3 throughout it. The regen averages about 15' tall. This regen needs to be released. Final harvest this stand, cut all A, P, Fs, Fb, Ash, W.B., AND R greater than 10". The stand will be a W stand after harvest, with residual W, R, and Oak. After pre-review Rx is good, except do not cut W or H.

Wld **:** Hemlock, cedar, and white pine is not prescribed to be cut within this stand. There is a partial eagle nest found in a clump of 3 white pines within this stand. If this eagle nest becomes active, an appropriate buffer zone will be applied. Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
44	**E6**	19	85	50	swamp hardwoods	mature	shelterwood-prep	1		

comnts Fmd **:** This stand contains decent quality ash and red maple with some poor quality C mixed in. This stand is in need of a shelterwood harvest to begin to regenerate it. This first cut will be done to open the stand up to allow some regen to get established. 40 to 50 BA should be left, leaving a mix of the current overstory species. The long range MO for this stand is Q. But it will probably always be a mixed stand, with E, Mr, P, Q, and C.

Wld **:** Concur with FMFMD.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
53	**M6**	15		70	white pine	unevenaged	final harvest	1	natural regeneration	

comnts Fmd **:** Stand was cut in 1998 under contract 023-96-01. This harvest opened the stand up enough to allow the W to regenerate. The regen ranges from W2 to W3 throughout the majority of the stand. The regen averages 15' tall. This regen needs to be released before it becomes stunted. Final harvest this stand, leaving a mix of the overstory species for diversity and for partial shade. The majority of the residual species should be pine and oak. On the west end where there is not as much advanced W regen leave a few more residual trees to provide a little more shade. After pre-review Rx is good, wildlife would like us to leave a higher percentage of oak seed trees than pine.

Wld **:** WLD would like to see additional oak retained as part of the 30 BA kept for shade. Concur with FMFMD.

Total Acres..... **357**

Proposed Treatments With Limiting Factors

Compartment: 30 **Entry Year:2010**

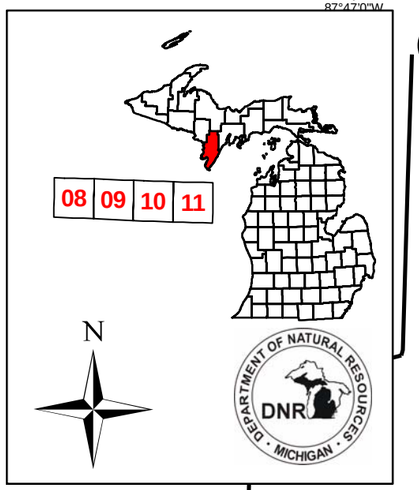
Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status

TREATMENT LIMITING FACTORS:

Total Acres..... **0**

Covertype & Treatment Map

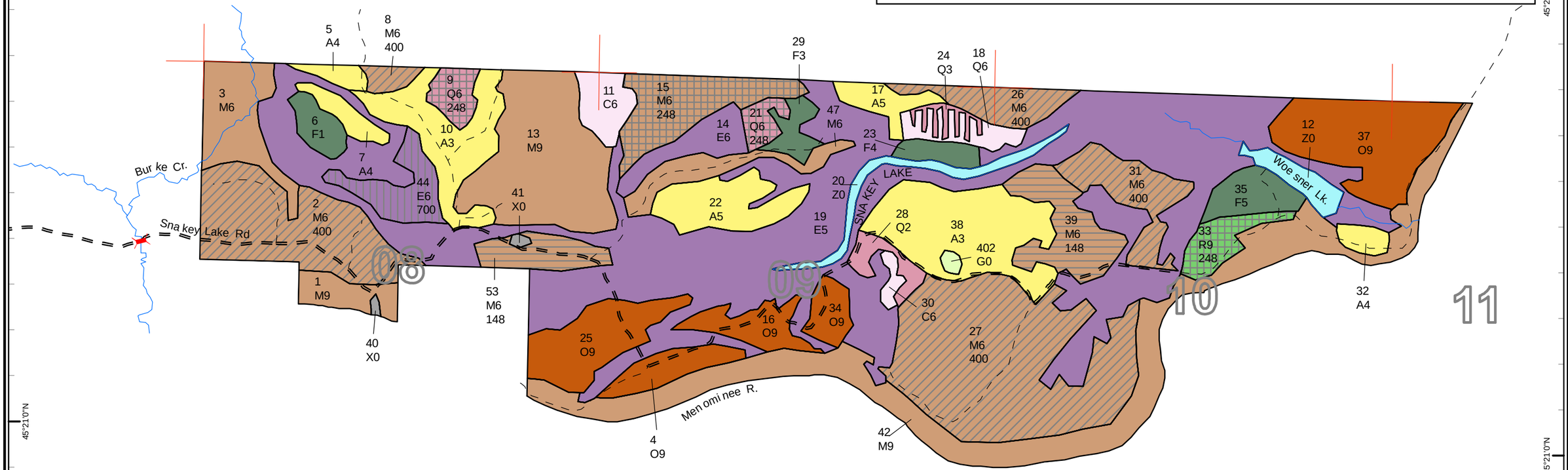
Compartment: 30
T34N, R28W, Sec. 8, 9, 10, 11
County: Menominee
Unit: Escanaba
YOE: 2010
Acres: 1,342 GIS Calculated
Stand Examiner: Dustin Salter
Map Revised: 7/24/2008
Map Phase: Pre-Review



Legend

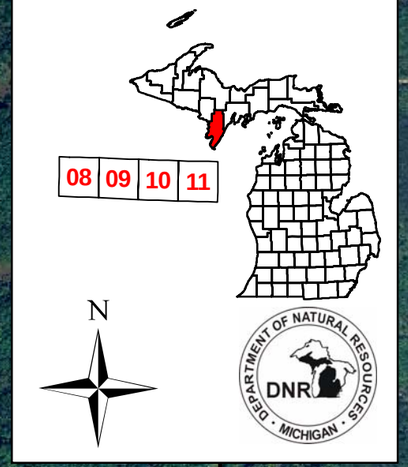
- Miris Corners
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Gravel Roads
- Poor Dirt Roads
- Water Features
- Bridge
- Stand Boundaries
- 148 - Final Harvest/Natural Regeneration/Other
- 248 - Seed Tree/Natural Regeneration/Other
- 400 - Thinning
- 700 -Shelterwood-prep

- A - Aspen
- C - Northern White Cedar
- E - Swamp Hardwoods
- F - Upland Spruce or Fir
- G - Grass
- M - Northern Hardwoods
- O - Oak
- Q - Mixed Swamp Conifers
- R - Red Pine
- X - Non-Stocked
- Z - Water



Stand Boundary Map

Compartment: 30
T34N, R28W, Sec. 8, 9, 10, 11
County: Menominee
Unit: Escanaba
YOE: 2010
Acres: 1,342 GIS Calculated
Stand Examiner: Dustin Salter
Map Revised: 7/24/2008
Map Phase: Pre-Review



Legend
- Miris Corners
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Gravel Roads
- Poor Dirt Roads
- Water Features
- Bridge
- Stand Boundaries

87°48'0"W 87°47'0"W 87°46'0"W 87°45'0"W 87°44'0"W
45°22'0"N
45°21'0"N

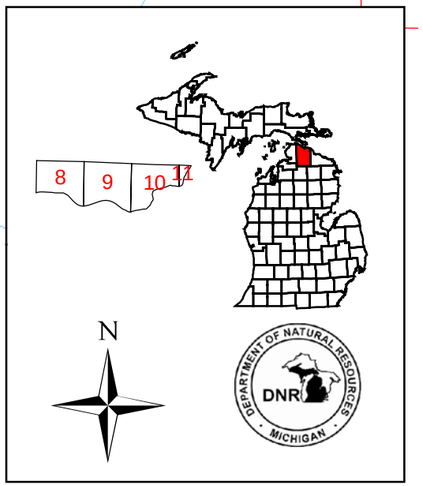
08 09 10 11

5 A4
8 M6
9 Q6
3 M6
6 F1
7 A4
10 A3
13 M9
11 C6
15 M6
29 F3
24 Q3
18 Q6
17 A5
26 M6
14 E6
21 Q6
47 M6
23 F4
12 Z0
37 O9
Bur ke Cr.
20 Z0
LAKE
SNA KEY
Woe sner Lk
31 M6
35 F5
41 X0
44 E6
22 A5
19 E5
28 Q2
38 A3
402 G0
39 M6
33 R9
2 M6
Sna key Lake Rd
1 M9
53 M6
16 O9
34 O9
30 C6
32 A4
40 X0
25 O9
27 M6
Men omi nee R.
4 O9
42 M9

1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment: 30
T34N, R28W, Sec. 8, 9, 10, 11
County: Menominee
Unit: Escanaba
YOE: 2010
Acres: 1,342 GIS Calculated
Stand Examiner: Dustin Salter
Map Revised: 7/24/2008
Map Phase: Pre-Review



Legend
- Miris Corners
- Stand Boundaries
- Proposed Special Conservation Areas

Dedicated Special Conservation Areas
- Boat Access Sites
- Cold Water Streams

87°48'0"W 87°47'0"W 87°46'0"W 87°45'0"W 87°44'0"W

45°22'0"N

45°21'0"N

Bur ke Cr.
Sna key Lake Rd
SNA KEY LAKE
Woe sner Lk.
Men omi nee R.

8 9 10 11

1 0.5 0 1 Miles

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	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.
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.