



**ESCANABA FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 16 ENTRY YEAR: 2009
Compartment Acreage: 969 County: Menominee

Last Revision: July 6, 2007

Stand Examiner: Kelly Standerfer, FMFMD; Bill Rollo and Craig Albright, Wildlife Division.

Legal Description: T36N-R27W, Sections 19, 20, 21 and 30.

Management Goals: This year of entry (YOE), management goals are focused on managing for a mixture of both vegetative and wildlife diversity. This compartment contains a wide variety of cover types ranging from upland aspen and maple types to lowland cedar and mixed conifer types. This YOE several mixed hardwood stands will be treated to increase the overall health and growth rate of the stands. A variety of species will be maintained within these stands to help maintain species diversity. Also, there will be several aspen stands that will be final harvested for aspen regeneration. There is a spruce and mixed conifer lowland stand that will be treated this YOE with regeneration harvests to try to maintain the current species composition.

Soil and Topography: Mostly level, some rolling, a few hills. Swamp: Greenwood-Dawson Assoc.; Lupton-Tawas Assoc. Tawas-Lunds-Kiva variant complex. Upland: Onaway fine sandy loams; Kiva variant fine sandy loam; Onaway-Kiva variant.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The majority of the compartment borders private lands that are surrounded primarily by an agricultural and forested landscape.

Unique, Natural Features: This area has the potential to harbor many rare and endangered species including red-shouldered hawk, goshawk, eagle, osprey, great blue heron rookery, moose, wolf, and wood turtle. In the form of vegetative unique and natural features, this area has the potential for calypso, ram's head lady's-slipper, marsh grass-of-parnassus, Assiniboia sedge and climbing fumitory.

Archeological, Historical, and Cultural Features: None known to exist.

Special Management Designations or Considerations: A corridor along the Ross Creek will be maintained as a "Special Conservation Area."

Watershed and Fisheries Considerations: No RDR (Resource Damage Reports) have been submitted for corrective action in this compartment. However, there are some ATV trails. These trails are generally causing little environmental threat. Ross Creek runs through state land in Compartment 21.

Wildlife Habitat Considerations: *Ecological Context:* This compartment is within a broad plain of loamy ground moraine. Drumlin ridges, trending northeast to southwest, are common throughout. Historically the ridge tops were covered with northern hardwood forests of sugar maple, beech, hemlock, cedar, and yellow birch. Between the ridges, swamps of cedar, tamarack, black spruce, or bog were common. Small knolls within wetlands were often dominated by hemlock and white pine. Wind throw was the most common

natural disturbance regime. During the past 100 years much of this landscape was converted to agriculture. Aspen forest increased greatly and hemlock and white pine declined due to early-day logging practices.

Recommendations: This compartment is divided into 3 relatively small blocks by private land holdings. Forest cover is largely aspen and northern hardwood in the uplands and lowlands of cedar, spruce, and tamarack. Several aspen stands are proposed for harvest and regeneration which will provide habitat for early-successional wildlife species. One stand that is mature will be held for 10 years to help balance the age class distribution of aspen and allow development of a balsam fir component—both of which will enhance wildlife habitat. Several stands will be harvested and regenerated to a spruce-fir mix, benefiting wildlife that utilize these conifer types. A block of predominately cedar swamp in the northeast corner of the compartment will continue to be designated a “Special Conservation Area” to provide a late-successional riparian corridor along Ross Creek which continues into Compartment 15 to the north.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel, postglacial alluvium and medium-textured glacial till drumlins. The glacial drift thickness varies between 10 and 50 feet. The Cambrian Trempealeau Formation underlies the glacial drift. The Trempealeau could be quarried for dolostone. This compartment has not been leased for metallic exploration, but compartments to the west were previously leased. A gravel pit is located just to the west and potential is good on the upland drumlins. No economic oil and gas production has been found in the UP.

Vehicle Access: Most of this compartment is accessible only by passing through private lands. “Old Cheese Factory Road” bisects the compartment and provides access to about 200 acres of the compartment. The state land in section 21 is accessible via foot from compartment 15 to the north.

Survey Needs: Some of the survey markers that are needed are already in place. However some are just approximate corners. Registered survey corners will likely be needed in sections 19, 20 and 21 unless the surrounding private lands have been surveyed.

Recreational Facilities and Opportunities: There are no officially designated or maintained sites. However, the area is recreated for hunting, camping, and trapping.

Fire Protection: No significant control problems are foreseen due to the lack of explosive fuels and an abundance of natural fuel breaks, such as low wet stands of timber and lowland brush. Low wet areas will impede fire suppression as well as fire spread.

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

ESCANABA RIVER STATE FOREST

ESCANABA FOREST MGT UNIT

MENOMINEE COUNTY

COMPARTMENT: 16

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			49	22	2	7	95	39											214
Black Spruce			13							14									27
Cedar			6						17	99	41	80							243
Grass	6																		6
Lowlnd Brush									18										18
Mx Swmp Cnfr					1	2		14		25	16								58
Non Stocked	1																		1
Spruce Fir			21	30								17							68
Swamp Hrdwds								13	117	21	13								164
Tamarack			3	70															73
Upland Hdwds									27									70	97
Total	7		92	122	3	9	95	66	179	159	70	97						70	969

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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: 16

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	214																										214
S Black Spruce		27																									27
C Cedar				237															6								243
G Grass					6																						6
L Lowlnd Brush									18																		18
Q Mx Swmp Cnfr												58															58
X Non Stocked													1														1
F Spruce Fir																			68								68
E Swamp Hrdwds																				164							164
T Tamarack																					73						73
M Upland Hdwds																			27					70			97
Total	214	27		237	6				18			58	1						101	164	73			70			969

ESCANABA RIVER STATE FOREST

ESCANABA FOREST MGT UNIT

MENOMINEE COUNTY

COMPARTMENT: **16**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	5641 Cds	Hardwood	2726 Cds
Hardwood	130 Mbf	Hardwood	23 Mbf
Softwood	8046 Cds	Softwood	1479 Cds
Softwood	238 Mbf	Softwood	27 Mbf
Sum TotVol	14423 Cds	Sum CutVol	4305 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	
969		220	

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
1	M6	27	74	55	spruce-fir (uplands-including upland black spruce)	mature	shelterwood-seed	1	natural regeneration	
<p>comnts Fmd : Mixed M,B,Fs,Fb,A,C,Balm, & Ash. Highly variable stand. Mostly upland but there are some low swails with dense cedar or ash. Cut all A, Fb, Fs, B and most maple. Leave all hemlock, cedar and sub-merchantable Fs & Fb, however cedar spec may be needed to make species removal more feasible. Some pine can be marked to remove but most should be retained. Cut all maple and ash over 8" DBH. Long term MO of mixed F, M, B, A, and cedar. Any mix of these species is accetable regen.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
2	A6	45	49	55	aspen (upland)	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Highly variable stand. Some A5-A6, Some B5-B6, Some F4 and some cedar and some pine. Cut all A, M, B, Fb, Fs. Leave all cedar, hemlock, and sub-merchantable Fb & Fs. Mark seed trees of mixed species if there isnt much aspen present or advanced regen. Long term MO is mixed aspen and F. Leave majority of pine however some can be marked to be removed in the denser areas. Acceptable regen is any mix of A, Fs, Fb, B, M, and ash. 3-10% retention will consist of seed trees, cedar, pine, and sub-merch Fs & Fb.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
25	A6	39	60	70	aspen (upland)	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Final harvest but save all oak, pine, and save most of the sub-merch spruce and fir. Save ash 8" and under to protect drain @ west end of the sale. Stand should regenerate nicely to a mix of aspen, spruce and fir. Residual sub-merch spruce/fir, oak and ash <8" dbh should result in retention of at least 3%.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
28	Q6	19	87	45	mixed swamp conifer	mature	seed tree	1	natural regeneration	
<p>comnts Fmd : This stand was under contract 006-96-01, but it was never cut. Thick pocket of cedar @ east end. Cut all but thick cedar and leave spruce, Tam and Cedar seed trees in clumps. May want to winter cut only (unless there is an exceptionally dry summer) and may want to limit equipment to 6 wheeled forwarder with tracks.</p> <p>Wld : Concur with FMFMD. Cut everything but cedar.</p>										
29	S6	7	87	45	black spruce-swamp	mature	seed tree	1	natural regeneration	
<p>comnts Fmd : This stand was under contract 006-96-01, but it was never cut. Cut all but leave a mix of spruce, tamarack & cedar in clumps. East end has smaller Diameter Sp. May want to winter cut only (unless there is an exceptionally dry summer) and may want to limit equipment to 6 wheeled forwarder with tracks. Access is probably best from stand 31, freezing a trail into stand 30. Stand 30 may be used as a landing.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
31	A6	7	46	60	aspen (upland)	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Final harvest, LEAVE ~100' NO CUT BUFFER ALONG CREEK, south end of stand has very little slope and lots of balsam fir that will buffer the stream and hinder aspen regen. Buffer will be the 3-10% retention.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
34	S6	7	87	45	black spruce-swamp	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : This stand was under contract 006-96-01, but it was never cut. Cut all but leave clumps of seed trees of sp & T and C where needed and for 3% retention. May want to have winter spec only (unless there is an exceptionally dry summer). And limit the equipment used to at least a 6 wheeled tracked forwarder.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										

ESCANABA FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 16

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
40	M6	19		65	northern hardwood	unevenaged	selection	2	natural regeneration	
<p>comnts Fmd : Long term MO of mixed M and F. much of stand now has a F1-F2 understory. Portions of stand are pretty hilly. Try a snow free harvest to promote scarification or could mechanically try to scarify to try to get M regenerating along with the F. acceptable regen is any mix of the overstory species.</p> <p>Wld : Concur with FMFMD. May want to check this area for hawk nests during setup of sale. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
45	F6	17	105	45	spruce-fir (uplands- including upland black spruce)	mature	seed tree	1	natural regeneration	
<p>comnts Fmd : Manage for mixed F,M,W,C&H. Cut all Fs, Fb, A, B, M and mark some poor quality pine, cedar & Hemlock in thicker areas to allow mixed regeneration. Green tree leave some Fs, Fb and M for seed and diversity and leave most of the C, W &H. target BA of 20-30 but some areas may be thicker in dense C or H areas.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
47	A6	27	55	66	aspen (upland)	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Final harvest but save all pine, sub-merch F, and green tree leave some maple and basswood in the areas without an abundance of popple. Most of the stand should regenerate nicely to mixed A3/F1. Acceptable regen is any mix of A, F, W & M and there may be a few open areas where there is more maple.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
50	M6	4		55	northern hardwood	unevenaged	selection	1		
<p>comnts Fmd : Norht east end of stand was more A6ish so the stand was re-delineated this YOE. The A6 area will be included with stand 47. Thin this stand to 70-80. East edge of stand can dip into stand 69 and 49 to salvage some of the mature F in the transition area. BA may be lower on the east edge. Should regenerate to mixed F and M on east edge. The remainder of the stand will likely convert to F over the next few decades. Short term MO of M. long term MO of mixed F and M. acceptabel regen is a mix of F, M, and A along the northeast edge.</p> <p>Wld : Concur with FMFMD. As a reference, use the Within-Stand Retention Guidelines. This document includes targeted retention characteristics that may include; diversity (tree speices, vertical, horizontal), mast trees, cavity trees/standing dead/down wood, retention, and additional considerations.</p>										
57	F4	2	27	55	spruce-fir (uplands- including upland black spruce)	immature	final harvest	3	natural regeneration	
<p>comnts Fmd : GO last YOE. F4 ish this YOE. Cut all merchantable F. this stand will likely be the landing for sale to the west. Should regenerate to a mix of grass and F. poor stocking is ok post harvest for this stand.</p> <p>Wld : Concur with FMFMD.</p>										
Total Acres.....		220								

**Proposed Treatments
With Limiting Factors**

Compartment: 16

Entry Year: 2009

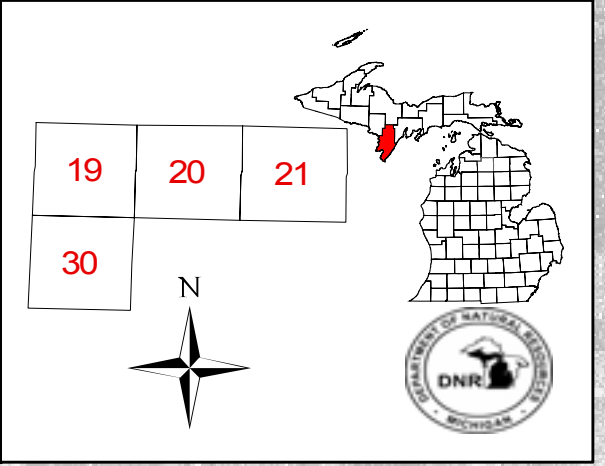
Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FD Status
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TREATMENT LIMITING FACTORS:

Total Acres..... 0

Compartment 16
 T36N, R27W, Sec. 19, 20, 21, 30
 County: Menominee
 Unit: Escanaba
 YOY: 2009
 Acres: 969 GIS Calculated
 Stand Examiner: Kelly Standerfer
 Map Revised: 7/16/2007
 Map Phase: Pre-review

Field Map



Legend

- Miris Corners
- County Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Water Features
- Stand Boundary
- Biodiversity/Old Growth Area
- 148 - Final Harvest/Natural Regeneration
- 248 - Seed Tree/Natural Regeneration
- 348 - Shelterwood-seed/Natural Regeneration
- 800 - Selection
- 848 - Selection/Natural Regeneration