



**SAULT FOREST MANAGEMENT UNIT  
COMPARTMENT REVIEW PRESENTATION**

**COMPARTMENT # 162      ENTRY YEAR: 2007**

**Compartment Acreage: 1,645      County: Mackinac**

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**Revision Date:** September 28, 2005

**Stand Examiner:** Karen Rodock

**Legal Description:** T43N-R8W Sections 19, 20, 29 & 30, Hudson Township & T43N-R9W Sections 24 & 25, Garfield Township.

**RMU (if applicable):**

**Management Goals:** This compartment is located 4 miles east of Naubinway. The compartment and surrounding area is composed of a variety of different upland and lowland types and species. The old Lake Nipissing shoreline makes a dramatic break between the majority of uplands and the deer yard lowland areas. The aspen type within the compartment and the surrounding area has been managed extensively within the past 30 years. Most of the aspen within the compartment was harvested between 1972 and 1985. A large aspen type timber sale (Strickler Sale) was set up in the early 70's for Mead to supply wood to the new mill. Most of the aspen is now over the 5 inch diameter class. Some stands in the adjacent compartments harvested on the Strickler Sale have been chipped or will be harvested to enhance the age class diversity of the aspen resources within the surrounding area. One swamp conifer stand is proposed for final harvesting to increase the age class diversity of the conifer types. The stand will regenerate to a variety of species including conifer and deciduous species. Most of the conifer stands will not be managed this year of entry. The northern hardwood types within the compartments not treated in the last decade have been proposed for a selection harvest. Some beech bark disease is present and stands will be marked and harvested according to the draft guidelines for management of the disease. A conifer component will be retained in all the northern hardwood stands where species are present. Stands 7 and 10 were set up on contract last decade and not completed under the timber sale contract. A small firewood contractor will clean up the small volume of hardwood pulp to be removed. The Best Management Practices guidelines and Fisheries recommendations will be followed when putting buffers along the unnamed streams.

**Soil and Topography:** The compartment transitions from the Lake Michigan shoreline north through the ridge and swale complex to the old Lake Nipissing shoreline on to the rolling upland with drainage flowing toward Lake Michigan. The ridge and swale is composed of Leafriver-Croswell-Wainola complex, Croswell-Wainola complex. The other lowland soil types are Leafriver mucky peat and Markey and Carbondale mucks. The transition along the Lake Nipissing bluff is Wallace-Alcona complex which is the soil on most of the drainages within the compartment. The majority of the uplands are Wallace sand, Pullup fine sand, Paquin sand, Borgstrom sand; and some transition soils are Caffey-Ingalls-Iosco complex, and Finch-Dawson-Pullup complex.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The east side of the compartment is surrounded by state lands, and to the north is state ownership except Section 18 which is in private ownership for the entire mile boundary. The west side is a mixture of state and private ownership

and the south is bordered by private ownership and Lake Michigan. There is a mixture of absentee owners and permanent residences surrounding and within the compartment. The Black River Road has a settlement along both sides of the road and the Black River for over 1 mile. An exchange has been proposed by the owners of the Mattix Point area for 62 + acres along US 2 Highway in Section 25. In 2001, 17.6 acres of the SWSW of Section 30 was purchased from Michigan Department of Transportation. MDOT retained the frontage on US -2. The state ownership of 4.5 acres between the private forty and US 2 in Section 25 SWNE was proposed for disposal to the adjacent private landowners in 2002. Paperwork had been started for the disposal but did not make it through the entire system. New paperwork will be started for the proposed disposal. MDOT has an easement over the entire parcel and will be conveyed.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** Potential for raptors to nest in the compartment exists and care will be taken to check stands for nests and take appropriate management action to protect the species. There is a potential for some rare, threatened, and special concern plant and animal species to inhabit the compartment. Stands to be managed will be checked for species of concern. Management will be modified if species are found within those stands per management guidelines for that species. The Niagara escarpment runs through the compartment.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** One possible old homestead or camp area was found while inventorying the compartment with comments in the locked comment box in inventory database. Stands 64 and 462 were part of a private campground Timbercrest before being purchased by Michigan Department of Transportation. MDOT retained the flowing well, but has since capped it.

**Special Management Designations or Considerations:** The Great Lakes Gas pipeline and Enbridge Oil pipeline right-of-ways with 2 Cloverland Electric transmission lines, run across the compartment. Contact will be made with the companies when harvesting activities take place around the right-of-ways. A portable bridge is necessary to harvest stands 85 and 86. Access is from the Enbridge Oil pipeline r.o.w. to cross the unnamed stream with a portable bridge which will require a DEQ permit. Vegetative management on the pipeline and powerline right-of-ways is taking place on a routine basis according to the specifications of the easement agreements.

**Watershed and Fisheries Considerations:** Fisheries Values: Excellent.

The Black River, East Branch of the Black River, and Borgstrom Creek are found in this compartment. The rivers in this watershed are cold-water trout streams that host a fish community of brook trout, slimy sculpins, central mudminnows, northern redbelly dace, white suckers, and brook sticklebacks. Mid-summer water temperatures of Borgstrom Creek and the E. Br. Black River are suitable for trout (upper 50's to low 60's F). The Black River also hosts runs of anadromous fish such as steelhead. This system of the Black River and its tributaries provides excellent spawning and nursery habitat for anadromous salmonids. A portion of Mattix Creek is also found in this compartment and offers little fishing opportunity.

**Wildlife Habitat Considerations:** This compartment lies within the St. Ignace sub-subsection. The growing season last approximately 130 days. Extreme winter low temperature approaches  $-46^{\circ}$  F. Annual snowfall averages 100 inches.

The original surveyor's notes show that this area contained a diversity of tree species in the pre-settlement forest. The assemblage of tree species includes hemlock, white birch, yellow birch, sugar maple, black ash, aspen, elm, red maple, and cedar. Lowlands also contained spruce and tamarack. Wind throw, fire and beaver pond were the likely forms of natural disturbance.

Aspen appears to be more prevalent in today's forest than during pre-settlement times. Mixed hardwood/conifer stands appear to be less prevalent. Northern hardwood will be treated using a selection

harvest that will maintain closed canopy as well as size and age structure diversity. This strategy will minimize canopy disturbance while still allowing timber harvest to occur. A small mixed conifer/deciduous stand will receive final harvest which will improve forage for deer that winter locally. The cedar component will be allowed to function naturally without treatment during the next planning cycle.

Gray wolves have been known to occur in this compartment. Wildlife species with the potential to benefit from the prescriptions include woodpeckers, black-capped chickadee, goshawk, ruffed grouse, white-tailed deer, American woodcock, and black bear.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 50 and 100 feet. The Silurian Engadine Group subcrops below the glacial drift. The Engadine is quarried for stone/limestone ten miles to the northeast. Gravel pits are not located in the area and potential appears to be limited. There is no current economic oil and gas production in the UP.

**Vehicle Access:** The vehicle access is very good through most of the compartment. US – 2 Highway provides the access to the southern portion of the compartment. The Black River Road and Borgstrom Road are county maintained paved and/or good gravel roads. The Black River Road provides the access to Section 19 and the Borgstrom Road provides the access to Sections 20 and 29. The Flowing Well Road runs between the Black River and Borgstrom Roads. The Flowing Well Road had previously been blocked by the private landowner in Section 20 on the east and west side of the property line. The road had been maintained by the state before the blockage occurred. The road is no longer blocked but is in need of repairs. The beavers have wreaked havoc on the road bed and the trees along the drainage. The road is in need of road repairs to fix the damage and remove portions of the beaver dam. Road and Bridge funds will be requested to repair the damage and obtain all necessary permits to repair the road bed. The two trails off the main roads give good access to all areas of the compartment except Section 25 and the south half of Section 24 which are lowlands. The Ledge and Ridge Roads are DNR maintained good dirt roads. These provide good access to the north west quarter of Section 24.

**Survey Needs:** None

**Recreational Facilities and Opportunities:** The Black River State Forest Campground is just to the north of Section 19. The area is heavily used by fishers, hunters, campers, berry and mushroom pickers, motorized vehicle users and nature viewers. The close proximity to the private lands and the campground makes the area more enticing for recreational users. MDOT has removed the access to the old Timbercrest campground area. The area in the past had provided a water source and camping area for mostly smelt fisherman and travelers.

**Fire Protection:** The fire potential is low to moderate in this area. The amount of private ownership surrounding the state lands increases the chances for a debris fire escape. The area has good access for except for the lowland areas. The potential for ground fire is high in the lowland if there is a start in these areas. There have been small lightning strike fires and a debris fire within this area in the past 5 years.

#### **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

SAULT STE. MARIE MGT. UNIT

MACKINAC COUNTY

COMPARTMENT: 162

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		18	49	127	87			24											305
Black Spruce											28								28
Cedar											52	378		4					434
Grass	68																		68
Hemlock																		9	9
Jack Pine								8											8
LowInd Brush	78																		78
LowInd Poplr		7																	7
Mx Swmp Cnfr										31		63						34	128
Non Stocked	13																		13
Paper Birch										25									25
Sand Dune	7																		7
Spruce Fir		4		37	130														171
Upland Hdwds			12	2														271	285
Water	8																		8
White Pine										28								43	71
<b>Total</b>	<b>174</b>	<b>29</b>	<b>61</b>	<b>166</b>	<b>217</b>			<b>32</b>		<b>84</b>	<b>80</b>	<b>441</b>		<b>4</b>				<b>357</b>	<b>1645</b>

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

LAKE SUPERIOR STATE FOREST

SAULT STE. MARIE MGT. UNIT

MACKINAC COUNTY

COMPARTMENT: 162

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	305																										305	
S Black Spruce		28																									28	
C Cedar				434																							434	
G Grass					68																						68	
H Hemlock						9																					9	
J Jack Pine							8																				8	
L LowInd Brush									78																		78	
P LowInd Poplr										7																	7	
Q Mx Swmp Cnfr												128															128	
X Non Stocked													13														13	
B Paper Birch															25												25	
Y Sand Dune																			7								7	
F Spruce Fir																				171							171	
M Upland Hdwds																								285			285	
Z Water																									8		8	
W White Pine																										71	71	
<b>Total</b>	<b>305</b>	<b>28</b>		<b>434</b>	<b>68</b>	<b>9</b>	<b>8</b>		<b>78</b>	<b>7</b>		<b>128</b>	<b>13</b>		<b>25</b>				<b>7</b>	<b>171</b>					<b>285</b>	<b>8</b>	<b>71</b>	<b>1645</b>

LAKE SUPERIOR STATE FOREST

SAULT STE. MARIE MGT. UNIT

MACKINAC COUNTY

COMPARTMENT: 162

**Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS**

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	11422 Cds	Hardwood	1358 Cds
Hardwood	892 Mbf	Hardwood	173 Mbf
Softwood	9595 Cds	Softwood	601 Cds
Softwood	588 Mbf	Softwood	18 Mbf
Sum TotVol	23977 Cds	Sum CutVol	2341 Cds
<b>Total Cmpt Acres</b>		Acres Proposed For Cut.....	
1645		196	

**SAULT STE. MARIE MGT. UNIT**

**Proposed Treatments  
With NO Limiting Factors**

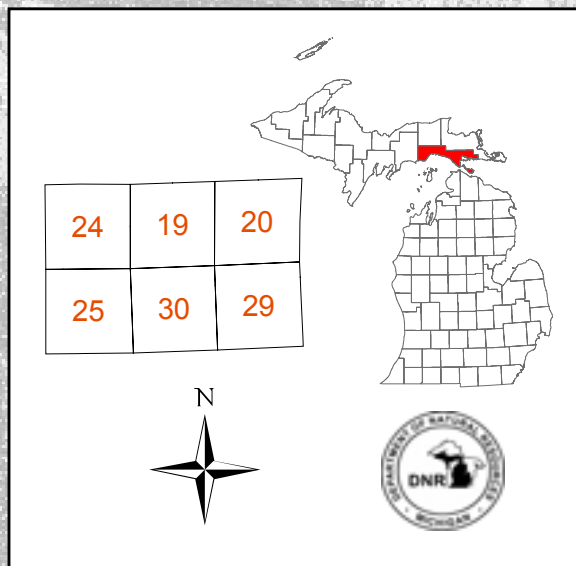
**Compartment: 162**    **Entry Year: 2007**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status	
<b>7</b>	<b>M6</b>	20		55	northern hardwood	unevenaged	selection	2			
comnts Fmd : Cleaning up after Ledge Road Hardwood sale was closed with not all marked trees harvested. Small sale to clean up the marked trees in small area in the stand. Need to pick marked trees. Some beech bark disease present in stand. Some browse present in the understory of red maple, hard maple and beech of 1 to 10 feet tall.											
<b>10</b>	<b>M6</b>	6		55	northern hardwood	unevenaged	selection	2			
comnts Fmd : Cleaning up after Ledge Road Hardwood sale was closed with not all marked trees harvested. Small sale to clean up the marked trees in small area in the stand. Need to pick marked trees. Some beech bark disease present in stand. Some browse present in the understory of red maple, hard maple and beech of 1 to 10 feet tall.											
<b>77</b>	<b>M9</b>	87		60	northern hardwood	unevenaged	selection	1			
comnts Fmd : Beech bark disease is present with some browse of the understory which is 1 to 15 feet tall. Select harvest down between 80 to 90 BA. Make sure to watch for raptor nest when marking this stand.											
<b>85</b>	<b>M6</b>	6		60	northern hardwood	unevenaged	selection	2			
comnts Fmd : Portable bridge and permission will be needed to cross on the Enbridge Oil pipeline and Cloverland Electric powerline R.O.W.. Leave the conifer component within the stand. Make sure to watch for raptor nests when marking this stand.											
<b>86</b>	<b>M6</b>	20		60	northern hardwood	unevenaged	selection	2			
comnts Fmd : Portable bridge and permission will be needed to cross on the Enbridge Oil pipeline and Cloverland Electric powerline R.O.W.. Leave the conifer component within the stand. Make sure to watch for raptor nests when marking this stand.											
<b>474</b>	<b>G0</b>	1			grass	nonstocked		0	opening maintenance		
comnts Fmd : Treat if the opening is be maintained or wait and treat with stand 76 when harvested.											
<b>475</b>	<b>G0</b>	2			grass	nonstocked		0	opening maintenance		
comnts Fmd : Treat if the opening is be maintained or wait and treat with stand 76 when harvested.											
<b>Total Acres.....</b>		<b>142</b>									

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
90	M6	1		60	northern hardwood	unevenaged	selection	2		
TREATMENT LIMITING FACTORS: Inadequate volume due to small acreage										
comnts Fmd : Portable bridge and permission will be needed to cross on the Great Lakes Gas pipeline R.O.W.. Leave the conifer component within the stand.										
110	Q6	27	85	40	mixed swamp conifer	immature	final harvest	2		
TREATMENT LIMITING FACTORS: Delayed treatment for age/size class diversity										
comnts Fmd : Mackinac mix stand with all types of species present. Understory is balsam fir, spruce, and maple of 1 to 20 feet tall. Will regenerate to a mixture of most balsam fir, spruce, red maple and aspen. Make sure to buffer the East Branch of the Black River with a 200 foot buffer from the top of the slope to the river floodplain.										
116	A6	4	65	65	aspen (upland)	mature	final harvest	3		
TREATMENT LIMITING FACTORS: Too steep										
comnts Fmd : Below the old shoreline with a very steep ridge. Mackinac mix with some mortality of the aspen, balsam fir and spruce. Understory is thick of balsam fir and spruce of 4 to 15 feet tall.										
117	B6	25	85	45	paper birch	mature	final harvest	3		
TREATMENT LIMITING FACTORS: Blocked by other physical obstacle										
comnts Fmd : Mackinac mix stand with ridges and swales. Mostly is birch, aspen, balsam fir, and spruce with white pine on the ridges. Heavy mortality occurring within the stands. Very difficult access down a very steep slope. If harvested then a buffer of 200 feet from the top of the slope of the E. Br. Black River needs to be left. Some areas are real wet. Understory is spruce and balsam fir of 2 to 15 feet tall.										
Total Acres.....		57								

# Field Map

Compartment 162  
 T43N, R8W, Sec. 19, 20, 29, 30  
 T43N, R9W, Sec. 24, 25  
 County: Mackinac  
 Unit: Sault Ste. Marie  
 YOE: 2007  
 Acres: 1,645 GIS Calculated  
 Stand Examiner: Karen Rodock  
 Map Revised: 9/27/2005  
 Map Phase: Pre-review



**Legend**

- ◆ RLS Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Closed Roads
- Pipelines
- Powerlines
- Water Features
- Stand Boundary
- ▨ Biodiversity/Old Growth Area
- ▧ 021 - Opening Maintenance/Hand Tools
- ▩ 100 - Final Harvest
- ▤ 800 - Selection

**Name** Paved Roads  
**Name** County Gravel Roads  
**Name** Gravel Roads  
**Name** Water Features

