



**SAULT FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 157 ENTRY YEAR: 2009

Compartment Acreage: 1852 County: Mackinac

Revision Date: September 11, 2007

Stand Examiner: Amy Douglass

Legal Description: T44N-R8W Sections 27, 28 & 29; Hudson Township

RMU (if applicable):

Management Goals: This compartment is located 1 mile north of Garnet along Borgstrom Road. While primarily a hardwood area, there are portions of aspen in varying age classes, and lowland swamp conifer types. Management activities include regular treatment of the hardwood stands to promote health and growth, while maintaining some closed canopy areas for nesting raptors. The aspen/mixed upland areas have a great age class distribution, with cuttings done over the past several decades. Cutting will continue this decade to enhance the age class diversity and maintain healthy forests.

Soil and Topography: The upland hardwoods vary from nearly level and undulating areas, to gently rolling and rolling areas, to rolling to steep areas. The major soil type here is Wallace sands, with areas of Springlake loamy coarse sand. The aspen and mixed upland areas are generally rolling to steep areas consisting of Battydoe, stony-Wallace complex. There are smaller portions of Longrie-Battydoe, stony, complex and Caffey-Ingalls-Iosco complex on the nearly level and undulating areas, and depressions and nearly level areas. The lowland swamp types are on depressions and nearly level areas of Markey-Spot-Finch complex; with low ridges, closed depressions and dunes of Finch-Dawson-Pullup complex. Bog areas are characterized by Dawson and Loxley peats on closed depressions.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment is surrounded entirely by state lands. Two forties within the compartment are privately owned. The forty in section 27 is wholly owned and has a camp overlooking Turtle Lake. The forty in section 29 is broken into 3 parcels, all with cabins on them, primarily used during hunting season(s). Borgstrom Road was recently upgraded from a good county gravel road to an all season paved road. Therefore, more traffic is using this road and it gives us more opportunities for trucking access on timber sales.

Unique, Natural Features (include only non-site specific and non-sensitive information): Red-shouldered hawks have been found in the area. Stands scheduled for harvest will be checked for stick nests. Appropriate buffer zones will be established, and timing of harvest will be adjusted to minimize disturbance if nests are found. There is a potential for rare, threatened, or endangered plant and animal species within the compartment.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): Evidence of old foundations exist within the compartment. Information has been sent on to the State Historic Preservation Office (SHPO). These areas will be protected if any harvest activities are done nearby.

Special Management Designations or Considerations: None noted.

Watershed and Fisheries Considerations: None in the Eastern Lake Superior Fisheries Management area, good in the Northern Lake Michigan Fisheries Management area. It contains the headwaters of the Bark Creek, a designated Type 1 trout water tributary to the Black River. As a headwater tributary, Bark Creek must be protected from any sediment erosion that could find its way downstream into the Black River. Little Dollar Lake was surveyed in the 1990s, at which time there was no viable fishery for anglers.

Wildlife Habitat Considerations: Aspen, lowland coniferous, and northern hardwoods dominate this stand. Several lakes, streams, and ponds will be surrounded by no harvest zones. Terrestrial reserve areas surrounding streams, ponds, and ephemeral wetlands offer protection for reptile and amphibian populations. Terrestrial reserve areas or core habitat zones surrounding streams, ponds, and ephemeral wetlands offer protection for reptile and amphibian populations. Interruption of migration activity to breeding areas is one consequence of operation of equipment within this core habitat. Additionally, decreasing forest canopy closure in adjacent terrestrial habitat causes changes in microhabitat and soil temperature which poses serious threats to many amphibians. These species contribute to the prey base for many reptiles, birds, and mammals, thus this habitat is an important component in the food web and is critical to maintaining a diverse community of species. Considering that one of our management goals is the conservation of biological diversity, we must incorporate this information into our management decisions, and by doing so assure that the variety and abundance of all species continues on in a healthy and productive state.

Red-shouldered hawk have been observed on the northern edge of the compartment. This species most often utilizes mature forested floodplain habitat. The required juxtaposition of mature forest stands within proximity of wetlands is met at this nesting location.

Northern hardwood management will focus on reserving large diameter trees and snags for cavity, den, and foraging habitat and future dead and down woody debris.

Other species observed within the compartment were ruffed grouse, pileated woodpecker, sharp-shinned hawk, and shrew sp.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of coarse-textured till and peat and muck. There is insufficient data to determine the glacial drift thickness. The Silurian Manistique Group subcrops below the glacial drift. The Manistique could be used for stone/limestone. The Dogman gravel pit is located in Section 28 and potential is good. There is no current economic oil and gas production in the UP.

Vehicle Access: Access is good for the eastern 2/3 of the compartment. Borgstrom Road runs north-south between sections 28 and 29. Dollar Lake Road and Dollar Lake Truck Trail cross northerly-southerly through sections 27 and 28. Numerous two-tracks cross between Borgstrom Road and Dollar Lake Road; and between Dollar Lake Road and Dollar Lake Truck Trail; and off to the east. There is limited access to the west of Borgstrom Road. One two-track accesses the southern part of section 29, towards King's Marsh; and an old timber sale access road is located just north of the private property in section 29 that may be opened up again for timber sale access.

Survey Needs: None needed for timber sale purposes; however, some bearing trees (and corners?) may have been lost during road construction on Borgstrom Road.

Recreational Facilities and Opportunities: Snowmobile trail number 2 follows Dollar Lake Truck Trail through the compartment. The ORV trail winds through the hardwood stands. Other recreational opportunities include hunting all types of game species, bird watching, mushroom and berry picking, and photography.

Fire Protection: Potential for wildfires in this compartment is low. The hardwood and aspen uplands have a lower potential to carry a fire. The areas of heavier, lowland soils would be difficult to access if a wildfire were to occur, and may pose mop-up difficulties. There is pine located to the south of the compartment that could pose a risk of wildfire continuing north. Hudson Township Fire Hall is located 2 miles away.

Additional Compartment Information:

Cover Type details, Proposed Treatments, and Stand listings are listed in the attached reports:

- ◆ **Cover Type by Age Class**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**
- ◆ **Stand Listing – Forested**
- ◆ **Stand Listing – Non Forested**
- ◆ **Special Conservation Area (SCA) Details**

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**
- ◆ **SCA – Special Conservation Areas**



Stage 1 Acres Summary By Level 3 Cover Type By Age

Compartment: 45157

Date: 10/2/2007

	0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	>89	Uneven Age	Grand Total
Aspen Types	0	0	51.4	142.9	37.2	40.1	0	0	0	0	0	201.8	473.4
Emergent Wetland	36.6	0	0	0	0	0	0	0	0	0	0	0	36.6
Herbaceous Openland	12.4	0	0	0	0	0	0	0	0	0	0	0	12.4
Low-Density Trees	5.6	0	0	0	0	0	0	0	0	0	0	0	5.6
Lowland Coniferous Forest	0	0	0	0	0	0	0	70.8	7.8	0	241.9	0	320.5
Lowland Shrub	120.9	0	0	0	0	0	0	0	0	0	0	0	120.9
Mixed Upland Deciduous	0	2.6	4.7	0	0	0	0	1.8	0	12.1	0	61.2	82.4
Northern Hardwood	0	0	48.2	0	4.7	0	0	2.3	4.2	634.2	19.9	0	713.5
Other Upland Conifers	0	0	0	0	0	0	0	0	0	0	18.3	0	18.3
Other Upland Deciduous	0	0	0	0	0	0	0	0	0	2.6	0	0	2.6
Planted Pines	0	0	0	0	0	0	0.7	0	0	0.7	0	0	1.4
Road/Parking Lot	5.4	0	0	0	0	0	0	0	0	0	0	0	5.4
Sand, Soil	9.8	0	0	0	0	0	0	0	0	0	0	0	9.8
Upland Mixed Forest	0	0	0	0	0	6.8	0	20.9	0	0	0	0	27.7
Upland Shrub	6.5	0	0	0	0	0	0	0	0	0	0	0	6.5
Water	15.3	0	0	0	0	0	0	0	0	0	0	0	15.3
Grand Total	212.5	2.6	104.3	142.9	41.9	46.9	0.7	95.8	12	649.6	280.1	263	1852.3

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Pg. 1
12 157012-Cut	15.7	4136 - Aspen, Mixed Conifer	9	49	44	Clearcut with Reserves	Regeneration	Aspen, Mixed Conifer	
<u>Rev</u> <u>Cmnt:</u>	Stand was commercially cut in 1958. This stand is upland, but has some transitional and lowland ground mixed in. Nicely regenerated stands of aspen and mixed upland deciduous border this stand on the north and south; cedar is to the west, and private land to the east. Will have to run private lines. Corners are present.								
<u>Rev</u> <u>Spec:</u>	Budding trees will be left along edges, especially against the younger aspen age classes. Vernal ponds found within the stand will be buffered appropriately (approximately one tree length away from edge). Cedar will be left for additional retention. All conifer < 4 inches at dbh will be left. Be sure sale boundary is 300' from water's edge (headwaters of Bark Creek).								
<u>Next</u> <u>Steps:</u>	Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes aspen, spruce, balsam, birch, cedar, cherry, and maple in various amounts.								
15 157015-Cut	12.6	4111 - S.Maple, Hard Mast Association	9	100	0	Single Tree Selection	Regeneration	Sugar Maple Association	
<u>Rev</u> <u>Cmnt:</u>	This is a nice hardwood sawlog stand that was last select cut in 1992. Good access off all season road (Borgstrom Road). While there is currently some beech component, there is BBD in the area. Every effort will be made to maintain some beech component within the stand. Will want to mark in either spring or fall due to the high density of saplings.								
<u>Rev</u> <u>Spec:</u>	Mark hardwoods to 85 BA, using the Compleat Marker as a guide, as well as other applicable guides. Retention will include the under-represented species (yellow birch and beech). Efforts will be made to try to regenerate these species also. Maintain species diversity in the subcanopy.								
<u>Next</u> <u>Steps:</u>	Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes sugar maple, red maple, beech, yellow birch and cherry in various amounts.								
17 157017-Cut	12.1	4193 - Birch, Aspen	6	87	0	Clearcut with Reserves	Regeneration	Aspen, Birch	
<u>Rev</u> <u>Cmnt:</u>	This is the last piece of original stand remaining after cuts in 1981, 1988 and 1991. White birch is dying out - fair amount of snags. A few large diameter white spruce within stand.								
<u>Rev</u> <u>Spec:</u>	Budding trees will be left along edges, especially against the younger aspen age classes. Large white spruce (> 16 inch dbh) can be left for additional retention. All conifer < 4 inches at dbh will be left. Be sure sale boundary is 300' from waters edge (headwaters of Bark Creek).								
<u>Next</u> <u>Steps:</u>	Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes aspen, birch, red maple, spruce, balsam, and cherry in various amounts.								
23 157023-Cut	7.2	4112 - Maple, Beech, Cherry Association	9	103	0	Single Tree Selection	Regeneration	Maple, Beech, Cherry Association	
<u>Rev</u> <u>Cmnt:</u>	This is a nice hardwood sawlog stand that was last select cut in 1992. Good access off all season road (Borgstrom Road). While there is currently some beech component, there is BBD in the area. Every effort will be made to maintain some beech component within the stand. There is maple borer damage within the stand. Will want to mark in either spring or fall due to the high density of saplings.								
<u>Rev</u> <u>Spec:</u>	Mark hardwoods to 85 BA, using the Compleat Marker as a guide, as well as other applicable guides. Retention will include the under-represented species (yellow birch, white birch, cherry and beech). Efforts will be made to try to regenerate these species also. Maintain species diversity in the subcanopy. Leave some large balsam in the overstory.								
<u>Next</u> <u>Steps:</u>	Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes sugar maple, red maple, beech, yellow birch and cherry in various amounts.								
51 157051-Cut	2.3	4110 - Sugar Maple Association	6	66	0	Single Tree Selection	Regeneration	Sugar Maple Association	
<u>Rev</u> <u>Cmnt:</u>	Small hardwood island in middle of aspen stand. Needs a light select cut to remove cankered and maple borer damaged maple.								
<u>Rev</u> <u>Spec:</u>	Mark hardwoods to 85 BA, using the Compleat Marker as a guide, as well as other applicable guides. Retention will include the under-represented species (white birch, cherry and aspen). Some aspen will be left for budding trees. Maintain species diversity in the subcanopy.								
<u>Next</u> <u>Steps:</u>	Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes sugar maple, red maple, beech, and cherry in various amounts.								

**PROPOSED TREATMENTS
NO LIMITING FACTORS**

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Pg. 2
62 157062 middle-Cut	274.6	4112 - Maple, Beech, Cherry Association	9	87	0	Single Tree Selection	Regeneration	Maple, Beech, Cherry Association	

Rev

Cmnt: The majority of this area of hardwoods was select cut in 1995. Nice quality hardwood sawlogs for the most part. There are some steep ridges that will preclude harvesting, and the western edge is generally smaller diameter trees which have not been thinned before. There are several small openings and associated aspen pockets within the stand. Some may be cut and others not. Diversity will be maintained. While there is currently some beech component, there is BBD in the area. Every effort will be made to maintain some beech component within the stand. ORV trail wanders thru stand. Use standard ORV spec for maintenance.

Rev

Spec: Mark hardwoods to 85 BA, using the Compleat Marker as a guide, as well as other applicable guides. Retention will include the under-represented species (yellow birch, cherry, beech, etc). Efforts can be made to try to regenerate these species also. Aspen budding trees will be left, if present, along younger aspen stands and openings. Maintain species diversity in the subcanopy. Apply 100' buffer along NE corner of lake. April 1 - June 30 no cut along lake.

Next

Steps: Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes sugar maple, red maple, beech, cherry, yellow birch and white birch in various amounts.

62 157062 NE-Cut	22.1	4112 - Maple, Beech, Cherry Association	9	87	0	Single Tree Selection	Regeneration	Maple, Beech, Cherry Association	
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Rev

Cmnt: This is a small portion of a larger hardwood stand that wasn't select cut in 2005. Variable hardwood sawlog stand. While there is currently some beech component, there is BBD in the area. Every effort will be made to maintain some beech component within the stand.

Rev

Spec: Mark hardwoods to 85 BA, using the Compleat Marker as a guide, as well as other applicable guides. Retention will include the under-represented species (yellow birch, cherry, beech, etc). Efforts can be made to try to regenerate these species also. Aspen budding trees will be left, if present, along younger aspen stands and openings. Maintain species diversity in the subcanopy.

Next

Steps: Regeneration survey will be needed within 4 years following harvest. Acceptable regeneration includes sugar maple, red maple, beech, cherry, yellow birch and white birch in various amounts.

**Total Treatment
Acreage Proposed: 346.6**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**

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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Pg. 1
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Limiting Factor and Comment:

Rev Cmnt:

No Stands with Limiting Factors

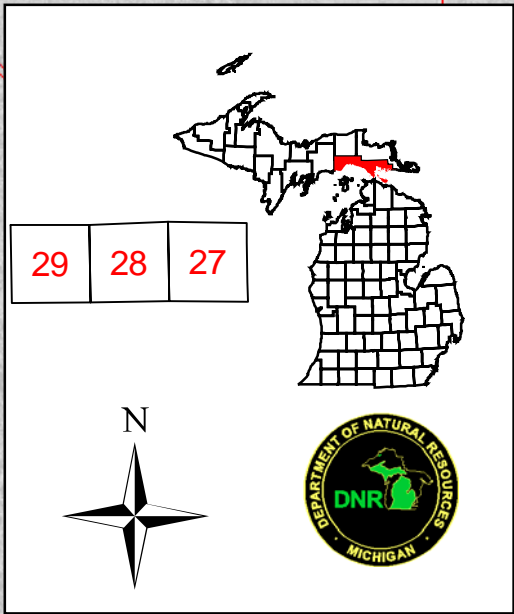
Rev Spec:

Next Steps:

Total Treatment
Acreage Proposed: 0

Compartment 157
 T44N, R08W, Sec. 27, 28, 29
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2009
 Acres: 1,853 GIS Calculated
 Stand Examiner: Amy Douglass
 Map Revised: 10/09/2007
 Map Phase: Pre-review

Multi-Part Stands
 Stand 61, 2 Parts, Split by stand 55
 Stand 31, 2 Parts, Split by stand 26



Field Map

Stand # 23
 Stacking Density (A)(412)0 - 7
 OI Level 3
 Code Level 4
 Cover Type Code

Legend

- ◆ RIs Corners
 - Miris Corners
 - County Paved Road
 - County Gravel Road
 - Public Gravel Road
 - - Poor Dirt Road
 - - Closed Road
 - - Intermittent Stream/Drain
 - - Stream
 - - Trails
 - Hydro
 - 🏍 Motorcycle Trails
 - 🚙 Snowmobile Trails
 - ▭ Stands
 - ▭ Clearcut with Reserves
 - ▭ Single Tree Selection
- ### Forest Stands
- Level 3**
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 414 - Other Upland Deciduous
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- ### Non-Forest Stands
- Level 3**
- 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 320 - Upland Shrub
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
 - 710 - Sand, Soil

