



**Crystal Falls FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

**COMPARTMENT #10 ENTRY YEAR: 2009
Compartment Acreage: 3359 County: Dickinson**

Revision Date: March 5, 2006

Stand Examiner: Thomas Seablom

Legal Description: T44N R29W Sec. 13-15, 22-24, 27-29, 33, 34

RMU (if applicable):

Management Goals:

There are several goals in this compartment. Timber goals include developing and maintaining age class distribution in the aspen timber type, maintain species diversity and increase sawlog quality in the northern hardwood timber type, maintain the swamp conifer timber type and the diversity in them, and to increase the mesic conifer component of this compartment where possible. The aspen age class is weighted to the younger age classes (0-29 years) and lacking in the middle and mature age classes (40-100 years). The majority of this type in the surrounding landscape is also weighted similarly. As these stands age, active management before maturity will be necessary in the future to help balance the age class and structure distribution across the surrounding landscape. Northern hardwood stands are still predominantly even-aged to two-aged, though some have uneven-age structure characteristics, but are slowly moving toward uneven-age stands in all aspects. Tree quality in the majority of the hardwood stands is good, with some poorer quality in the transitional site areas. Non-timber goals include protecting the water quality and habitat of the North Branch of the Fence River, its tributaries, McGregor Creek and Camp Ott Creek, and the surrounding lowlands through proper BMP's. Maintaining and expanding transition zones, thermal cover cover types, and to maintain existing wildlife openings are also department goals in this compartment.

Soil and Topography:

The topography of this compartment ranges from nearly level to rolling hills. The major soil associations in this compartment are the Pemene-Emmet-Cathro (PEC) and Rubicon-Cathro (RC). Soils in the PEC association (well drained and very poorly drained) were formed in ice-contact drift, glacial till, and organic deposits. Pemene soils, located on flats, knolls, ridges and hills in the uplands, have a surface layer of fine sandy loam with a subsurface of loamy fine sand, and a subsoil of fine sandy loam and loamy fine sand. Emmet soils, on the flats, knolls, ridges, and hills in the uplands, on the surface are loam with a subsurface layer of fine sandy loam, and subsoil layer of sandy loam to fine sandy loam. The substratum is gravelly fine sandy loam. Cathro soils are very poorly drained and occur in depressions and drainage ways on low flats and near streams on flood plains. The soil has a surface and subsurface layer of muck. The substratum is very fine sandy loam, stratified fine sandy loam and loamy sand. RC association soils (excessively drained and very poorly drained) were formed in glacial outwash and organic deposits. Rubicon soils are located on the flats, knolls, foot slopes, side slopes and ridges. It has a surface of loamy sand; subsurface is sand with a subsoil of sand, and a substratum of sand. Cathro soils in this association have the same characteristics as in the PEC association. (Soil Conservation Service. 1989. Dickinson County. pgs 5-9.) Alberts Sub-section VIII3.1

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Ownership surrounding this compartment is predominately State land with scattered private individual parcels, and forest industry land. Land use on the private parcels is in camps and on industrial land is forest management. State land use is managed according to goals in the surrounding compartments determined by inventory and reviews.

Unique, Natural Features (include only non-site specific and non-sensitive information):

This compartment is bordered by McGregor Creek along the northeast, the North Branch of the North Branch Ford River along the east, the North Branch Ford River along the southeast, and Camp Ott Creek along the west.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):**Special Management Designations or Considerations:****Watershed and Fisheries Considerations:**

Maintaining adequate buffers, at least 300 feet, along with protecting and enhancing the cover types, especially cedar and lowland conifer, surrounding the N. Branch and its tributaries will help to protect the water quality of this river and promote the potential high quality trout habitat it holds.

Wildlife Habitat Considerations:**Mineral, Oil, and Gas Considerations:**

Surface sediments consist of medium-textured till. There is insufficient data to determine the glacial drift thickness. The Precambrian Archean Granite/Gneiss subcrops below the glacial drift. There is not a current economic use for the granite/gneiss, although it has dimension stone potential. The abandoned Republic Iron mine is located approximately eleven miles to the north. Gravel pits are not located in the area, but there could be potential. Part of this Compartment was previously leased for metallic exploration and potential may still exist. There is no economic oil and gas production in the UP.

Vehicle Access:

There is decent access to this compartment. Nature Trail (Cleveland Homestead) road provides access to the compartment, with the Big Wheel Road providing access through the compartment (north-south). Various side roads allow access to the stands within the compartment. Some new roads and minor road work within the compartment will be needed to accomplish timber sale activity.

Survey Needs:

No survey needs are required at this entry period.

Recreational Facilities and Opportunities:

Snowmobile trail #32, Silver Lake to Kates Grade, utilizes the Big Wheel Road within the compartment. It is a heavily used trail. Logging will be restricted to non-snowmobiling months to prevent conflicting use on the road. Hunting occurs throughout the compartment for all game species and fishing occurs on the North Branch of the Ford River. Maintaining young stands of aspen, grassy openings, and cover types such as cedar, spruce, and lowland conifer will help to enrich the hunting and fishing opportunities in this compartment.

Fire Protection:

There are timber types that are fire susceptible within this compartment. The southwest portion of the compartment is dominated by young aspen and red pine pole stands, with one stand being a mix of red and white pine and another being a mix of young aspen and jack pine. The red pine stands are fairly contiguous.

The Big Wheel Road and Cleveland Homestead road act as fire breaks for ground fires, but crown fires would carry across certain areas of the roads in the red pine types. The remaining timber types are spruce, cedar, swamp conifer, white birch, upland hardwoods, and aspen. All timber types are accessible with minor road work, i.e. berm removal. Timber types in the surrounding compartments are composed of the same species.

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

COPPER COUNTRY STATE FOREST

CRYSTAL FALLS FOREST MGT UNIT

DICKINSON COUNTY

COMPARTMENT: 10

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		72	485	772	36	40				94									1499
Black Spruce					28				114	21									163
Cedar									217	86									303
Grass	39																		39
Jack Pine			39																39
Lowlnd Brush	175																		175
Mx Swmp Cnfr										245	39								284
Non Stocked	6																		6
Paper Birch										68									68
Red Pine							366												366
Spruce Fir					15														15
Tamarack			14																14
Upland Hdwds									35	346								7	388
Total	220	72	538	772	79	40	366		366	860	39							7	3359

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

COPPER COUNTRY STATE FOREST

CRYSTAL FALLS FOREST MGT UNIT

DICKINSON COUNTY

COMPARTMENT: 10

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	1499																										1499
S Black Spruce		163																									163
C Cedar				303																							303
G Grass					39																						39
J Jack Pine							39																				39
L Lowlnd Brush									175																		175
Q Mx Swmp Cnfr												284															284
X Non Stocked													6														6
B Paper Birch															68												68
R Red Pine															366												366
F Spruce Fir																			15								15
T Tamarack																					14						14
M Upland Hdwds																								388			388
Total	1499	163		303	39		39		175			284	6		68	366			15		14			388			3359

COPPER COUNTRY STATE FOREST

CRYSTAL FALLS FOREST MGT UNIT

DICKINSON COUNTY

COMPARTMENT: **10**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	22451 Cds	Hardwood	6378 Cds
Hardwood	381 Mbf	Hardwood	71 Mbf
Softwood	24364 Cds	Softwood	532 Cds
Softwood	639 Mbf	Softwood	88 Mbf
Sum TotVol	48855 Cds	Sum CutVol	7228 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	577
3359			

CRYSTAL FALLS FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 10

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
4	M6	29	78	52	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft./acre. Concentrate removal on clumps.										
5	M6	8	78	52	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft./acre. Concentrate removal on clumps.										
9	M6	135	78	52	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft./acre. Leave any aspen, and if present in the stand, any yellow birch.										
20	M6	57	78	52	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin to 70 sq. ft./acre. Leave all aspen and yellow birch.										
22	M6	52	78	52	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft./acre. Retain all aspen.										
23	M6	7		55	northern hardwood	two aged	selection	1		
comnts Fmd : Select cut to 80 sq. ft./acre and create gaps, expect regeneration, open up 1/2 chain around oak. Leave aspen.										
29	B6	28	81	55	paper birch	mature	final harvest	1	natural regeneration	
comnts Fmd : Retain 3 to 4 birch trees and 1 to 2 aspen (either big tooth or quaking) per acre, cutting all other tree species regardless of merchantability except for red oak, red and white pine. A light underburn will follow the harvest to prepare the seedbed, preferably late summer to early fall. Harvesting shall take place during the summer to avoid conflict with the snowmobile trail. It would be preferable to have whole tree harvesting as the method used to cut the stand to reduce the amount of fuel available to burn. Slash from unmerchantable timber that is cut will provide an adequate fuel load for burning. Summer logging and whole tree harvesting will also help to prepare the seed bed in the event the underburn does not take place. Aspen and spruce/fir will be acceptable species for regeneration if white birch does not regenerate.										
41	A6	69	86	60	aspen (upland)	mature	final harvest	1		
comnts Fmd : Cut all trees >4-inches dbh regardless of species or merchantability except the following; yellow birch, red oak, and white pine, and if there are any present, hemlock and red pine.										
45	A6	6	81	55	aspen (upland)	mature	final harvest	2		
comnts Fmd : Clearcut this stand removing all species >6-inches dbh regardless of species or merchantability except northern white cedar. A portion of this stand is wet and drains to the North Branch of the Ford River. This should only be harvested during frozen conditions to protect soil and water quality.										
50	M6	11	78	55	northern hardwood	immature	final harvest	1		
comnts Fmd : This stand is to be clearcut. Cut all tree's >2-inches dbh except red oak, red and white pine, and any maple trees greater than 16-inches dbh. The goal is to manage for a mix stand of red maple, aspen, red oak, red and white pine.										
51	M6	8	82	60	northern hardwood	immature	final harvest	1		
comnts Fmd : This stand is to be clearcut. Cut all tree's >2-inches dbh except red oak, red and white pine, and any maple trees greater than 16-inches dbh. The goal is to manage for a mix stand of red maple, aspen, red oak, red and white pine.										
53	M6	17	72	60	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft. per acre. Open up around oaks and pines by thinning residual to 60 sq. ft. per acre. Retain all aspen and yellow birch.										
54	M6	18	72	60	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft. per acre. Open up around oaks and pines by thinning residual to 60 sq. ft. per acre. Retain all aspen and yellow birch.										
59	R6	96	48	60	red pine	immature	thinning	1		prescribed for fdf treatment
comnts Fmd : FDF. Thin stand by removing every third row. Remove all aspen. Leave spruce and if present, any white pine as per retention guidelines.										
76	M6	36	78	52	northern hardwood	two aged	thinning	1		
comnts Fmd : Thin stand to 70 sq. ft./acre. Concentrate removal in the 6-8 inch diameter classes.										

Total Acres..... 577

**Proposed Treatments
With Limiting Factors**

Compartment: 10

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:0

Total Acres..... 0

Compartment 10
 T44N, R29W, Sec. 13, 22-27, 34-36
 County: Dickinson
 Unit: Crystal Falls
 YOY: 2009
 Acres: 3,359 GIS Calculated
 Stand Examiner: Thomas Seablom
 Map Revised: 7/10/2007
 Map Phase: Pre-Review

Field Map

Legend

- Miris Corners
- Gravel Roads
- Poor Dirt Roads
- Trails
- Snowmobile Trails
- Stand Boundary
- 100 - Final Harvest
- 147 - Final Harvest/Natural Regeneration/Prescribed Burning
- 400 - Thinning
- 800 - Selection

	15	14	13
21	22	23	24
29	28	27	
33	34		

N

