Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #16 Entry Year: 2012
Compartment Acreage: 1525 County: Dickinson

Revision Date: 6-23-2010

Stand Examiner: Terry Cryderman

Legal Description: T44N R28W Sec 3-5, 9-11

Identified Planning Goals ('Management Area' or 'RMU',if applicable):

Management Goals: Develop age class distribution in aspen type. Maintain diversity in hardwood types. Increase conifers where possible.

Soil and Topography: Rolling hills to swamps.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is all State-owned land, used by loggers, hunters, fisherpeople, campers, trappers, general recreationists. State land surrounds much of the compartment boundary.

Unique, Natural Features: Wild West Creek, Flat Rock Creek, Schwartz Creek

Archeological, Historical, and Cultural Features: None known

Special Management Designations or Considerations: None known

Watershed and Fisheries Considerations: Protect water quality for all bodies of water, particularly the Wild West, Flat Rock and Schwartz Creeks. Promote long lived conifer species along these waterbodies and use adequate buffer protection.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Formation and Precambrian granite/gneiss subcrop below the glacial drift. There is not an economic use for these rocks, although some might have dimension stone potential. A rock (type?) quarry is located three miles to the north. Iron mines are located approximately fifteen miles to the southwest. A gravel pit is located six miles to the northwest. Part of this area was previously leased for metallic exploration and potential may still exist. There is no economic oil and gas production in the UP.

Vehicle Access: County Road 581 north from Ralph to Aimone Road then northwest on Schwartz Creek Road.

Survey Needs: Needed in section 4

Recreational Facilities and Opportunities: Hunting, camping, fishing, trapping, hiking.

Fire Protection: Felch protection area. Access to most upland stands is poor to fair, access to some swamp types would be difficult.

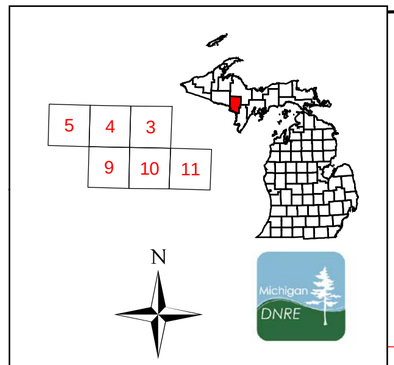
Additional Compartment Information:

- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

Cover Type & Treatment Map

Compartment 016
T44N, R28W, Sec. 3-5, 9-11
County: Dickinson
Unit: Crystal Falls
YOE: 2012
Acres: 1,525 GIS Calculated
Stand Examiner: Terry Cryderman
Map Revised: 07/28/2010
Map Phase: Pre-Review



Stand # 23 — Stocking Density
(412)0) - A7
Level 3 / Level 4 — OI Code
Cover Type Code

1 **622**-D0
2 **6121**-T5
3 **4130**-A3
4 **4130**-A6
5 **4130**-A6
6 **6111**-P3
7 **4193**-B6
8 **4140**-B6
9 **6124**-Q6
10 **310**-G0
11 **4110**-M6
12 **4130**-A6
13 **6123**-Q2
14 **4136**-A3
15 **6121**-T3
16 **310**-G0
17 **6123**-Q3
18 **4211**-R9
19 **6124**-Q6
20 **4130**-A3
21 **6128**-Q6
22 **4130**-A3
23 **4211**-R9
24 **4133**-A6
25 **310**-G0
26 **4211**-R9
27 **4311**-UM3
28 **4211**-R9
29 **4319**-UM6
30 **310**-G0
31 **310**-G0
32 **6120**-C6
33 **4319**-UM6
34 **6120**-C6
35 **500**-Z0
36 **4134**-A6
37 **622**-L0

5 4 3 9 10 11

Flat Rock Rd
County Road Coo
Schwartz Creek Rd
McGregor Rd
Unknown 14.1 Rd
Mc Gregor Creek

Legend

- Miris Corners
- Paved Roads
- Poor Dirt Roads
- Trails
- Snowmobile Trails
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments
- Thinning (Crown, Low, Systematic)
- Seed Tree (w/Reserves)
- Clearcut (w/Reserves, Patch/Strip)
- Other Treatment - See Comments

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub

1 0.5 0 1 Miles

87°51'0"W 87°50'0"W 87°49'0"W 87°48'0"W 87°47'0"W 87°46'0"W
46°15'0"N 46°14'0"N 46°13'0"N

Stand Boundary Map

Compartment 016
T44N, R28W, Sec. 3-5, 9-11
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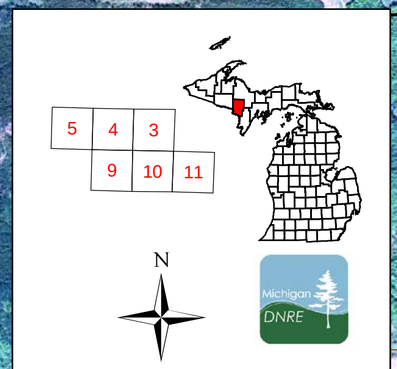

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 / Level 4 — OI Code
Cover Type Code

Legend
- Miris Corners
- Paved Roads
- Poor Dirt Roads
- Trails
- Snowmobile Trails
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands
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411 - Northern Hardwood
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1 Miles 0.5 0

87°51'0"W 87°50'0"W 87°49'0"W 87°48'0"W 87°47'0"W 87°46'0"W
46°14'0"N 46°13'0"N

Dedicated & Proposed Special Conservation Area Map

Compartment 016
T44N, R28W, Sec. 3-5, 9-11
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Stand Examiner: Terry Cryderman
Map Revised: 07/28/2010
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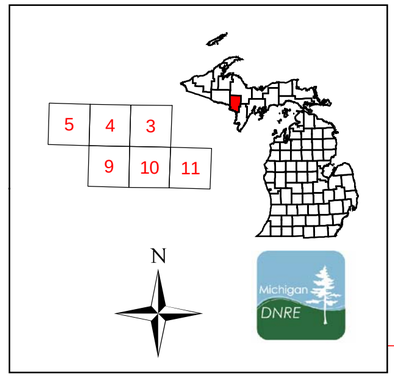

Legend
- Miris Corners
- Stand Boundaries

Proposed Special Conservation Areas
- SCA - Special Conservation Area
- SCA Removal

Dedicated Special Conservation Areas
- Cold Water Streams

Stand # / Stocking Density
23 / (412)0) - A7
Level 3 / Level 4 / OI Code
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5 **4130**-A6
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8 **4140**-B6
9 **6124**-Q6
10 **310**-G0
11 **4110**-M6
12 **4130**-A6
13 **6123**-Q2
14 **4136**-A3
15 **6121**-T3
16 **310**-G0
17 **6123**-Q3
18 **4211**-R9
19 **6124**-Q6
20 **4130**-A3
21 **6128**-Q6
22 **4130**-A3
23 **4211**-R9
24 **4133**-A6
25 **310**-G0
26 **4211**-R9
27 **4311**-UM3
28 **4211**-R9
29 **4319**-UM6
30 **310**-G0
31 **310**-G0
32 **6120**-C6
33 **4319**-UM6
34 **6120**-C6
35 **500**-Z0
36 **4134**-A6
37 **622**-L0

5 4 3 9 10 11

1 0.5 0 1 Miles

87°51'0"W 87°50'0"W 87°49'0"W 87°48'0"W 87°47'0"W 87°46'0"W
46°15'0"N 46°14'0"N 46°13'0"N

Table 1 – Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit **Compartment 016 Year of Entry 2012**

Age Class

	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	0	110	133	245	77	0	144	0	0	0	0	0	0	0	0	**709**
Cedar	0	0	0	0	0	0	0	0	0	63	0	0	0	0	0	**63**
Herbaceous Openland	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**68**
Lowland Aspen/Balsam Poplar	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	**55**
Lowland Conifers	0	0	0	54	0	0	0	0	0	78	0	0	0	0	0	**131**
Lowland Shrub	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**22**
Northern Hardwood	0	0	0	0	0	0	0	0	0	199	0	0	0	0	0	**199**
Paper Birch	0	0	0	0	0	0	0	0	0	56	0	0	0	0	0	**56**
Red Pine	0	0	0	0	0	0	0	0	114	0	0	0	0	0	0	**114**
Tamarack	0	0	0	18	0	0	0	0	20	0	0	0	0	0	0	**38**
Treed Bog	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Upland Mixed Forest	0	6	0	0	0	0	0	29	23	0	0	0	0	0	0	**59**
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Total	**101**	**116**	**133**	**372**	**77**	**0**	**144**	**29**	**157**	**395**	**0**	**0**	**0**	**0**	**0**	**1525**

Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2012

Compartment 016
Total Compartment Acres: 1525

Acres by Treatment Type

Commercial Harvest - 225	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 27	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	144	0	0	0	0	0	**144**
Paper Birch	0	0	56	0	0	0	**56**
Red Pine	0	0	0	0	25	0	**25**
Total	**144**	**0**	**56**	**0**	**25**	**0**	**225**

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	12016005-Cut	76.7	4130 - Aspen	High Density Pole	56	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal

Prescription Specs: Cut all stems two inches and larger to insure adequate regeneration.Retention along stand 2. Leave oak.

Other Comments:

Next Steps: Regeneration survey in 4 years.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7	12016007-Cut	47.4	4193 - Birch, Aspen	High Density Pole	83	Harvest	Seed Tree with Reserves	Aspen	Cmpt. Review Proposal

Prescription Specs: Leave 5 seed trees per acre. Seed trees will serve as retention.

Other Comments:

Next Steps: Scarify for birch regeneration. This is a good site for birch. Monitor the success of regeneration. Acceptable regeneration mix of birch, aspen, maple, spruce and balsam fir.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	12016008-Cut	8.4	4140 - Other Upland Deciduous	High Density Pole	83	Harvest	Seed Tree	Birch, Aspen	Cmpt. Review Proposal

Prescription Specs: Leave 5 trees per acre.

Other Comments:

Next Steps: Monitor the success of regeneration.
Acceptable regeneration mix of birch, aspen, maple, spruce and balsam. Scarify for birch regeneration.
This is a good site for birch.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	12016012-Cut	67.6	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal

Prescription Specs: Cut all stems two inches and over to insure adequate regeneration.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
23	12016023-Cut	24.7	42110 - Planted Red Pine	High Density Log	71	Harvest	Crown Thinning	Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Cut all aspen and jack pine. Mark red pine to cut. Leave all oak. Thin to 110 basal area.

Other Comments: cut will include pulpwood and sawlogs.

Next Steps:

Table 3 -- Treatments Prescribed with No Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	NF_12016016-NonFor	26.8	Non-Forested		0	Non-Forest Management	Other - Specify	Cool Season Grass	Cmpt. Review Proposal

Prescription Specs: Opening Maintenance: Disc, Seed & Fertilize and Berm Hunter Walking Trail.

Other Comments:

Next Steps:

Total Treatment Acreage Proposed: 251.7

Crystal Falls Mgt. Unit

Table 4 -- Treatments Prescribed with a Limiting Factor

Compartment: 016
Year of Entry 2012

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6121 - Tamarack	Medium Density Pole	20.1	77		
3	4130 - Aspen	High Density Sapling	67.6	5		
4	4130 - Aspen	High Density Pole	21.5	32		
5	4130 - Aspen	High Density Pole	76.7	56		Cut all stems two inches and larger to insure adequate regeneration.
6	6111 - Lowland Balsam Poplar	High Density Sapling	55.1	22		
7	4193 - Birch, Aspen	High Density Pole	47.4	83		
8	4140 - Other Upland Deciduous	High Density Pole	8.4	83		
9	6124 - Lowland Spruce-Fir	High Density Pole	2.4	83		
11	4110 - Sugar Maple Association	High Density Pole	199.2	83	81-110	
12	4130 - Aspen	High Density Pole	67.6	50		
13	6123 - Lowland Fir	Medium Density	40.1	22		
14	4136 - Aspen, Mixed Conifer	High Density Sapling	244.8	25		
15	6121 - Tamarack	High Density Sapling	18.1	25		
17	6123 - Lowland Fir	High Density Sapling	13.7	22		
18	42110 - Planted Red Pine	High Density Log	17.5	71		
19	6124 - Lowland Spruce-Fir	High Density Pole	63.3	82		
20	4130 - Aspen	High Density Sapling	42.1	5		
21	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	11.8	82		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4130 - Aspen	High Density Sapling	132.8	15		
23	42110 - Planted Red Pine	High Density Log	24.7	71	141-170	
24	4133 - Aspen, Mixed Pine	High Density Pole	31.5	34		
26	42110 - Planted Red Pine	High Density Log	29.2	71	81-110	
27	4311 - Pine, Aspen Mix	High Density Sapling	6.2	4		
28	42110 - Planted Red Pine	High Density Log	42.2	71	81-110	
29	4319 - Mixed Upland Forest	High Density Pole	29.2	62		
32	6120 - Lowland Cedar	High Density Pole	14.9	81		
33	4319 - Mixed Upland Forest	High Density Pole	23.3	71		
34	6120 - Lowland Cedar	High Density Pole	47.6	81		
36	4134 - Aspen, Spruce/Fir	High Density Pole	24.2	35		

Stand	Cover Type	Acres	Gen Cmts:
1	6224 - Treed Bog	9.0	
10	310 - Herbaceous Openland	6.6	
16	310 - Herbaceous Openland	26.8	
25	310 - Herbaceous Openland	23.4	
30	310 - Herbaceous Openland	7.9	
31	310 - Herbaceous Openland	3.7	
35	50 - Water	1.7	
37	622 - Lowland Shrub	22.1	

7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatIves (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Inventory Method: IFMAP

Stand	SCA Type	SCA Name	Acres	Comments

8 – 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	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.