

Revision Date: July 19, 2010

Stand Examiner: Scott Sebero

Legal Description: T44N, R29W, Sections 9, 15, 16, 17, 19, 20, 21, 29 & 30.

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

Management Goals: Our management goals in this compartment are to develop age class distribution in aspen types, maintain health of conifer types and increase acreage where possible, and to develop the quality while maintaining diversity in hardwood types.

Soil and Topography: Land is nearly level to hilly with a mix of Pemene and Emmet soils that are welldrained loamy and sandy soils on ground moraines, end moraines and outwash plains. Some areas contain rock outcrops up to 50 feet in height. Some narrow depressions contain Cathro soils that are poorly drained black muck.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Ownership patterns in and around this compartment consist mostly of State lands with a few private parcels and camps. These lands are used mainly for hunting and managed for forest products.

Unique, Natural Features: Two Mile Creek.

Archeological, Historical, and Cultural Features: None.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: Compartment 7 is located in the heart of the Floodwood Deeryard in northwest Dickinson County. Almost ³/₄ of the compartment is a combination of aspen and swamp conifer types. Many of the swamp conifer types are high quality cedar that should be protected. Care should be taken to assure the stands remain intact, if harvesting takes place in adjacent stands. Adequate buffers to

protect drainages and guard against blow down should be provided in all upland sales. Travel corridors should be maintained between Q-types.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 0 and 100 feet in the west. Precambrian granite/gneiss and the Michigamme Formation subcrop below the glacial drift. There is not an economic use for these rocks, although some of the granite might have dimension stone potential. Iron mines are located approximately fourteen miles to the south. A gravel pit is indicated two miles to the west. There appears to be good gravel potential in the compartment. Part of this area was previously leased for metallic exploration and potential may still exist. The Compartment to the north has been nominated for metallic leasing. There is no economic oil and gas production in the UP.

Vehicle Access: Vehicle access is from Two Mile Creek Road and associated trail roads.

Survey Needs: None.

Recreational Facilities and Opportunities: This area is used heavily by both deer and grouse hunters. Two Mile Creek is a good quality trout stream.

Fire Protection: None.

Additional Compartment Information: None.

- > 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







Table 1 – Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Compartment 007 Year of Entry 2012



							Age	Class									
	Nor	A a start	6.z	⁷ 0,79	0 ² / ₂	40 ⁻³⁰	10-12-10-12-10-12-12-12-12-12-12-12-12-12-12-12-12-12-	85.38	69.09	ST D	69.00	66.0	00 ⁻¹⁰⁰	8 ^{77,071}	*0cz	ACCESSION A	, 0 ²
Aspen	0	221	171	287	357	97	0	0	109	6	0	0	0	0	0	1248	
Cedar	0	0	0	0	0	0	0	0	0	902	0	0	0	0	0	902	
Jack Pine	0	10	0	0	0	0	30	0	0	0	0	0	0	0	0	40	
Lowland Conifers	0	0	0	0	0	0	0	0	0	35	0	0	0	0	0	35	
Lowland Shrub	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160	
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	267	0	0	0	0	0	267	
Northern Hardwood	0	0	0	0	0	0	0	0	0	6	220	0	0	0	0	227	
Red Pine	0	0	0	0	0	0	30	0	0	108	0	0	0	0	0	138	
Upland Conifers	0	0	0	0	40	0	0	0	0	26	0	0	0	0	0	67	
Upland Mixed Forest	0	0	0	107	0	0	0	0	39	0	0	0	0	0	0	146	
Upland Shrub	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11	
Total	205	231	171	394	397	97	60	0	147	1361	220	0	0	0	0	3284	



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Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit Year of Entry 2012									Total Com	Compartment partment Acres:	007 3284
		A	cres by 1	Freatme	ent Ty	ре					
Commercial Harvest - 350	Site Prep - 0		Tree P	lanting -	0		Presc	ribed Burn - 0	Other	- 0	
Habitat Cut - 0	Opening Maintenand	ce - 77	Tree Se	eeding -	· 0		Pestic	cide - 0			
		c	over Ty	pe by H	arves	t Meth	od				
Aspen	/	C ^{ent} 115 0		000 1000 000 000 000 000 000 000 000 00	oo contraction of the second s	o 0	500 1000 115	See Contraction			
Jack Pi	ne	30 0	0	0	0	0	30				
Norther	n Hardwood	0 0	0	0	6	0	6				
Red Pin	e	0 10	8 0	0	15	0	123				
Upland	Conifers	26 0	0	0	0	0	26				
Upland	Mixed Forest	39 0	0	0	0	0	39				
Upland	Spruce/Fir	11 0	0	0	0	0	11				
	Total	220 10	8 0	0	22	0	350				
	· · · · · ·										

S t			Crystal	Falls Mgt. Unit	Table 3 with I	Treatr No Lim	nents Presc niting Facto	cribed r	Compartment: 007 Year of Entry 2012	
a n d	Treatr Nar	nent ne	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	120070	05-Cut	38.9	4319 - Mixed Upland Forest	High Density Log	70	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir	Cmpt. Review Proposal
Preso Spec	<u>cription</u> (<u>s:</u> c	Cut all as cedar, he	pen and mlock, c	mixed hardwood 2" or red and white pine	or greater DBH. Cut will be cut.	t all spru	ice, balsam and	d jackpine with a stump di	ameter of six inches or	more. No oak,
<u>Other</u> Comr	<u>۔</u> ۱ <u>ments:</u>	Net drair	nages wi	ll be painted out of h	arvest area.					
<u>Next</u> Steps	F <u>5:</u>	Regen sı	irvey as	per work constructio	n.					
14	120070	14-Cut	26.4	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	85	Harvest	Clearcut with Reserves	Non Pine Upland Conifer, Mixed Deciduous	Cmpt. Review Proposal
Preso Spec	<u>cription</u> (<u>s:</u> ł	Cut all as nemlock,	pen and oak, or	mixed hardwood 2" red and white pine w	or greater DBH. Cu ill be cut.	t all spru	ice and balsam	with a stump diameter of	six inches or more. No	o cedar,
Other Comr	<u>nents:</u>									
<u>Next</u> Steps	F <u>8:</u>	Regen sı	irvey will	be done per work co	onstructions.					
24	120070	24-Cut	15.4	42110 - Planted Red Pine	High Density Pole	54	Harvest	Systematic Thinning	Planted Red Pine	Cmpt. Review Proposal
Preso Spec	<u>cription</u> (<u>s:</u> i	Cut every nches or	/ third ro	w of red pine. Cut al No oak, cedar or hen	ll aspen and mixed h nlock will be cut.	ardwood	d 2" or greater D	DBH. Cut all balsam and	spruce with a stump dia	ameter of six
<u>Other</u> Comr	nents:									
<u>Next</u> Steps	<u>s:</u>									
34	120070	34-Cut	2.2	42210 - Natural Red Pine	High Density Log	85	Harvest	Single Tree Selection	Natural Red Pine	Cmpt. Review Proposal
Preso Spec	cription (<u>s:</u> v t	Cut all as white pine between	pen and e will be 50 to 90	mixed hardwood 2" marked to remove tr	or greater DBH. Cur rees within all size cla	t all spru asses. S	ice, balsam and Some small reg	l jackpine with a stump di eneration gaps will be ma	ameter greater than 5" arked out. BA will be re	Red and duced to
<u>Other</u> Comr	<u>nents:</u>									
<u>Next</u> Steps	F <u>5:</u>	Regen sı	irvey pei	work constructions.						
39	120070	39-Cut	6.4	4117 - Mixed N. Hardwood - Pine	High Density Pole	85	Harvest	Crown Thinning	Mixed N. Hardwood - Pine	Cmpt. Review Proposal
Preso Spec	<u>ription</u> F <u>s:</u>	Remove	trees fro	m dominate and cod	ominate crown class	es. Rec	duce BA to betw	veen 60 to 90.		
<u>Other</u> Comr	nents:									
<u>Next</u> Steps	<u>):</u>									

Crystal Falls Mg	ıt. Unit
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Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 007 Year of Entry 2012



t									DNRE
n d	Treatmen Name	Acre	s Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40 1	2007040-C	ut 84.4	42210 - Natural Red Pine	High Density Log	85	Harvest	Single Tree Selection	Natural Red Pine	Cmpt. Review Proposal
<u>Prescri</u> p <u>Specs:</u>	p <u>tion</u> Cut a and v heav	III aspen a vhite pine y to asper	nd mixed hardwood 2" will be marked to remo and spruce. BA will b	and greater DBH. (ove trees within all si be 50 to 90.	Cut all sp ize classe	ruce, balsam ar es. Some small	nd jackpine with a stump I to medium regeneration	diameter of six inches gaps will be marked o	or more. Red out in areas
<u>Other</u> Comme	Cut v ents:	vill need to	be followed up with h	erbicide and scarific	ation of re	egen gaps.			
<u>Next</u> Steps:	Rege	n survey	per work constructions						
42 1	2007042-C	ut 10.6	42320 - Upland Spruce	High Density Pole	e 85	Harvest	Clearcut with Reserves	Upland Spruce	Cmpt. Review Proposal
<u>Prescri</u> <u>Specs:</u>	ption Cut a white	III aspen a pine or c	nd mixed hardwood 2 edar will be cut.	inches or more DBH	I. Cut all	spruce and bal	sam with a stump diamete	er of six inches or mor	e. No red or
<u>Other</u> Comme	ents:								
<u>Next</u> Steps:	Rege	n survey	per work constructions						
48 1	2007048-C	ut 6.2	4134 - Aspen, Spruce/Fir	High Density Log	85	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescrip</u> Specs:	p <u>tion</u> Cut a heml	III aspen a ock, oak o	nd mixed hardwood 2" or red and white pine w	or greater DBH. Cu ill be cut.	ut all spru	ce and balsam	with a stump diameter of	six inches or more. N	lo cedar,
<u>Other</u> Comme	ents:								
<u>Next</u> <u>Steps:</u>	Rege	n survey	as per work constructio	ons.					
49 1	2007049-C	ut 59.8	4134 - Aspen, Spruce/Fir	High Density Pole	e 76	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescri</u> Specs:	ption_Cut a heml	III aspen a ock, oak o	nd mixed hardwood 2" or red and white pine w	and greater DBH. (ill be cut.	Cut all sp	ruce and balsar	n with a stump diameter o	of six inches or more.	No cedar,
<u>Other</u> Comme	ents:								
<u>Next</u> <u>Steps:</u>	Rege	en survey	as per work constructio	ons.					
52 1	2007052-C	ut 48.7	4130 - Aspen	High Density Pole	e 76	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal
Prescrip Specs:	<u>ption</u> Cut a heml	III aspen a ock, oak o	nd mixed hardwood gr or red and white pine w	eater than 2" DBH. ill be cut.	Cut all sp	pruce and balsa	m with a stump diameter	of six inches or greate	er. No cedar,
<u>Other</u> Comme	ents:								
<u>Next</u> Steps:	Rege	n survey	per work constructions						

S t		Crystal	Falls Mgt. Unit	Table 3 with	Treati No Lin	ments Presc niting Factor	ribed	Compartment: 007 Year of Entry 2012	
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
55	12007055-Cut	21.2	42210 - Natural Red Pine	High Density Log	85	Harvest	Single Tree Selection	Natural Red Pine	Cmpt. Review Proposal
<u>Prescr</u> Specs	<u>Prescription</u> Cut all aspen and mixed hardwood 2" and greater DBH. Cut all spruce, balsam and jackpine with a stump diameter of six inches or more. Red and white pine will be marked to remove trees within all size classes. Some small to medium regeneration gaps will be marked out. Residual BA will be 50 to 90.								
<u>Other</u> Comm	Harvest	will need	to be followed up by	herbicide and scarif	fication of	of regen gaps.			
<u>Next</u> Steps:	Regen s	urvey per	work constructions.						
69	12007069-Cut	29.8	42120 - Planted Jack Pine	High Density Pole	55	Harvest	Clearcut	Planted Jack Pine	Cmpt. Review Proposal
<u>Prescr</u> Specs	<u>ription</u> Cut all tr <u>:</u>	ees 2" or	greater DBH.						
<u>Other</u> Comm	ients:								
<u>Next</u> Steps:	Herbicide Survey p	e to preve er work o	ent aspen from growi constructions.	ng. Plant back to ja	ickpine.				
17	12007017- NonFor	77.2	4130 - Aspen	High Density Sapling	7	Non-Forest Management	Other - Specify	Cool Season Grass	Cmpt. Review Proposal
<u>Presci</u> Specs	<u>ription</u> Opening <u>:</u>	Maintena	ance: Disc, Seed & F	ertilize, and Berm H	lunter W	/alking Trail.			
<u>Other</u> Comm	ients:								
<u>Next</u> Steps:									
	Total Treatmen	it 10							

Acreage Proposed: 427.1

S t		Crystal F	alls Mgt. Unit	Table 4 -	- Treatmo a Limiti	ents Prescrib ng Factor	Compartment: 007 Year of Entry 2012		
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						
Presc Spece	<u>s:</u>								
<u>Comr</u> <u>Next</u> <u>Steps</u>	<u>nent:</u> ::								
<u>Limiti</u> Treati	ng Factor and No ment Reason	<u>)</u>							
Ac	Total Treatmen creage Proposed	nt d:	0						

S t	Crystal Falls Mgt. Unit			5 – Fo Inventor	orested Stands ry Method: IFMAP	Compartment: 007 Year of Entry: 2012
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	6122 - Black Spruce	High Density Pole	6.1	85	81-110	
4	4136 - Aspen, Mixed Conifer	High Density Pole	16.9	40	1-50	
5	4319 - Mixed Upland Forest	High Density Log	38.9	70	81-110	
6	4130 - Aspen	High Density Pole	60.7	37	51-80	
8	6120 - Lowland Cedar	High Density Pole	201.4	85	111-140	
11	4136 - Aspen, Mixed Conifer	High Density Sapling	46.7	13		
12	42221 - Natural Jack Pine, Mixed Deciduous	Low Density Sapling	9.8	7		
14	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	26.4	85	81-110	
15	4110 - Sugar Maple Association	High Density Pole	22.7	90	81-110	
16	4130 - Aspen	High Density Pole	44.4	35	51-80	
17	4130 - Aspen	High Density Sapling	77.2	7		
20	4134 - Aspen, Spruce/Fir	High Density Pole	55.8	26	1-50	
21	4130 - Aspen	High Density Sapling	83.3	6		
22	4119 - Mixed Northern Hardwoods	High Density Pole	27.7	90	81-110	
23	4130 - Aspen	High Density Pole	13.8	40	51-80	
24	42110 - Planted Red Pine	High Density Pole	15.4	54	111-140	
26	6120 - Lowland Cedar	High Density Pole	78.1	85	111-140	
27	6122 - Black Spruce	High Density Pole	55.4	85	111-140	

S t	Crystal Falls Mgt. Unit			5 – Fo Inventor	orested Stands ry Method: IFMAP	Compartment: 007 Year of Entry: 2012
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	4130 - Aspen	High Density Pole	45.7	41	51-80	
29	4134 - Aspen, Spruce/Fir	High Density Sapling	25.5	13		
30	4319 - Mixed Upland Forest	High Density Pole	21.9	29	1-50	
31	4134 - Aspen, Spruce/Fir	High Density Pole	69.4	37	51-80	
33	4110 - Sugar Maple Association	High Density Pole	48.4	90	81-110	
34	42210 - Natural Red Pine	High Density Log	2.2	85	141-170	
35	4110 - Sugar Maple Association	High Density Pole	32.4	90	81-110	
37	4134 - Aspen, Spruce/Fir	High Density Pole	58.2	37	51-80	
38	6120 - Lowland Cedar	High Density Pole	51.3	85	111-140	
39	4117 - Mixed N. Hardwood - Pine	High Density Pole	6.4	85	111-140	
40	42210 - Natural Red Pine	High Density Log	84.4	85	141-170	
41	4134 - Aspen, Spruce/Fir	High Density Pole	69.3	30	1-50	
42	42320 - Upland Spruce	High Density Pole	10.6	85	81-110	
43	4110 - Sugar Maple Association	High Density Log	55.1	90	81-110	
44	6122 - Black Spruce	High Density Pole	53.3	85	1-50	
45	42110 - Planted Red Pine	High Density Pole	14.7	54	81-110	
46	4130 - Aspen	High Density Sapling	160.8	20		
47	6120 - Lowland Cedar	High Density Pole	306.6	85	111-140	

S t	Crystal Falls Mgt. Unit			5 – Fo Inventor	orested Stands ry Method: IFMAP	Compartment: 007 Year of Entry: 2012
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4134 - Aspen, Spruce/Fir	High Density Log	6.2	85	81-110	
49	4134 - Aspen, Spruce/Fir	High Density Pole	59.8	76	81-110	
50	4130 - Aspen	High Density Sapling	59.8	13		
52	4130 - Aspen	High Density Pole	48.7	76	81-110	
53	6122 - Black Spruce	High Density Pole	59.8	85	81-110	
55	42210 - Natural Red Pine	High Density Log	21.2	85	141-170	
58	6120 - Lowland Cedar	High Density Pole	246.6	85	111-140	
61	6122 - Black Spruce	High Density Pole	36.0	85	81-110	
62	4134 - Aspen, Spruce/Fir	High Density Pole	20.7	46	51-80	
63	429 - Mixed Upland Conifers	High Density Pole	40.2	37	51-80	
64	4136 - Aspen, Mixed Conifer	Medium Density	39.2	15	1-50	
65	6124 - Lowland Spruce- Fir	High Density Pole	35.1	85	81-110	
66	4134 - Aspen, Spruce/Fir	High Density Pole	70.2	28	1-50	
67	4319 - Mixed Upland Forest	Medium Density Pole	85.0	25	1-50	
68	6122 - Black Spruce	High Density Pole	45.1	85	81-110	
69	42120 - Planted Jack Pine	High Density Pole	29.8	55	141-170	
73	4130 - Aspen	High Density Sapling	60.9	6		
74	6120 - Lowland Cedar	Medium Density Pole	18.0	85	1-50	

S t	Crystal Fall	s Mgt. Unit		5 – Fo Inventor	orested Stands ry Method: IFMAP	Compartment: 007 Year of Entry: 2012	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
75	4110 - Sugar Maple Association	High Density Pole	34.1	90	81-110		
76	4130 - Aspen	High Density Pole	54.5	37	51-80		
77	6122 - Black Spruce	High Density Pole	10.8	85	81-110		

Crystal Falls Mgt. Unit

6 – Nonforested Stands Inventory Method: IFMAP

Compartment: 007 Year of Entry: 2012



Stand	Cover Type	Acres	Gen Cmts:
1	622 - Lowland Shrub	13.2	
2	622 - Lowland Shrub	6.8	
7	622 - Lowland Shrub	9.2	
9	622 - Lowland Shrub	15.5	
10	320 - Upland Shrub	5.0	
13	622 - Lowland Shrub	3.8	
18	320 - Upland Shrub	11.1	
19	622 - Lowland Shrub	13.4	
25	622 - Lowland Shrub	3.7	
32	320 - Upland Shrub	3.3	
36	622 - Lowland Shrub	29.1	
51	622 - Lowland Shrub	1.5	
54	320 - Upland Shrub	2.2	
56	320 - Upland Shrub	7.6	
57	320 - Upland Shrub	4.7	
59	320 - Upland Shrub	7.3	
60	320 - Upland Shrub	1.3	
70	320 - Upland Shrub	3.0	

Crystal Falls Mgt. Unit

6 – Nonforested Stands Inventory Method: IFMAP

Compartment: 007 Year of Entry: 2012



Stand	Cover Type	Acres	Gen Cmts:
71	622 - Lowland Shrub	17.0	
72	622 - Lowland Shrub	9.2	
77	622 - Lowland Shrub	4.9	
78	622 - Lowland Shrub	14.5	
79	622 - Lowland Shrub	18.0	



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.

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.

Conservation Area	Туре	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area		
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ter stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or rout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from ear. Coldwater streams in Michigan typically provide these conditions due to substantial ions of groundwater to their stream flows. Such streams are established by Director's action and ed as trout resources by Fisheries Order 210.		
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.			