

Crystal Falls Forest Management Unit Compartment Review Presentation Compartment # 40 Entry Year: 2014

Compartment Acreage: 2162 County: Dickinson

Revision Date: 05/16/12

Stand Examiner: Scott Sebero

Legal Description: T43N, R29W, Sec. 11, 13, 14, 15, 23, 24

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 well-drained loamy and sandy soils on ground moraines, end moraines and outwash plains. Some areas contain rock outcrops. 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: The Ford River is the southern border and the N. Branch of the Ford is the northern border of the compartment.

Archeological, Historical, and Cultural Features: None.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: This compartment is adjacent to the Henderson Deer Wintering Complex. Openings that were created during the ELF project have been maintained as hunter walking trails. The conifer component in upland hardwood and aspen stands should be maintained and promoted to provide for cover and food for deer, grouse and variety of other wildlife species. This is particularly important in transition zones between upland deciduous and lowland conifer types. Underplantings of hemlock and pine were done to promote mesic conifer in hardwood stands that were harvested in the last year of entry. Losses of conifer to spruce budworm, make cedar, hemlock and pine more essential than ever to provide life requisites for wildlife in the area.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured glacial till. The glacial drift thickness varies between 50 and 100 feet. The Cambrian Munising Group, Precambrian Archean granite/gneiss and the Michigamme Formation subcrop below the glacial drift. There is not an economic use for these rocks, although the granite/gneiss may have dimension stone potential. Randville Dolomite marble quarries are located two miles to the south. Groveland Iron mine is located approximately eight miles to the southwest. The compartment was previously leased for metallic exploration and Section 13 & 14 are currently leased. A gravel pit is located two miles to the west and there appears to be potential. There is no economic oil and gas production in the UP.

Vehicle Access:	Vehicle access	is from	Pirlot Road	and asso	ciated trail road	ds.
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Survey Needs: None.

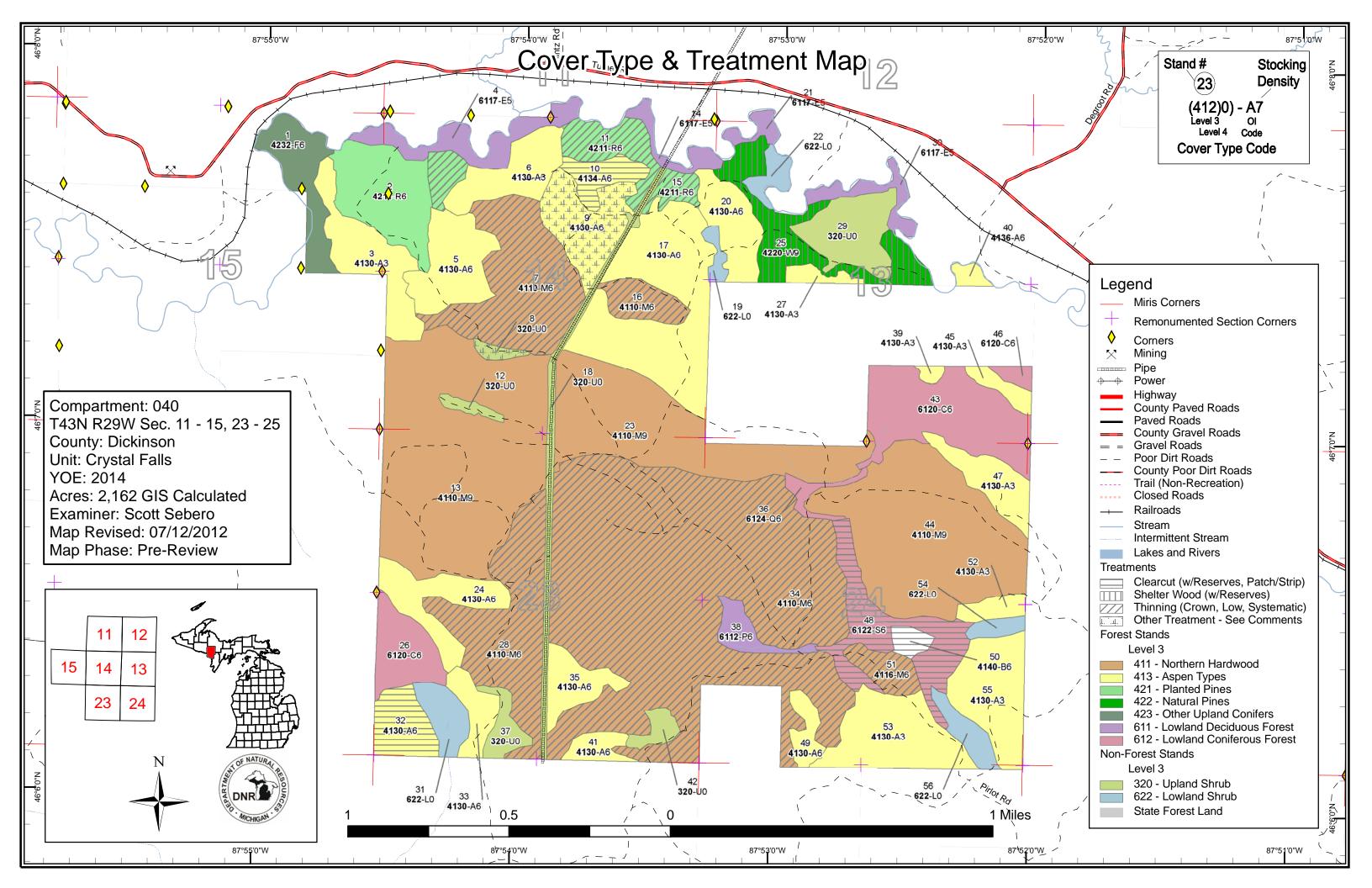
Recreational Facilities and Opportunities: None.

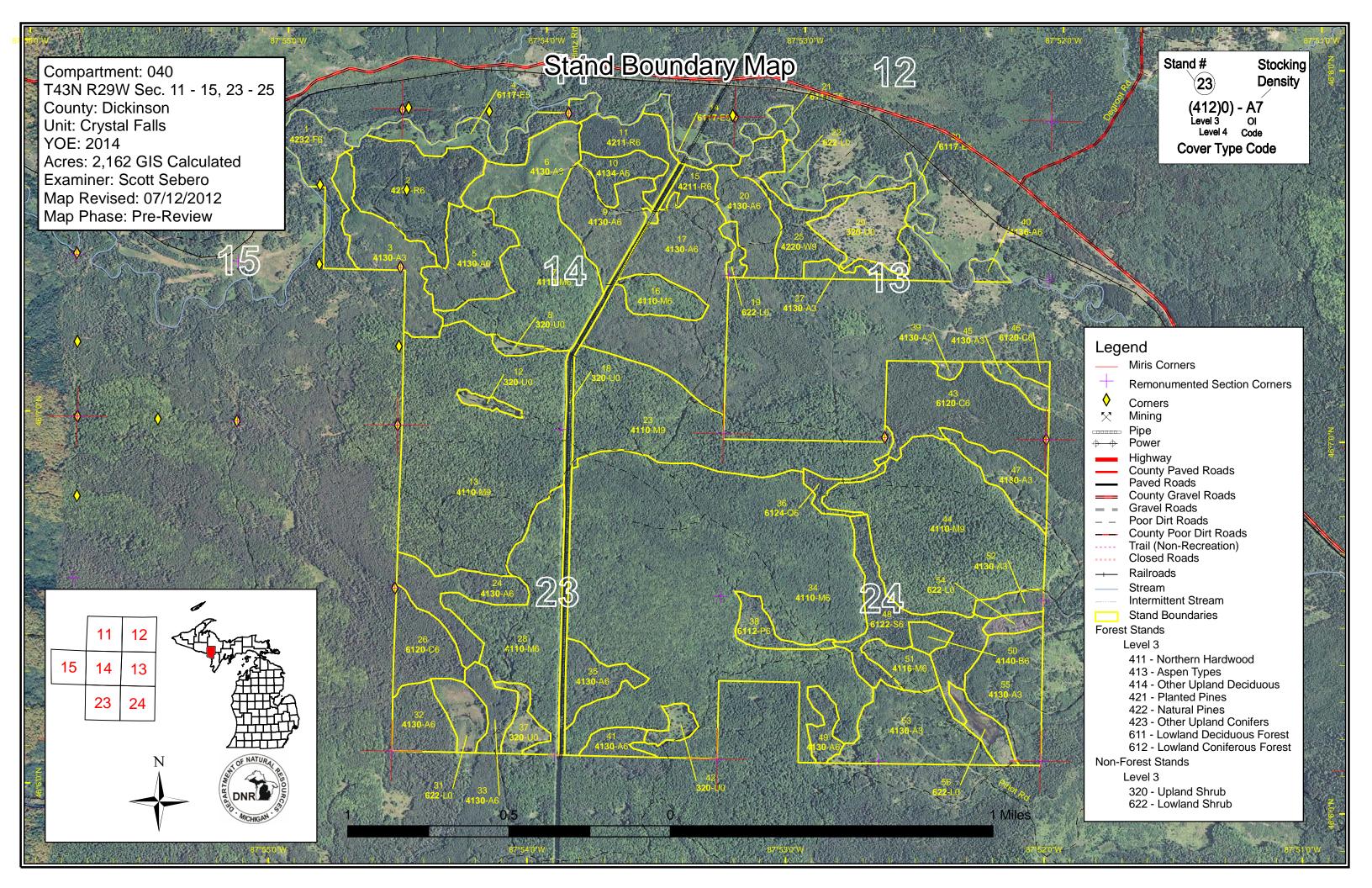
Fire Protection:

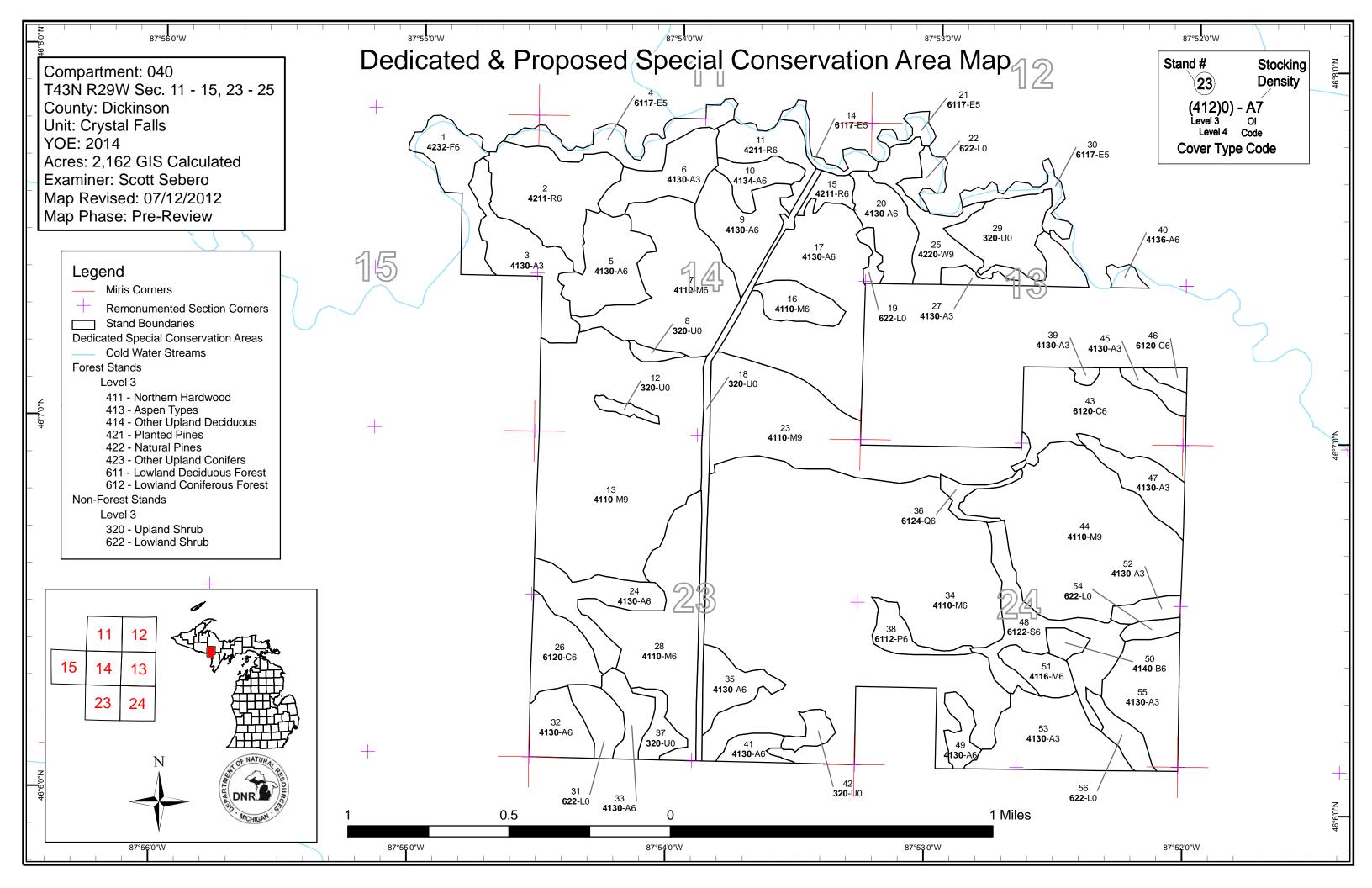
Additional Compartment Information: None.

- **➤** 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

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Compartment 040 Year of Entry 2014

Crystal Falls Mgt. Unit

Scott Sebero : Examiner



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						Age	Class									
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Aspen	31	91	92	231	85	0	0	0	19	0	0	0	0	0	548	
Cedar	0	0	0	0	0	0	0	0	104	0	0	0	0	0	104	
Lowland Aspen/Balsam Poplar	0	0	0	0	12	0	0	0	0	0	0	0	0	0	12	
Lowland Conifers	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7	
Lowland Deciduous	0	0	0	0	0	0	0	0	56	0	0	0	0	0	56	
Lowland Shrub	46	0	0	0	0	0	0	0	0	0	0	0	0	0	46	
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	49	0	0	0	0	0	49	
Northern Hardwood	0	0	0	0	0	0	0	0	1079	0	0	0	0	0	1079	
Paper Birch	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	
Red Pine	0	0	0	0	92	0	0	0	0	0	0	0	0	0	92	
Upland Shrub	84	0	0	0	0	0	0	0	0	0	0	0	0	0	84	1
Upland Spruce/Fir	0	0	0	0	32	0	0	0	0	0	0	0	0	0	32	1
White Pine	0	0	0	0	0	0	0	0	45	0	0	0	0	0	45	ĺ
Total	162	91	92	231	221	0	0	0	1365	0	0	0	0	0	2162	1



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit

Compartment 040 Year of Entry 2014 **Total Compartment Acres: 2162**

Acres by Treatment Type

Commercial Harvest - 788 Site Prep - 0 Tree Planting - 0 Prescribed Burn - 0 Other - 0

Habitat Cut - 0 Opening Maintenance - 41 Tree Seeding - 0 Pesticide - 0

Cover Type by Harvest Method

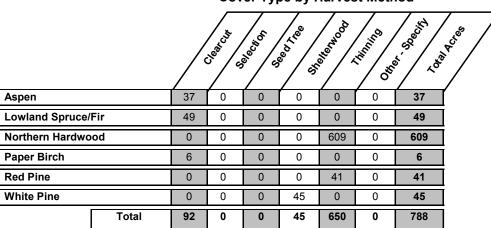


Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 040 Year of Entry 2014

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a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	12040002-Cut	9.6	42110 - Planted Red Pine	High Density Pole	47	81-110	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription About 10 acres in the NE portion of the stand were not treated when last cut in 1997. Propose to remove merchantable aspen and spruce/fir and to row thin red pine where needed in this portion of the stand. Specs:

Other_

s

Comments:

<u>Next</u> Steps:

Proposed

10/01/2013 Start Date:

12040007-Cut 4110 - Sugar Maple 82 141-170 Crown Thinning 4110 - Sugar Maple Cmpt. Review 84.3 High Harvest Association Density Association Proposal Pole

Prescription Mark stand down to a BA of 80. Use completete marker. Leave pine, oak, cedar and hemlock. Focus on cutting sawlog sized ash. Reduce ash BA to 10 sq. ft.

Specs:

<u>Other</u>

Comments:

<u>Next</u> Steps:

Proposed

10/01/2013 Start Date:

82 10 12040010-Cut 15.0 4134 - Aspen, High 51-80 Harvest Clearcut with 4134 - Aspen, Cmpt. Review Spruce/Fir Density Reserves Spruce/Fir Proposal Pole

Prescription Cut all aspen and mixed hardwood two inches or more DBH. Cut all spruce, balsam and jack pine with one or more pulpwood sticks. No red or Specs:

white pine, cedar, hemlock or oak will be cut.

Other

Comments:

regen survey. <u>Next</u>

Steps:

Proposed

Start Date: 10/01/2013

42110 - Planted 12040011-Cut 42110 - Planted 11 23.4 High 47 141-170 Harvest Systematic Cmpt. Review Thinning Red Pine Red Pine Proposal Density Pole

Prescription Remove every third row of red pine. Cut all aspen, spruce, balsam, jack pine and mixed hardwood with one or more pulpwood sticks. No oak will be cut. Specs:

Other_

Comments:

<u>Next</u> Steps:

Proposed

10/01/2013 Start Date:

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 040
Year of Entry 2014

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a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
15	12040015-Cut	8.4	42110 - Planted Red Pine	High Density Pole	47	111-140	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Remove every third row of red pine. Cut all aspen, spruce, balsam, jack pine and mixed hardwood with one or more pulpwood sticks. No oak

Specs: will be cut

Other Comments:

s

<u>Next</u> Steps:

Proposed

Start Date: 10/01/2013

1612040016-Cut16.94110 - Sugar MapleHigh82111-140HarvestCrown Thinning4110 - Sugar MapleCmpt. ReviewAssociationDensityAssociationProposalPole

Prescription Mark stand down to a BA of 80. Use completete marker. Leave pine, oak, cedar and hemlock. Focus on cutting sawlog sized ash. Reduce

Specs: ash BA to 10 sq. ft.

Other Commo

Comments:

Next Steps:

Proposed

Start Date: 10/01/2013

25 12040025-Cut 45.0 42200 - Natural High 82 111-140 Harvest Shelterwood 42200 - Natural Cmpt. Review White Pine Density Log White Pine Proposal

<u>Prescription</u> Cut all trees two inches and greater except red and white pine. Remove smaller pine around large log sized pine to promote regen of pine.

Specs: Scarify through summer logging. Thin areas of pole sized pine to a BA of 100. Try to keep the current mix of red and white pine.

Other Comments:

Next Regen survey. Scarification if needed.

Steps:

<u>Proposed</u>

Start Date: 10/01/2013

28 12040028-Cut 81.8 4110 - Sugar Maple High 82 141-170 Harvest Crown Thinning 4110 - Sugar Maple Cmpt. Review Association Density Association Proposal Pole

Prescription Mark stand down to a BA of 80. Use completete marker. Leave pine, oak, cedar and hemlock. Focus cutting on sawlog size ash. Reduce ash

Specs: to a BA of 10 sq.ft.

Other Comments:

<u>Next</u> Steps:

<u>Proposed</u>

Start Date: 10/01/2013

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 040 Year of Entry 2014

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MICHIGAN	6

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32	12040032-Cut	22.3	4130 - Aspen	High Density Pole	40	81-110	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Cut all aspen and mixed hardwood two inches or more DBH. Cut all spruce, balsam and jack pine with one or more pulpwood sticks. No red or

Specs: white pine, cedar, hemlock or oak.

Other Comments:

Next regen survey

Steps:

s

Proposed

Start Date: 10/01/2013

34 12040034-Cut 411.7 4110 - Sugar Maple High 82 141-170 Harvest Crown Thinning 4110 - Sugar Maple Cmpt. Review Association Density Association Proposal

Pole

Pole

Prescription Mark stand down to a BA of 80. Use completete marker. Leave pine, oak, cedar and hemlock. Focus cutting on sawlog sized ash. Reduce

Specs: ash BA to 10 sq. ft.

Other Common

Comments:

Next Steps:

Proposed

Start Date: 10/01/2013

48 12040048-Cut 49.1 6122 - Black Spruce High 82 81-110 Harvest Clearcut with 6128 - Lowland Cmpt. Review Density Reserves Coniferous, Mixed Proposal Pole Deciduous

Prescription Cut all aspen and mixed hardwood two inches or more DBH. Cut all spruce, balsam and jack pine with one or more pulpwood stick. No red or

Specs: white pine, cedar, hemlock or oak. Buffer creek with standard BMP distance.

Other Comments:

Next regen survey

Steps:

Proposed

Start Date: 10/01/2013

50 12040050-Cut 6.0 4140 - Other High 82 81-110 Harvest Clearcut with 4193 - Birch, Aspen Cmpt. Review Reserves Proposal

<u>Prescription</u> Cut all aspen and mixed hardwood two inches or more DBH. Cut all spruce, balsam and jack pine with one or more pulpwood sticks. No red or <u>Specs:</u> white pine, cedar, hemlock or oak will be cut.

<u>Other</u>

Comments:

Next regen survey

Steps:

<u>Proposed</u>

Start Date: 10/01/2013

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 040
Year of Entry 2014

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t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
51	12040051-Cut	14.4	4116 - Mixed N. Hardwood - Aspen	High Density Pole	82	111-140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Mark stand down to a BA of 80. Use completete marker. Leave pine, oak, cedar and hemlock. Focus cutting on sawlog size ash. Reduce ash

Specs: BA to 10 sq. ft.

Other Comments:

Next Steps:

s

<u>Proposed</u>

<u>Start Date:</u> 10/01/2013

9 12040009-Cmpt. Review 37.6 4130 - Aspen High 32 51-80 Non-Forest Other - Specify 3102 - Grass Proposal NonFor Density Management Pole

<u>Prescription</u> Disk, Seed and Fertilize Hunter Walking Trail

Specs:

Other Comments:

Next

Steps: Proposed

Start Date: Unspecified

8NF_12040008-
NonFor3.73205 - Mixed
Upland ShrubNon-Forest
ManagementOther - Specify
Management3102 - Grass
ProposalCmpt. Review
Proposal

<u>Prescription</u> Disk, Seed, and Feritlizer opening with approved seed mixture

Specs:

Other Comments:

Next

Steps: Proposed

Start Date: Unspecified

Total Treatment

Acreage Proposed: 829.0

Crystal Falls Mgt. Unit Table 4 -- Treatments Prescribed with Compartment: 040 a Limiting Factor s Year of Entry 2014 n **Treatment Acres** CoverType Size Stand BA **Treatment** Treatment **Cover Type Approval** Name Method Objective Status Density Age Range Type d #Error **Prescription** Specs: <u>Other</u> Comment: <u>Next</u> Steps: <u>Proposed</u> Start Date: #Error

Total Treatment Acreage Proposed:

Limiting Factor and No Treatment Reason

0

Out of YOE -- Treatments **Prescribed with No Limiting Factor**

Year of Entry: 2014

_	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	12091001-Cut	31.4	4110 - Sugar Maple Association	High Density Log	87 I		Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal - Incomplete

Prescription Mark trees to 80 BA leaving best tree in place according to the Compleat Marker but focusing on White Ash to avoid Emerald Ash borer Specs:

devastation. Create canopy gaps for regeneration

<u>Other</u> Comments:

Regen check according to certification

<u>Next</u> Steps:

Proposed

Start Date: 10/01/2013

Total Treatment

31.4 Acreage Proposed:

s t	Crystal Falls		5 – Fo	orested Sta	nds Compartment: 040 Year of Entry: 2014	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42320 - Upland Spruce	High Density Pole	32.0	47	51-80	Steep rocky ridge.
2	42110 - Planted Red Pine	High Density Pole	60.5	47	81-110	About 10 acres in the NE portion of the stand were not treated when last cut in 1997. Propose to remove merchantable aspen and spruce/fir and to row thin red pine where needed in this portion of the stand.
3	4130 - Aspen	High Density Sapling	39.6	15		
4	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	28.2	82	1-50	Stand borders Ford River.
5	4130 - Aspen	High Density Pole	38.8	37	81-110	Several small opening within stand. Pockets of older aspen and spruce. Scattered clumps of older sugar maple.
6	4130 - Aspen	High Density Sapling	31.0	7		
7	4110 - Sugar Maple Association	High Density Pole	84.3	82	141-170	Large, steep hill on north side of stand.
9	4130 - Aspen	High Density Pole	37.6	32	51-80	
10	4134 - Aspen, Spruce/Fir	High Density Pole	15.0	82	51-80	Steep hill on west side of stand. Hill may be inoperable.
11	42110 - Planted Red Pine	High Density Pole	23.4	47	141-170	
13	4110 - Sugar Maple Association	High Density Log	207.6	82	111-140	Thinned last entry. 2005.
14	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	9.8	82	51-80	Stand borders Ford River.
15	42110 - Planted Red Pine	High Density Pole	8.4	47	111-140	
16	4110 - Sugar Maple Association	High Density Pole	16.9	82	111-140	·
17	4130 - Aspen	High Density Pole	101.9	32	51-80	
20	4130 - Aspen	High Density Pole	27.2	32	51-80	
21	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	6.0	82	51-80	Stand borders Ford River.

S t	orystarr ans mgt. omt					Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4110 - Sugar Maple Association	High Density Log	114.6	82	111-140	Thinned last entry. 2005.
24	4130 - Aspen	High Density Pole	32.9	40	81-110	
25	42200 - Natural White Pine	High Density Log	45.0	82	111-140	Seek exception from 300 foot buffer on Ford River.
26	6120 - Lowland Cedar	High Density Pole	28.2	82	141-170	
27	4130 - Aspen	High Density Sapling	5.9	22		
28	4110 - Sugar Maple Association	High Density Pole	81.8	82	141-170	
30	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	12.4	82	1-50	Stand borders Ford River.
32	4130 - Aspen	High Density Pole	22.3	40	81-110	Pockets of older aspen and balsam in poor condition.
33	4130 - Aspen	High Density Pole	14.9	30	51-80	Some pockets of older aspen.
34	4110 - Sugar Maple Association	High Density Pole	411.7	82	141-170	
35	4130 - Aspen	High Density Pole	19.9	47	81-110	
36	6124 - Lowland Spruce- Fir	High Density Pole	6.7	82	81-110	Drainage through large hardwood stand.
38	6112 - Lowland Aspen	High Density Pole	12.2	47	51-80	Seep and drainage through large hardwood stand.
39	4130 - Aspen	High Density Sapling	2.4	22		
40	4136 - Aspen, Mixed Conifer	High Density Pole	4.2	82	51-80	Stand borders Ford River.
41	4130 - Aspen	High Density Pole	9.5	47	51-80	
43	6120 - Lowland Cedar	High Density Pole	71.7	82	111-140	
44	4110 - Sugar Maple Association	High Density Log	147.5	82	51-80	Thinned last entry. 2005.

5 - Forested Stands

Compartment: 040

Crystal Falls Mgt. Unit

s t	Crystal Falls Mgt. Unit			5 – Forested Stands		Compartment: 040 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
45	4130 - Aspen	High Density Sapling	7.6	22		
46	6120 - Lowland Cedar	High Density Pole	4.1	82	111-140	
47	4130 - Aspen	High Density Sapling	22.9	22		
48	6122 - Black Spruce	High Density Pole	49.1	82	81-110	Small stream, about 2 feet wide, flowing through stand.
49	4130 - Aspen	High Density Pole	10.2	38	51-80	
50	4140 - Other Upland Deciduous	High Density Pole	6.0	82	81-110	A few scattered large B.T. aspen. 14 inch plus diameter.
51	4116 - Mixed N. Hardwood - Aspen	High Density Pole	14.4	82	111-140	
52	4130 - Aspen	High Density Sapling	8.7	23		
53	4130 - Aspen	High Density Sapling	51.3	15		
<u></u>	4130 - Aspen	High Density Sapling	44.6	22		

6 - Nonforested Stands

Compartment: 040 Year of Entry: 2014



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
8	3205 - Mixed Upland Shrub	3.7	No	Unspecified	
12	3205 - Mixed Upland Shrub	4.2	No	Unspecified	
18	3205 - Mixed Upland Shrub	23.5	No	Unspecified	Old Elf line.
19	6229 - Mixed lowland shrub	4.5	No	Unspecified	
22	6229 - Mixed lowland shrub	8.6	No	Unspecified	
29	3205 - Mixed Upland Shrub	34.8	No	Unspecified	
31	6229 - Mixed lowland shrub	15.5	No	Unspecified	
37	3205 - Mixed Upland Shrub	11.0	No	Unspecified	
42	3205 - Mixed Upland Shrub	7.3	No	Unspecified	
54	6229 - Mixed lowland shrub	6.0	No	Unspecified	
56	6229 - Mixed lowland shrub	11.8	No	Unspecified	

Compartment: 040 Year of Entry: 2014



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

Compartment: 040 Year of Entry 2014



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	stocked trout populations and those of other col year to year. Coldwater streams in Michigan typ	ream has temperature and dissolved oxygen conditions that allow naturally-reproduced or copulations and those of other coldwater fish species (e.g., slimy sculpin) to persist from Coldwater streams in Michigan typically provide these conditions due to substantial of groundwater to their stream flows. Such streams are established by Director's action and trout resources by Fisheries Order 210.			