



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 103

Entry Year 2016

Acreage: 1,020

County Dickinson

Management Area: Groveland

Revision Date: 07/23/2014

Stand Examiner: Linda Lindberg

Legal Description:

T40N, R30W, Sections 11 & 12

Identified Planning Goals:

There is much diversity here along with a lot of rock. The compartment has aspen and pine or rock tops. The maple is mixed in the aspen stands for the most part. There are some swamp types. A lot have been cut and the main goal here will be to maintain the diversity of species and aspen age classes. To preserve the two trout streams that flow north and south through the compartment, and preserve the recreational value of the snowmobile trail that moves through the compartment on the east end.

Soil and topography:

The soil is Dickinson Ssurgo soils which are very sandy and do well with aspen and pine. The pine seems to be on the rock tops in this compartment with some intermingled with the species in accessible stands.

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

The main access through this compartment is from Trepanier's fields to the south. There is a power line that moves north and south through the compartment. There have been bridges built over the two creeks which help considerably for access to different parts of the compartment. The compartment is fairly contiguous but does involve access through the large private ownership to the south. This compartment is close to Iron Mountain and a paved road accesses the private fields that lead to the compartment.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

This compartment provides valuable riparian habitat which should be protected. This compartment has a tendency to move toward mesic conifer, and is a good candidate for underplanting of hemlock or pine. Portions of this compartment were part of a historic deer wintering complex and it should be moved toward that condition. Age class and structural diversity is also important for this area.

Mineral Resource and Development Concerns and/or Restrictions

Vehicle Access:

As stated earlier, the access is through private land. I believe we have a good relationship with the owners and can and have worked with them for sales in the past. There are a few sandy roads throughout the compartment and bridges over the creeks for better access, but keeping a good relationship with the private owners to the south is good.

Survey Needs:

There are a fair amount of corners in this compartment but a few that were not established might be needed for timber sales proposed.

Recreational Facilities and Opportunities:

Fishing and hunting could abound here. The private access does deter that although I met a person who was given access to the property for that very reason. Also, the snowmobile trail gives access and is another recreation.

Fire Protection:

I am sure the private landowners would not hamper any fire access that was needed.

Additional Compartment Information:

There is rock throughout this compartment and does cause some harvest challenges. The rock in the NE corner makes access just about impossible. Part of the reason is the wet (some creeks) at the rock bottoms which is another deterrent from harvest. Access from the power line is possible but extremely steep.

The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

The following information is displayed, where pertinent, on the attached compartment maps:

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatment Map

Compartment: 103
 T40N R30W Sections 11 & 12
 County: Dickinson
 Unit: Crystal Falls
 Management Area: Groveland
 YOE: 2016
 Acres: 1,020 GIS Calculated
 Examiner: Linda Lindberg
 Map Revised: 08/28/2014
 Map Phase: Pre-Review

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

Legend

- Miris Corners
- Remonumented Section Corners
- PLSS Corner
- Unclassified Corners
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Powerline
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Other Harvest - See Comments
- Other Treatment - See Comments
- Treatments w/ Site Condition

Forest Stands

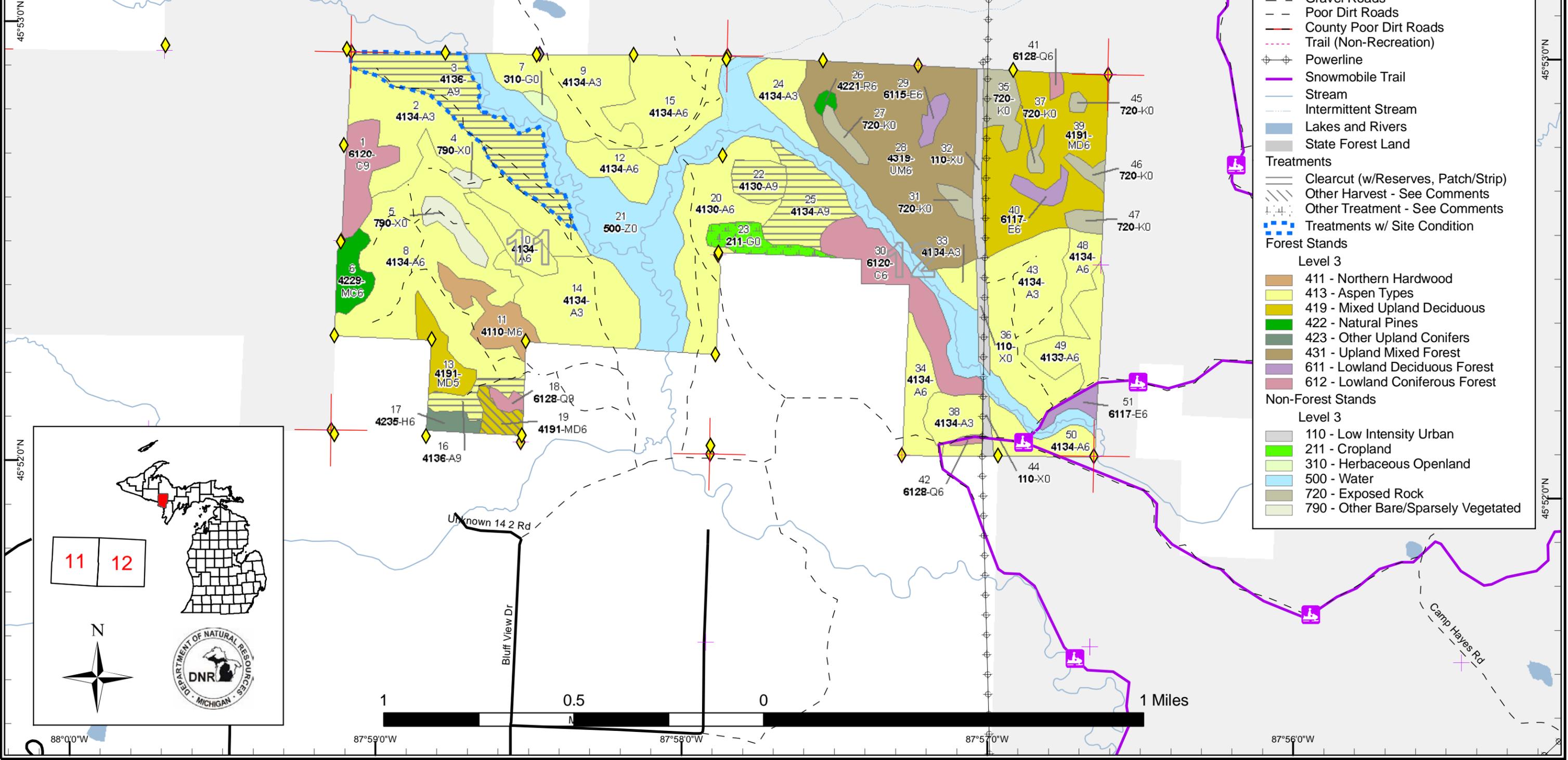
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

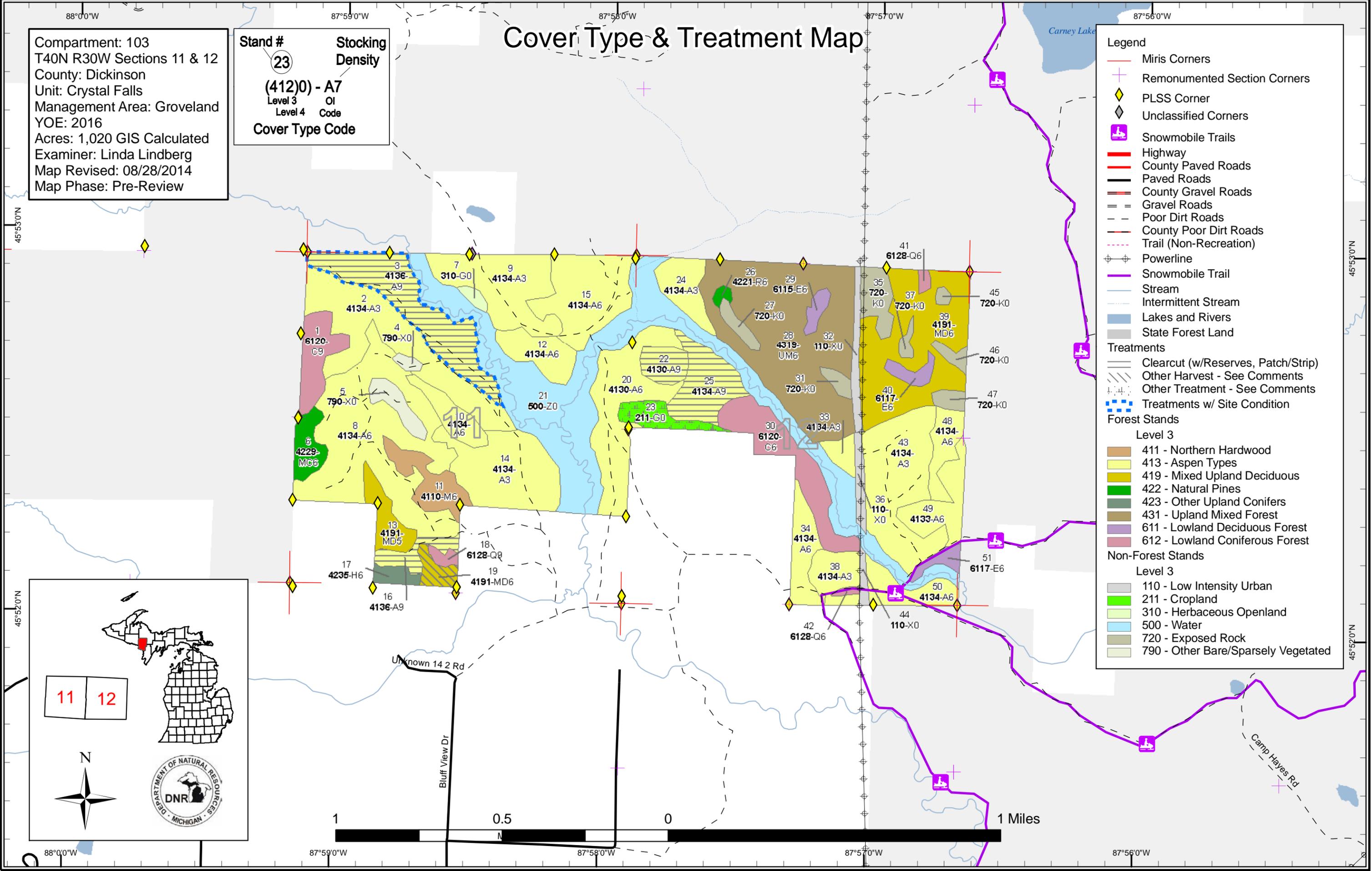
Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 211 - Cropland
- 310 - Herbaceous Openland
- 500 - Water
- 720 - Exposed Rock
- 790 - Other Bare/Sparsely Vegetated



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Stand Boundary Map

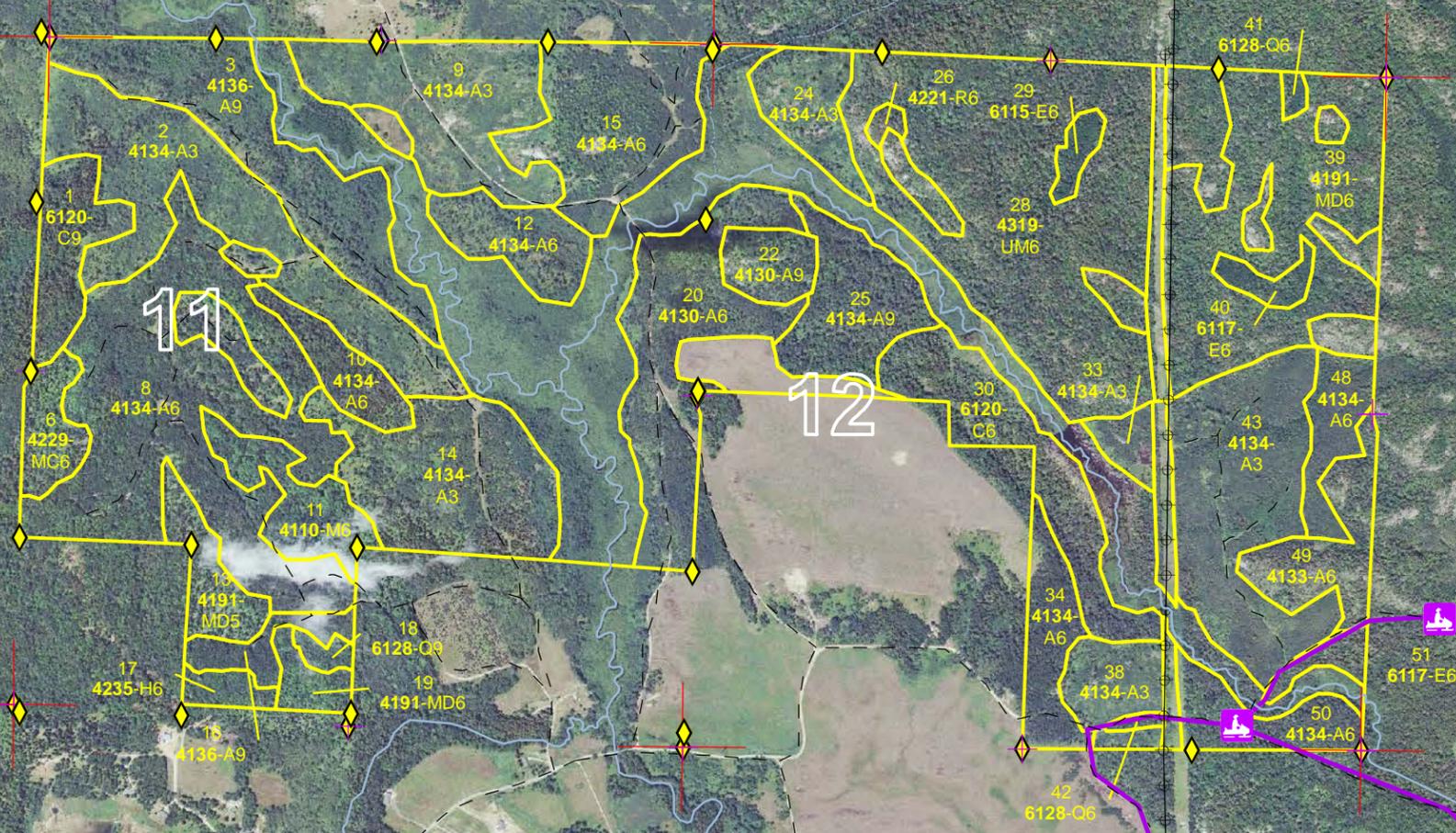
Compartment: 103
 T40N R30W Sections 11 & 12
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48°53'0"N
48°52'0"N
48°51'0"N
48°50'0"N

88°0'0"W
87°59'0"W
87°58'0"W
87°57'0"W
87°56'0"W



11 12
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1 0.5 0 1 Miles

Special Conservation Areas & Site Conditions Map

Compartment: 103
 T40N R30W Sections 11 & 12
 County: Dickinson
 Unit: Crystal Falls
 Management Area: Groveland
 YOE: 2016
 Acres: 1,020 GIS Calculated
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 Map Revised: 08/28/2014
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Stand # **23**
(412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

- Miris Corners
- + Remonumented Section Corners
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type
- Unavailable Factors
 - 2F: Too steep
 - 3J: Water quality / BMPs (stream, river, or lake)
- Dedicated Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer

45°53'0"N

45°52'0"N

45°53'0"N

45°52'0"N

88°0'0"W

87°59'0"W

87°58'0"W

87°57'0"W

87°56'0"W

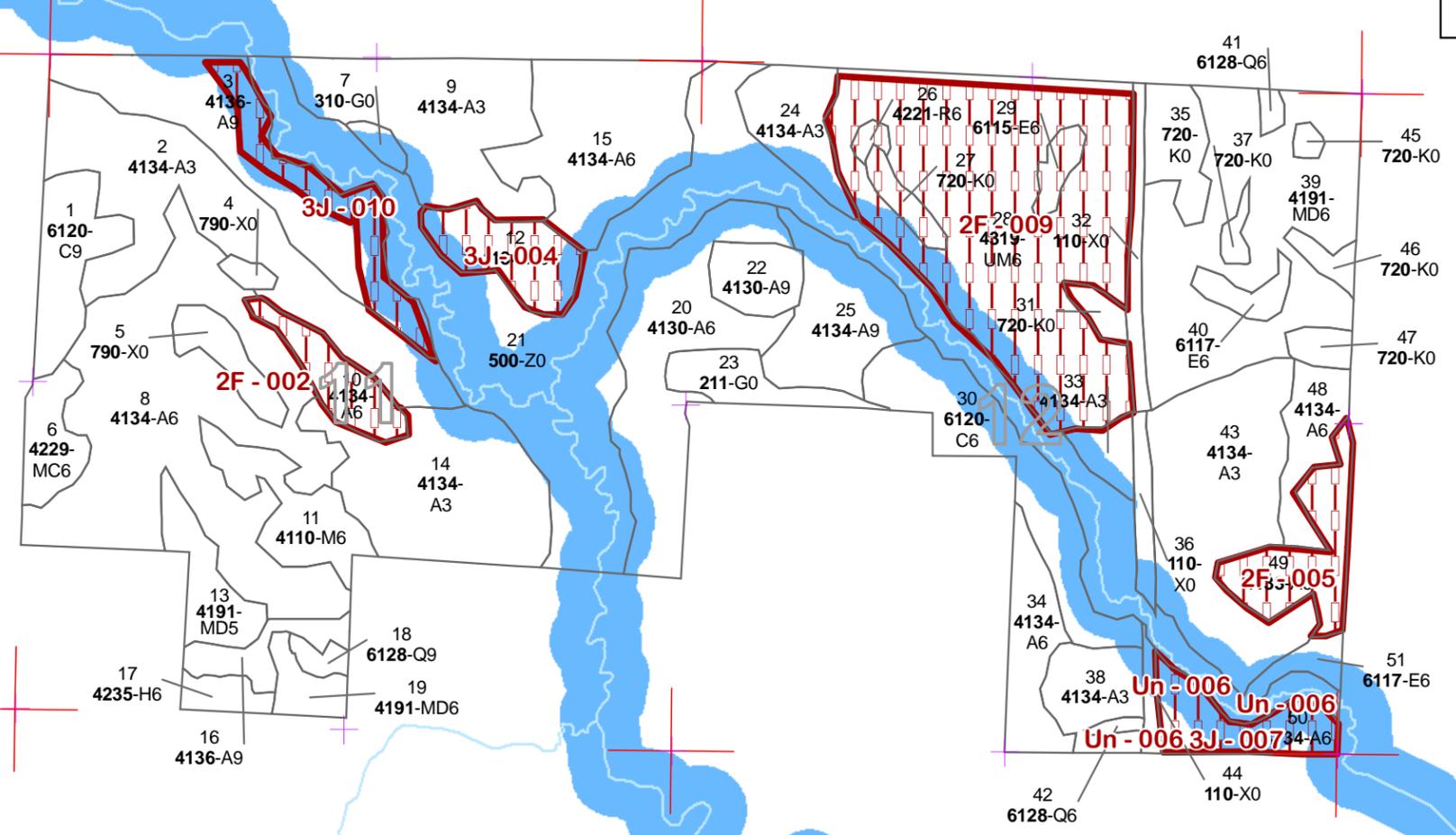
88°0'0"W

87°59'0"W

87°58'0"W

87°57'0"W

87°56'0"W



	Age Class														Total
	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 +	Uneven Age	
Aspen	118	134	0	11	144	8	0	132	0	0	0	0	0	0	547
Bare/Sparsely Vegetated	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Cedar	0	0	0	0	0	0	0	16	0	29	0	0	0	0	45
Cropland	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Exposed Rock	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Hemlock	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Conifers	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5
Lowland Deciduous	0	0	0	0	0	0	4	0	8	0	0	0	0	0	12
Mixed Upland Deciduous	0	0	0	0	0	0	0	70	0	0	0	0	0	11	81
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
Northern Hardwood	0	0	0	0	0	0	0	0	16	0	0	0	0	0	16
Red Pine	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Upland Mixed Forest	0	0	0	0	0	0	0	102	0	0	0	0	0	0	102
Urban	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Water	133	0	0	0	0	0	0	0	0	0	0	0	0	0	133
Total	314	134	0	11	144	8	6	327	25	29	0	0	0	21	1020



Report 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2016

Compartment 103
Total Compartment Acres: 1,020

Acres by Treatment Type

Commercial Harvest - 87	Tree Planting - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 10	

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen Types	82	0	0	0	0	0	82
Mixed Upland Deciduous	0	0	0	0	0	6	6
Total	82	0	0	0	0	6	87



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	12103016-Cut	7.6	4136 - Aspen, Mixed Conifer	High Density Log	58	51-80	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches or more in diameter at breast height except red and white pine, cherry, oak, elm, cedar and hemlock. Cut all spruce and										
<u>Specs:</u> balsam that is greater than 10 inches in diameter at a four inch stump										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Regen check										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
19	12103019-Cut	5.8	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	78	51-80	Harvest	Other - Specify in Comments	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> Cut live, merchantable birch and aspen. Cut all spruce and balsam greater than 10 inches in diameter at a 4 inch stump. Leave all red and										
<u>Specs:</u> white pine, cedar hemlock, cherry, oak and elm.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
22	12103022-Cut	8.9	4130 - Aspen	High Density Log	71	81-110	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches or more in diameter except red and white pine, hemlock, cedar, cherry, oak and elm. Cut all spruce and balsam that is 6										
<u>Specs:</u> inches or more in diameter at a 4 inch stump.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Regen check										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
25	12103025-Cut	22.9	4134 - Aspen, Spruce/Fir	High Density Log	76	51-80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches or more in diameter except red and white pine, hemlock, cedar, oak, cherry and elm. Cut all spruce and balsam that is 6										
<u>Specs:</u> inches or more in diameter at a 4 inch stump.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Regen check										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
23	NF_12103023- NonFor	9.6	2111 - Non- vegetated Farmland				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> Opening Maintenance										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2016										

Report 3 -- Treatments Prescribed
with No Limiting Factor



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
Total Treatment Acreage Proposed:		54.8							

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3 12103003-Cut	42.1	4136 - Aspen, Mixed Conifer	High Density Log	77	81-110	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription Cut all trees 2 inches or larger except cedar, hemlock, oak, elm , cherry and red or white pine.

Specs:

Other

Comment:

Next Regen check per certification

Steps:

Proposed

Start Date: 10/01/2015

Limiting Factor

3J: Water quality / BMPs (stream, river, or lake)

**Total Treatment
Acreage Proposed: 42.1**

Report 5 – Site Conditions

Crystal Falls Mgt. Unit
Linda Lindberg : Examiner

Compartment 103
Year of Entry 2016

Availability for Management

Total Acres	Acres		Dominant Site Conditions	Dominant Site Conditions			
	Available	Not Available		Un	No	3J	2F
545	473	72	Aspen	1	473	43	28
45	45		Cedar		45		
4	4		Hemlock		4		
5	5		Lowland Conifers		5		
12	9	4	Lowland Deciduous		9		4
81	81		Mixed Upland Deciduous		81		
10	10		Natural Mixed Pines		10		
16	16		Northern Hardwood		16		
2		2	Red Pine				2
101	4	97	Upland Mixed Forest		4		97
821	647	174	Total Forested Acres	1	647	43	130
	79%	21%	Relative Percent				

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Not Available	2F: Too steep	11				
Comments: rock							
004	Not Available	3J: Water quality / BMPs (stream, river, or lake)	15	2F: Too steep			
Comments: rock and buffer							
005	Not Available	2F: Too steep	17				
Comments:							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit
Linda Lindberg : Examiner

Compartment 103
Year of Entry 2016

006	Not Available	Unspecified	1
Comments:			
007	Not Available	3J: Water quality / BMPs (stream, river, or lake)	14
Comments: steep also			
009	Not Available	2F: Too steep	107
Comments: If you put the topography layer on, you will see that this is not accessible.			
010	Not Available	3J: Water quality / BMPs (stream, river, or lake)	15
Comments: 200 foot buffer on Pine Creek			



Report 6 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	High Density Log	15.9	74	81-110	
2	4134 - Aspen, Spruce/Fir	High Density Sapling	53.1	6		
3	4136 - Aspen, Mixed Conifer	High Density Log	42.1	77	81-110	
6	42290 - Natural Mixed Pine	High Density Pole	9.7	Uneven Age	51-80	The aspen and birch was cut and the rest is left. It is basically a diverse pine stand.
8	4134 - Aspen, Spruce/Fir	High Density Pole	85.8	41		This stand seems to be different ages in different areas and I will harvest some in the southern corner but it is very diverse and very nicely done.
9	4134 - Aspen, Spruce/Fir	High Density Sapling	37.9	6		
10	4134 - Aspen, Spruce/Fir	High Density Pole	10.9	76	81-110	
11	4110 - Sugar Maple Association	High Density Pole	15.7	80	81-110	
12	4134 - Aspen, Spruce/Fir	High Density Pole	15.1	76		
13	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	11.4	Uneven Age	51-80	This was cut and residual was left
14	4134 - Aspen, Spruce/Fir	High Density Sapling	41.3	15		Conifers were left in this stand when cut to promote seeding of them in the stand because the aspen is not good quality.
15	4134 - Aspen, Spruce/Fir	High Density Pole	36.8	15		
16	4136 - Aspen, Mixed Conifer	High Density Log	7.6	58	51-80	
17	42350 - Upland Hemlock	High Density Pole	4.4	78		
18	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	2.4	75	81-110	This is a nice diverse wer in some places, dry in others but should be left.
19	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	5.8	78	51-80	
20	4130 - Aspen	High Density Pole	43.1	46		



S t a n d	Crystal Falls Mgt. Unit		Report 8 – Forested Stands			Compartment: 103 Year of Entry: 2016	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
22	4130 - Aspen	High Density Log	8.9	71	81-110		
24	4134 - Aspen, Spruce/Fir	High Density Sapling	14.1	6			
25	4134 - Aspen, Spruce/Fir	High Density Log	22.9	76	51-80		
26	42210 - Natural Red Pine	High Density Pole	1.5	66			
28	4319 - Mixed Upland Forest	High Density Pole	101.8	78	51-80		
29	6115 - Lowland Ash	High Density Pole	3.7	80		This is the area that is seemingly inaccessible	
30	6120 - Lowland Cedar	High Density Pole	29.5	95	81-110	Some of this is blown over at the bottom of the steep incline on the highland	
33	4134 - Aspen, Spruce/Fir	High Density Sapling	5.0	13			
34	4134 - Aspen, Spruce/Fir	High Density Pole	14.8	40			
38	4134 - Aspen, Spruce/Fir	High Density Sapling	13.0	6			
39	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	64.0	75	51-80	This seems quite impossible to get to to log, but closer inspection is needed.	
40	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	4.5	66		This whole area seems to be inaccessible for logging	
41	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	1.4	75		This is in the area of non-accessibility. I am going to try to get here.	
42	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	1.1	84		This is right at the base of the rock cut behind	
43	4134 - Aspen, Spruce/Fir	High Density Sapling	50.9	13			
48	4134 - Aspen, Spruce/Fir	High Density Pole	11.5	30			
49	4133 - Aspen, Mixed Pine	High Density Pole	17.6	75		What could be gotten on these rocks was and the rest is inaccessible	

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Crystal Falls Mgt. Unit

Report 8 – Forested Stands

Compartment: 103
Year of Entry: 2016



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4134 - Aspen, Spruce/Fir	High Density Pole	14.2	75		
51	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	4.3	84		This a one of a few buffers left on Upper pine creek.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	790 - Other Bare/Sparsely Vegetate	1.9	No	Unspecified	
5	790 - Other Bare/Sparsely Vegetate	7.6	No	Unspecified	
7	3102 - Grass	2.2	No	Unspecified	
21	50 - Water	133.4	No	Unspecified	
23	2111 - Non-vegetated Farmland	9.6	No	Unspecified	
27	720 - Exposed Rock	4.1	No	Unspecified	
31	720 - Exposed Rock	3.1	No	Unspecified	
32	11 - Low Intensity Urban	6.7	No	Unspecified	
35	720 - Exposed Rock	10.1	No	Unspecified	
36	11 - Low Intensity Urban	4.9	No	Unspecified	
37	720 - Exposed Rock	2.0	No	Unspecified	
44	11 - Low Intensity Urban	2.5	No	Unspecified	
45	720 - Exposed Rock	1.3	No	Unspecified	
46	720 - Exposed Rock	3.0	No	Unspecified	
47	720 - Exposed Rock	3.4	No	Unspecified	