



# Compartment Review Presentation

## Crystal Falls Forest Management Unit

Compartment 12098

Entry Year 2017

Acreage: 1,292

County Dickinson

Management Area: Groveland

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**Revision Date:** 2015-07-27

**Stand Examiner:** Linda Lindberg

### Legal Description:

T40N,R29W Sections 9 & 16

### Identified Planning Goals:

This compartment is in the Groveland Management Area. One of the goals is to work toward having aspen in all age classes, thin hardwoods when needed. Look toward increasing pine in this compartment where the terrain is extremely rugged and pine grows well. Part of the Groveland Management area is its location on a bedrock controlled ground moraine. We should work to keep drainages functioning and manage carefully around the unique lakes and pond in this compartment.

### Soil and topography:

There are many rock bluffs which make this rugged terrain. In between the rocks are the drainages.

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

This compartment is fairly contiguous in ownership with exceptions to the north near Benton Lake and to the NE.

### Unique Natural Features:

Gustafson Lake, hald of Miller Lake and the Rocky pine bluff on the east side of Benton Lake are unique.

### Archeological, Historical, and Cultural Features:

There is an archaeological site in this compartment.

### Special Management Designations or Considerations:

### Watershed and Fisheries Considerations:

This whole compartment has drainages through it and there is Cassidy Creek flowing out of Gustafson creek and a small creek flowing out of Miller Lake that runs into Cassidy Creek. Cassidy Creek is a Type I Trout Stream therefore 300 foot buffers should be implemented. Streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function. Additionally, wetlands and open waters in riparian areas and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs. BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

### Wildlife Habitat Considerations:

This compartment contains most of the Rock Lake Deeryard. The hemlock and white pine component present should be maintained and expanded in the future, if possible. Swamp conifer stands should remain intact and lowland hardwood inclusions should be protected.

### Mineral Resource and Development Concerns and/or Restrictions

Compartment 98: Sections 9 & 16, T40N R29W, Dickinson County

Surface sediments consist of thin to discontinuous glacial till over bedrock. There is insufficient data to determine the glacial drift thickness. Archean granite/gneiss underlies the glacial drift. There is not a current economic use for these rocks, but the granite/gneiss has building/dimension stone potential. Abandoned iron mines of the Iron Mountain area are located approximately four miles to the south and southwest. This compartment was previously leased for metallic mineral exploration and potential may still exist. Gravel pits are located two miles to the south in Section 29. Potential appears to be more limited for the compartment due to thinner glacial drift. There is no economic oil and gas production in the UP.

**Vehicle Access:**

The Benton Lake road is somewhat primitive and goes through much private land but is the only access into this compartment. There are several logging roads off of the Benton Lake road that will get you into the compartment.

**Survey Needs:**

Because of the contiguous ownership in this compartment, for the proposed timber sales in 2017, no survey is required.

**Recreational Facilities and Opportunities:**

There are walk-in opportunities to get to Gustafson Lake fairly easily on a bermed road. It is a little more difficult to get to Miller lake.

**Fire Protection:**

As mentioned this is a fairly accessible, yet primitive access area, but there is a lot of wet in this compartment also.

**Additional Compartment Information:**

The following reports from the Inventory are attached:

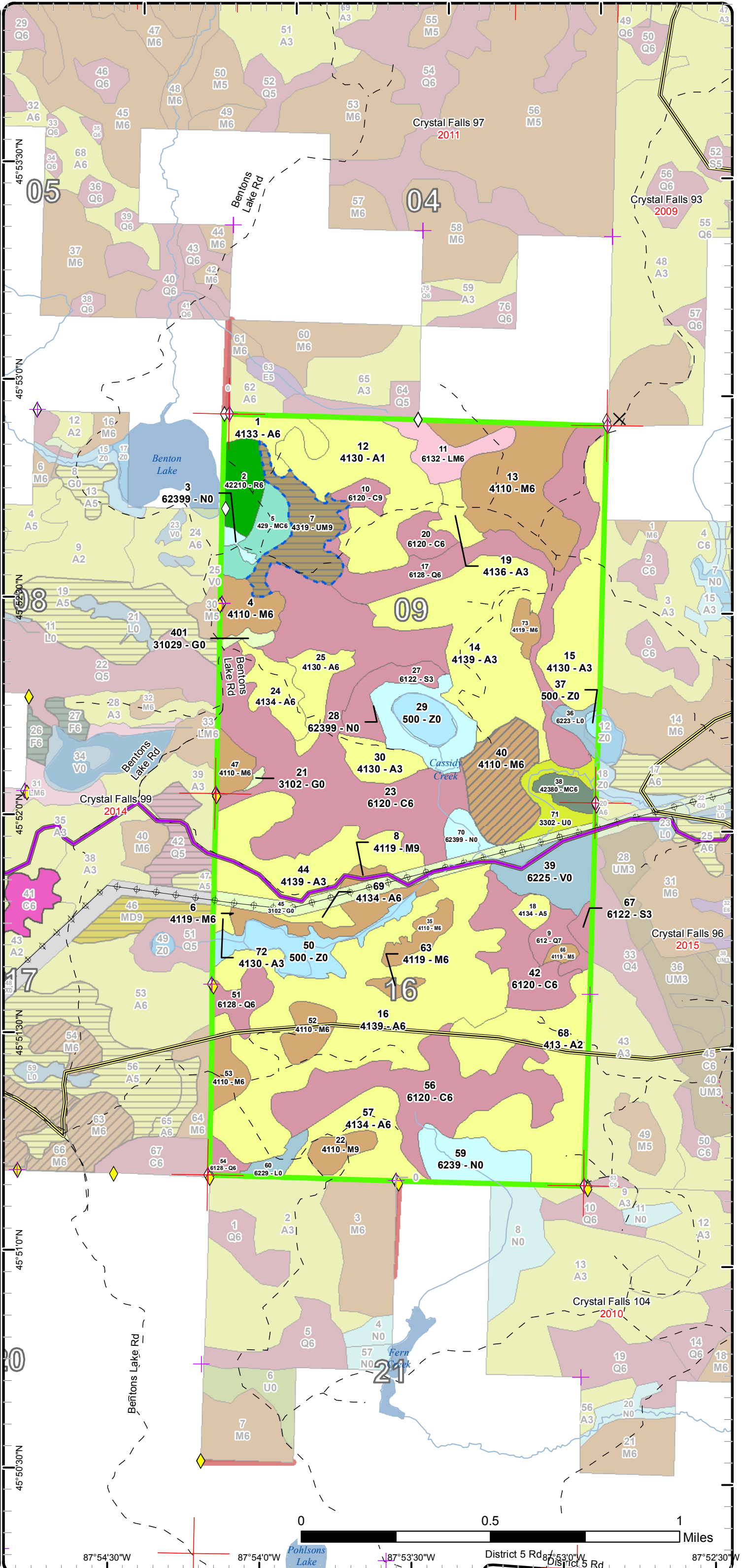
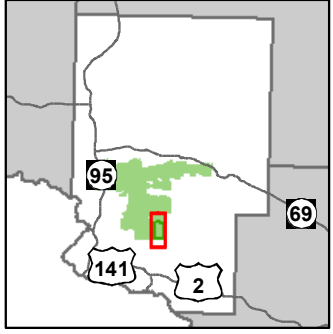
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

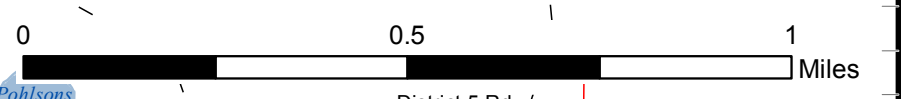
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments

Compartment: 98  
 T40N R29W 09,16  
 County: Dickinson  
 Unit: Crystal Falls  
 Mgmt Area: Groveland  
 YOE: 2017  
 Acres: 1292 GIS Calculated  
 Examiner: Linda Lindberg  
 Map Revised: 8/31/2015  
 Map Phase: Pre-Review



- ✚ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- Paved Roads
- - Poor Dirt Roads
- - - Trail (Non-Recreation)
- Yes
- ✕ Gate
- Rivers
- Lakes
- Powerline
- ▨ Treatments with Site Conditions
- Treatments
- ▨ Clearcut (w/Reserves)
- ▨ Thinning (Crown, Low, Systematic)
- Forest Cotype
- 411 - Northern Hardwood
- 413 - Aspen
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Fores
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- Non-Forest Cotype
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

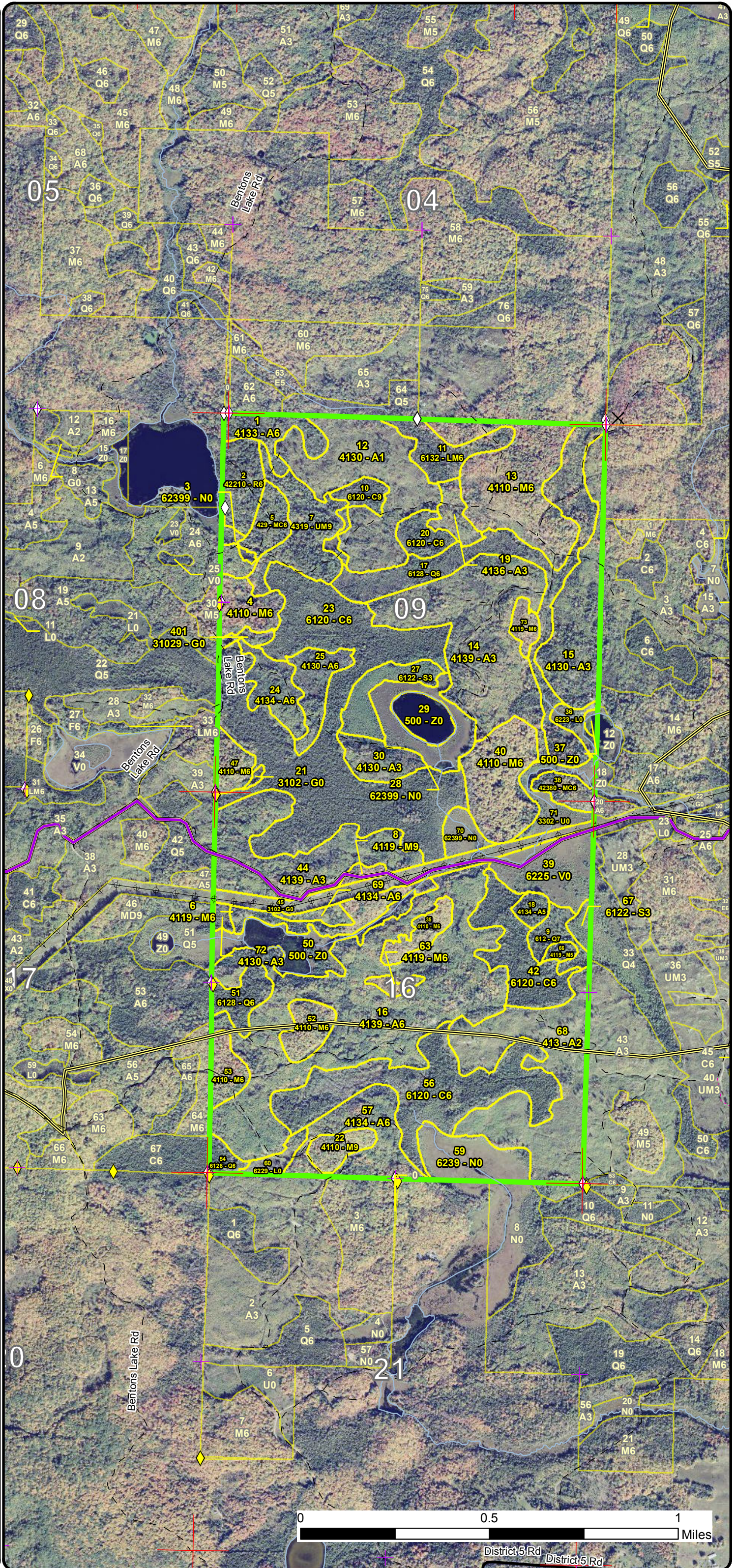
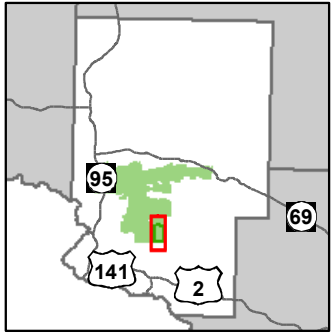


87°54'30"W 87°54'0"W 87°53'30"W 87°53'0"W 87°52'30"W



# Stand Boundary Map

Compartment: 98  
 T40N R29W 09,16  
 County: Dickinson  
 Unit: Crystal Falls  
 Mgmt Area: Groveland  
 YOE: 2017  
 Acres: 1292 GIS Calculated  
 Examiner: Linda Lindberg  
 Map Revised: 8/31/2015  
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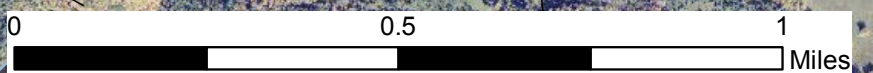
- ✚ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- Paved Roads
- - Poor Dirt Roads
- - - Trail (Non-Recreation)
- Yes
- ✕ Gate
- Rivers
- Powerline
- Stand Boundaries

### Forest Covertypes

- 411 - Northern Hardwood
- 413 - Aspen
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Fores
- 612 - Lowland Coniferous Forest

### Non-Forest Covertypes

- 613 - Lowland Mixed Forest
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

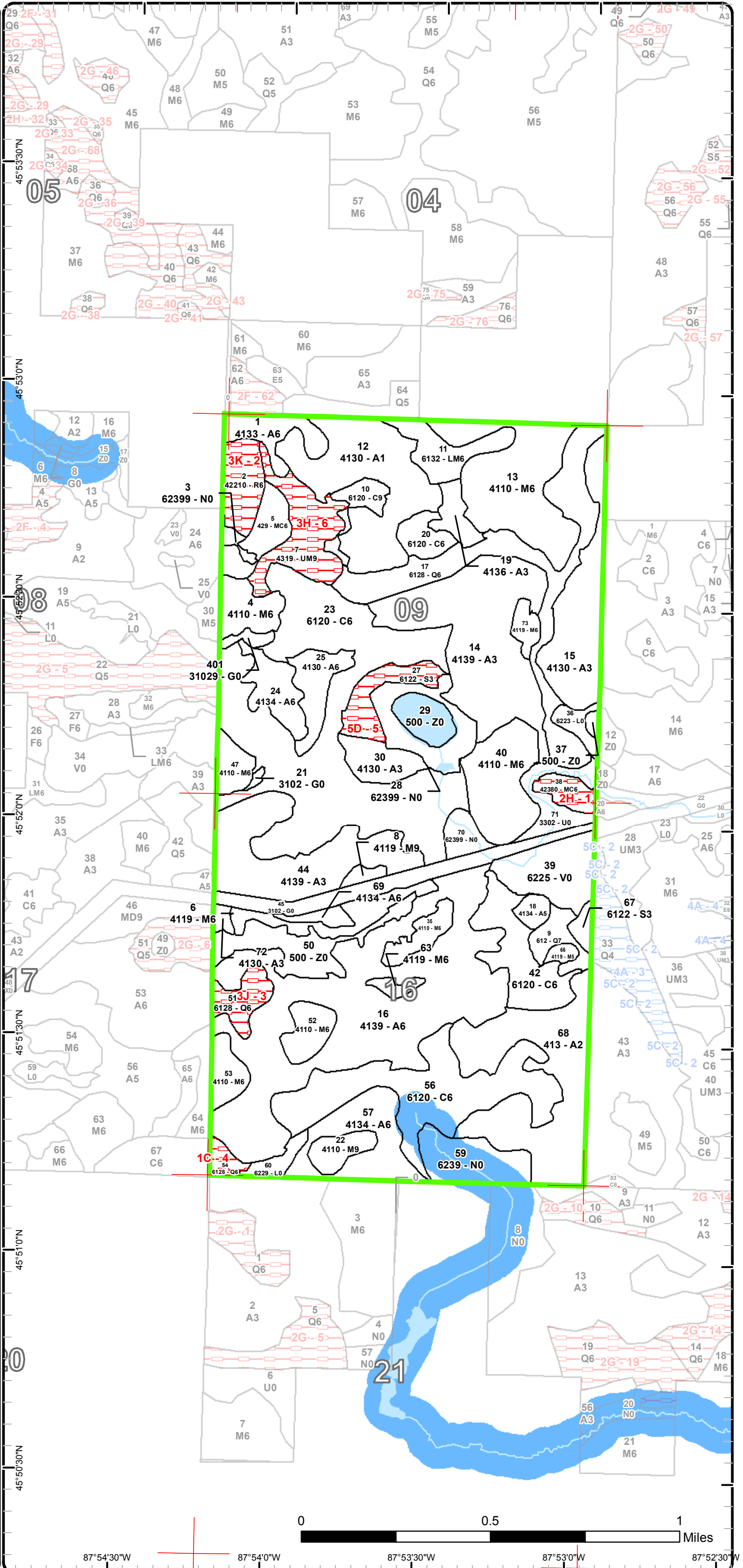
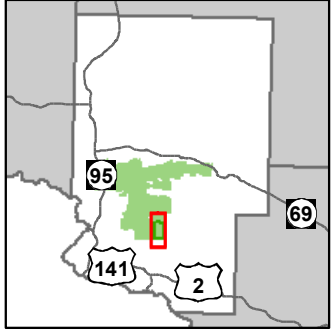


District 5 Rd  
 District 5 Rd

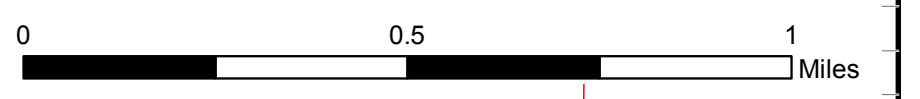


# Special Conservation Areas & Site Conditions Map

Compartment: 98  
 T40N R29W 09,16  
 County: Dickinson  
 Unit: Crystal Falls  
 Mgmt Area: Groveland  
 YOE: 2017  
 Acres: 1292 GIS Calculated  
 Examiner: Linda Lindberg  
 Map Revised: 8/31/2015  
 Map Phase: Pre-Review



- Miris Corners
- Stand Boundaries
- Site Condition
- Unavailable
- Unavailable Factors
- 1C: Other dept or div proc/practices
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3H: Deer Wintering Areas
- 3J: Water quality / BMPs (stream, river, or lake)
- 3K: Rare or unique landforms
- 5D: Unproductive Forest Land
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



87°54'30"W    87°54'0"W    87°53'30"W    87°53'0"W    87°52'30"W

Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	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+	Uneven-Aged	Total
Aspen	0	127	123	232	27	0	0	0	0	4	0	0	0	0	0	0	0	28	541
Bog	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Cedar	0	0	0	0	0	0	0	8	0	65	8	143	27	0	0	0	0	0	251
Herbaceous Openland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Low-Density Trees	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Conifers	0	0	0	0	0	0	0	55	9	0	11	0	4	0	0	0	0	0	79
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	15
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Spruce/Fir	0	0	0	0	0	0	4	0	0	14	0	0	0	0	0	0	0	0	18
Marsh	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Northern Hardwood	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	162	167
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15
Upland Conifers	0	0	0	0	13	0	0	0	0	7	0	0	0	0	0	0	0	0	20
Upland Mixed Forest	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	26
Water	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
<b>Total</b>	<b>158</b>	<b>127</b>	<b>123</b>	<b>232</b>	<b>40</b>	<b>0</b>	<b>4</b>	<b>89</b>	<b>9</b>	<b>110</b>	<b>19</b>	<b>143</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>205</b>	<b>1290</b>



## Report 2 – Treatment Summary

Crystal Falls Mgt. Unit  
Year of Entry: 2017

Compartment 98  
Total Compartment Acres: 1,292

### Acres of Harvest

Commercial Harvest - 31  
Harvests with Site Condition - 26  
Next Step Harvest - 26  
Habitat Cut -

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Northern Hardwood	0	0	0	0	31	0	0	0	0	31
Upland Mixed Forest	26	0	0	0	0	0	0	0	0	26
<b>Total</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	57	0	0	0	0	0	0	0	0	57
Next Step	26	0	0	0	0	0	0	0	0	26
<b>Total</b>	<b>84</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
7	12098007-3- New	0.0	4319 - Mixed Upland Forest	Sawtimber Well	60	81-110		ERROR	Unspecified		Incomplete Proposal
<b>Habitat Cut: Yes</b>			<b>Site Condition: Deer Wintering Area</b>								
<u>Prescription</u>											
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u>											
<u>Regen:</u>											
<u>Other</u> Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											
7	12098007-Cut	26.3	4319 - Mixed Upland Forest	Sawtimber Well	60	81-110	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Approved Proposal
<b>Habitat Cut: No</b>			<b>Site Condition: Deer Wintering Area</b>								
<u>Prescription</u> Cut all trees that are 2 inches or greater except red and white pine, cedar, hemlock, cherry, oak and, elm. Cut all spruce and balsam that is 6											
<u>Specs:</u> inches or greater at a 4 inch stump. Leave all pine on rock top as thinning it would cause possible collapse of stand. There are wet areas and rocks that will have to be taken out of this stand and that will decrease the volume and the acres. This includes black ash swales, cedar or any swamp situation or drainage.											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> aspen											
<u>Regen:</u>											
<u>Other</u> Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											
40	12098040-Cut	31.0	4110 - Sugar Maple Association	Poletimber Well	85	81-110	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven- Aged	Approved Proposal
<b>Habitat Cut: No</b>			<b>Site Condition:</b>								
<u>Prescription</u> Thin stand to 80 BA taking all high risk trees, Leave crop trees with two main competitors if they are 9 inches or larger in diameter, and if less											
<u>Specs:</u> than 8 inches in diameter thin around tree											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u> maple, ash											
<u>Regen:</u>											
<u>Other</u> Buffer along creek Old next step comments:											
<u>Comment:</u>											
<u>Proposed Start Date:</u> 10/1 /2016											
<b>Total Treatment Acreage Proposed:</b>		<b>57.3</b>									



## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Linda Lindberg : Examiner

Compartment: 98  
Year of Entry: 2017

### Dominant Site Conditions

	1C	2H	3H	3J	3K	5D
Aspen						
Bog						
Cedar						
Herbaceous Openland						
Low-Density Trees						
Lowland Conifers	4			11		
Lowland Mixed Forest						
Lowland Shrub						
Lowland Spruce/Fir						14
Marsh						
Northern Hardwood						
Red Pine					15	
Upland Conifers		7				
Upland Mixed Forest			26			
Water						
Total Forested Acres	4	7	26	11	15	14
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
1	Unavailable	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	7	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> You cannot get to this stand to log it due to Cassidy Creek and steep sides to the stand where the wet area is least wide							
2	Unavailable	<b>3K: Rare or unique landforms</b>	15	3D: Recreational / Scenic values	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This stand can be viewed from the boat landing of Benton Lake. The main part of the stand is on a huge rock and is pine. It seems if you thinned the pine and took out the other species it would cause the residual to be unstable and blow over.							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Linda Lindberg : Examiner

Compartment: 98  
Year of Entry: 2017

3	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	11	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
<b>Comments:</b> The dominant species in this stand is hemlock and cedar. There is not much else left and this is also drainage from the pond north in stand 50							
4	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> The main species in this stand is cedar and there is drainage on the south side of the stand.							
5	<b>Unavailable</b>	<b>5D: Unproductive Forest Land</b>	14	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This is small and somewhat a buffer. I believe it is old but very condensed.							
6	<b>Unavailable</b>	<b>3H: Deer Wintering Areas</b>	26	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							



Mgt. Unit

Compartment: #Type!

Year of Entry:



## 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
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Comments

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**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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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	Crystal Falls Mgt. Unit		Report 8 – Forested Stands			Compartment: 98 Year of Entry: 2017
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4133 - Aspen, Mixed Pine	Poletimber Well	13.2	39	51-80	OPIC - FMD: LONG RANGE CONVERSION TO RED PINE That is a good goal, but if cut again it will be diverse like it is now.
2	42210 - Natural Red Pine	Poletimber Well	14.9	100	81-110	OPIC - FMD: Remove aspen and birch, thin pine to 120 sq ft. check mnfi. This never got cut and since it is up on the rocks and has the full view of the lake and the residual would probably blow down, it should be left for seed and buffer and aesthetics.
4	4110 - Sugar Maple Association	Poletimber Well	12.9	85	51-80	OPIC - FMD: check mnfi, protect any hemlock, cedar or white pine component in this stand. Stand was thinned summer 2009 the current in understory is Ribes or gooseberry
5	429 - Mixed Upland Conifers	Poletimber Well	13.4	39	51-80	OPIC - FMD: LONG RANGE CONVERSION TO RED PINE This also will continue to be very diverse
6	4119 - Mixed Northern Hardwoods	Poletimber Well	14.1	85	51-80	Very steep and unharvestable down to the water at the bottom. Some wet inclusions also.
7	4319 - Mixed Upland Forest	Sawtimber Well	26.3	60	81-110	OPIC - FMD: VERY TOUGH-MANY BLUFFS AND WET LANDS. MIXED PINE ON SEVERAL BLUFFS. Otto was right about this stand but some of it can be cut. There will be a lot of inclusions that are wet and/or rocky that will not be able to be included and will cut the acreage down.
8	4119 - Mixed Northern Hardwoods	Sawtimber Well	2.7	85	51-80	
9	612 - Lowland Coniferous Forest	Sawtimber Poor	9.0	77	51-80	OPIC - FMD: check mnfi, hold any white pine, cedar or hemlock component in this stand protect drainages and seeps. The snowmobile trail may be crossed, but do not use it for a skid trail Stand cut summer 2008. This was proposed to be cut, but after looking at it, was decided not to be so I will not cut it either and believe it has low basal area
10	6120 - Lowland Cedar	Sawtimber Well	7.8	90	51-80	OPIC - FMD: OI Stand Year Origin was 1900
11	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	15.3	86	51-80	OPIC - FMD: OI Stand Year Origin was 1900
12	4130 - Aspen	Sapling Poor	56.8	7	Immature	
13	4110 - Sugar Maple Association	Poletimber Well	52.2	85	81-110	OPIC - FMD: check mnfi, Protect any white pine or hemlock component in this stand, protect drainages and seeps. Stand was thinned summer 2009.
14	4139 - Aspen, Mixed Deciduous	Sapling Well	75.9	19	51-80	This stand has many wet areas and rocky areas and the road through winds between the rocks
15	4130 - Aspen	Sapling Well	39.5	19	Immature	OPIC - FMD: STAND CUT IN 1996



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4139 - Aspen, Mixed Deciduous	Poletimber Well	147.8	25	1-50	OPIC - FMD: OI Stand Year Origin was 1990. Some of this stand has the drainage running through it. It was cut but Mature trees were left where the water runs through.
17	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	55.3	66	51-80	OPIC - FMD: OI Stand Year Origin was 1900 This is basically drainage all the way into Miller Lake
18	4134 - Aspen, Spruce/Fir	Poletimber Medium	4.2	85	51-80	This is a high piece of ground in the middle of a swamp so it will not be cut as there is more than enough wet cut in this compartment and the cedar will not be compromised. Besides it is a high spot.
19	4136 - Aspen, Mixed Conifer	Sapling Well	7.7	19	Immature	OPIC - FMD: STAND CUT IN 1996 This was mostly a fir stand and I left it separated because it will likely return to fir
20	6120 - Lowland Cedar	Poletimber Well	8.3	65	51-80	
22	4110 - Sugar Maple Association	Sawtimber Well	8.1	85	81-110	
23	6120 - Lowland Cedar	Poletimber Well	143.0	100	51-80	OPIC - FMD: OI Stand Year Origin was 1900 This is a huge drainage that was cut through in some areas but is fairly intact for the most part and is mostly cedar.
24	4134 - Aspen, Spruce/Fir	Poletimber Well	14.3	23	Immature	
25	4130 - Aspen	Poletimber Well	13.8	39	51-80	
27	6122 - Black Spruce	Sapling Well	13.9	89	1-50	OPIC - FMD: This looks like a flood zone, flooded by beavers occasionally These trees would be fun to core with a electron microscope because I bet they are even older than 89
30	4130 - Aspen	Sapling Well	12.2	23	Immature	This is fairly open near the lake with a lot of cherry and conifers but savannah like. the south part is fairly solid aspen
35	4110 - Sugar Maple Association	Poletimber Well	8.5	85	81-110	It is quite an effort to get here, and isn't worth going to until the aspen is ready to cut again. There is some steepness to the stand.
38	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Well	7.3	80	51-80	OPIC - FMD: This is a rock ridge with conifer on the south side and hdwds on the north face Looking at from stand 40, this is not worth fighting to access for lack of volume and species. It seems open toward the middle
40	4110 - Sugar Maple Association	Poletimber Well	31.0	85	81-110	OPIC - FMD: stand cut in 2000 as Benton Half sale # 26-97-01 (12-2001) This fair quality hdwd has a strip of aspen on the south. It would probably be worth leaving this for next time since the basal area isn't that high.





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	6120 - Lowland Cedar	Poletimber Well	27.1	115	51-80	OPIC - FMD: OI Stand Year Origin was 1900
44	4139 - Aspen, Mixed Deciduous	Sapling Well	51.2	25	Immature	OPIC - FMD: OI Stand Year Origin was 1990
47	4110 - Sugar Maple Association	Poletimber Well	7.8	85	81-110	OPIC - FMD: check mnfi, protect any white pine, cedar or hemlock component in this stand.
51	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	10.5	92	51-80	OPIC - FMD: OI Stand Year Origin was 1900 This is drainage from the pond that is northeast of this stand
52	4110 - Sugar Maple Association	Poletimber Well	10.3	85	51-80	OPIC - FMD: check mnfi, hold any cedar, hemlock or white pine in this stand. Stand thinned 2008. There is a trail through the stand that goes to the pond up north of the stand
53	4110 - Sugar Maple Association	Poletimber Well	8.9	85	51-80	OPIC - FMD: check mnfi, protect any hemlock, cedar or white pine component in this stand . Stand thinned 2008.
54	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	4.3	115	51-80	OPIC - FMD: OI Stand Year Origin was 1900 This stand has a mixture of species around the edge but is more cedar in the middle
56	6120 - Lowland Cedar	Poletimber Well	65.3	89	51-80	OPIC - FMD: OI Stand Year Origin was 1900 Some of this stand has died and has drained down into stand 60 then to 54
57	4134 - Aspen, Spruce/Fir	Poletimber Well	28.5	23	51-80	
63	4119 - Mixed Northern Hardwoods	Poletimber Well	3.0	85	81-110	OPIC - FMD: rocky north slope Valley through the middle of the stand
66	4119 - Mixed Northern Hardwoods	Poletimber Medium	2.3	178	1-50	OPIC - FMD: rocky tops This seems to be a rock outcrop with spruce and some hardwood on it. Good "leave" area.
67	6122 - Black Spruce	Sapling Well	3.5	53	51-80	OPIC - FMD: OI Stand Year Origin was 1962 It is hard to know how old this is, but it is not harvestable.
68	413 - Aspen	Sapling Medium	69.7	7	Immature	OPIC - FMD: check mnfi, hold any white pine, cedar or hemlock component in this stand protect drainages and seeps. The snowmobile trail may be crossed, but do not use it for a skid trail Stand cut summer 2008. I observed this stand two years ago when I was in comp 96.
69	4134 - Aspen, Spruce/Fir	Poletimber Well	4.0	25	1-50	OPIC - FMD: OI Stand Year Origin was 1990
72	4130 - Aspen	Sapling Well	2.0	25	Immature	OPIC - FMD: OI Stand Year Origin was 1990

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Crystal Falls Mgt. Unit

Report 8 – Forested Stands

Compartment: 98  
Year of Entry: 2017



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
73	4119 - Mixed Northern Hardwoods	Poletimber Well	5.0	85	51-80	Just a rock with hardwood on top. Not operable



Stand	Cover Type	Acres	Managed Site	General Comments:
3	62399 - Marsh (OI)	2.4	No	This is the low area coming from Benton Lake
21	3102 - Grass	0.9	No	There are many conifers we could see from afar.
28	62399 - Marsh (OI)	19.3	No	OPIC - FMD: a fine stand of hippie heads of grass :-) This has some scattered tamarack, R. Pine, Black Spruce, cedar and cherry and tag alder
29	500 - Water	10.2	No	OPIC - FMD: Gustafson lake Boggy around the edge but clear blue water in the middle with Cassiday Creek on the south side.
36	6223 - Inundated Shrub Swamp	5.2	No	This has a few trees and a creek going in or out
37	500 - Water	1.4	No	OPIC - FMD: Miller lake. A real beauty set in the rugged precambrian basalts Lily pads and lots of frogs
39	6225 - Bog	24.4	No	OPIC - FMD: a fine stand of grass Fairly boggy and wet with creek running in and out of the power line
45	3102 - Grass	23.6	No	OPIC - FMD: power line right of way There is a combination of rock, wet, grass etc with the power lines over all
50	500 - Water	22.4	No	OPIC - FMD: beaver flooding Nice pond. There was a deer laying in the shallow part when I was there.
59	6239 - Mixed Emergent Wetland	21.0	No	This stand is another drainage.
60	6229 - Mixed lowland shrub	5.2	No	This had trees but they all have died and there is a creek running across the road. Probably drainage that came from stand 56
70	62399 - Marsh (OI)	7.0	No	OPIC - FMD: a fine stand of grass A creek runs through it Cassidy Creek
71	3302 - Low Density Conifer Trees	12.8	No	OPIC - FMD: a fine stand of grass This was observed last year from up on the rocks in comp 96 A creek runs through it.
401	31029 - Grass (OI)	2.7	No	There is a low area in this stand that has cattails and some highland cedar near it.