



**Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #85 Entry Year: 2014
Compartment Acreage: 1112 County: Dickinson**

Revision Date: May 8, 2012

Stand Examiner: Linda Lindberg

Legal Description: T41N, R29W Sections 25 and 26

RMU (if applicable): Text

Management Goals: In this compartment, there is a large amount of rock outcrops that deem the land inaccessible. A fine job has been done to both access and divide the land between Whiskey Creek and the unruly ground. A good mixture of age classes in aspen are present right now with a dry mesic soil type that leans to conifer types. It would bode well to move the land back to more conifers with a mixture of aspen and some more solid stands of red pine. There is oak in here also and a few swamp areas that have been left after cutting through some of them for the aspen acres. The ones that are left have a large amount of cedar or are creek buffers or both.

Soil and Topography: The main soil is Pemene-Rock Outcrop complex, and Zimmerman-Rock outcrop complex with some Vilas Loamy sand and even that has 18-35% slopes. Timber has been harvested here but there have been and will be challenges and some places are just inaccessible.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is fairly contiguous with a few private pieces along the edge both to the north and by Lyons Lake which is north also.

Unique, Natural Features: Just an over abundance of rocky outcrops.

Archeological, Historical, and Cultural Features: Text

Special Management Designations or Considerations: Text

Watershed and Fisheries Considerations: Lyons lake to the NE with no real access and Whiskey Creek which runs through the compartment.

Wildlife Habitat Considerations: This compartment is within the Rock Lake Deeryard Restoration Project Area where management emphasis is on the enhancement of upland and lowland conifer associations. This is a long term landscape scale project to enhance the ability of the area to support wintering whitetails. Stands throughout this compartment have a significant naturally occurring red and white pine component.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of thin to discontinuous glacial till over bedrock. There is insufficient data to determine the glacial drift thickness. The Precambrian Archean granite/gneiss outcrops beneath the glacial drift. There is not a current economic use, although there might have dimension stone potential. The Hancock iron mine is located approximately four miles to the east. Part of this compartment was previously leased for metallic exploration and potential may still exist. A gravel pit is located three miles to the northeast and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access: The main access into this compartment is from the Lyons lake road. Otherwise, there is a ATV trail that is challenging in areas that goes through the compartment.

Survey Needs: There may be a slight need for survey here.

Recreational Facilities and Opportunities: Text

Fire Protection: Text

Additional Compartment Information: Text

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential old growth**

Cover Type & Treatment Map

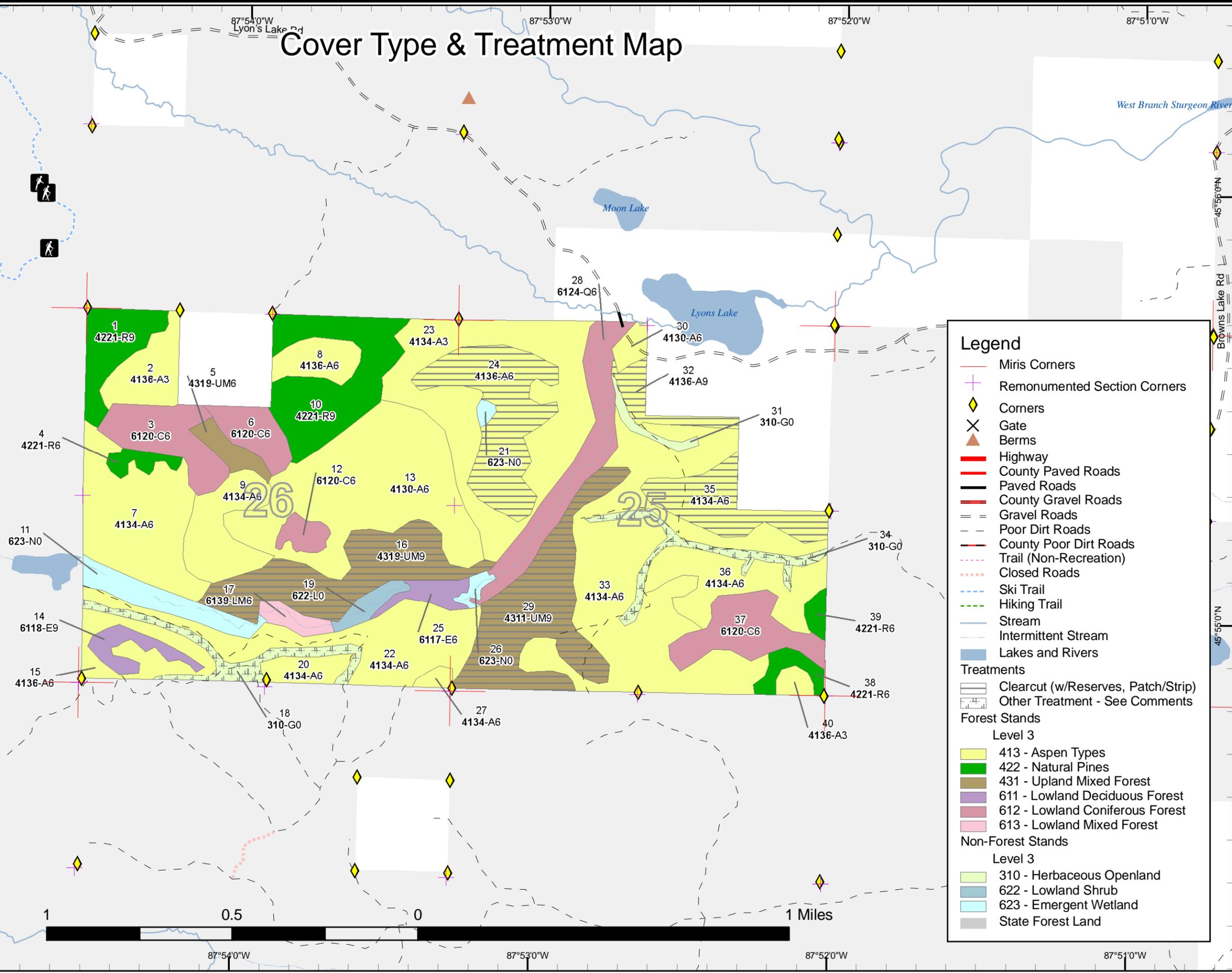
Compartment: 085
 T41N R29W Sec. 25, 26
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2014
 Acres: 1,112 GIS Calculated
 Examiner: Linda Lindberg
 Map Revised: 07/13/2012
 Map Phase: Pre-Review

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



26 25





Legend

- Miris Corners
- Remonumented Section Corners
- Corners
- Gate
- Berms
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Ski Trail
- Hiking Trail
- Stream
- Intermittent Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Other Treatment - See Comments

Forest Stands

Level 3

- 413 - Aspen Types
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- State Forest Land

Stand Boundary Map

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



26 25



Legend

- Remonumented Section Corners
- Miris Corners
- Corners
- Gate
- Berms
- Bridges
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Ski Trail
- Hiking Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

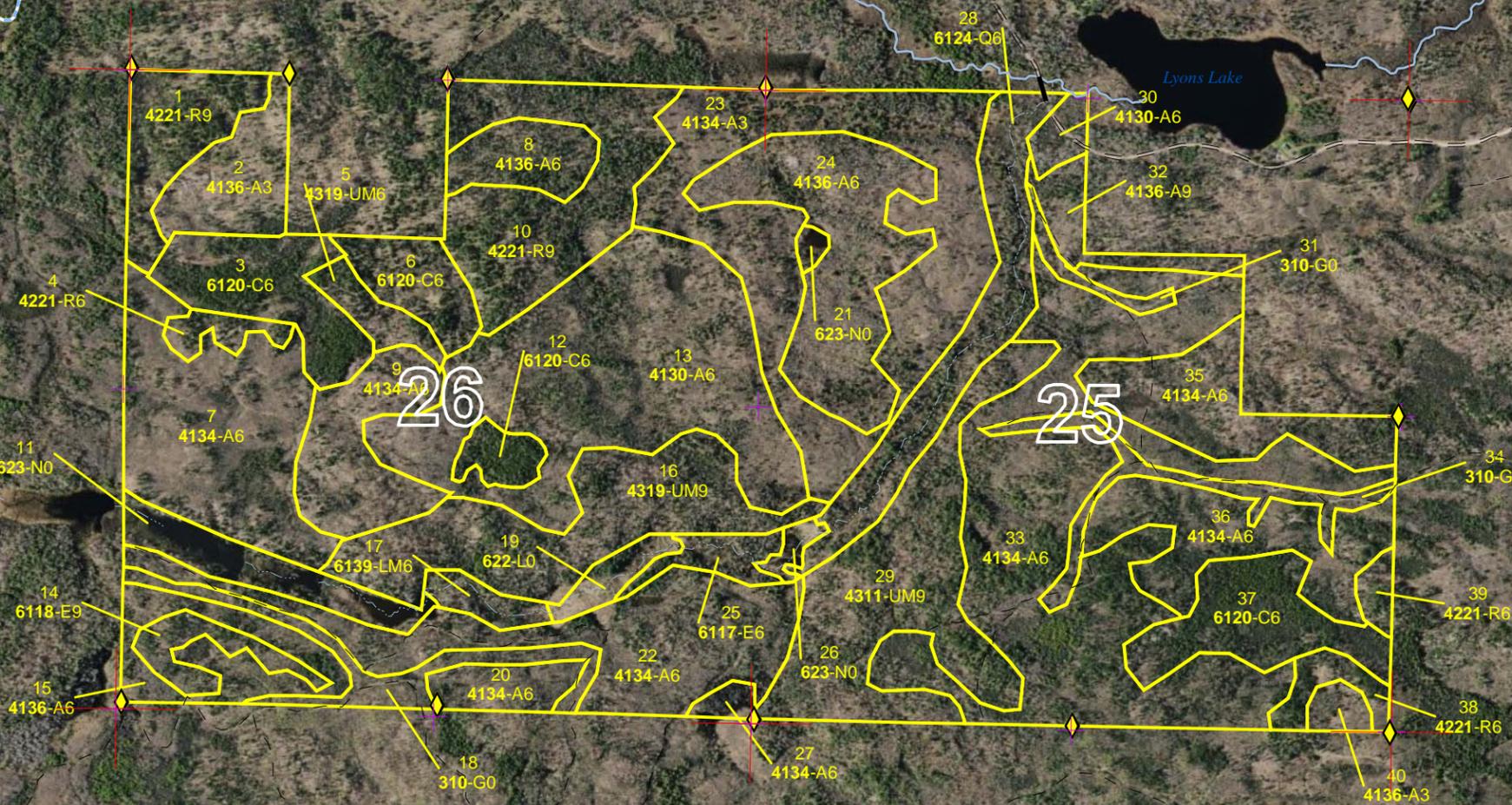
Level 3

- 413 - Aspen Types
- 422 - Natural Pines
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Non-Forest Stands

Level 3

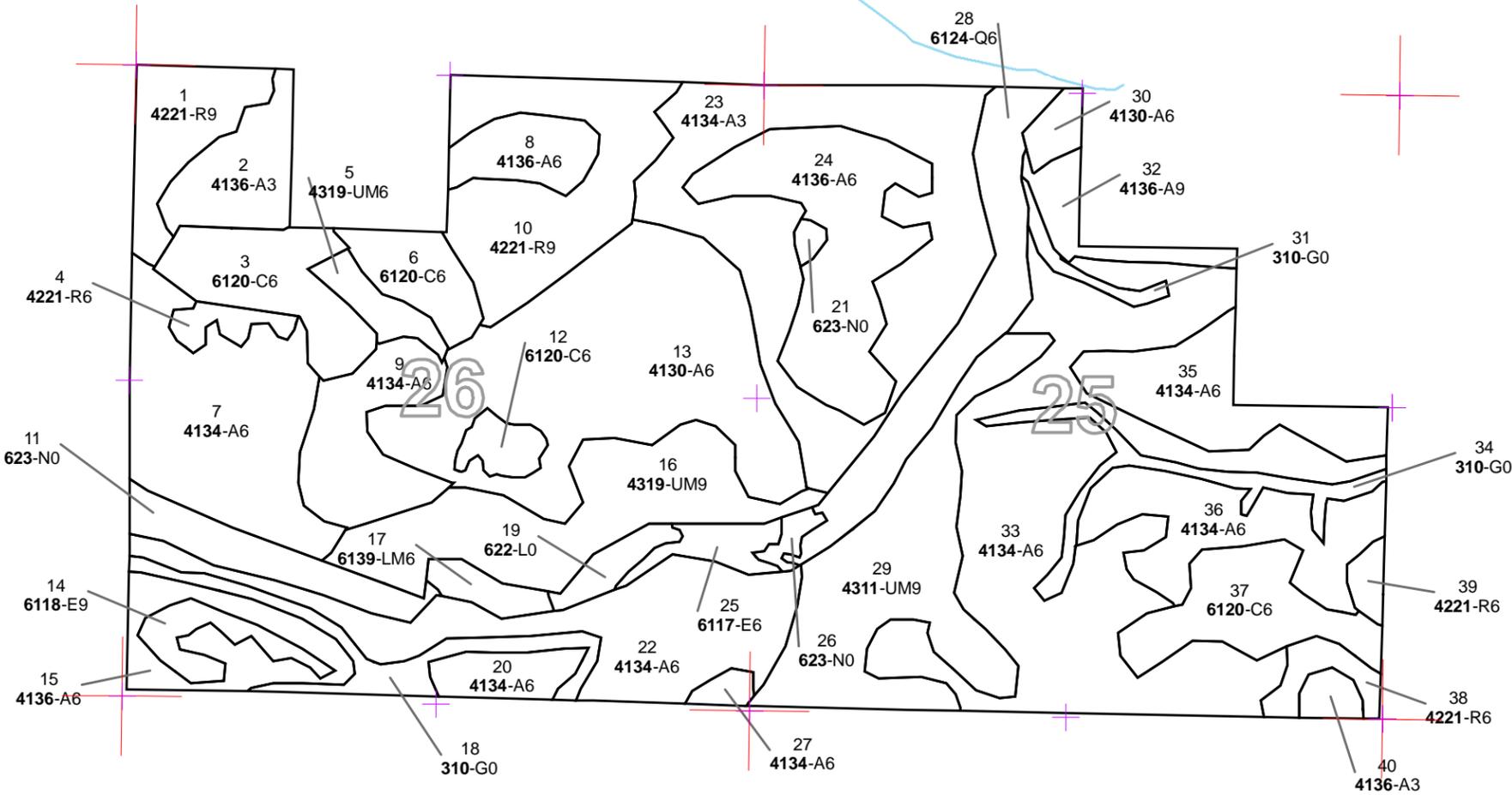
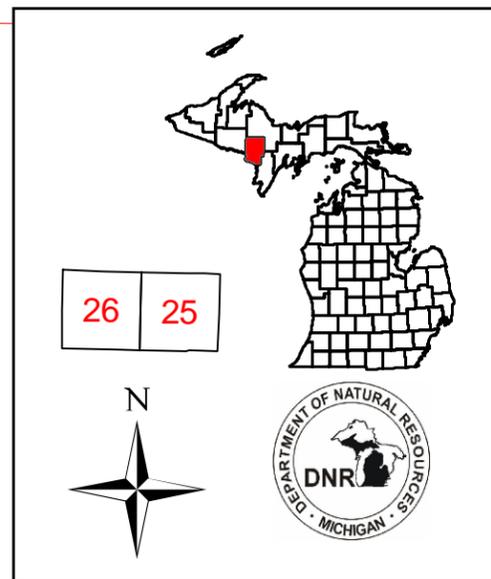
- 310 - Herbaceous Openland
- 622 - Lowland Shrub
- 623 - Emergent Wetland



Dedicated & Proposed Special Conservation Area Map

Compartment: 085
 T41N R29W Sec. 25, 26
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2014
 Acres: 1,112 GIS Calculated
 Examiner: Linda Lindberg
 Map Revised: 07/13/2012
 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
 - Stand Boundaries
 - ▭ Dedicated Special Conservation Areas
 - Cold Water Streams
 - Forest Stands**
 - Level 3
 - 413 - Aspen Types
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
 - Non-Forest Stands**
 - Level 3
 - 310 - Herbaceous Openland
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland



87°55'0"W 87°54'0"W 87°53'0"W 87°52'0"W 87°51'0"W

45°56'0"N

45°55'0"N

45°56'0"N

45°55'0"N

Table 1 – Total Acres by Cover Type and Age Class



	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	21	95	60	419	53	0	0	42	0	0	0	0	0	0	690
Cedar	0	0	0	0	0	0	0	0	0	78	0	0	0	0	78
Herbaceous Openland	35	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Lowland Conifers	0	0	0	0	0	0	0	0	0	38	0	0	0	0	38
Lowland Deciduous	0	0	0	0	0	0	0	10	0	8	0	0	0	0	18
Lowland Mixed Forest	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
Lowland Shrub	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Marsh	23	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Red Pine	0	0	0	0	0	0	0	17	0	73	0	0	0	0	89
Upland Mixed Forest	0	0	0	0	0	0	0	128	0	0	0	0	0	0	128
Total	85	95	60	419	53	0	0	204	0	196	0	0	0	0	1112



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2014

Compartment 085
Total Compartment Acres: 1112

Acres by Treatment Type

Commercial Harvest - 216	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 35	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	95	0	0	0	0	0	95
Upland Mixed Forest	120	0	0	0	0	0	120
Total	216	0	0	0	0	0	216



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	12085016-Cut	56.0	4319 - Mixed Upland Forest	High Density Log	78		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches and larger except red and white pine, hemlock, cedar, oak, cherry, and elm. Cut all spruce and balsam that is 6 inches or <u>Specs:</u> larger at a 4 inch stump. Wet areas would be used for retention.										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> Regen check according to certification <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
24	12085024-Cut	53.2	4136 - Aspen, Mixed Conifer	High Density Pole	49	51-80	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription</u> Clearcut all trees 2 inches and over except oak, red and white pine, hemlock, cedar, cherry, elm, and spruce and balsam less than 12 inches in <u>Specs:</u> diameter at a 4 inch stump.										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> Check Regen Timeclock <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
29	12085029-Cut	64.3	4311 - Pine, Aspen Mix	High Density Log	75	51-80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches and larger except red and white pine, hemlock, cedar, oak, cherry and elm. Cut all spruce and balsam that is 6 inches and <u>Specs:</u> larger at a 4 inch stump. Wet areas would be used for retention.										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
32	12085032-Cut	10.8	4136 - Aspen, Mixed Conifer	High Density Log	74	51-80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches and larger except oak, red and white pine, elm, cherry, hemlock and cedar. Cut all spruce and balsam that are greater <u>Specs:</u> than 6 inches at a 4 inch stump.										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> Regen check per work instructions <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
35	12085035-Cut	31.4	4134 - Aspen, Spruce/Fir	High Density Pole	75	81-110	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches and larger except red and white pine, hemlock, cedar, oak, cherry and elm. Cut all spruce and balsam 6 inches or larger at <u>Specs:</u> a 4 inch stump. Wet areas left for retention.										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> Regen check according to certification <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	NF_12085018- NonFor	16.9	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> Disk, Seed and Fertilize hunter walking trail with approved seed mixture										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										
34	NF_12085034- NonFor	14.0	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> Disk, Seed, Fertilize with approved Seed Mixture.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										
<hr/>										
Total Treatment Acreage Proposed:		246.6								

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

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Error

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 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		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 devastation. Create canopy gaps for regeneration

Other Comments:

Next Steps: Regen check according to certification

Proposed Start Date: 10/01/2013

Total Treatment Acreage Proposed: 31.4



Stand	Crystal Falls Mgt. Unit			5 – Forested Stands		Compartment: 085 Year of Entry: 2014
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	High Density Log	22.2	94	51-80	
2	4136 - Aspen, Mixed Conifer	High Density Sapling	20.7	7		
3	6120 - Lowland Cedar	High Density Pole	27.7	98	51-80	
4	42210 - Natural Red Pine	High Density Pole	5.6	75	81-110	
5	4319 - Mixed Upland Forest	High Density Pole	8.0	75		
6	6120 - Lowland Cedar	High Density Pole	15.0	98	171-200	
7	4134 - Aspen, Spruce/Fir	High Density Pole	60.4	24		
8	4136 - Aspen, Mixed Conifer	High Density Pole	14.6	34		
9	4134 - Aspen, Spruce/Fir	High Density Pole	28.2	34		
10	42210 - Natural Red Pine	High Density Log	50.3	98		
12	6120 - Lowland Cedar	High Density Pole	6.7	98		
13	4130 - Aspen	High Density Pole	105.6	34		
14	6118 - Lowland Deciduous with Cedar	High Density Log	10.0	75		
15	4136 - Aspen, Mixed Conifer	High Density Pole	21.4	34		
16	4319 - Mixed Upland Forest	High Density Log	56.0	78		
17	6139 - Mixed Lowland Forest	High Density Pole	6.6	78	81-110	
20	4134 - Aspen, Spruce/Fir	High Density Pole	10.3	34		
22	4134 - Aspen, Spruce/Fir	High Density Pole	58.0	34		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4134 - Aspen, Spruce/Fir	High Density Sapling	90.5	17		
24	4136 - Aspen, Mixed Conifer	High Density Pole	53.2	49	51-80	This is 49 years old which ordinarily could still grow especially with the bigtooth aspen in it but the drought has weakened it and trees are falling down so it would be best to cut leaving conifers since it is a sandy site.
25	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.9	90		
27	4134 - Aspen, Spruce/Fir	High Density Pole	2.9	34		
28	6124 - Lowland Spruce- Fir	High Density Pole	37.6	98		
29	4311 - Pine, Aspen Mix	High Density Log	64.3	75	51-80	
30	4130 - Aspen	High Density Pole	5.2	34		
32	4136 - Aspen, Mixed Conifer	High Density Log	10.8	74	51-80	
33	4134 - Aspen, Spruce/Fir	High Density Pole	136.1	34		
35	4134 - Aspen, Spruce/Fir	High Density Pole	31.4	75	81-110	
36	4134 - Aspen, Spruce/Fir	High Density Pole	36.3	34		
37	6120 - Lowland Cedar	High Density Pole	28.7	98	51-80	
38	42210 - Natural Red Pine	High Density Pole	7.4	75		
39	42210 - Natural Red Pine	High Density Pole	3.8	75	111-140	
40	4136 - Aspen, Mixed Conifer	High Density Sapling	4.3	10		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
11	6239 - Mixed Emergent Wetland	18.6	No	Unspecified	This is Whiskey Creek with beaver ponds
18	3102 - Grass	16.9	No	Unspecified	road intersection/opening
19	6220 - Alder/willow	6.5	No	Unspecified	Whiskey creek and tag alder
21	6239 - Mixed Emergent Wetland	1.7	No	Unspecified	
26	6239 - Mixed Emergent Wetland	2.9	No	Unspecified	Whiskey Creek with surrounding wetland
31	3102 - Grass	4.2	No	Unspecified	
34	3102 - Grass	14.0	No	Unspecified	



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.

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.