



**Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #174 Entry Year: 2014
Compartment Acreage: 1146 County: Iron**

Revision Date: 5/16/12

Stand Examiner: Scott Sebero

Legal Description: T41N, R31W, Sects. 9, 14, 15, 16, 22, 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 Sarona soils that are excessively drained to well-drained, loamy and sandy soils on ground moraines and end moraines and Cathro soils that are irregular depressions within these moraines that are poorly drained black muck.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Ownership patterns in this compartment consist mostly of State lands, Keweenaw lands, WE Energies lands and some small private parcels and hunting camps. Lands in and around the compartment are used mainly for hunting and managed for forest products.

Unique, Natural Features: Menominee River is the southern border of this compartment. Green Acres Creek and First Creek.

Archeological, Historical, and Cultural Features: None.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: This compartment is located along the north shore of the Menominee River, in the southwest corner of Iron County. The area is predominately aspen. There are approximately 600 acres, most of which is younger than 40 years old. Management should focus on increasing age-class diversity, species diversity, and protecting lowland sites and drainages, which need expanded buffers. This area has fir, pine and cedar stands that hold deer all winter. These areas should be protected so that they continue to have a canopy closure sufficient to hold deer. Oak mast provides an excellent food source for a multitude of wildlife species. Riparian buffers should be maintained to provide travel corridors, nesting cavities for waterfowl and winter cover. Spruce and fir losses will significantly reduce the cover component that animals are currently using for travel and residing, so other conifer species that aren't affected by budworm will become even more critical.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 50 and 100 feet. The Precambrian Paint River Group, Dunn Creek Formation and Badwater Greenstone subcrop below the glacial drift. There is not a current economic use for these rocks. Abandoned iron mines are located six miles to the northeast. This area has not been previously leased for metallic exploration, but there may be potential. A gravel pit is located two miles to the east and there may be some potential. There is no economic oil and gas production in the UP.

Vehicle Access: Access for the compartment is blocked by private property. An easement for access has been obtained from WE Energies. This access needs to be developed and is planned to be done as part of a timber sale for the 2014 entry year. Access will be from Lower Dam Road. Access for the far east part of the compartment is through private property off Peterson road in SW Dickinson County.

Survey Needs: None.

Recreational Facilities and Opportunities:

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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Cover Type & Treatment Map

Legend

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

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

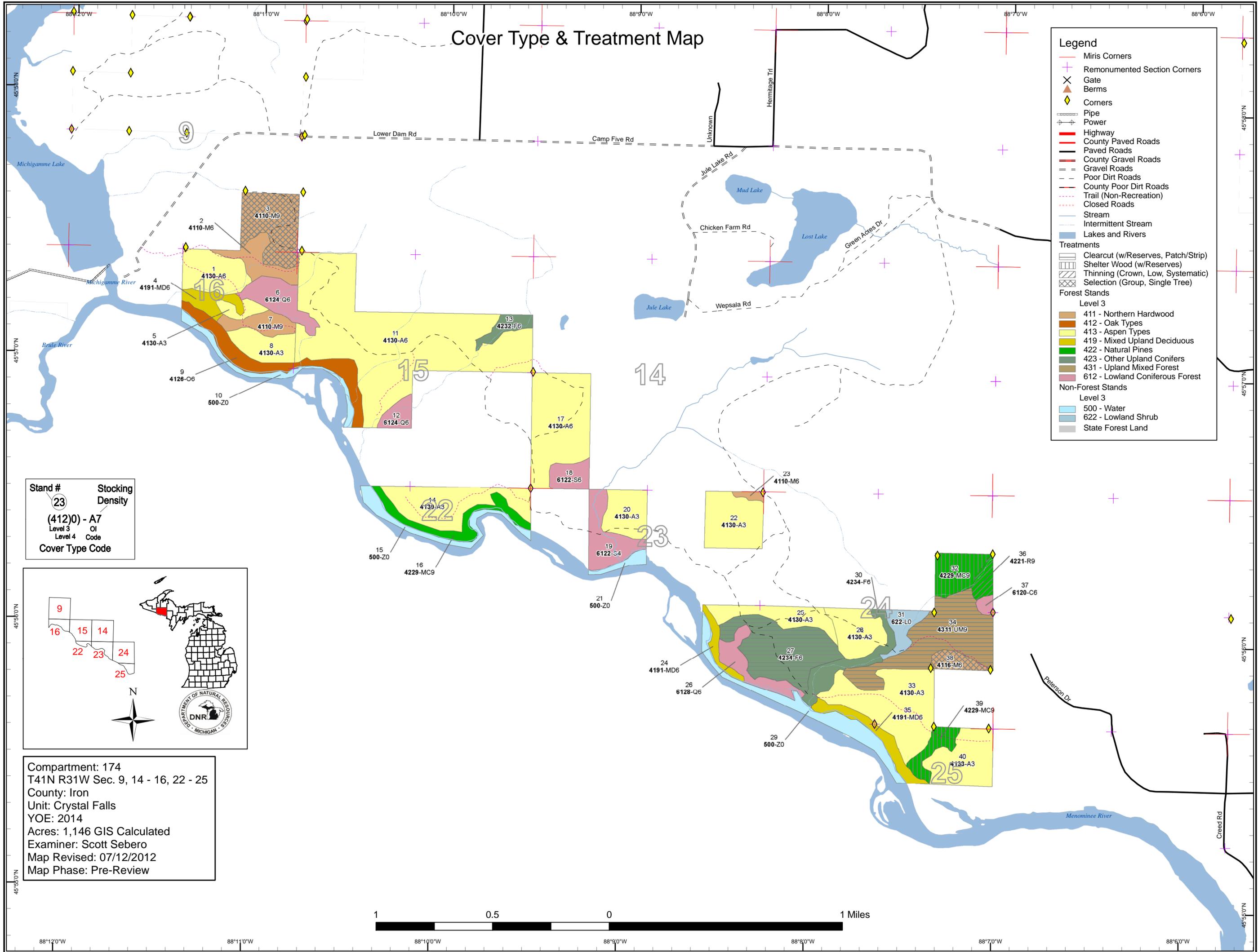
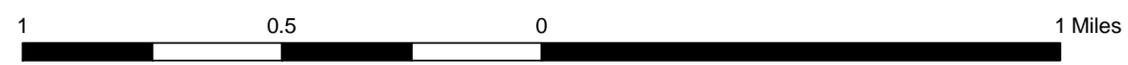
- 500 - Water
- 622 - Lowland Shrub
- State Forest Land

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

Cover Type Code

DEPARTMENT OF NATURAL RESOURCES
DNR
MICHIGAN

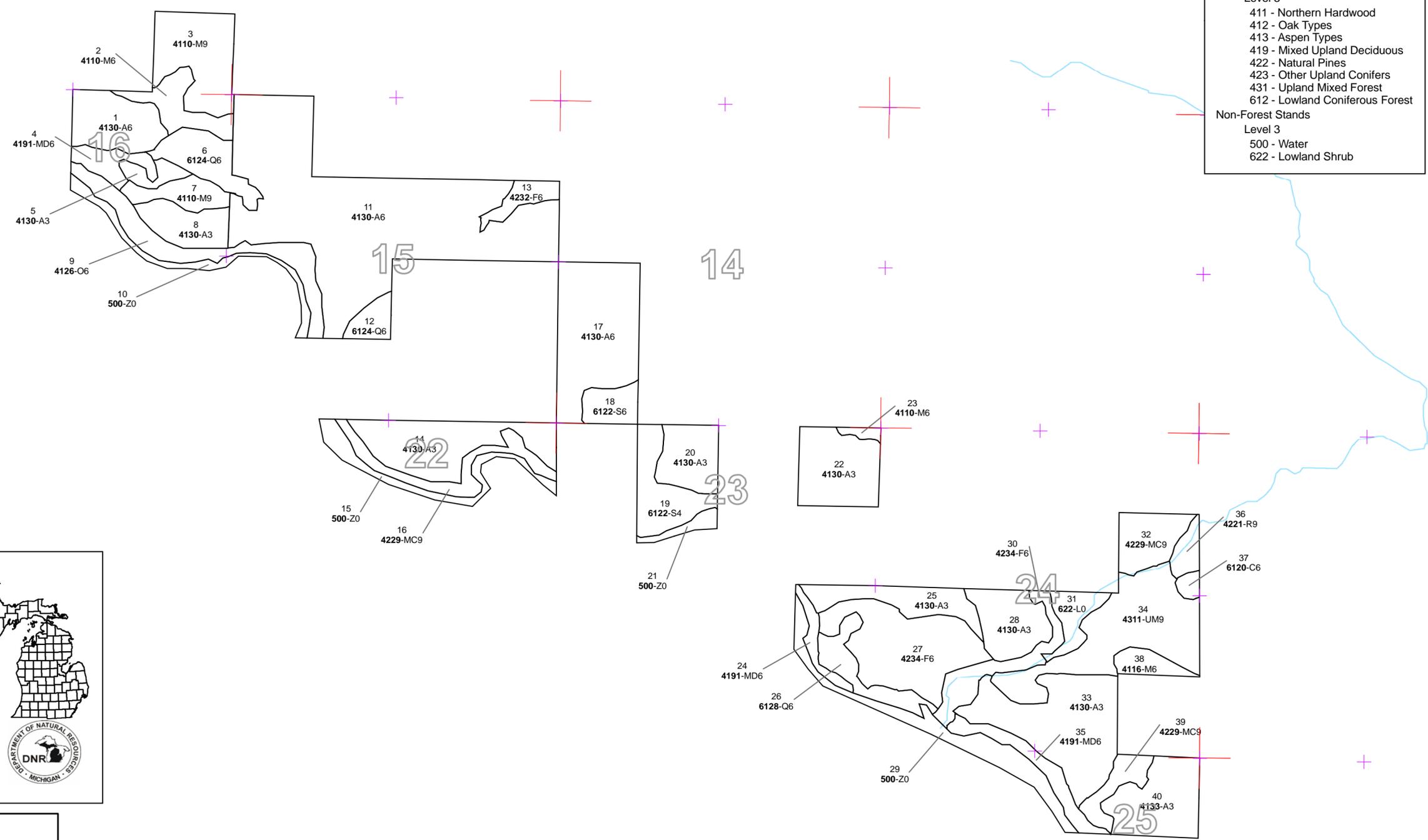
Compartment: 174
 T41N R31W Sec. 9, 14 - 16, 22 - 25
 County: Iron
 Unit: Crystal Falls
 YOE: 2014
 Acres: 1,146 GIS Calculated
 Examiner: Scott Sebero
 Map Revised: 07/12/2012
 Map Phase: Pre-Review



Dedicated & Proposed Special Conservation Area Map

Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries
- Dedicated Special Conservation Areas
- Cold Water Streams
- Forest Stands
 - Level 3
 - 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands
 - Level 3
 - 500 - Water
 - 622 - Lowland Shrub



Stand #
23

Stocking Density
(412)0 - A7

Level 3 OI
Level 4 Code

Cover Type Code

Compartment: 174
 T41N R31W Sec. 9, 14 - 16, 22 - 25
 County: Iron
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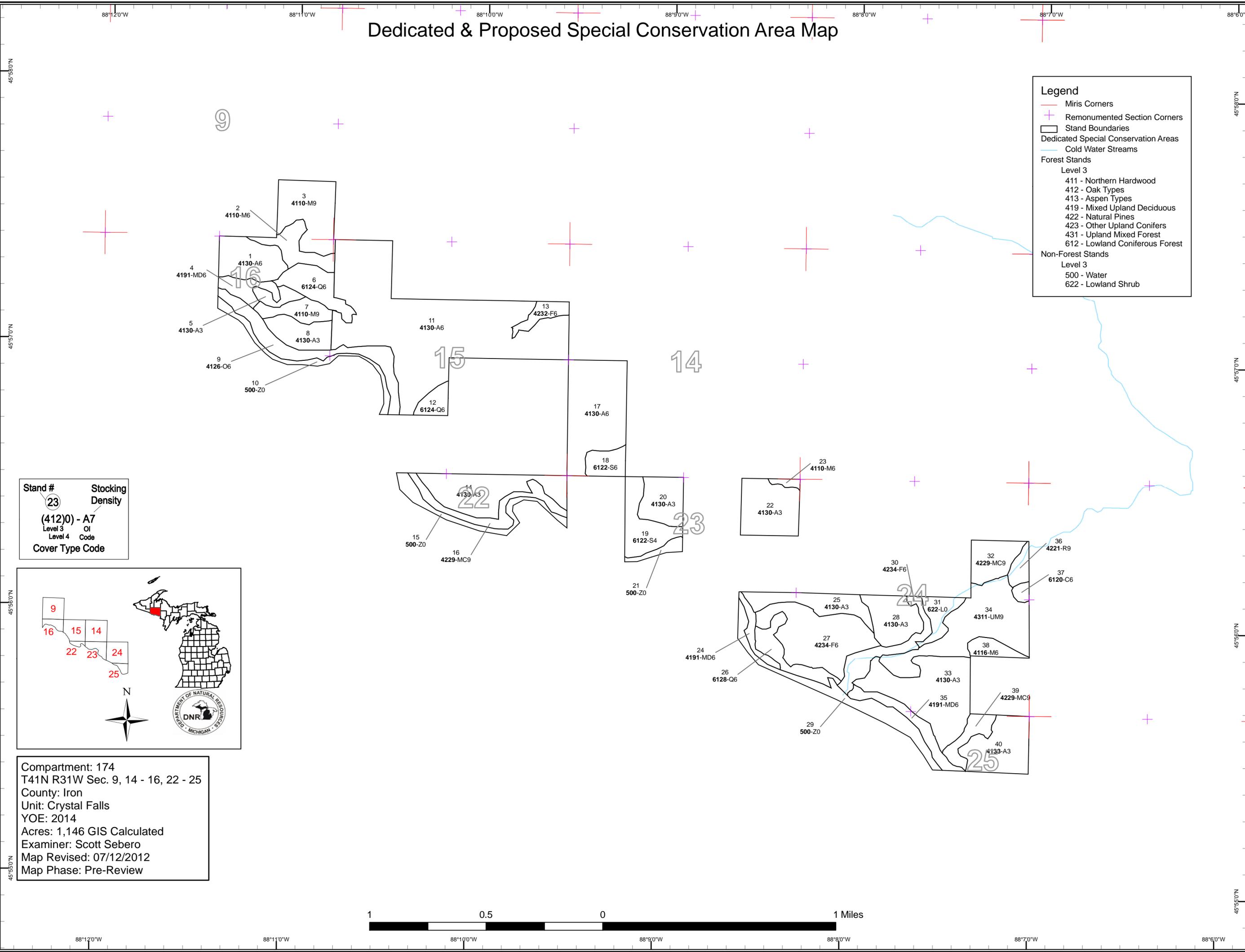
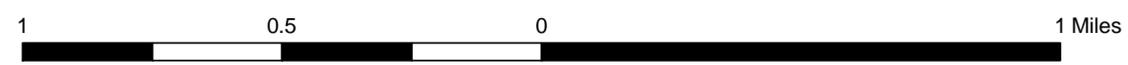


Table 1 – Total Acres by Cover Type and Age Class



	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 +	Uneten Age	
Aspen	139	0	220	209	29	0	0	0	0	0	0	0	0	0	597
Cedar	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Lowland Conifers	0	0	0	0	0	0	0	0	51	0	0	0	0	0	51
Lowland Shrub	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Spruce/Fir	0	0	0	0	0	27	0	0	12	0	0	0	0	0	39
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	35	0	0	0	0	0	35
Natural Mixed Pines	0	0	0	0	0	0	0	0	54	0	0	0	0	0	54
Northern Hardwood	0	0	0	0	0	0	0	0	86	0	0	0	0	0	86
Oak	0	0	0	0	0	0	0	0	35	0	0	0	0	0	35
Red Pine	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7
Upland Mixed Forest	0	0	0	0	0	0	0	0	68	0	0	0	0	0	68
Upland Spruce/Fir	0	0	0	0	0	0	0	0	91	0	0	0	0	0	91
Water	67	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Total	218	0	220	209	29	27	0	0	443	0	0	0	0	0	1146



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2014

Compartment 174
Total Compartment Acres: 1146

Acres by Treatment Type

Commercial Harvest - 221	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Natural Mixed Pines	0	0	0	33	0	0	33
Northern Hardwood	0	51	0	0	0	0	51
Red Pine	0	0	0	0	7	0	7
Upland Mixed Forest	68	0	0	0	0	0	68
Upland Spruce/Fir	61	0	0	0	0	0	61
Total	129	51	0	33	7	0	221



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	12174003-Cut	41.3	4110 - Sugar Maple Association	High Density Log	89	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Mark stand down to a BA of 80. Create regeneration gaps when removing large crown trees. Leave pine, oak, cedar and hemlock.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u> Regen survey per work constructions.										
<u>Proposed Start Date:</u> 10/01/2013										
27	12174027-Cut	61.1	42340 - Upland Spruce/Fir	High Density Pole	86	81-110	Harvest	Clearcut with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all aspen mixed hardwood, except oak 2" or greater DBH. Cut all spruce, balsam and jackpine with one or more pulpwood stick. No red or white pine, cedar, hemlock or oak will be cut. Mark out any wet drainages within stand. Protect wet areas.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u> Regen survey per work constructions.										
<u>Proposed Start Date:</u> 10/01/2013										
32	12174032-Cut	20.9	42290 - Natural Mixed Pine	High Density Log	89	141-170	Harvest	Shelter Wood with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> Cut all aspen, spruce, balsam, jackpine and mixed hardwood, except oak that are two inches or greater DBH. In areas of pure pine, mark red and white pine down to a BA of 100. No oak will be cut.										
<u>Specs:</u>										
<u>Other Comments:</u> Summer harvest tree length to scarify or anchor chain after harvest.										
<u>Next Steps:</u> Scarify with local resources if needed. Regen survey per work constructions.										
<u>Proposed Start Date:</u> 10/01/2013										
34	12174034-Cut	68.4	4311 - Pine, Aspen Mix	High Density Log	89	81-110	Harvest	Clearcut with Reserves	4311 - Pine, Aspen Mix	Cmpt. Review Proposal
<u>Prescription</u> Cut all aspen and mixed hardwood, except oak that are 2" DBH or greater. Cut all spruce, balsam and jackpine with one or more pulpwood sticks. No red or white pine, cedar, hemlock or oak will be cut. Mark out any wet drainages within stand.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u> Regen survey per work constructions.										
<u>Proposed Start Date:</u> 10/01/2013										
36	12174036-Cut	7.4	42210 - Natural Red Pine	High Density Log	89	171-200	Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Cut all aspen, spruce, balsam, jackpine and mixed hardwood, except oak with one or more pulpwood sticks. Mark red and white pine down to a BA of 100.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u>										
<u>Proposed Start Date:</u> 10/01/2013										

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38 12174038-Cut	9.3	4116 - Mixed N. Hardwood - Aspen	High Density Pole	89	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription: Cut all aspen, spruce and balsam with one or more pulpwood stick. Mark hardwood down to a BA of 80. Create regen gaps when removing large crown trees.

Other Comments:

Next Steps: Regen survey per work constructions.

Proposed Start Date: 10/01/2013

39 12174039-Cut	12.5	42290 - Natural Mixed Pine	High Density Log	89	81-110	Harvest	Shelter Wood with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal
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Prescription: Cut all aspen and mixed hardwood, except oak that are 2" or greater DBH. Cut all spruce, balsam and jackpine with one or more pulpwood sticks. In areas of pure pine, mark red and white pine down to a BA of 100. No oak will be cut.

Other Comments: Summer harvest tree length to scarify or anchor chain after harvest.

Next Steps: Scarify with local resources if needed. Regen survey per work constructions.

Proposed Start Date: 10/01/2013

**Total Treatment
Acreage Proposed: 220.9**

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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: 174 Year of Entry: 2014	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	4130 - Aspen	High Density Pole	29.4	40	51-80		
2	4110 - Sugar Maple Association	High Density Pole	18.4	89	51-80		
3	4110 - Sugar Maple Association	High Density Log	41.3	89	111-140		
4	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	11.6	89	81-110	High rocky hill top.	
5	4130 - Aspen	High Density Sapling	7.1	5			
6	6124 - Lowland Spruce- Fir	High Density Pole	23.1	89	81-110		
7	4110 - Sugar Maple Association	High Density Log	14.5	89	81-110		
8	4130 - Aspen	High Density Sapling	20.3	5			
9	4126 - White, Black, N. Pin Oak	High Density Pole	34.7	89	81-110	Buffer strip along Menominee River.	
11	4130 - Aspen	High Density Pole	208.5	36	51-80		
12	6124 - Lowland Spruce- Fir	High Density Pole	9.3	89	51-80	Rough rocky ground. small stream running through stand falling over rock dams and falls. Stream running through and under tree roots.	
13	42320 - Upland Spruce	High Density Pole	9.6	89	51-80	Steep hill down to creek. NE portion flattens out and is wet.	
14	4130 - Aspen	High Density Sapling	48.1	5			
16	42290 - Natural Mixed Pine	High Density Log	20.2	89	81-110	Buffer along Menominee River.	
17	4130 - Aspen	High Density Pole	68.1	27	1-50		
18	6122 - Black Spruce	High Density Pole	12.4	89	81-110		
19	6122 - Black Spruce	Low Density Pole	26.6	50	1-50		
20	4130 - Aspen	High Density Sapling	23.0	25			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4130 - Aspen	High Density Sapling	36.5	25		
23	4110 - Sugar Maple Association	High Density Pole	2.6	89	81-110	
24	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	7.3	89	81-110	Buffer for Menominee River.
25	4130 - Aspen	High Density Sapling	24.7	25		
26	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	18.3	89	51-80	
27	42340 - Upland Spruce/Fir	High Density Pole	61.1	86	81-110	
28	4130 - Aspen	High Density Sapling	26.6	5		
30	42340 - Upland Spruce/Fir	High Density Pole	20.7	89	81-110	Steep hill down to creek.
32	42290 - Natural Mixed Pine	High Density Log	20.9	89	141-170	
33	4130 - Aspen	High Density Sapling	67.5	24		
34	4311 - Pine, Aspen Mix	High Density Log	68.4	89	81-110	
35	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	16.4	89	81-110	Very steep hill down to river.
36	42210 - Natural Red Pine	High Density Log	7.4	89	171-200	
37	6120 - Lowland Cedar	High Density Pole	3.3	89	81-110	
38	4116 - Mixed N. Hardwood - Aspen	High Density Pole	9.3	89	111-140	
39	42290 - Natural Mixed Pine	High Density Log	12.5	89	81-110	
40	4133 - Aspen, Mixed Pine	High Density Sapling	36.7	5		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
10	50 - Water	13.8	No	Unspecified	Menominee River
15	50 - Water	16.7	No	Unspecified	Menominee River
21	50 - Water	5.3	No	Unspecified	Menominee River
29	50 - Water	31.2	No	Unspecified	Menominee River
31	6229 - Mixed lowland shrub	12.6	No	Unspecified	Lowland associated with First Creek.



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.