



**Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #83 Entry Year: 2013
Compartment Acreage: 1082 County: Dickinson**

Revision Date: June 23, 2011

Stand Examiner: Cynthia Cooper

Legal Description: T41N, R 29W, Sections 32 and 33.

RMU (if applicable): None

Management Goals: Maintain and improve aspen and northern hardwoods.

Soil and Topography: Rock outcrop – Pemene complex. Numerous rock outcrops with shallow soils. Cathro and Carbondale muck between outcrops. Some more level areas exist, but overall very difficult terrain.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Private 40's on the north and east of section 33 used mostly as camps. Rock Lake boat launch in section 33. The remainder is State land primarily used for timber production.

Unique, Natural Features: Rock Lake. Portions of stands 3, 7 and 11 are included in the Rock Glade Ecological Reference Area.

Archeological, Historical, and Cultural Features: None

Special Management Designations or Considerations: See Unique, Natural Features above.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: This compartment is part of the Rock Lake Deeryard Area that Wildlife and Forest Management agreed to target for restoration by increasing conifer component in stands where possible. Area has the tendency to go to red and white pine naturally. All species of wildlife need to be considered and a full range of habitat conditions should be provided. Conditions from early-successional to old growth must be provided to meet these needs. Riparian and transition zones were set aside in prior years of entry to provide some of these habitat requirements. Upland and lowland conifer components should be maintained and enhanced when possible. Opening maintenance will be completed as logistics allow.

Mineral Resource and Development Concerns and/or Restrictions: Compartment 83: Sections 32 and 33, T41N-R29W, Dickinson County

Surface sediments consist of thin to discontinuous glacial sediments over bedrock. The glacial drift thickness is less than 50 feet. The Precambrian Archean granite/gneiss and Chocolay Group outcrop at or near the surface. There is not an economic use for these rocks, although the granite/gneiss might have building stone potential. The Groveland Iron mine is located five miles to the north. Part of this compartment was previously leased for metallic exploration and potential may still exist. A gravel pit is located one mile to the west. There may be some gravel potential in the compartment. There is no economic oil and gas production in the UP.

Vehicle Access: Good in the north and eastern portions. Poor in the south half of section 32. Access is through private in the east half of 33.

Survey Needs: Corners will be needed in section 33.

Recreational Facilities and Opportunities: Rock Lake boat launch.

Fire Protection:

Additional Compartment Information:

- **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

Compartment 083
 T41N, R29W, Sec. 32, 33
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2013
 Acres: 1,082 GIS Calculated
 Stand Examiner: Cynthia Cooper
 Map Revised: 7/28/2011
 Map Phase: Pre-Review

32 33

N

Legend

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

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 720 - Exposed Rock

Stand # 23

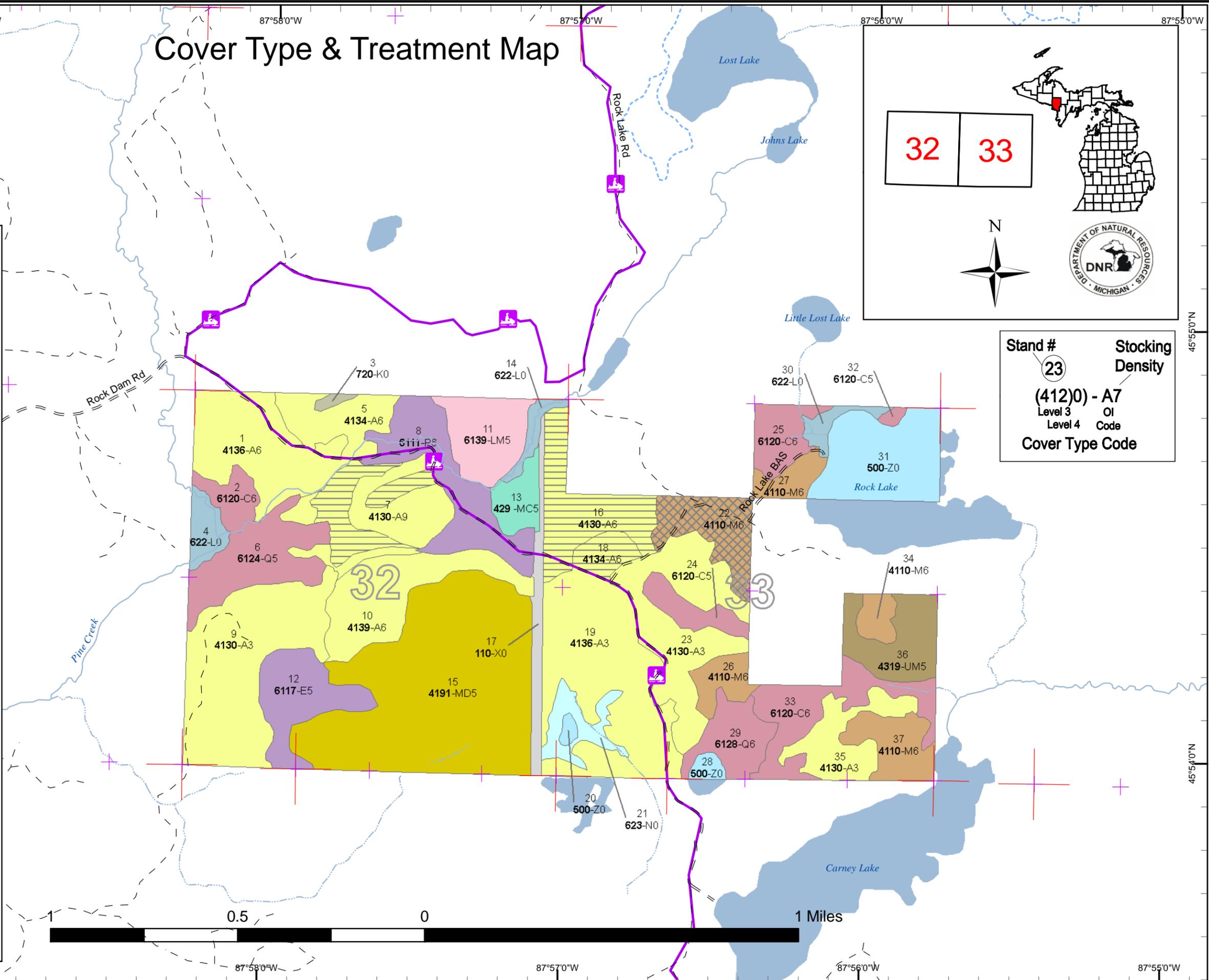
Stocking Density

(412)0 - A7

Level 3 OI

Level 4 Code

Cover Type Code



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Stand Boundary Map



Legend

- Miris Corners
- + Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Intermittent Stream/Drain
- Stream
- Snowmobile Trail
- Stand Boundaries

Forest Stands

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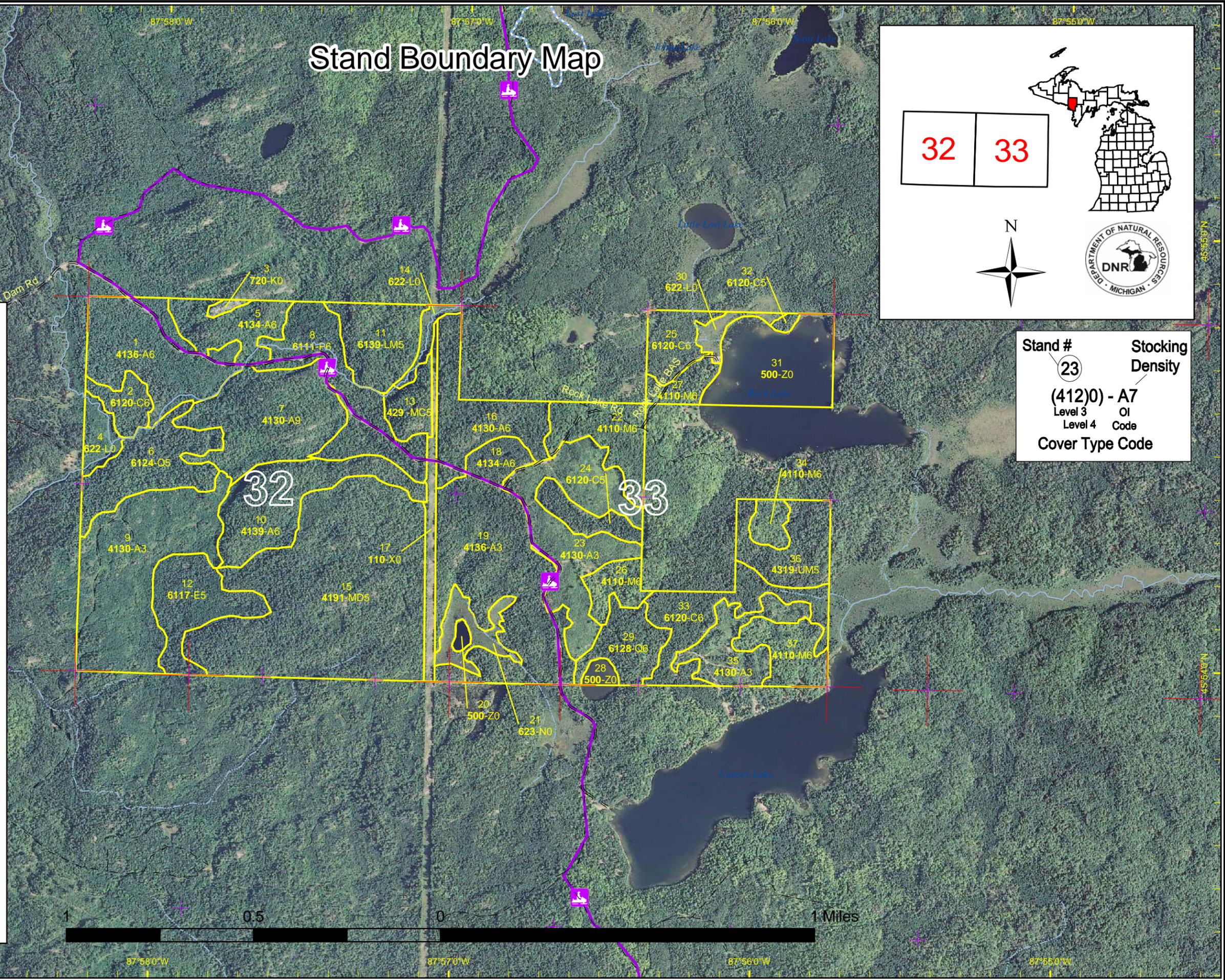
Stocking Density

(412)0 - A7

Level 3 OI

Level 4 Code

Cover Type Code



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Dedicated & Proposed Special Conservation Area Map

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**
- Ecological Reference Areas
- Campgrounds
- Boat Access Sites
- Cold Water Streams
- Forest Stands**
- Stand Boundaries
- Non-Forest Stands**
- Non-Forest Stands

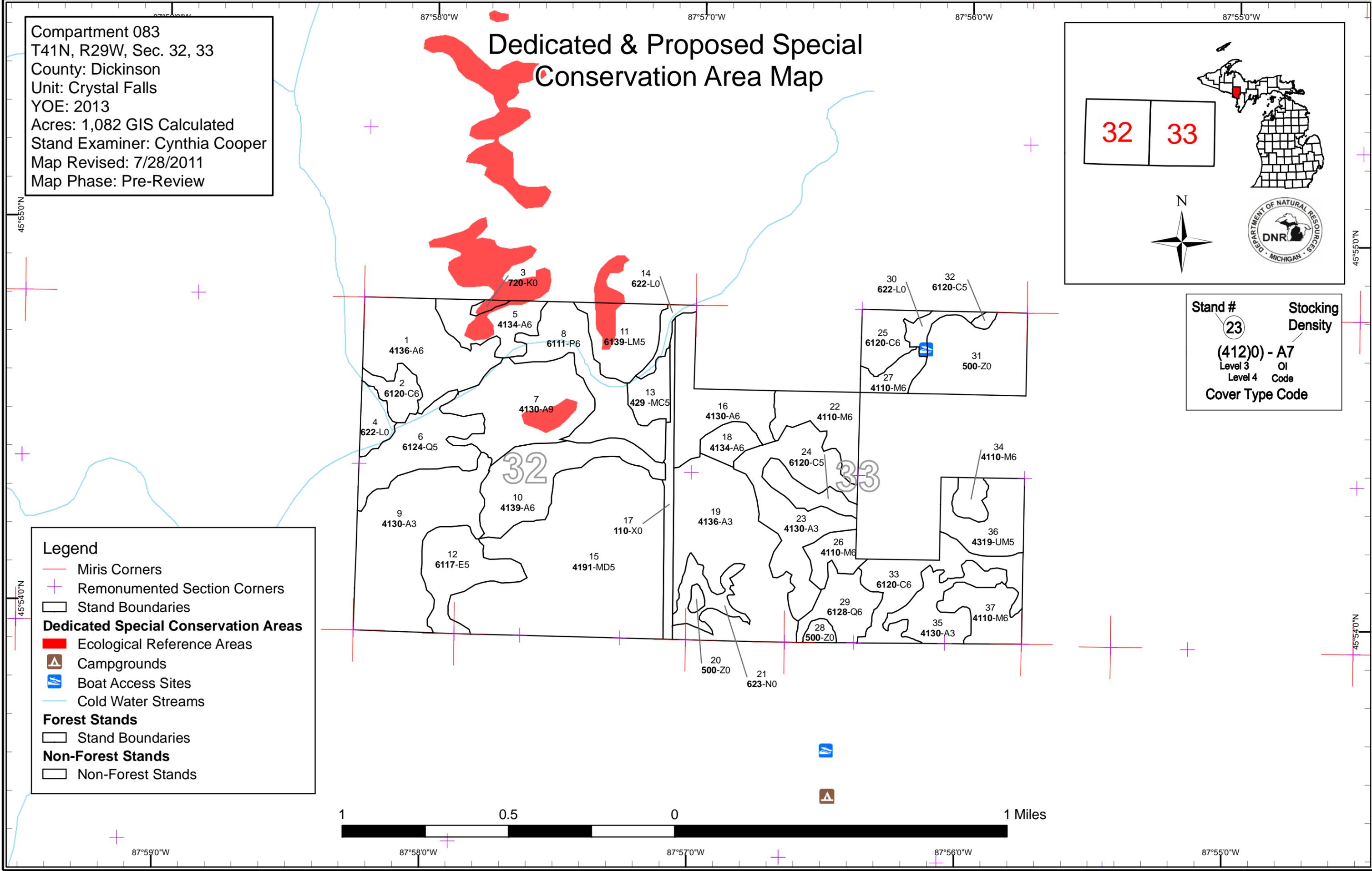
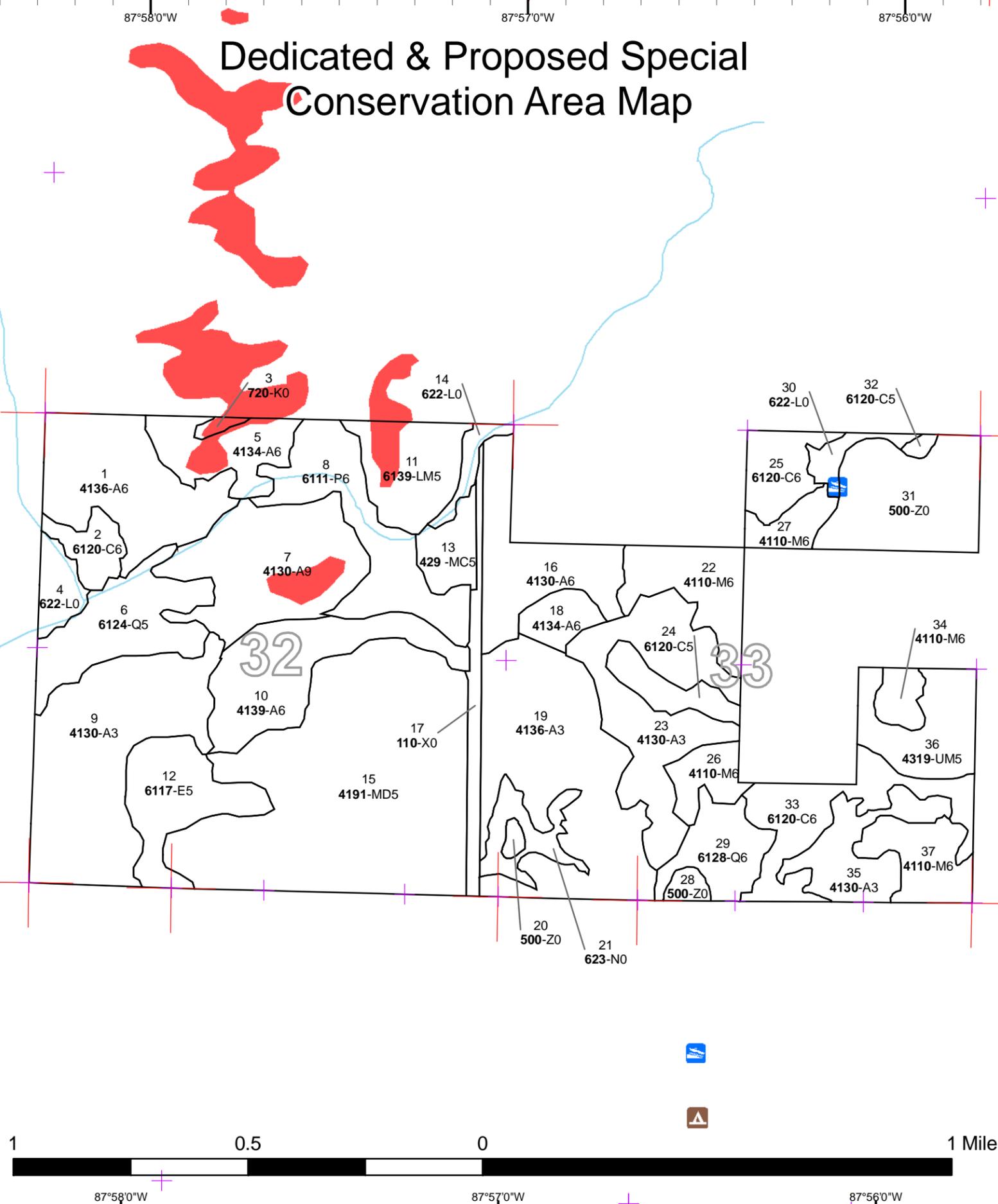
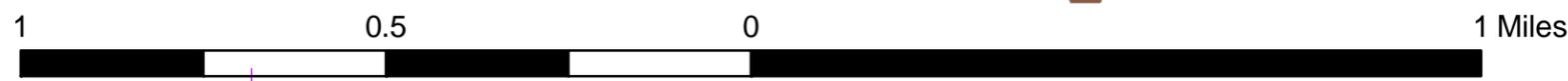


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneren Age
Aspen	0	57	81	0	0	52	0	56	0	0	37	0	0	0	190	474
Cedar	0	0	0	0	0	0	0	12	11	52	0	0	0	0	0	75
Exposed Rock	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	44
Lowland Conifers	0	0	0	0	0	0	0	0	0	58	0	0	0	0	0	58
Lowland Deciduous	0	0	0	0	0	0	32	0	0	0	0	0	0	0	0	32
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	28
Lowland Shrub	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Marsh	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	156
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	75	0	0	0	0	75
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	27
Urban	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Water	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
Total	102	57	81	0	0	52	32	68	11	110	112	0	0	0	458	1082



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2013

Compartment 083
Total Compartment Acres: 1082

Acres by Treatment Type

Commercial Harvest - 96	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
Aspen	70	0	0	0	0	0	70
Northern Hardwood	0	26	0	0	0	0	26
Total	70	26	0	0	0	0	96



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7	12083007-Cut_small	5.5	4130 - Aspen	High Density Log	68	Harvest	Clearcut	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clear cut 2" spec. Buffer creek to northwest. some portions of the stand inoperable. Use old ORV trail to the south as southern boundary.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Steep. Pine on top of rock. Aspen, maple and fir on hillsides. Small e-type between stands 7 and 10. Birch and aspen declining. Entire stand cannot be harvested because of rock.</p> <p><u>Next Steps:</u> Regeneration survey.</p>									
7	12083007-Cut_small_3	18.0	4130 - Aspen	High Density Log	68	Harvest	Clearcut	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clear cut 2" spec. Buffer creek to northwest. some portions of the stand inoperable. Use old ORV trail to the south as southern boundary.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Steep. Pine on top of rock. Aspen, maple and fir on hillsides. Small e-type between stands 7 and 10. Birch and aspen declining. Entire stand cannot be harvested because of rock.</p> <p><u>Next Steps:</u> Regeneration survey.</p>									
16	12083016-Cut	37.1	4130 - Aspen	High Density Pole	90	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<p><u>Prescription</u> Clear cut to 2" spec. Rock tops can be used as reserve (sparse conifers and aspen). Save all hemlock if present as per WLD.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Regeneration survey.</p>									
18	12083018-Cut	9.9	4134 - Aspen, Spruce/Fir	High Density Pole	48	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<p><u>Prescription</u> Clear cut reserving spruce/fir less than 6" on the stump and all pine, cedar, hemlock and oak if present.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Regeneration survey.</p>									
22	12083022-Cut	25.7	4110 - Sugar Maple Association	High Density Pole	90	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Thin to a residual basal area of 80. Retain hemlock and oak.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p>									
Total Treatment Acreage Proposed:		96.2							

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 0

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

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12060_OutOfYOE-Cut	6.0				Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription: Clearcut 2" dbh and above except cedar, hemlock and pine if present.

Specs:

Other:

Comments:

Next

Steps:

**Total Treatment
Acreage Proposed: 6.0**



Stand	Crystal Falls Mgt. Unit			5 – Forested Stands		Compartment: 083 Year of Entry: 2013	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	4136 - Aspen, Mixed Conifer	High Density Pole	51.9	44		Pockets of heavy spruce/fir understory. Scattered supercanopy white and red pine throughout. Cedar present, but just a trace. Hold 10 years.	
2	6120 - Lowland Cedar	High Density Pole	10.8	71		dense cedar/b. spruce stand	
5	4134 - Aspen, Spruce/Fir	High Density Pole	23.4	Uneven Age		Tag alder and balsam fir saps on west side. Many rock outcrops with low basal area of old aspen, paper birch and white pine, maple and fir saps.	
6	6124 - Lowland Spruce- Fir	Medium Density Pole	37.1	83		Q type with a highland packet. Not very dense.	
7	4130 - Aspen	High Density Log	56.4	68		Steep. Pine on top of rock. Aspen/maple/fir on hillside. Old ORV trail on south side. Small E type in between stands 7 and 10. Birch is declining as well as the aspen. Entire stand cannot be harvested because of rock (center rock portion of stand included in the Rock Glade ERA).	
8	6111 - Lowland Balsam Poplar	High Density Pole	43.9	Uneven Age		Very wet. Area of tag alder on west side. What's not wet is rock.	
9	4130 - Aspen	High Density Sapling	80.9	15		Healthy A3. Abandoned ORV trail through middle. Some spots wet. Supercanopy pines scattered throughout.	
10	4139 - Aspen, Mixed Deciduous	High Density Pole	44.1	Uneven Age		Steep, hillside or bluff. Inoperable. E type on bottom of hill. Aspen and birch dying. Many different age classes.	
11	6139 - Mixed Lowland Forest	Medium Density Pole	28.1	Uneven Age		Most aspen and birch dead and dying. Creek and ORV trail run through stand.	
12	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	31.6	56		Small conifer inclusion to east. Wet.	
13	429 - Mixed Upland Conifers	Medium Density Pole	12.4	Uneven Age		Rock outcrop along powerline.	
15	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	156.2	Uneven Age		Rugged. Poor access. Inoperable. Creeks, drainages, swamp hardwoods, rock outcroppings all scattered throughout. Pine growing on the rocks. Aspen and white birch are falling apart, being replaced by red maple, aspen and red pine saplings. Supercanopy white pine throughout. More aspen to south.	
16	4130 - Aspen	High Density Pole	37.1	90			
18	4134 - Aspen, Spruce/Fir	High Density Pole	9.9	Uneven Age		Several low areas in stand.	

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Crystal Falls Mgt. Unit

5 – Forested Stands

Compartment: 083
Year of Entry: 2013

Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19 4136 - Aspen, Mixed Conifer	High Density Sapling	88.3	Uneven Age		Some aspen starting to become merchantable but mostly < 5" dbh. Variable stand. Rocks ,drainages, e types, upland aspen. Not a clear cut in 1996 because of terrain. Many pockets of unharvested timber that were inopeerable. More balsam fir to north.Small visual buffer along Carney LAke road. Scattered supercanopy pines and oaks.
22 4110 - Sugar Maple Association	High Density Pole	25.7	90	111-140	Y.birch mostly dead. Some hemlock along road. Needs survey.
23 4130 - Aspen	High Density Sapling	57.0	6		red pine patch and fir residual
24 6120 - Lowland Cedar	Medium Density Pole	12.0	69		
25 6120 - Lowland Cedar	High Density Pole	16.3	89		
26 4110 - Sugar Maple Association	High Density Pole	11.8	90	81-110	Nice hardwood. Oak in stand.
27 4110 - Sugar Maple Association	High Density Pole	9.6	95	81-110	sparse hardwood and paper birch with upland cedar in the north. Next to private and Rock Lake.
29 6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	20.5	87		
32 6120 - Lowland Cedar	Medium Density Pole	1.6	89		inaccessable small lowland conifer stand between Rock Lake and tag alder type.
33 6120 - Lowland Cedar	High Density Pole	34.3	87		
34 4110 - Sugar Maple Association	High Density Pole	7.4	90	81-110	
35 4130 - Aspen	High Density Sapling	24.8	Uneven Age		Cut in 2005 with small fir and large and small white spruce.
36 4319 - Mixed Upland Forest	Medium Density Pole	27.2	Uneven Age		
37 4110 - Sugar Maple Association	High Density Pole	20.3	95	51-80	hemlock and white pine in stand



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	720 - Exposed Rock	1.8	No	Unspecified	
4	6220 - Alder/willow	9.8	No	Unspecified	
14	6229 - Mixed lowland shrub	5.7	No	Unspecified	un-named creek running through
17	11 - Low Intensity Urban	14.0	No	Unspecified	powerline
20	50 - Water	1.9	No	Unspecified	
21	6230 - Cattail	13.3	No	Unspecified	cattail/tag alder
28	50 - Water	3.6	No	Unspecified	
30	6229 - Mixed lowland shrub	6.1	No	Unspecified	north edge of Rock Lake
31	50 - Water	45.8	No	Unspecified	Rock Lake



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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.