



**Crystal Falls Forest Management Unit**  
**Compartment Review Presentation**  
**Compartment #18**                      **Entry Year: 2013**  
**Compartment Acreage: 2096**        **County: Dickinson**

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**Revision Date:** 6-23-11

**Stand Examiner:** Terry Cryderman

**Legal Description:** T44N R28W Sec 11-14, 24  
T44N R27W Sec 18, 19

**Management Goals:** This compartment has a good degree of upland with wet types throughout. Almost one-half of the compartment is aspen, most of it under 50 years old; one-third is lowland type; and the rest is northern hardwood, mixed upland forest or mixed pine. Management of all aspen stands is to balance age class and allow best suited species to continue to grow on best suited sites. We will protect all bodies of water, especially the West Branch of the Escanaba River and the headwaters of the Little Brook.

**Soil and Topography:** The majority of the upland is dominated by Pemene fine sandy loam, a well drained soil found on level to rolling hills or Zimmerman and Rousseau fine sand. Lowland soils are Carbondale and Cathro mucks which are very poorly drained soils, found on low flats and depressions.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** State-owned land with few private parcels throughout, used by loggers, hunters, fisherpeople, campers, trappers, general recreationists. State land is adjacent to the compartment boundary on all sides.

**Unique, Natural Features:** Flat Rock Creek and Schwartz Creek join to form the West Branch of the Escanaba River in Section 11; headwaters of the Little Brook Creek may begin in here.

**Archeological, Historical, and Cultural Features:** None known

**Special Management Designations or Considerations:** None known

**Watershed and Fisheries Considerations:** Protect water quality for all bodies of water, particularly the Flat Rock Creek, West Branch of the Escanaba River and Little Brook. Promote long lived conifer species along these waterbodies and use adequate buffer protection.

**Wildlife Habitat Considerations:** 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. Openings will be maintained as logistics permit.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Formation and Precambrian granite and gneiss subcrop below the glacial drift. There is not an economic use for these rocks, although they might have building stone potential. A rock (type?) quarry is located six miles to the northwest. Old iron mines are located approximately fifteen miles to the southwest, east and northeast. A gravel pit is located three miles to the northeast. There appears to be good gravel

potential in the compartment. Part of this area was previously leased for metallic exploration and potential may still exist. There is no economic oil and gas production in the UP.

**Vehicle Access:** County Road 581 and the Simpson Road. Snowmobile trail runs on the Simpson Road half way up the east side of the compartment before turning east.

**Survey Needs:** Needed in Section 24

**Recreational Facilities and Opportunities:** Snowmobile trail, hunting, camping, fishing, trapping, hiking, canoeing.

**Fire Protection:** Felch protection area. Access to most upland stands is poor to fair, access to some swamp types would be difficult.

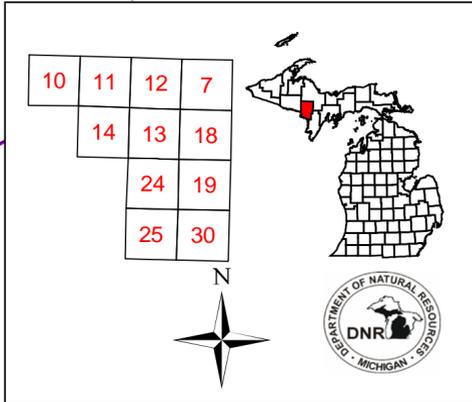
**Additional Compartment Information:**

- **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 018  
 T44N, R27W, Sec.07, 18, 19, 30  
 T44N, R28W, Sec. 10-14, 24, 25  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2013  
 Acres: 2,096 GIS Calculated  
 Stand Examiner: Deb Goupell  
 Map Revised: 7/28/2011  
 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
- X Gates
- ▲ Berms
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

**Treatments**

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

**Forest Stands**

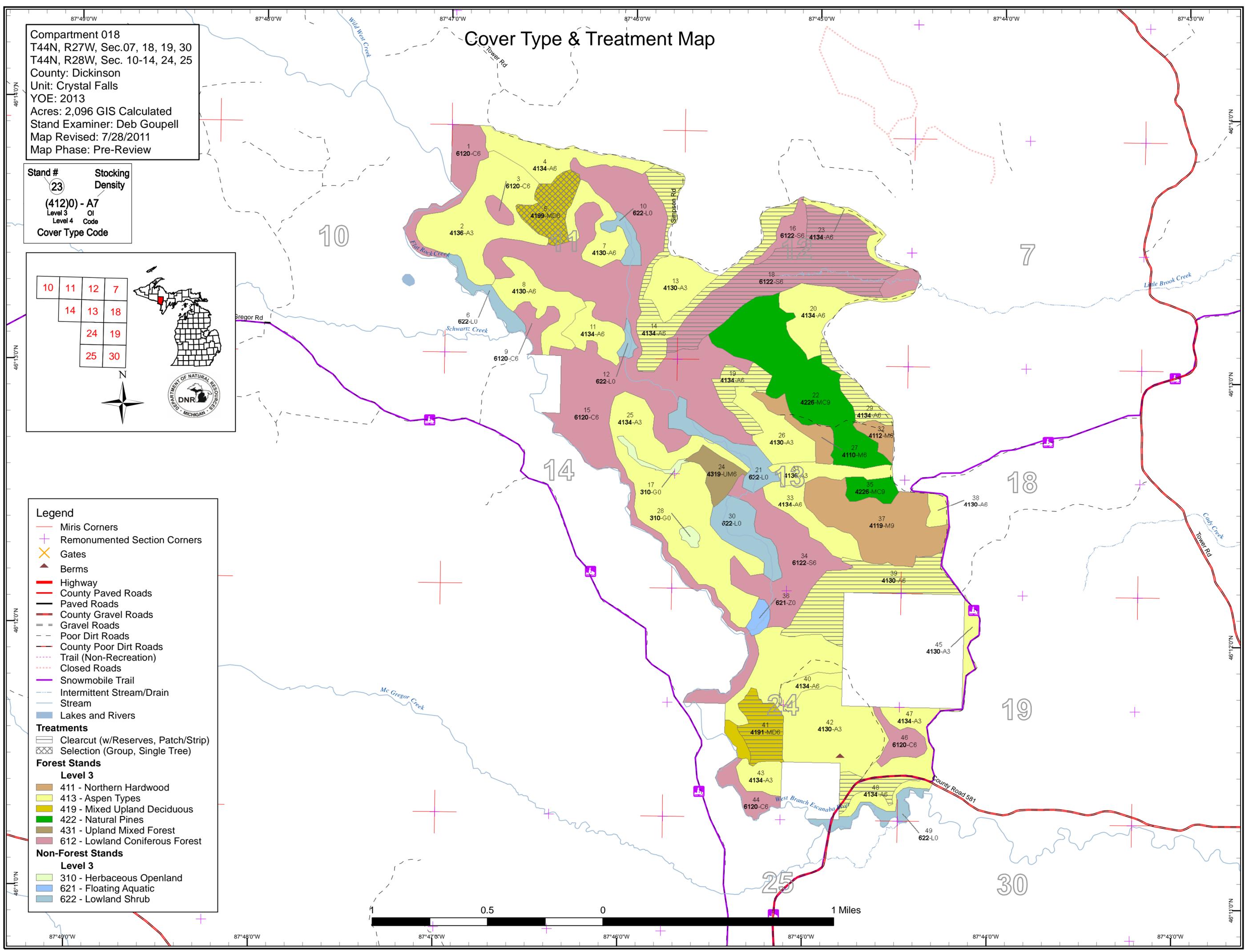
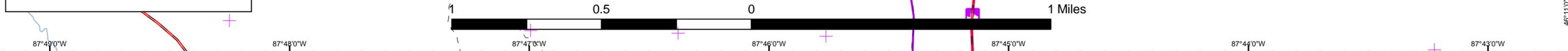
**Level 3**

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

**Non-Forest Stands**

**Level 3**

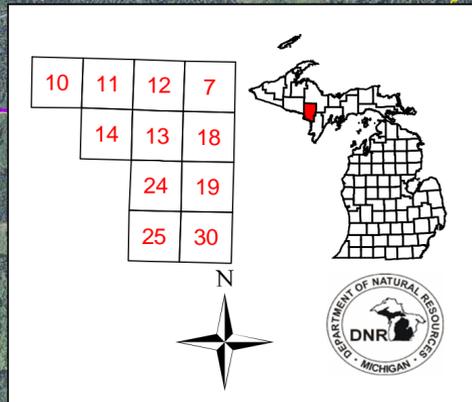
- 310 - Herbaceous Openland
- 621 - Floating Aquatic
- 622 - Lowland Shrub



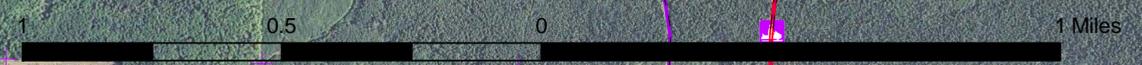
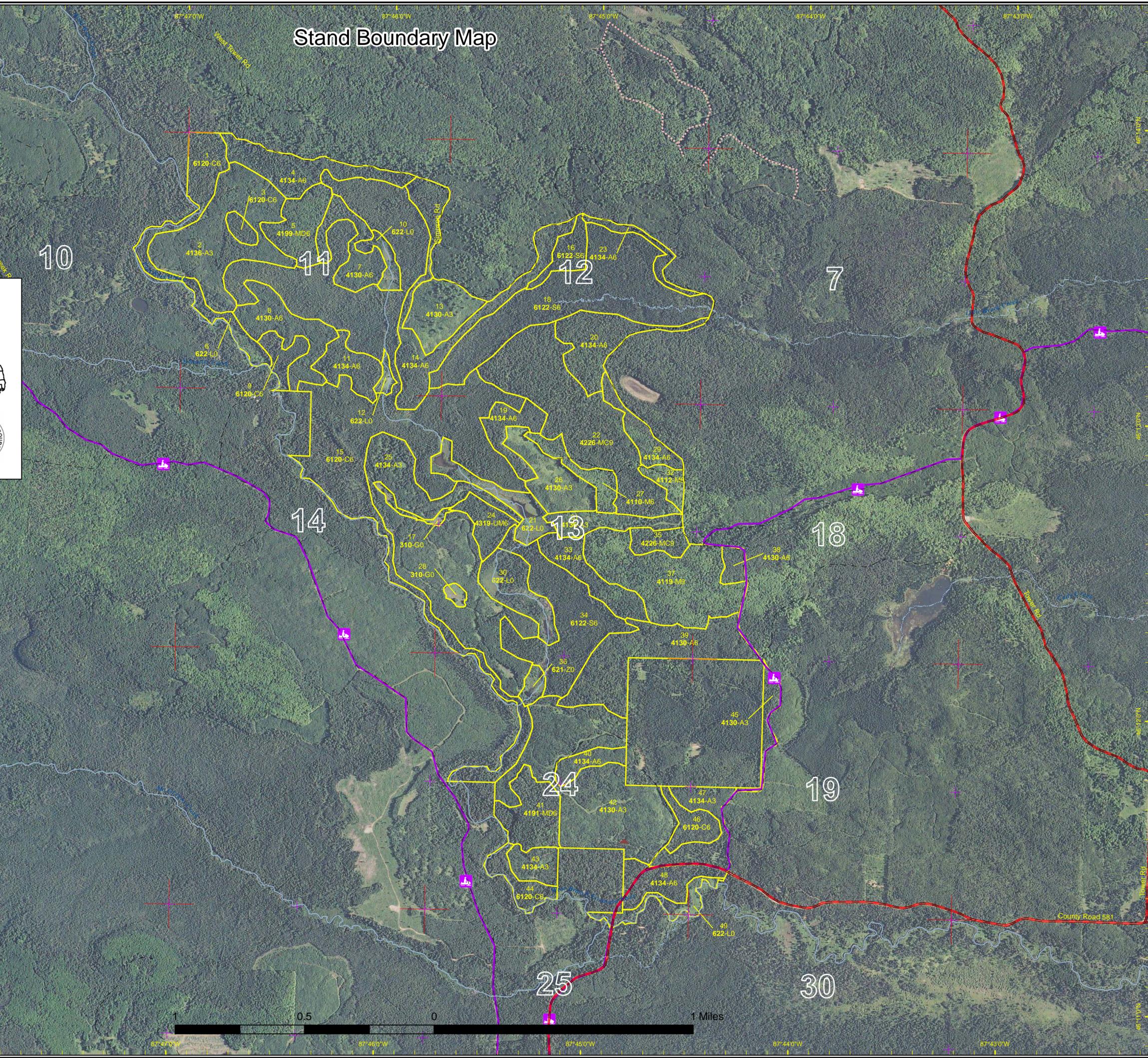
# Stand Boundary Map

Compartment 018  
 T44N, R27W, Sec.07, 18, 19, 30  
 T44N, R28W, Sec. 10-14, 24, 25  
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 YOY: 2013  
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 Stand Examiner: Deb Goupell  
 Map Revised: 7/28/2011  
 Map Phase: Pre-Review

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



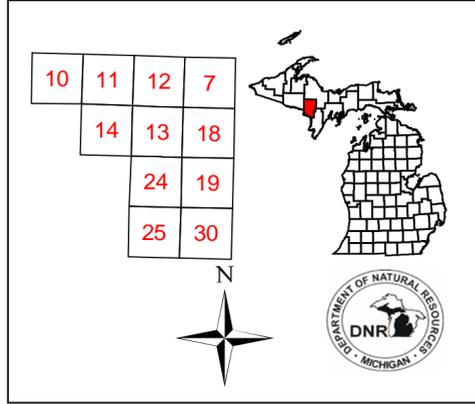
- Legend**
- Miris Corners
  - + Remonumented Section Corners
  - X Gates
  - ▲ Berms
  - Stand Boundaries
  - Highway
  - County Paved Roads
  - Paved Roads
  - County Gravel Roads
  - Gravel Roads
  - Poor Dirt Roads
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  - Trail (Non-Recreation)
  - Closed Roads
  - Snowmobile Trail
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  - Stream
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- Forest Stands**
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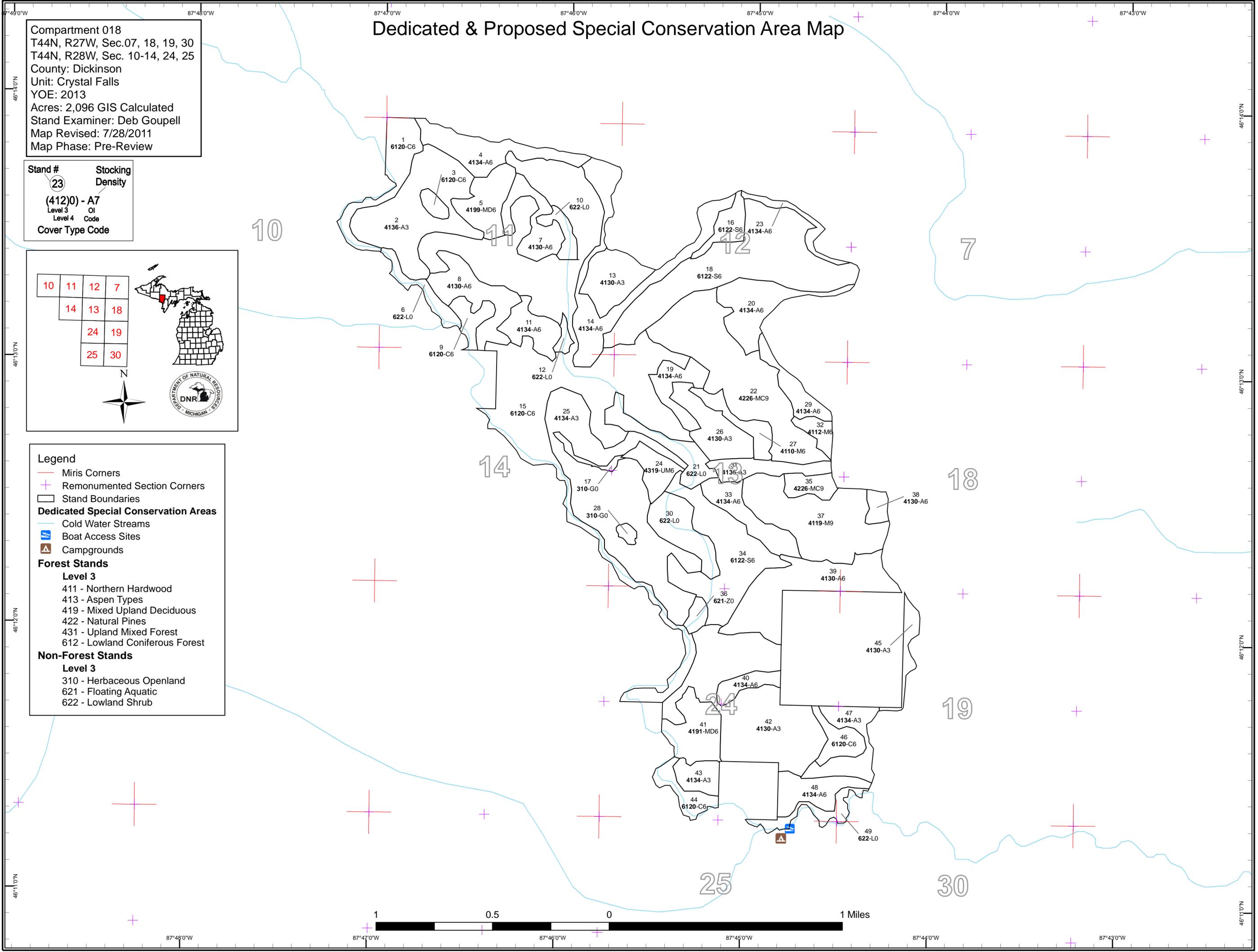
# Dedicated & Proposed Special Conservation Area Map

Compartment 018  
 T44N, R27W, Sec.07, 18, 19, 30  
 T44N, R28W, Sec. 10-14, 24, 25  
 County: Dickinson  
 Unit: Crystal Falls  
 YOY: 2013  
 Acres: 2,096 GIS Calculated  
 Stand Examiner: Deb Goupell  
 Map Revised: 7/28/2011  
 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
  - ⚓ Boat Access Sites
  - ⚠ Campgrounds
  - Forest Stands**
  - Level 3**
  - 411 - Northern Hardwood
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
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  - Non-Forest Stands**
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**Table 1 – Total Acres by Cover Type and Age Class**

Terry Cryderman : Examiner



	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 +		Uneven Age
Aspen	0	102	156	286	111	294	0	0	0	27	0	0	0	0	0	976
Cedar	0	0	0	0	0	0	0	0	398	17	16	0	0	0	0	431
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Shrub	104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104
Lowland Spruce/Fir	0	0	0	0	0	15	0	0	216	0	0	0	0	0	0	231
Mixed Upland Deciduous	0	0	0	0	0	0	0	35	0	31	0	0	0	0	0	66
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	123	13	0	0	0	0	136
Northern Hardwood	0	0	0	0	0	0	0	0	0	117	0	0	0	0	0	117
Upland Mixed Forest	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	18
Water	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
<b>Total</b>	<b>120</b>	<b>102</b>	<b>156</b>	<b>286</b>	<b>111</b>	<b>327</b>	<b>0</b>	<b>35</b>	<b>614</b>	<b>315</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2096</b>



## Table 2 – Proposed Treatment Summaries

**Crystal Falls Mgt. Unit**  
**Year of Entry 2013**

**Compartment 018**  
**Total Compartment Acres: 2096**

### Acres by Treatment Type

Commercial Harvest - 383	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

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
<b>Aspen</b>	197	0	0	0	0	0	197
<b>Lowland Spruce/Fir</b>	126	0	0	0	0	0	126
<b>Mixed Upland Deciduous</b>	29	31	0	0	0	0	60
<b>Total</b>	<b>352</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>383</b>



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	12018005-Cut	31.1	4199 - Other Mixed Upland Deciduous	High Density Pole	88	Harvest	Group Selection	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<u>Prescription:</u> Thin stand by removing white birch and the trace of aspen. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Northern hardwood would be acceptable species									
14	12018014-Cut	64.8	4134 - Aspen, Spruce/Fir	High Density Pole	44	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2" dbh and greater except pine and cedar <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> aspen, spruce/fir is acceptable species									
18	12018018-Cut	126.1	6122 - Black Spruce	High Density Pole	78	Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2" dbh and greater except cedar. Locate and buffer headwaters of Little Brook Stream 100 feet. If hauling in the winter, snowmobile trail needs to have 4" minimum packed snow on trail, signs posted and snowmobile club notified. Black spruce, tamarack are acceptable regen species. Season of operation to be determined during sale set-up. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u>									
19	12018019-Cut	21.8	4134 - Aspen, Spruce/Fir	High Density Pole	44	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription:</u> Cut all species 2" dbh and greater except pine and cedar, if found. <u>Specs:</u> <u>Other Comments:</u> Bigger wood, good for cutting <u>Next Steps:</u> Aspen or spruce/fir will be acceptable species alternative									
29	12018029-Cut	18.9	4134 - Aspen, Spruce/Fir	High Density Pole	44	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription:</u> This stand was selected for additional acres for FY 2010 and is currently part of Dogleg TS; pine is being retained in this sale. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u>									

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39 12018039-Cut	75.4	4130 - Aspen	High Density Pole	48	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription: This stand was additional acres for FY 2010 and was set up and sold as Dogleg TS. Pine is being retained in this stand.

Specs:

Other

Comments:

Next

Steps:

41 12018041-Cut	29.0	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	63	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
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Prescription: Cut all stems 2" dbh and greater except red & white pine. 300 foot buffer to W. Br. Escanaba River. Expect buffer may be larger in places due to challenging side hills.

Specs:

Other

Recommending cutting smaller diameter white birch as these regenerate better than larger diameter birch

Comments:

Next

A mix of aspen, birch, red maple, balsam, white spruce and red pine regeneration would be acceptable alternative

Steps:

48 12018048-Cut	16.2	4134 - Aspen, Spruce/Fir	High Density Pole	80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription: Cut all stems 2" dbh and greater except cedar and pine, if found. Retention will be 300 foot buffer from West Branch Esc. River.

Specs:

Other

Light budworm damage. Old West Branch Annex Campground (now closed) on east end of stand will be within 300 buffer.

Comments:

Next

Steps:

**Total Treatment  
Acreage Proposed: 383.3**

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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

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**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:

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**Total Treatment  
Acreage Proposed: 6.0**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	High Density Pole	34.1	78		
2	4136 - Aspen, Mixed Conifer	High Density Sapling	90.6	22		
3	6120 - Lowland Cedar	High Density Pole	6.3	78		
4	4134 - Aspen, Spruce/Fir	High Density Pole	41.7	30		
5	4199 - Other Mixed Upland Deciduous	High Density Pole	31.1	88	111-140	Thin stand by removing white birch and trace aspen.
7	4130 - Aspen	High Density Pole	28.6	30		
8	4130 - Aspen	High Density Pole	41.1	30		
9	6120 - Lowland Cedar	High Density Pole	13.2	78		
11	4134 - Aspen, Spruce/Fir	High Density Pole	23.3	44		smaller diameters for the age; must cross stream to access stand
13	4130 - Aspen	High Density Sapling	33.7	4		
14	4134 - Aspen, Spruce/Fir	High Density Pole	64.8	44		
15	6120 - Lowland Cedar	High Density Pole	344.2	78		
16	6122 - Black Spruce	High Density Pole	15.4	47		
18	6122 - Black Spruce	High Density Pole	135.3	78		Mature timber to harvest.
19	4134 - Aspen, Spruce/Fir	High Density Pole	21.8	44		bigger wood, good for cutting
20	4134 - Aspen, Spruce/Fir	High Density Pole	41.3	44		
22	42260 - Natural Pine, Mixed Deciduous	High Density Log	122.9	80		
23	4134 - Aspen, Spruce/Fir	High Density Pole	10.7	44		some areas of younger timber. Hold.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4319 - Mixed Upland Forest	High Density Pole	18.2	44		smaller diameters; more conifer and wetter than most A6 sites
25	4134 - Aspen, Spruce/Fir	High Density Sapling	152.9	24		
26	4130 - Aspen	High Density Sapling	34.7	5		
27	4110 - Sugar Maple Association	High Density Pole	17.7	80	111-140	total BA 112
29	4134 - Aspen, Spruce/Fir	High Density Pole	18.9	44		Part of Dog Leg TS (add'l acres for 2010)
31	4136 - Aspen, Mixed Conifer	High Density Sapling	21.8	9		Tornado damaged area
32	4112 - Maple, Beech, Cherry Association	High Density Pole	10.1	80	81-110	
33	4134 - Aspen, Spruce/Fir	High Density Pole	29.9	44		
34	6122 - Black Spruce	High Density Pole	80.6	77		
35	42260 - Natural Pine, Mixed Deciduous	High Density Log	13.4	96		
37	4119 - Mixed Northern Hardwoods	High Density Log	89.6	80	81-110	good regeneration in gaps; thinned last entry period
38	4130 - Aspen	High Density Pole	7.9	48		
39	4130 - Aspen	High Density Pole	75.4	48		This stand is the Dog Leg TS (additional acres POW 2010); east 1/2 of the stand has been cut, west half not cut yet
40	4134 - Aspen, Spruce/Fir	High Density Pole	12.8	24		This stand originated after a blow down wind event
41	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	35.1	63		
42	4130 - Aspen	High Density Sapling	139.9	13		
43	4134 - Aspen, Spruce/Fir	High Density Sapling	15.7	13		
44	6120 - Lowland Cedar	High Density Pole	16.1	95		stream buffer

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Crystal Falls Mgt. Unit

5 – Forested Stands

Compartment: 018  
Year of Entry: 2013



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
45	4130 - Aspen	High Density Sapling	11.9	1		Part of Dog Leg TS, (additional acres POW 2010) already cut in 2010.
46	6120 - Lowland Cedar	High Density Pole	16.6	85		Black spruce is small diameter
47	4134 - Aspen, Spruce/Fir	High Density Sapling	29.8	22		
48	4134 - Aspen, Spruce/Fir	High Density Pole	27.4	80		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	622 - Lowland Shrub	14.4	N/A	Unspecified	
10	622 - Lowland Shrub	10.4	N/A	Unspecified	
12	622 - Lowland Shrub	4.4	N/A	Unspecified	
17	310 - Herbaceous Openland	5.1	N/A	Unspecified	
21	622 - Lowland Shrub	27.0	N/A	Unspecified	
28	310 - Herbaceous Openland	3.5	N/A	Unspecified	
30	622 - Lowland Shrub	32.8	N/A	Unspecified	
36	621 - Floating Aquatic	6.8	N/A	Unspecified	
49	622 - Lowland Shrub	15.4	N/A	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.
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.