



**Crystal Falls Forest Management Unit  
Compartment Review Presentation  
Compartment #76      Entry Year: 2014  
Compartment Acreage: 1212      County: Dickinson**

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**Revision Date:** June 9,2012

**Stand Examiner:** Cynthia Cooper

**Legal Description:** T41N, R29W, Sections 16 & 17

**RMU (if applicable):**

**Management Goals:** Improve quality of timber focusing on Red Oak, Aspen and Red and White Pine this year of entry.

**Soil and Topography:** This areas soils are mostly sandy loams. Topography is roughly 2/3rds upland and 1/3<sup>rd</sup> lowland.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Ownership in and around compartment almost entirely timber producing State Forest lands. High use recreation trails and fishing/ boating access sites are found in the compartments to the west and north.

**Unique, Natural Features:** Mitchell Creek.

**Archeological, Historical, and Cultural Features:** None in this compartment.

**Special Management Designations or Considerations:** Nice Red Oak and Red and White Pine.

**Watershed and Fisheries Considerations:** Mitchell Creek

**Wildlife Habitat Considerations:** This compartment is located within the southwestern portion of the Camp Suicide Deer Wintering Complex. Significant work has been done in this compartment in the past to promote conifer regeneration. Expected losses of spruce and fir due to spruce budworm will negatively impact this deer wintering complex, so every effort to retain other conifer covertypes that are not affected by this pest. The large 62 acre opening in the east half of Section 16 has been historically maintained by prescribed fire.

**Mineral Resource and Development Concerns and/or Restrictions:** Compartment 76: Sections 16 and 17, T41N-R29W, Dickinson County

Surface sediments consist of thin to discontinuous glacial till over bedrock and medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Precambrian Archean granite/gneiss

and Michigamme formation outcrop below the glacial drift. There is not an economic use for these rocks, although the granite/gneiss might have dimension stone potential. The Groveland Iron mine is located two miles to the north. This compartment was not previously leased for metallic exploration but could have potential. A gravel pit is located one mile to the west and there should be some potential. There is no economic oil and gas production in the UP.

**Vehicle Access:** Good

**Survey Needs:** None.

**Recreational Facilities and Opportunities:** Mostly in the compartments to the west and north.

**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: 076  
 T41N R29W Sec. 16, 17  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2014  
 Acres: 1,212 GIS Calculated  
 Examiner: Cynthia Cooper  
 Map Revised: 07/16/2012  
 Map Phase: Pre-Review

**Stand #**  
 23  
**Stocking Density**  
 (4120) - A7  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

17 16

N

### Legend

- Miris Corners
- Remonumented Section Corners
- Corners
- Pipe
- Power
- 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
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers

### Treatments

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

### Forest Stands

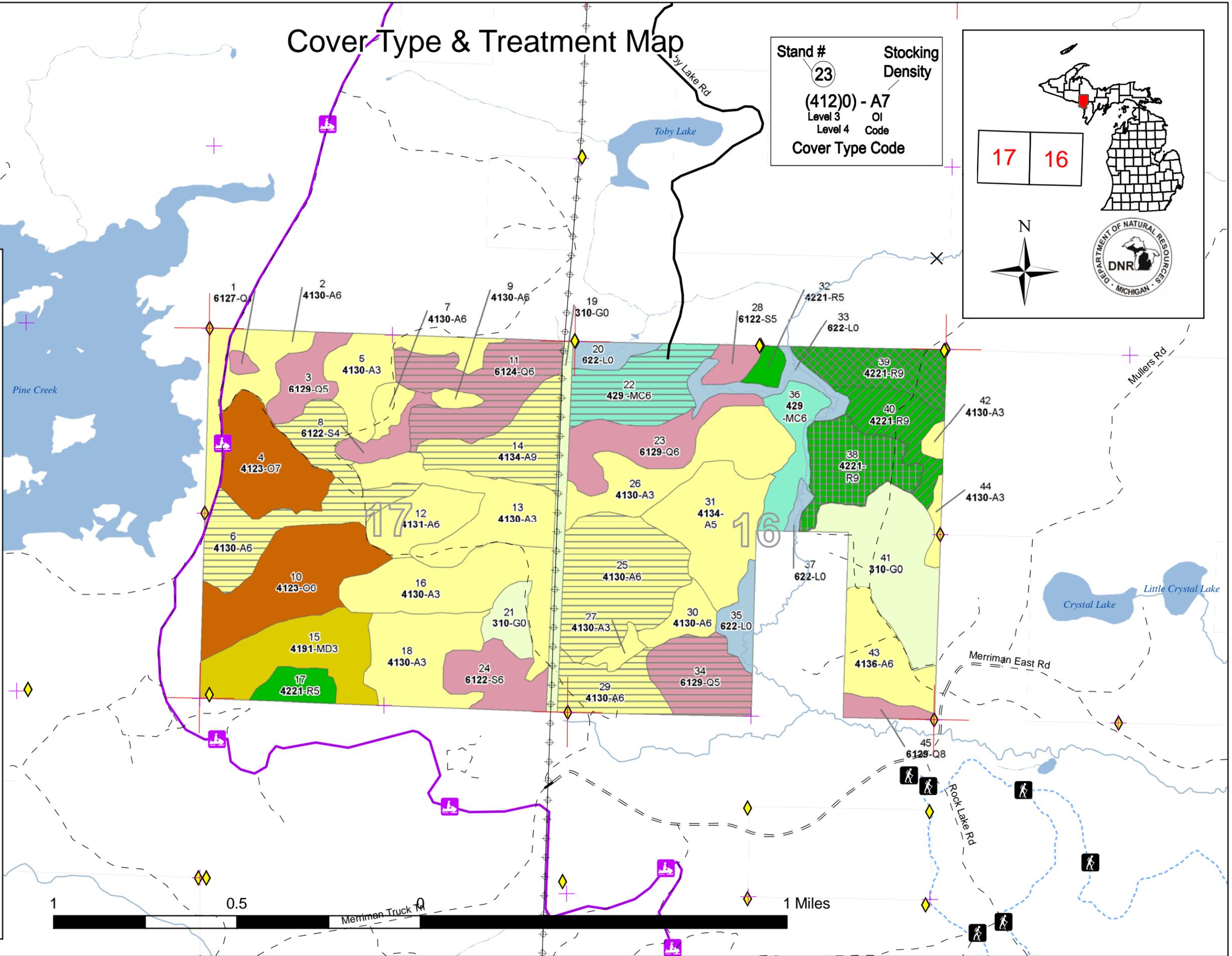
Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest

### Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 622 - Lowland Shrub
- State Forest Land



# Stand Boundary Map

Compartment: 076  
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 23  
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 (412)0 - A7  
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 Level 4 Code  
**Cover Type Code**

**Legend**

- Miris Corners
- ✚ Remonumented Section Corners
- ◆ Corners
- ✕ Gate
- ▲ Berms
- 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
- Ski Trail
- Hiking Trail
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries

**Forest Stands**

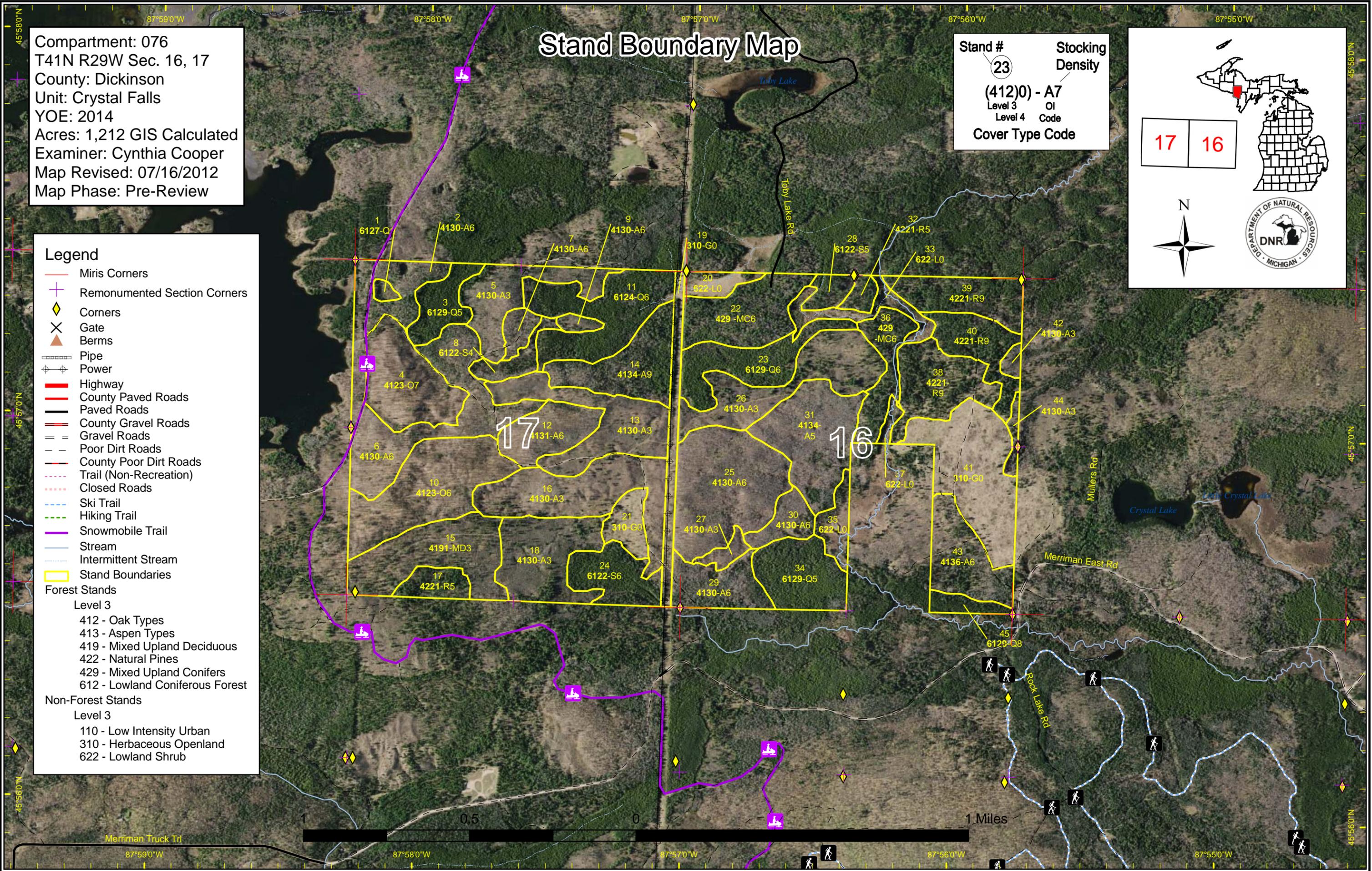
Level 3

- 412 - Oak Types
- 413 - Aspen Types
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**Non-Forest Stands**

Level 3

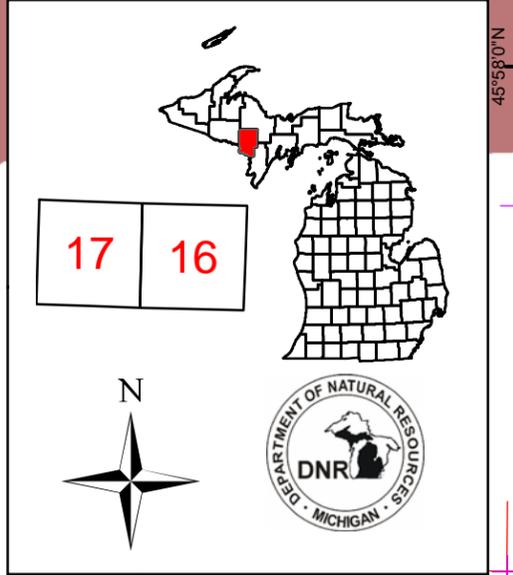
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- 622 - Lowland Shrub



# Dedicated & Proposed Special Conservation Area Map

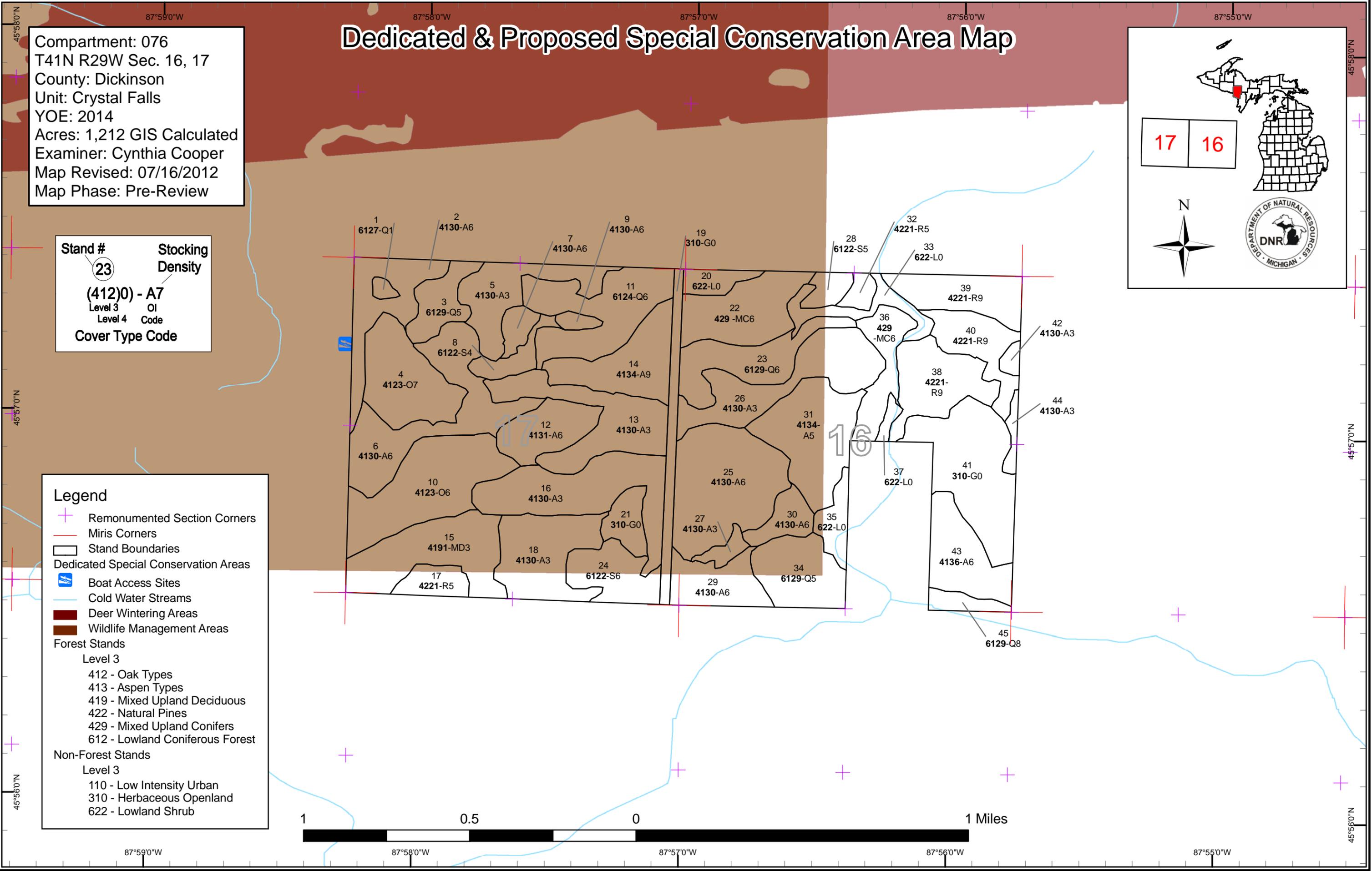
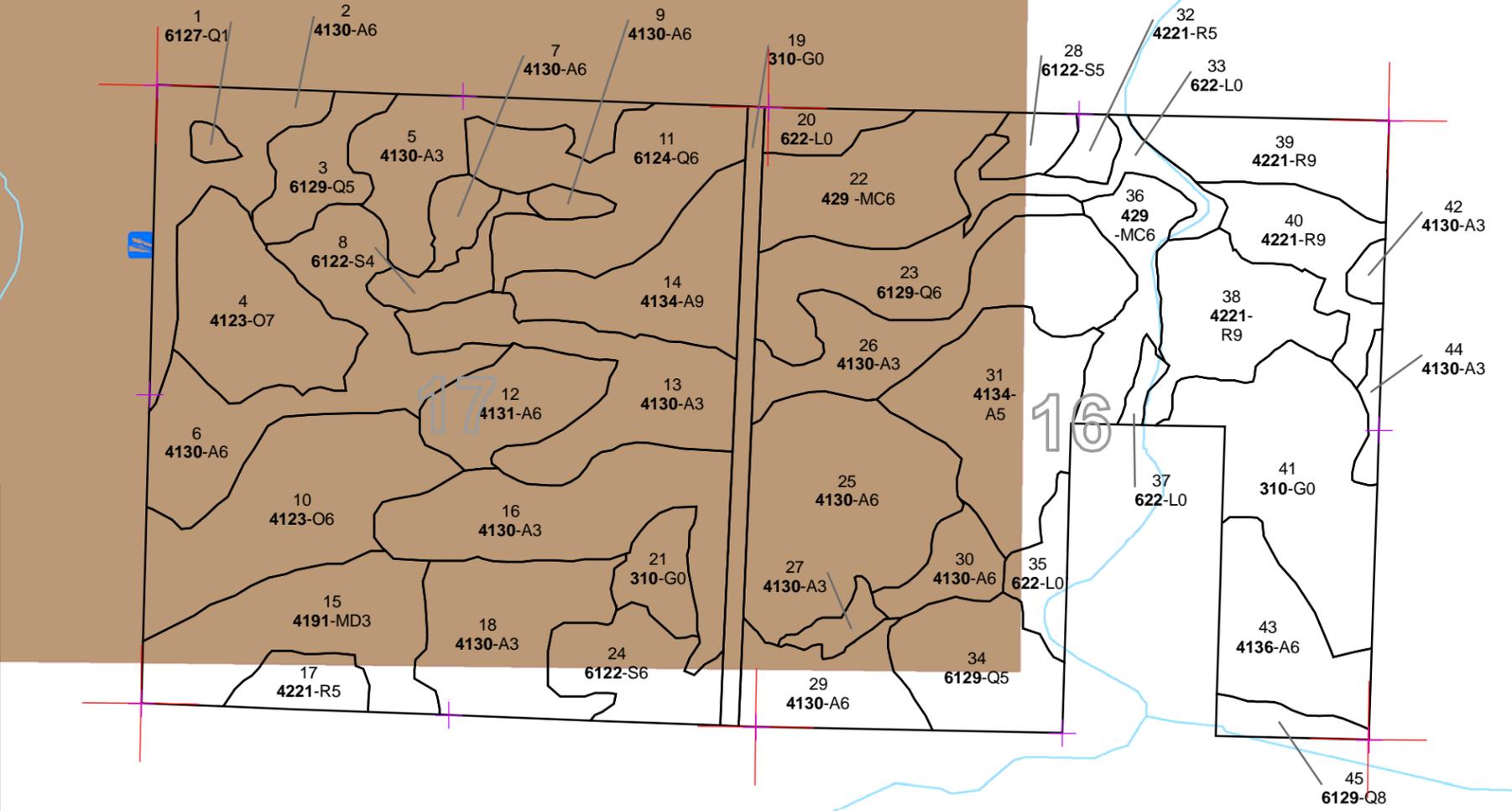
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**Stand #**  
 23  
**Stocking Density**  
 (412)0 - A7  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**



**Legend**

- ✚ Remonumented Section Corners
- Miris Corners
- ▭ Stand Boundaries
- Dedicated Special Conservation Areas**
- Boat Access Sites
- Cold Water Streams
- Deer Wintering Areas
- Wildlife Management Areas
- Forest Stands**
- Level 3
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 622 - Lowland Shrub



**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	56	148	36	13	131	39	0	123	36	0	0	0	0	0	581
Herbaceous Openland	90	0	0	0	0	0	0	0	0	0	0	0	0	0	90
Lowland Conifers	0	0	0	2	0	0	0	0	40	102	0	0	0	0	144
Lowland Shrub	38	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	35	8	0	0	0	0	43
Mixed Upland Deciduous	0	49	0	0	0	0	0	0	0	0	0	0	0	0	49
Oak	0	0	0	0	0	0	0	101	0	0	0	0	0	0	101
Red Pine	0	0	0	0	0	0	11	40	25	0	29	0	0	0	105
Upland Conifers	0	0	0	0	22	0	0	0	38	0	0	0	0	0	60
<b>Total</b>	<b>184</b>	<b>196</b>	<b>36</b>	<b>15</b>	<b>153</b>	<b>39</b>	<b>11</b>	<b>265</b>	<b>174</b>	<b>109</b>	<b>29</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1212</b>



## Table 2 – Proposed Treatment Summaries

**Crystal Falls Mgt. Unit**  
**Year of Entry 2014**

**Compartment 076**  
**Total Compartment Acres: 1212**

### Acres by Treatment Type

Commercial Harvest - 361	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 32	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	184	0	0	0	0	0	184
<b>Lowland Conifers</b>	82	0	0	0	0	0	82
<b>Red Pine</b>	0	29	35	0	25	0	89
<b>Upland Conifers</b>	38	0	0	0	0	0	38
<b>Total</b>	<b>304</b>	<b>29</b>	<b>35</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>393</b>



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	12076006-Cut	56.4	4130 - Aspen	High Density Pole	74		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription.</u> Cut all trees down to a 2" dbh except cut no oak or pine. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey <u>Proposed Start Date:</u> 10/01/2013										
14	12076014-Cut	36.1	4134 - Aspen, Spruce/Fir	High Density Log	80		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription.</u> Cut all trees down to 2" dbh except cut only white spruce and balsam fir 6" and greater on the stump. Cut no cedar, oak, pine or cherry. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey. <u>Proposed Start Date:</u> 10/01/2013										
25	12076025-Cut	66.7	4130 - Aspen	High Density Pole	74		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription.</u> Cut all trees down to a 2" dbh retaining oak, cherry, hemlock and pine if present. Remove NE lobe and add into stand 31. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey. <u>Proposed Start Date:</u> 10/01/2013										
22	12076029-Cut	38.3	429 - Mixed Upland Conifers	High Density Pole	80		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription.</u> Cut all trees to a 2" dbh except cut only white spruce and balsam fir 6" and greater on the stump. Cut no pine, cedar, oak, hemlock or cherry. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey. <u>Proposed 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
22	12076029-Cut	38.3	429 - Mixed Upland Conifers	High Density Pole	80		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees to a 2" dbh except cut only white spruce and balsam fir 6" and greater on the stump. Cut no pine,cedar, oak,hemlock or cherry. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey. <u>Proposed Start Date:</u> 10/01/2013										

29	12076029-Cut	24.7	4130 - Aspen	High Density Pole	44		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees to a 2" dbh except cut only white spruce and balsam fir 6" and greater on the stump. Cut no pine,cedar, oak,hemlock or cherry. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey. <u>Proposed Start Date:</u> 10/01/2013										

29	12076029-Cut	24.7	4130 - Aspen	High Density Pole	44		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees to a 2" dbh except cut only white spruce and balsam fir 6" and greater on the stump. Cut no pine,cedar, oak,hemlock or cherry. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Regeneration survey. <u>Proposed Start Date:</u> 10/01/2013										

38	12076038-Cut	35.0	42210 - Natural Red Pine	High Density Log	72		Harvest	Seed Tree	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription:</u> Seed tree harvest to regenerate red pine <u>Specs:</u> <u>Other Comments:</u> Harvest will generate products ranging from pulpwood to logs this YOY. <u>Next Steps:</u> regeneration survey <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
39 12076039-Cut	28.5	42210 - Natural Red Pine	High Density Log	100	111-140	Harvest	Single Tree Selection	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription: Thin stand by 1/3 basal area retaining a good representation of all species. Spruce budworm is present so retain only healthier white spruce and balsam fir.

Other Comments:

Next Steps: Future shelterwood cut.

Proposed Start Date: 10/01/2013

40 12076040-Cut	25.0	42210 - Natural Red Pine	High Density Log	80	171-200	Harvest	Crown Thinning	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: Thin approximately 1/3 of basal area leaving a good representation of all species. Spruce budworm is in the stand so leave only the healthiest white spruce and balsam fir.

Other Comments:

Next Steps: Future shelterwood cut.

Proposed Start Date: 10/01/2013

**Total Treatment Acreage Proposed: 373.8**

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
11 12076011-Cut	49.8	6124 - Lowland Spruce-Fir	High Density Pole	99		Harvest	Clearcut with Reserves	6124 - Lowland Spruce-Fir	Cmpt. Review Proposal

Prescription In SW portion of stand, cut all trees down to 2" DBH except cut no pine, oak, cedar, hemlock, cherry if present.

Specs:

Other

Comment:

Next

Steps:

Proposed

Start Date: 10/01/2013

Limiting Factor and No Treatment Reason

2G: Too wet (sensitive soils, does not include access issues)

34 12076034-Cut	32.4	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	81		Harvest	Clearcut with Reserves	6119 - Mixed Lowland Deciduous Forest	Cmpt. Review Proposal
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Prescription Cut all trees 2" DBH and greater in north portion of stand high to black spruce. Cut not hemlock, cedar, oak, cherry or pine if present.

Specs:

Other

Comment:

Next

regeneration survey

Steps:

Proposed

Start Date: 10/01/2013

Limiting Factor and No Treatment Reason

2G: Too wet (sensitive soils, does not include access issues)

**Total Treatment  
Acreage Proposed: 82.2**

**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

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**Total Treatment  
Acreage Proposed: 31.4**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6127 - Lowland Pine	Low Density Sapling	2.4	32		lowland grass and willow filling in with white pine saps.
2	4130 - Aspen	High Density Pole	31.4	54		mixed aspen with mixed conifer sub-canopy
3	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	18.0	99		
4	4123 - Red Oak	Low Density Log	41.6	74	51-80	
5	4130 - Aspen	High Density Sapling	32.5	27		
6	4130 - Aspen	High Density Pole	56.4	74		
7	4130 - Aspen	High Density Pole	7.3	57		Stand is in good condition. Very mixed in size and species composition. Hold for age class distribution in compartment.
8	6122 - Black Spruce	Low Density Pole	10.2	84		Old, sparse stand more than 50% tag alder. Spruce dying out.
9	4130 - Aspen	High Density Pole	3.6	27		small stand on a hill. Some spruce, fir and red pine residual.
10	4123 - Red Oak	High Density Pole	59.6	74	81-110	Was poorly thinned in 2002.
11	6124 - Lowland Spruce-Fir	High Density Pole	49.8	99		Very wet with creek running thru . Most of the b. spruce and aspen dead/dying. White spruce tamarack and balsam fir regenerating in understory.
12	4131 - Aspen, Oak	High Density Pole	25.0	49		
13	4130 - Aspen	High Density Sapling	44.8	14		
14	4134 - Aspen, Spruce/Fir	High Density Log	36.1	80		A couple of low areas in stand mostly black spruce or cedar.
15	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	48.9	10		Newly acquired land. This stand is 10 year old aspen with oak and pine residual as super canopy.
16	4130 - Aspen	High Density Sapling	55.5	8		
17	42210 - Natural Red Pine	Medium Density Pole	11.4	60	81-110	Red pine with 10 year old aspen sub-canopy.



Stand	Crystal Falls Mgt. Unit			5 – Forested Stands		Compartment: 076 Year of Entry: 2014	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
18	4130 - Aspen	High Density Sapling	42.2	10		Newly acquired land. This is an aspen stand with small red pine inclusion in south of stand with red and white scattered throughout.	
22	429 - Mixed Upland Conifers	High Density Pole	38.3	80		Aspen, older spruce and balsam fir declining. Maples and younger spruce and fir look good. Much super-canopy white pine. Trail (end of Tobly Lake road) through stand.	
23	6129 - Mixed Coniferous Lowland Forest	High Density Pole	33.8	99		Areas heavy to white pine.	
24	6122 - Black Spruce	High Density Pole	24.9	81			
25	4130 - Aspen	High Density Pole	66.7	74			
26	4130 - Aspen	High Density Sapling	47.9	14		A few residual oak.	
27	4130 - Aspen	High Density Sapling	5.4	18			
28	6122 - Black Spruce	Medium Density Pole	7.7	99		Tag alder surrounds 3 sides of stand.	
29	4130 - Aspen	High Density Pole	24.7	44		spruce/fir heavier in south. corner flagged and painted.	
30	4130 - Aspen	High Density Pole	12.6	34			
31	4134 - Aspen, Spruce/Fir	Medium Density Pole	49.2	49			
32	42210 - Natural Red Pine	Medium Density Pole	5.4	72		Small stand on top of hill surrounded by lowland softwoods and tag alder.	
34	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	32.4	81			
36	429 - Mixed Upland Conifers	High Density Pole	22.1	49		Creek buffer, some upland with more aspen in mix.	
38	42210 - Natural Red Pine	High Density Log	35.0	72			
39	42210 - Natural Red Pine	High Density Log	28.5	100	111-140	Average DBH of red pine moving out of utility pole size.	
40	42210 - Natural Red Pine	High Density Log	25.0	80	171-200	Thinned in 2000. Current ba 180.	

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Crystal Falls Mgt. Unit

5 – Forested Stands

Compartment: 076  
Year of Entry: 2014



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4130 - Aspen	High Density Sapling	3.1	14		
43	4136 - Aspen, Mixed Conifer	High Density Pole	32.0	44		Red pine scattered thru stand and in clumps.
44	4130 - Aspen	High Density Sapling	4.2	14		
45	6129 - Mixed Coniferous Lowland Forest	Medium Density Log	7.3	81		Mitchell Creek buffer.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
19	3102 - Grass	18.7	No	Low (NonForested)	
20	6229 - Mixed lowland shrub	8.7	No	Unspecified	
21	3102 - Grass	12.4	No	Unspecified	
33	6229 - Mixed lowland shrub	15.2	No	Unspecified	
35	6229 - Mixed lowland shrub	11.3	No	Unspecified	
37	6229 - Mixed lowland shrub	3.1	No	Unspecified	
41	3102 - Grass	59.1	Yes	Low (NonForested)	



**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	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.