



**Crystal Falls Forest Management Unit**  
**Compartment Review Presentation**  
**Compartment #29**                      **Entry Year: 2014**  
**Compartment Acreage: 2353**            **County: Dickinson**

---

**Revision Date:** 6-19-12

**Stand Examiner:** Debbie Goupell

**Legal Description:** T43N R27W Sec 19, 30, 31  
T43N R28W Sec 23-26, 36, 36

**Management Goals:** This compartment has a near equal amount of upland and lowland. About one-third of the compartment is aspen, which does make up the greatest cover type in this compartment. Management of all stands is to balance age class distribution and allow best suited species to grow on best suited sites while promoting sustainable timber production, and enhancing and protecting wildlife habitat. Hardwood management goals are to put growth on the best trees in place by removing crown competition and selectively harvest on an alternating 20 year rotation.

**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 Emmet fine sandy loam, also a well drained soil. 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:** The compartment is fairly contiguous State land, interspersed with private. Some State land adjoins the compartment on most sides as does private ownership. The area is heavily used by loggers, hunters, fisherpeople, campers, seasonal residents, trappers, general recreationists.

**Unique, Natural Features:** Stafford Creek, Hintz Lake and the Ford River.

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

**Special Management Designations or Considerations:** Much of this compartment appears to be in Deer yard/wintering areas, per the 1978 deer wintering area map.

**Watershed and Fisheries Considerations:** Protect water quality for all bodies of water, particularly Stafford Creek and the Ford River. Promote long lived conifer species along these waterbodies and use adequate buffer protection.

**Wildlife Habitat Considerations:** This compartment is located in the Ford River Deer Wintering Complex and incorporates the Cootware Farm. Aspen, birch and hardwood stands should remain as diverse as possible in both species and age class. The conifer component in the upland stands should be promoted to provide access and dispersal of wintering deer when feeding in them. Transition zones between upland and lowland stands should be protected to allow for soft snags, nesting trees and travel corridors for wildlife. Drainages should be protected during harvest operations. This area provides habitat that is ideal for wood turtles and black-backed woodpeckers. Significant conifer losses due to spruce budworm are of concern and make cedar, hemlock and pine components more important than ever.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of medium-textured and coarse-textured glacial till. The glacial drift thickness varies between 10 and 100 feet with some glacial drumlins. The Cambrian Munising Group and Precambrian Archean granite/gneiss, Randville Dolomite and Michigamme Formation subcrop below the glacial drift. The Randville and Granite/Gneiss are or could be used for decorative or building stone. A Randville Dolomite marble quarry is located five miles to the southwest. Groveland Iron mine is located approximately twelve miles to the southwest. Most of this compartment was previously leased for metallic exploration and potential may still exist. Gravel pits are located to the east and west of the compartment and there appears to be potential. There is no economic oil and gas production in the UP.

**Vehicle Access:** County Road 426 is the primary access along the north and east; additional access is via unimproved two-track roads. Portions of the State land in this compartment will need to be accessed via private property.

**Survey Needs:** Needed for almost every prescribed stand.

**Recreational Facilities and Opportunities:** Hunting, camping, fishing, trapping, hiking, canoeing.

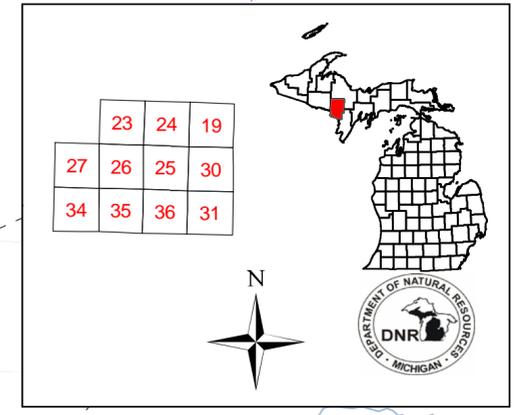
**Fire Protection:** Felch protection area. Access to most upland stands is fair, access to some swamp types would be difficult.

#### **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: 029  
 T43N R27W Sec. 19, 30, 31  
 T43N R28W Sec. 23 - 27, 34 - 36  
 County: Dickinson  
 Unit: Crystal Falls  
 YO: 2014  
 Acres: 2,353 GIS Calculated  
 Examiner: Deb Goupell  
 Map Revised: 07/16/2012  
 Map Phase: Pre-Review



**Stand #**  
 23  
**Stocking Density**  
 (4120) - A7  
 Level 3 OI  
 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
- Railroads
- Stream
- Intermittent Stream
- Lakes and Rivers

**Treatments**

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

**Forest Stands**

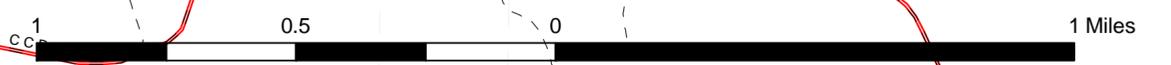
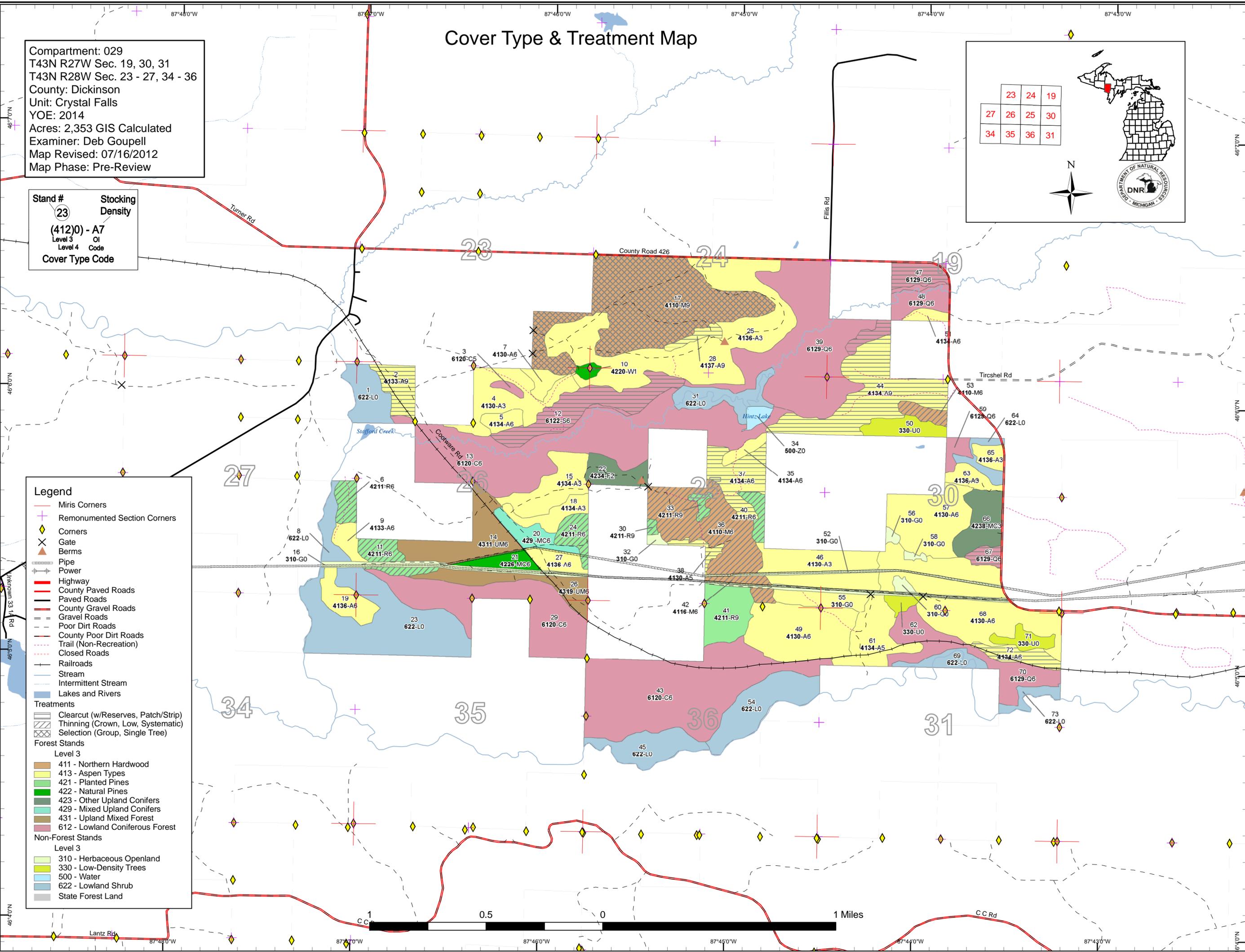
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

**Non-Forest Stands**

Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- State Forest Land



Map coordinates: 87°48'0"W to 87°43'0"W (Longitude) and 46°50'0"N to 46°40'0"N (Latitude).

# Stand Boundary Map

Compartment: 029  
 T43N R27W Sec. 19, 30, 31  
 T43N R28W Sec. 23 - 27, 34 - 36  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2014  
 Acres: 2,353 GIS Calculated  
 Examiner: Deb Goupell  
 Map Revised: 07/16/2012  
 Map Phase: Pre-Review

23	24	19	
27	26	25	30
34	35	36	31

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

**Legend**

- Miris Corners
- Remunented 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
- Railroads
- Stream
- Intermittent Stream
- Stand Boundaries

**Forest Stands**

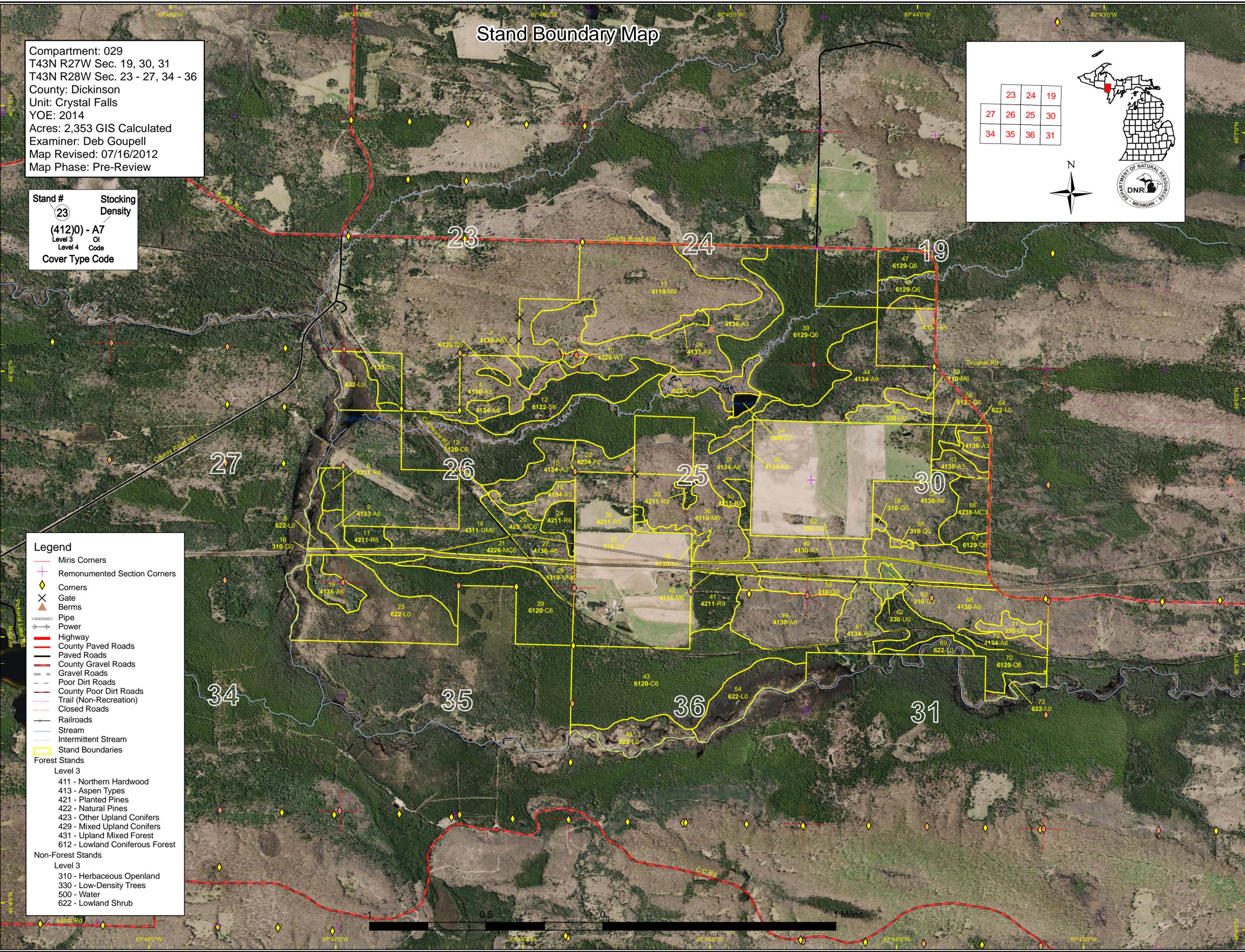
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

**Non-Forest Stands**

Level 3

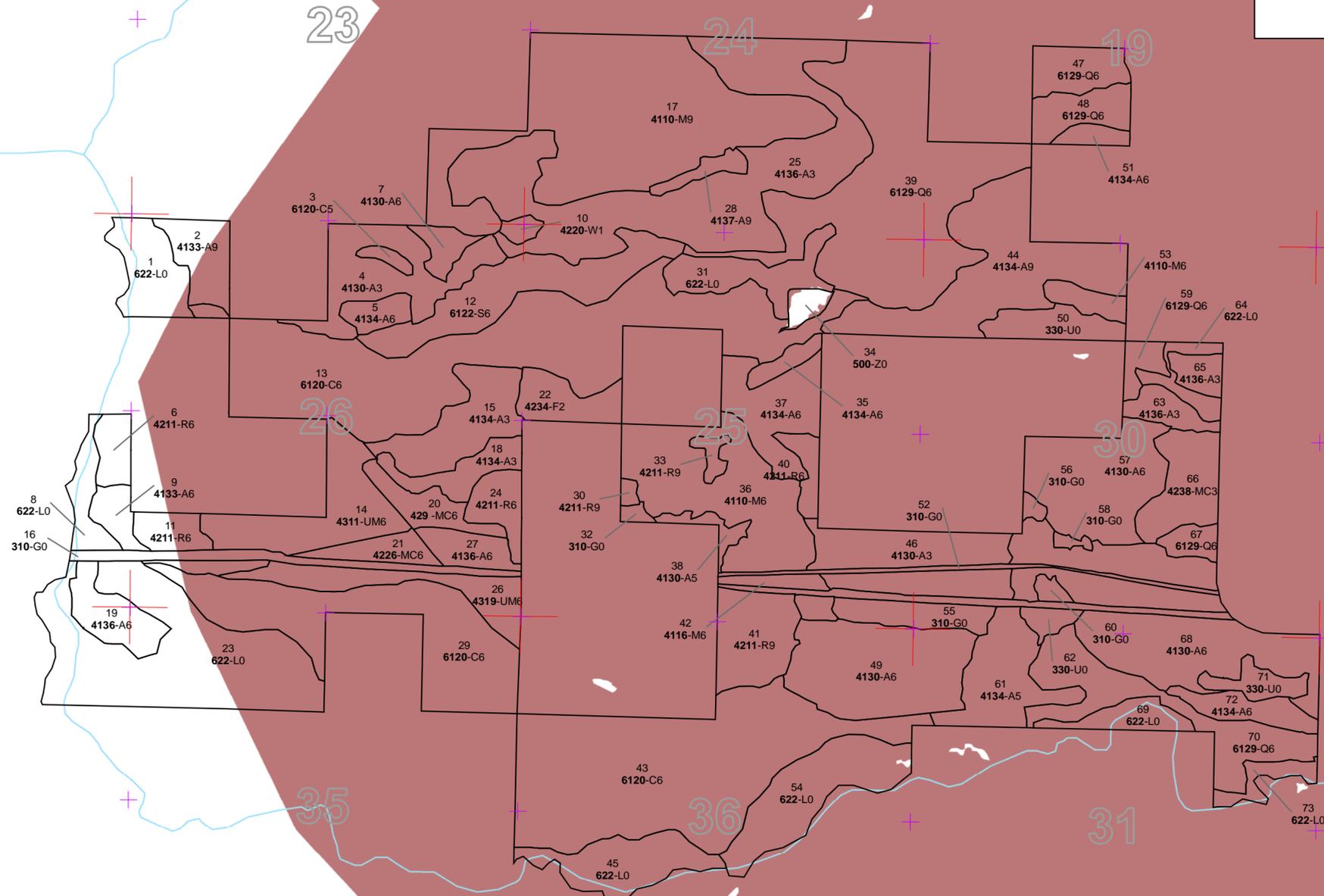
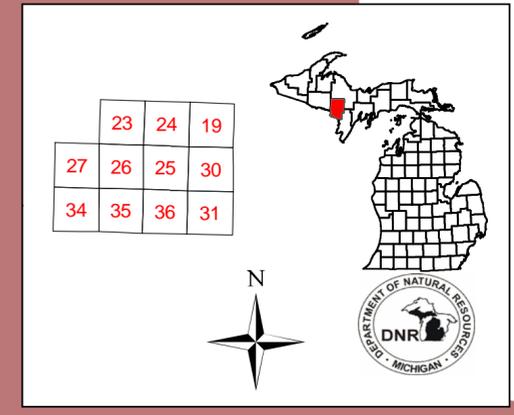
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub



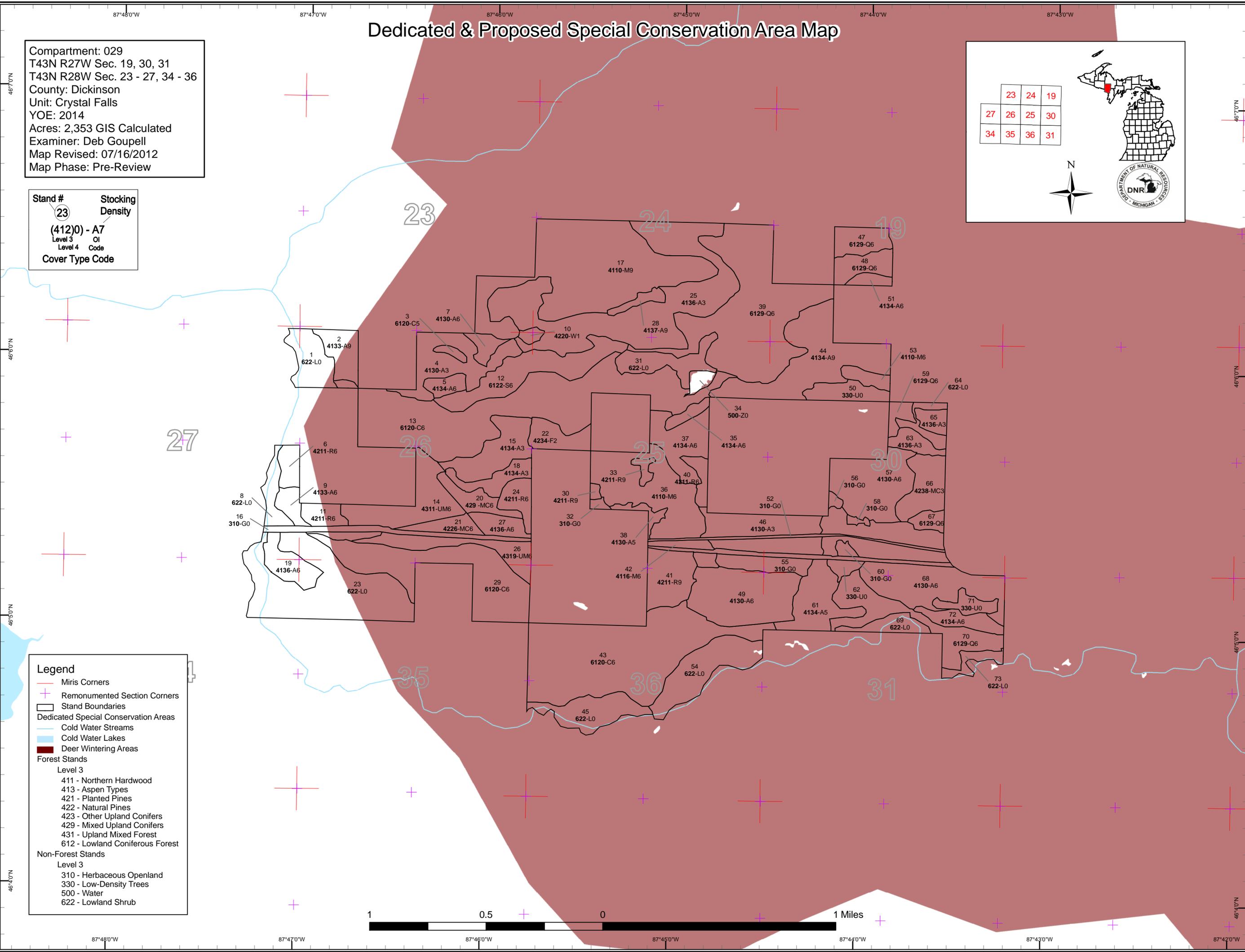
# Dedicated & Proposed Special Conservation Area Map

Compartment: 029  
 T43N R27W Sec. 19, 30, 31  
 T43N R28W Sec. 23 - 27, 34 - 36  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2014  
 Acres: 2,353 GIS Calculated  
 Examiner: Deb Goupell  
 Map Revised: 07/16/2012  
 Map Phase: Pre-Review

**Stand #**  
 23  
**(4120) - 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
  - Cold Water Lakes
  - Deer Wintering Areas
  - Forest Stands**
  - Level 3
  - 411 - Northern Hardwood
  - 413 - Aspen Types
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 423 - Other Upland Conifers
  - 429 - Mixed Upland Conifers
  - 431 - Upland Mixed Forest
  - 612 - Lowland Coniferous Forest
  - Non-Forest Stands**
  - Level 3
  - 310 - Herbaceous Openland
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub



**Table 1 – Total Acres by Cover Type and Age Class**

Deborah Goupell : Examiner



	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	122	163	99	156	95	57	79	14	19	0	0	0	0	0	804
Cedar	0	0	0	0	0	0	0	0	246	181	0	0	0	0	427
Herbaceous Openland	47	0	0	0	0	0	0	0	0	0	0	0	0	0	47
Low-Density Trees	31	0	0	0	0	0	0	0	0	0	0	0	0	0	31
Lowland Conifers	0	0	0	0	0	0	0	0	201	41	0	0	0	0	242
Lowland Shrub	272	0	0	0	0	0	0	0	0	0	0	0	0	0	272
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	50	0	0	0	0	0	50
Natural Mixed Pines	0	0	0	0	0	12	0	0	0	0	0	0	0	0	12
Northern Hardwood	0	0	0	0	0	0	0	0	245	0	0	0	0	0	245
Red Pine	0	0	0	0	0	83	0	0	0	0	0	0	0	0	83
Upland Conifers	0	27	0	0	0	15	0	0	0	0	0	0	0	0	42
Upland Mixed Forest	0	0	0	0	0	71	0	0	0	0	0	0	0	0	71
Upland Spruce/Fir	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
Water	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
White Pine	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
<b>Total</b>	<b>479</b>	<b>207</b>	<b>99</b>	<b>160</b>	<b>95</b>	<b>237</b>	<b>79</b>	<b>14</b>	<b>762</b>	<b>222</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2353</b>



## Table 2 – Proposed Treatment Summaries

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

**Compartment 029**  
**Total Compartment Acres: 2353**

### Acres by Treatment Type

Commercial Harvest - 539	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
<b>Aspen</b>	156	0	0	0	0	0		156
<b>Lowland Conifers</b>	29	0	0	0	0	0		29
<b>Lowland Spruce/Fir</b>	49	0	0	0	0	0		49
<b>Northern Hardwood</b>	0	157	0	0	88	0		245
<b>Red Pine</b>	0	0	0	0	53	0		53
<b>Upland Mixed Forest</b>	0	0	0	0	7	0		7
<b>Total</b>	<b>234</b>	<b>157</b>	<b>0</b>	<b>0</b>	<b>148</b>	<b>0</b>		<b>539</b>



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	12029002-Cut	18.8	4133 - Aspen, Mixed Pine	High Density Log	82		Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all stems 2" dbh and above EXCEPT white &amp; red pine and oak. South half of stand is heavier to mixed pine, so remove all species except pine. Take care to protect subcanopy pine. White pine may be cut for maneuverability; All cedar will be retained.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Jack pine needs to be cut west of the railroad tracks; ELS RR will need to be contacted to move stored cars on the tracks to access. Larger diameter aspen on north and top of hill, smaller aspen dbh along road.</p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
6	12029006-Cut	10.2	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	57	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Remove most species besides red and white pine and thin red pine to BA 110, focusing on releasing red pine crowns.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
11	12029011-Cut	15.9	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	57	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Remove most species besides red and white pine, and thin red pine to a BA 110, focusing on releasing red pine crop tree crowns.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
12	12029012-Cut	49.1	6122 - Black Spruce	High Density Pole	87		Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all stems 2" dbh and greater, leaving 1/10th acre islands of black spruce for seed source (roughly every 3-chains). Red and white pine, cedar will be left. 100 foot buffer to Stafford Ck, as this is an exception to trout waters</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	12029014_sm all-Cut	6.6	4311 - Pine, Aspen Mix	High Density Pole	56	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Thin to residual BA 100 of red pine and remove all other species. Focus thinning on releasing crop trees with a good crown ratio. This is an inclusion within a larger stand, no retention <u>Specs:</u>										
<u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
17	12029017-Cut	157.4	4110 - Sugar Maple Association	High Density Log	87	81-110	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription:</u> Thin to BA 80 and focus creating regeneration gaps, particularly around maple saplings/seedlings. Open canopy around pine to recruit additional pine seedlings. Retain conifer. <u>Specs:</u>										
<u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
24	12029024-Cut	13.3	42110 - Planted Red Pine	High Density Pole	57	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Thin red pine to residual BA100, focus on releasing crowns of crop trees with a strong crown ratio. No retention as this stand was thinned last entry. <u>Specs:</u>										
<u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
28	12029028-Cut	6.3	4137 - Aspen, Birch	High Density Log	59		Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2" dbh and greater except red & white pine, oak if present. Encourage scarification beneath white pine as allowable. <u>Specs:</u>										
<u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
30	12029030-Cut	1.8	42110 - Planted Red Pine	High Density Log	57	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2" dbh and greater except red pine; Red pine to be thinned to BA 100. There is a chain of jack pine on the south side of this stand, which will be harvested. No retention due to stand size <u>Specs:</u>										
<u>Other Comments:</u> <u>Next Steps:</u> <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
33	12029033-Cut	4.0	42110 - Planted Red Pine	High Density Log	57	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Cut all stems 2"dbh and greater except red pine; red pine will be thinned to a residual BA 100. No retention due to stand size										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
36	12029036-Cut	70.5	4110 - Sugar Maple Association	High Density Pole	87	81-110	Harvest	Crown Thinning	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Release crop tree crowns to BA of 70-80 removing poorer formed trees.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u> This stand has not been treated since TSI days and needs an improvement cut, even though BA is not terribly high. Recommending treatment as we will be crossing through private to access adjacent stand. There is an electric fence along road in south.										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
37	12029037-Cut	32.2	4134 - Aspen, Spruce/Fir	High Density Pole	59		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Cut all stems 2"dbh and greater except red and white pine, hemlock and oak if present.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
38	12029038-Cut	5.6	4130 - Aspen	Medium Density Pole	56		Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Cut all stems 2"dbh and greater, no reserves. This stand is not fully stocked and has shallow soils, as trees are blown over. Leaving no retention will encourage greater stocking in the next generation.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u> There is electric fence along road.										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39	12029039-Cut_small	7.4	6129 - Mixed Coniferous Lowland Forest	High Density Pole	89		Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<u>Prescription:</u> Cut pocket of black spruce/tamarack, retaining cedar, hemlock and pine, if present. Will leave several islands of spruce for seed source. Winter harvest. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
40	12029040-Cut	7.8	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	57	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2"dbh and greater except red pine; Red pine will be thinned to release crop tree crowns as needed. <u>Specs:</u> <u>Other Comments:</u> Red pine BA ranged from 60-120, so there may be little red pine removal necessary. There is an electric fence along the road south half of this stand. <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
42	12029042-Cut	9.3	4116 - Mixed N. Hardwood - Aspen	High Density Pole	87	111-140	Harvest	Crown Thinning	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
<u>Prescription:</u> Thin to BA 80, releasing crop tree crowns and removing poorly formed trees. Stand on south side of southernmost pipeline is heavier to aspen, which should be removed. Southernmost stand has less BA to remove but both stands can use an improvement cut. Focus on removing ironwood and aspen. <u>Specs:</u> <u>Other Comments:</u> An electric fence is on either side of the pipelines. <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
44	12029044-Cut	78.7	4134 - Aspen, Spruce/Fir	High Density Log	61		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Remove all species 2"dbh and greater except red and white pine, cedar, oak and hemlock, if found. Additional retention may be poor quality hardwood knob on south OR smaller, unmerchantable spruce/fir along swamp where it exists. <u>Specs:</u> <u>Other Comments:</u> Access will need to be across private. <u>Next Steps:</u> <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
47	12029047-Cut	14.9	6129 - Mixed Coniferous Lowland Forest	High Density Pole	90		Harvest	Clearcut with Reserves	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2"dbh and greater except cedar and red and white pine, hemlock if present. 100 ft buffer to Stafford Ck (trout water exception)										
<u>Specs:</u>										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
53	12029053-Cut	8.2	4110 - Sugar Maple Association	High Density Pole	89	111-140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription:</u> Thin to BA 50-60 by releasing crop tree crowns, removing poorly formed and competing trees. Lower BA is due to small stand size and access thru private. Slope is steeper as you go west. South facing/top of slope has less BA. Favor leaving cavity trees when possible										
<u>Specs:</u>										
<u>Other</u> <u>Comments:</u> Access will be through private.										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
67	12029067-Cut	7.1	6129 - Mixed Coniferous Lowland Forest	High Density Pole	85		Harvest	Clearcut with Reserves	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2"dbh and greater except cedar, pine and hemlock if present. Winter/dry ground harvest to prevent rutting.										
<u>Specs:</u>										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
72	12029072-Cut	14.2	4134 - Aspen, Spruce/Fir	High Density Pole	75		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription:</u> Cut all stems 2"dbh and greater except cedar, hemlock and pine, if present. Wet pocket just north of railroad tracks will be retention.										
<u>Specs:</u>										
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										

**Total Treatment  
Acreage Proposed: 539.3**

**Table 4 -- Treatments Prescribed with a Limiting Factor**



S  
t  
a  
n  
d

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

#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	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4133 - Aspen, Mixed Pine	High Density Log	18.8	82		larger aspen on north, top of hill, smaller diameter along road. jack pine is west of railroad tracks in north half. south 1/3 of stand is mostly RP and WP; remove aspen, mixed hardwood, mixed softwood.
3	6120 - Lowland Cedar	Medium Density Pole	3.1	91		this stand was probably more of a retention pocket
4	4130 - Aspen	High Density Sapling	42.4	7		Palluconi TS closed 2006
5	4134 - Aspen, Spruce/Fir	High Density Pole	8.4	36		
6	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	10.2	57	171-200	
7	4130 - Aspen	High Density Pole	8.0	36		some residual white and red pine.
9	4133 - Aspen, Mixed Pine	High Density Pole	9.1	36		
10	42200 - Natural White Pine	Low Density Sapling	3.5	36		white pine is completely bushed out. This stand was clearcut and burned in 1976
11	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	15.9	57	141-170	
12	6122 - Black Spruce	High Density Pole	50.4	87		there is an upland knob with red pine seeding on to it in far southwest. Cedar is more south of old winter road in the far southeast. Reserve all red pine and cedar, clumps of black spruce.
13	6120 - Lowland Cedar	High Density Pole	177.5	94		most of the tamarack is concentrated on the west side off Cootware Rd.
14	4311 - Pine, Aspen Mix	High Density Pole	43.3	56	111-140	Far north and west and due south of airport is heaviest to aspen/mixed hardwood/mixed softwood. White pine and red pine seeds/saps are throughout. Can hold another entry; will remove all but pine, summer log and anchor chain to promote the natural pine component.
15	4134 - Aspen, Spruce/Fir	High Density Sapling	34.3	21		White pine is heavily browsed, multi-topped and bushy. There are some open areas with fir and pine seeding in. Pine more prolific than usual.
17	4110 - Sugar Maple Association	High Density Log	157.4	87	81-110	Ralph Hill TS closed 2005. Most of standing white birch is dead; good quality hardwood
18	4134 - Aspen, Spruce/Fir	High Density Sapling	15.3	6		Chevy TS closed 2006



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4136 - Aspen, Mixed Conifer	High Density Pole	19.4	36		Wet swale divides the stand. There's an opening on the south with red and white pine, which are dying/snapped off. Far west strip is a buffer to the Ford River and has large white pine, aspen, white spruce
20	429 - Mixed Upland Conifers	High Density Pole	14.7	51		Very mixed stand with white pine potential.
21	42260 - Natural Pine, Mixed Deciduous	High Density Pole	11.5	51		More red pine on east side of stand.
22	42340 - Upland Spruce/Fir	Medium Density	17.3	12		Chevy TS 1990
24	42110 - Planted Red Pine	High Density Pole	13.3	57	141-170	Cootware Pine closed 2006; one-third of this stand was removed in the Cootware Pine TS (where it is currently 160 BA, 90 BA was already removed). I cannot recommend another thinning despite the high BA
25	4136 - Aspen, Mixed Conifer	High Density Sapling	144.4	18		Hintz Lake TS closed 1993. Tamarack is located in far south side of stand. There are more open areas on north side of east half of stand; they are filling in with balsam, spruce, jack, white and some red pine and tamarack. Residual red pine log sized trees in southeast corner of stand.
26	4319 - Mixed Upland Forest	High Density Pole	27.7	56		
27	4136 - Aspen, Mixed Conifer	High Density Pole	12.5	56		White birch is starting to fall out. Aspen dbh ranges from 7-14". Manage with stand to south.
28	4137 - Aspen, Birch	High Density Log	6.3	59		Much of the white birch is dying or dead. Steep slope, especially as you go west. Retain all red and white pine.
29	6120 - Lowland Cedar	High Density Pole	85.5	86		
30	42110 - Planted Red Pine	High Density Log	1.8	57	141-170	Smaller stand has about 1 chain of jack pine on south strip; larger stand has a heavy sugar maple sapling understory which are heavily browsed.
33	42110 - Planted Red Pine	High Density Log	4.0	57	141-170	
35	4134 - Aspen, Spruce/Fir	High Density Pole	6.2	35		
36	4110 - Sugar Maple Association	High Density Pole	70.5	87	81-110	small pocket of balsam fir/upland cedar/cherry due west of larger redpine: may thin because we are cutting aspen to the northeast and access will be limited. There are a lot of ugly trees and a thinning would help improve stand quality
37	4134 - Aspen, Spruce/Fir	High Density Pole	32.2	59		aspen dbh ranges from 7-14" dbh

S  
t  
a  
n  
d

## Crystal Falls Mgt. Unit

## 5 – Forested Stands

Compartment: 029  
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4130 - Aspen	Medium Density Pole	5.6	56		
39	6129 - Mixed Coniferous Lowland Forest	High Density Pole	145.3	89		Cut approx 7 acres in north central. Drainage in north off CR 426
40	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	7.8	57	111-140	Sugar maple saplings are thickest under aspen. Remove aspen, thin pine as needed.
41	42110 - Planted Red Pine	High Density Log	30.1	57	111-140	Cootware Pine TS closed 2006
42	4116 - Mixed N. Hardwood - Aspen	High Density Pole	9.3	87	111-140	heavy to aspen on south side; electric fence on north. Stand has hardwood potential but aspen and ironwood should be removed. No maple regen to release
43	6120 - Lowland Cedar	High Density Pole	160.6	87		
44	4134 - Aspen, Spruce/Fir	High Density Log	78.7	61		Hardwood pocket on south line is predominantly 4-6" dbh maple, of fair-low quality. Sawlog bass/maple is very low quality. This may serve as retention if necessary, initial thought is to clearcut. Stand has large diameters and is ready to be cut. Narrow swale (1-2 chains) extends from swamp finger, treat same. Will retain all red and white pine, cedar, hemlock.
46	4130 - Aspen	High Density Sapling	64.7	5		Two Pipelines TS closed 2007. There is a wet Q swale on north side of north pipeline with cedar, black ash, red maple, tamarack, white spruce. Was retention
47	6129 - Mixed Coniferous Lowland Forest	High Density Pole	17.4	90		Northwest corner of stand is upland aspen/spruce/fir pocket. Cedar is in more localized pockets vs scattered evenly throughout. South is wetter. Black spruce is starting to break up; black spruce seedlings are in these openings. 100 foot buffer to Stafford Ck (exception to trout waters); retain all cedar.
48	6129 - Mixed Coniferous Lowland Forest	High Density Pole	16.6	93		Smaller diameter trees
49	4130 - Aspen	High Density Pole	65.1	21		'87 Blizzard TS closed 1991; electric fencing along east side
51	4134 - Aspen, Spruce/Fir	High Density Pole	5.6	46		
53	4110 - Sugar Maple Association	High Density Pole	8.2	89	111-140	most of the stand is north facing slope, which gets steeper as you go west. South facing/top of slope has less BA and more spruce/fir seeding in about 1-5' tall. Much of the white birch is dead. Access, like adjacent stand, will be across private.
57	4130 - Aspen	High Density Pole	54.4	40		balsam understory lacking north 1/2 of stand



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
59	6129 - Mixed Coniferous Lowland Forest	High Density Pole	7.0	91		tamarack is heaviest north of tag swale, also very thick balsam fir understory.
61	4134 - Aspen, Spruce/Fir	Medium Density Pole	35.1	42		aspen is two-aged, most is 42 years old, some is 54. Black cherry in open areas, fenced off. Finger on southeast is older, cut together.
63	4136 - Aspen, Mixed Conifer	High Density Sapling	10.4	19		426 TS, closed in 1992.. Some lower, wet pockets
65	4136 - Aspen, Mixed Conifer	High Density Sapling	7.9	19		426 TS closed 1992; some lower pockets
66	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Sapling	26.9	19		Some low places. Tag scattered throughout. 426 Ts closed 1992
67	6129 - Mixed Coniferous Lowland Forest	High Density Pole	7.1	85		cedar is heaviest 1 chain from CR 426 and pocket in west (back). Black spruce most evident beneath cedar.
68	4130 - Aspen	High Density Pole	104.9	38		larger aspen either side of tag swale/drainage that runs north/south. Conifer understory more apparent against F3/Q6 ridge vs throughout stand.
70	6129 - Mixed Coniferous Lowland Forest	High Density Pole	48.8	87		Drainage with bed/bank in NW half of stand.
72	4134 - Aspen, Spruce/Fir	High Density Pole	14.2	75		Aspen on north, heavier to spruce on south half. Wet pocket just north of railroad tracks.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	622 - Lowland Shrub	24.5	N/A	Unspecified	
8	622 - Lowland Shrub	12.6	N/A	Unspecified	
16	310 - Herbaceous Openland	16.5	N/A	Unspecified	
23	622 - Lowland Shrub	105.8	N/A	Unspecified	
31	622 - Lowland Shrub	24.5	N/A	Unspecified	
32	310 - Herbaceous Openland	2.0	N/A	Unspecified	
34	50 - Water	5.3	N/A	Unspecified	
45	622 - Lowland Shrub	30.9	N/A	Unspecified	
50	330 - Low-Density Trees	16.3	N/A	Unspecified	
52	310 - Herbaceous Openland	8.0	N/A	Unspecified	
54	622 - Lowland Shrub	44.0	N/A	Unspecified	
55	310 - Herbaceous Openland	14.0	N/A	Unspecified	
56	310 - Herbaceous Openland	2.0	N/A	Unspecified	
58	310 - Herbaceous Openland	1.8	N/A	Unspecified	
60	310 - Herbaceous Openland	2.9	N/A	Unspecified	
62	330 - Low-Density Trees	5.3	N/A	Unspecified	
64	622 - Lowland Shrub	9.1	N/A	Unspecified	
69	622 - Lowland Shrub	12.6	N/A	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
71	330 - Low-Density Trees	9.9	N/A	Unspecified	
73	622 - Lowland Shrub	8.3	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	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.