



# Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12031

Entry Year 2015

Acreage: 2,237

County Dickinson

Management Area: Ralph Ground Moraine

---

**Revision Date:** 2013-06-27

**Stand Examiner:**

**Legal Description:**

T43N R27W Sections 5-8,17,18 T43N R28W Sections 1,12

**Identified Planning Goals:**

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Protect riparian areas during management activities.

**Soil and topography:**

Soils range from well drained Emmet fine sandy loams to very poorly drained Waucedah - Cathro mucks. The topography is rolling hills with few steep areas.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:**

Small pieces of private ownership are scattered around this compartment. Active forest management has occurred and will continue within and surrounding this area. Hunting, fishing, and dispersed camping are the main recreational use patterns.

**Unique Natural Features:**

North Branch of Ford River

**Archeological, Historical, and Cultural Features:**

No Archeological, Historical, or Cultural Features known.

**Special Management Designations or Considerations:**

**Watershed and Fisheries Considerations:**

North Branch of Ford River and Hayes Creek are present within Compartment 31.

**Wildlife Habitat Considerations:**

This compartment has been extensively treated in past entry years and is basically a mix of younger aspen, swamp conifer, upland hardwoods and large grass openings. Budworm is affecting portions of this compartment so conifer species that are not affected by it, primarily hemlock, cedar and pine will be very important for their ability to provide cover and forage for wildlife. Transition zones between upland and lowland are an important habitat feature, providing cover during travel, and providing access to forage from winter cover. Lowland conifers and lowland hardwoods are especially important for bear. Large maintained openings are uncommon in the area and provide a wide variety of habitat components for openland species. Openings will be retained by prescribed burn.

**Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of medium-textured glacial till. The glacial drift thickness varies between 50 and 100 feet. The Cambrian Munising Formation and Precambrian Archean granite/gneiss subcrop below the glacial drift. There is not an economic use for these rocks, although they have building stone potential. Abandoned iron mines are located approximately ten miles to the south. A gravel pit is located 2.5 miles to the south and there appears to be good gravel potential. Part of Sections 5 and 6 are leased, and there was previous leasing for metallic exploration in the general area. There is no economic oil and gas production in the UP.

**Vehicle Access:**

Access is good throughout the landscape with County Road 581 and the Buckler Road serving as the main access points.

**Survey Needs:**

None.

**Recreational Facilities and Opportunities:**

Hunting, fishing, and dispersed camping are the main recreational use patterns.

**Fire Protection:**

Felch fire protection area.

**Additional Compartment Information:**

**The following reports from the Inventory are attached:**

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

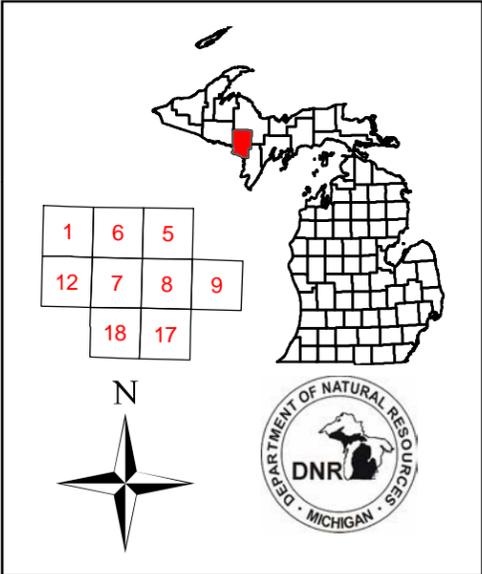
**The following information is displayed, where pertinent, on the attached compartment maps:**

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatment Map

Compartment: 031  
 T43N R27W Sections 5-9, 17, 18  
 T43N R28W Sections 1, 12  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2015  
 Acres: 2,237 GIS Calculated  
 Examiner: Andy Church  
 Map Revised: 06/20/2014  
 Map Phase: Post-Review

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



### Legend

- Miris Corners
- Remonumented Section Corners
- DNR Survey Corners
- Gate
- Bridges
- Mining
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

### Treatments Post Review

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Shelter Wood (w/Reserves)
- Prescribed Burn

### Forest Stands

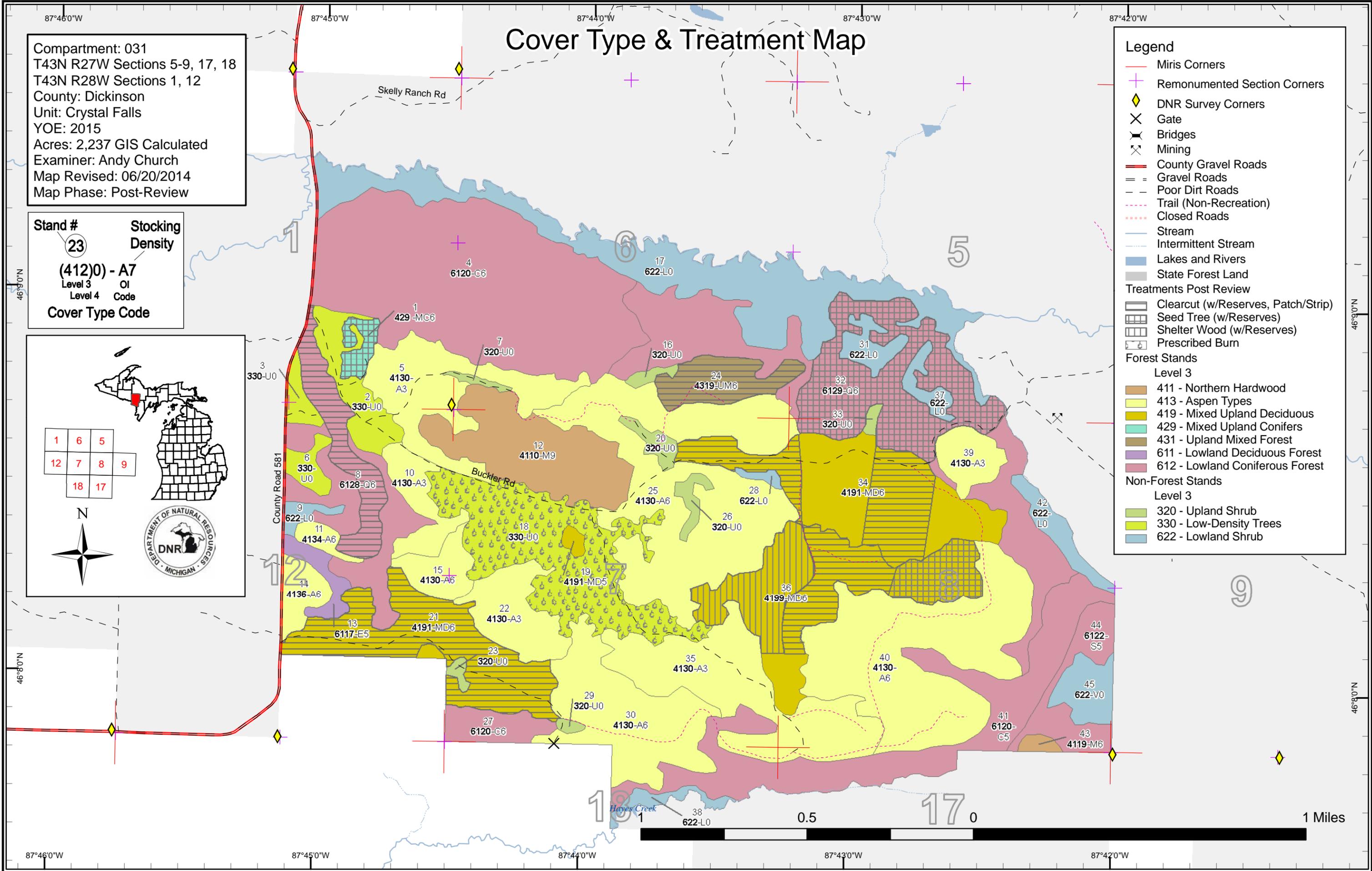
Level 3

- 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

### Non-Forest Stands

Level 3

- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub

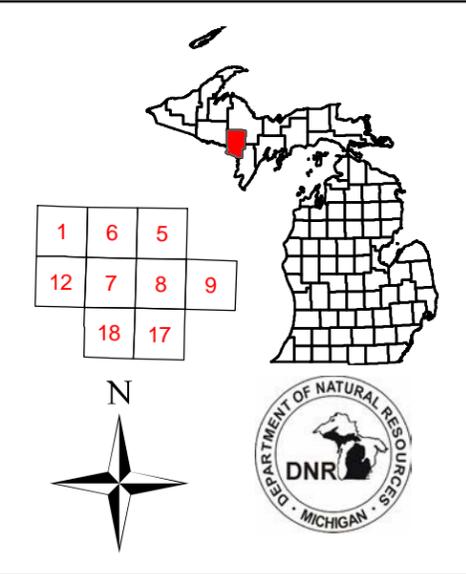




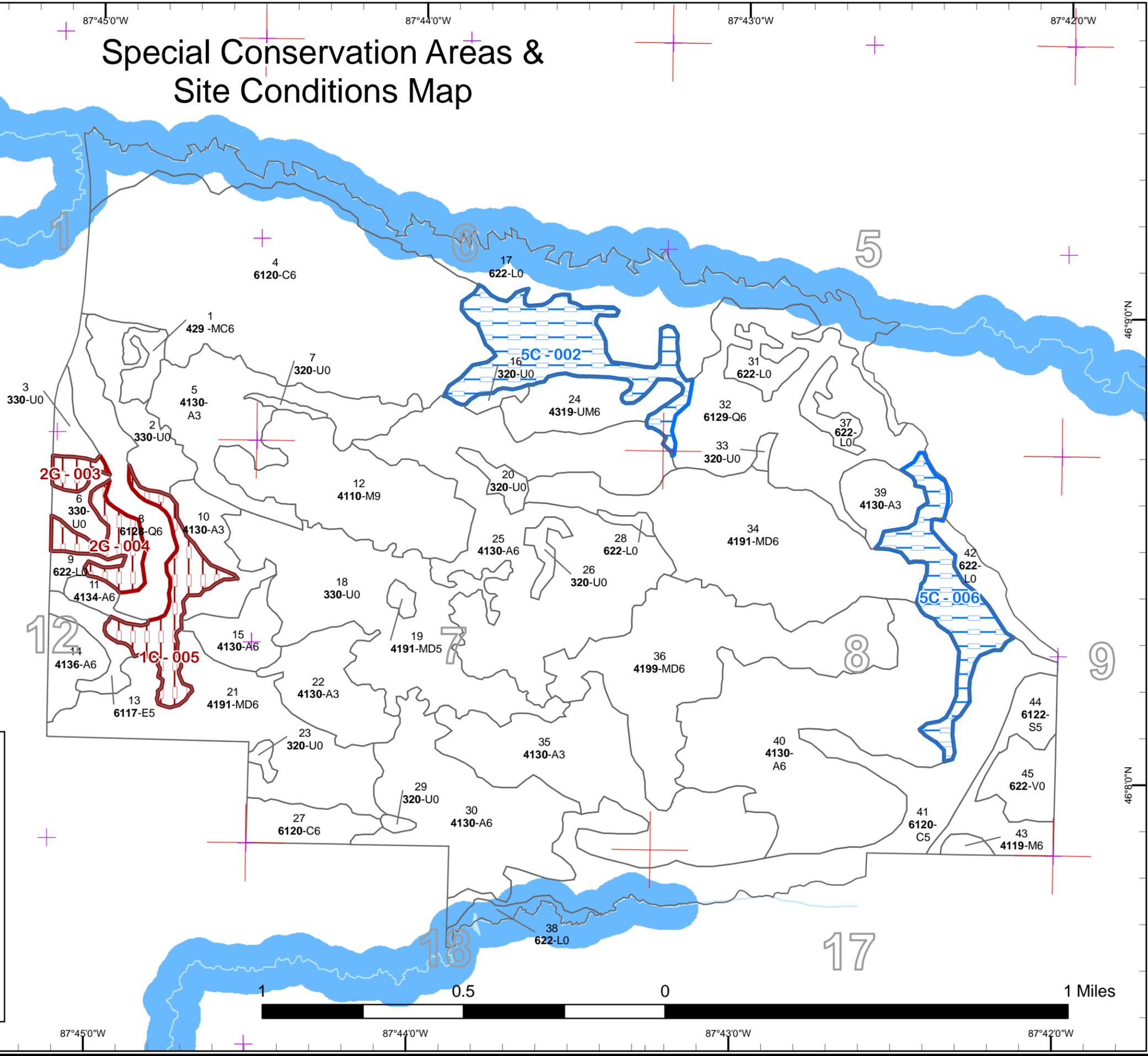
# Special Conservation Areas & Site Conditions Map

Compartment: 031  
 T43N R27W Sections 5-9, 17, 18  
 T43N R28W Sections 1, 12  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2015  
 Acres: 2,237 GIS Calculated  
 Examiner: Andy Church  
 Map Revised: 06/20/14  
 Map Phase: Post-Review

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



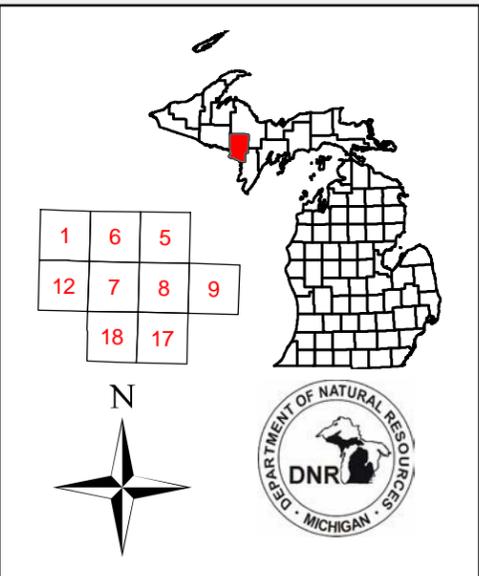
- Legend**
- Miris Corners
  - ⊕ Remonumented Section Corners
  - Stand Boundaries
  - Site Condition Available
  - ▭ Available w/ Constraints (Factor - Number)
  - ▭ Unavailable (Factor - Number)
  - Site Condition Type
  - Available Factors W/ Constraints
  - 5C: Delay treatment for age/size class diversity or exceptional site quality
  - Unavailable Factors
  - 1C: Other dept or div proc/practices
  - 2G: Too wet (sensitive soils, does not include access issues)
  - Dedicated Special Conservation Areas
  - Cold Water Streams
  - Cold Water Lakes
  - High Priority Trout Stream Buffer



# Cover Type & Treatment Map

Compartment: 031  
 T43N R27W Sections 5-9, 17, 18  
 T43N R28W Sections 1, 12  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2015  
 Acres: 2,237 GIS Calculated  
 Examiner: Andy Church  
 Map Revised: 06/20/2014  
 Map Phase: Post-Review

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

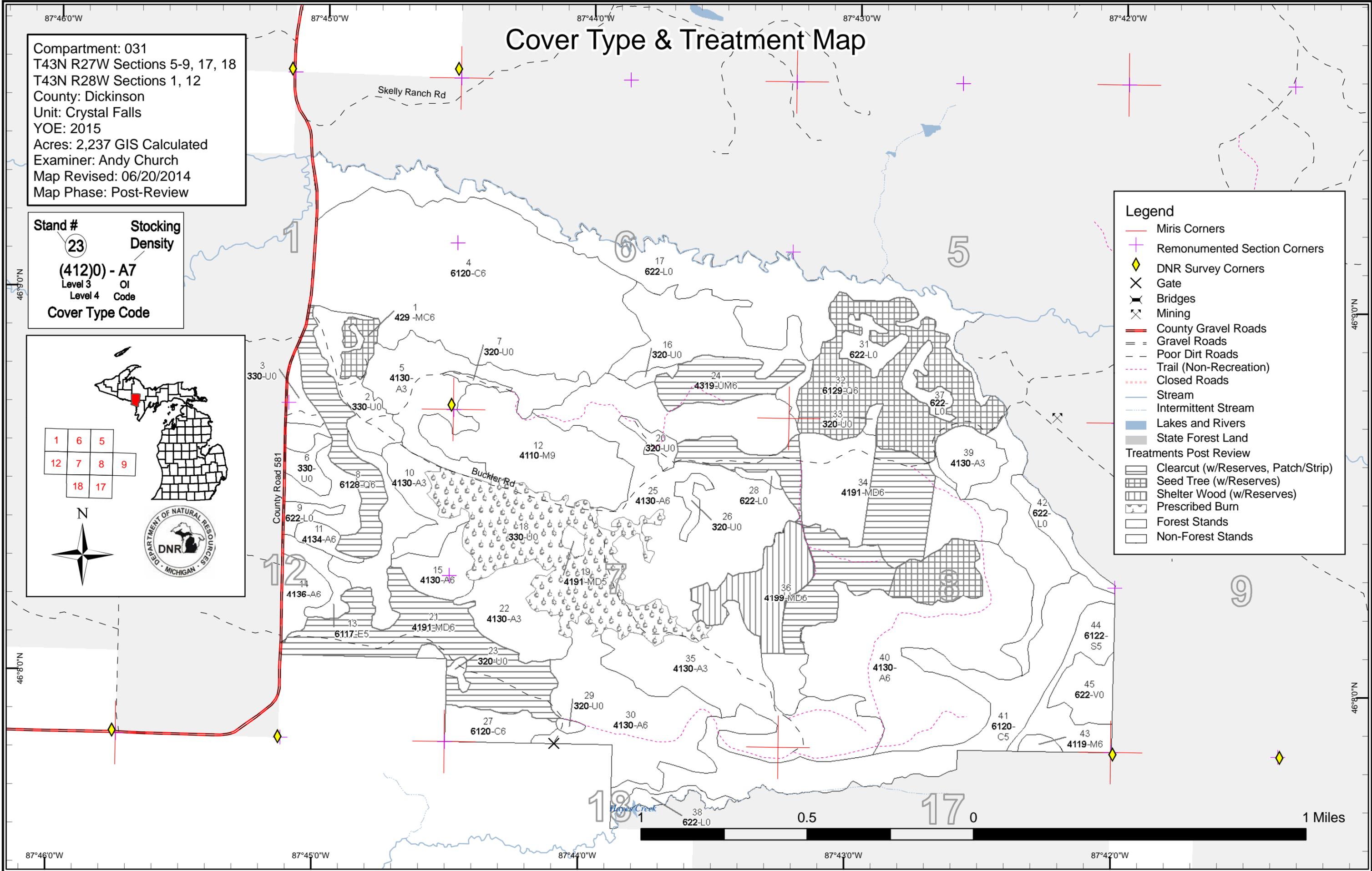


**Legend**

- Miris Corners
- + Remonumented Section Corners
- ◆ DNR Survey Corners
- ✕ Gate
- ≡ Bridges
- ⊗ Mining
- County Gravel Roads
- == Gravel Roads
- - - Poor Dirt Roads
- - - Trail (Non-Recreation)
- ⋯ Closed Roads
- Stream
- - - Intermittent Stream
- Lakes and Rivers
- State Forest Land

**Treatments Post Review**

- ▨ Clearcut (w/Reserves, Patch/Strip)
- ▩ Seed Tree (w/Reserves)
- ▧ Shelter Wood (w/Reserves)
- ▩ Prescribed Burn
- Forest Stands
- Non-Forest Stands



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	19	66	162	7	442	0	0	0	0	0	0	0	0	0	0	0	0	696
Bog	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Cedar	0	0	0	0	0	0	0	0	0	383	0	0	0	0	0	0	0	0	383
Low-Density Trees	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	160
Lowland Conifers	0	0	0	0	0	0	0	0	0	258	394	0	0	0	0	0	0	0	652
Lowland Deciduous	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	11
Lowland Shrub	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185
Lowland Spruce/Fir	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	31
Mixed Upland Deciduous	0	0	0	0	0	90	118	3	0	0	114	0	0	0	0	0	0	0	325
Northern Hardwood	0	0	0	0	0	0	0	0	0	81	0	0	0	0	0	0	0	0	81
Upland Conifers	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	9
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	29
Upland Shrub	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
<b>Total</b>	<b>389</b>	<b>19</b>	<b>66</b>	<b>162</b>	<b>7</b>	<b>532</b>	<b>149</b>	<b>14</b>	<b>9</b>	<b>751</b>	<b>508</b>	<b>0</b>	<b>2606</b>						



## Report 2 – Treatment Summary

Crystal Falls Mgt. Unit  
Year of Entry: 2015

Acres of Harvest

Compartment 31  
Total Compartment Acres: 2,237

Commercial Harvest - 421  
Harvests with Site Condition - 0  
Next Step Harvest - 0  
Habitat Cut - 114

### Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Lowland Conifers	36	0	0	97	0	0	0	0	0	133
Mixed Upland Deciduous	184	0	0	25	41	0	0	0	0	249
Upland Conifers	0	0	0	9	0	0	0	0	0	9
Upland Mixed Forest	29	0	0	0	0	0	0	0	0	29
<b>Total</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>131</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>421</b>

### Proposed and Next Step Treatments by Harvest Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	421	0	0	0	114	0	0	0	0	535
<b>Total</b>	<b>421</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>535</b>



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	12031001-Cut	9.2	429 - Mixed Upland Conifers	Poletimber Well	78	141-170	Harvest	Seed Tree with Retention	4319 - Mixed Upland Forest	Two-Aged	Draft Field Boundary
<p><u>Prescription</u> Seed tree leaving 10-20 BA of the most windfirm Red Pine. Cut all other species. Leave all Cedar, Hemlock, and Oak if found.</p> <p><u>Specs:</u> RETENTION: 10-20 BA of Pine, Cedar, Hemlock, and Oak if found. ACCEPTABLE ALTERNATIVE REGEN: Spruce/Fir</p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable</u> <u>Regen:</u></p> <p><u>Other</u> Northern half of stand is Spruce, Southern half of stand is Red Pine. Excellent RP regen in open areas adjacent to the Pine. Budworm damage is bad on the Spruce. Manage for Pine to South and Spruce/Fir to North. Old next step comments: Scarify post harvest then regen check</p> <p><u>Comment:</u></p> <p><u>Proposed Start Date:</u> 10/1 /2014</p> <p><b>Site Condition: None</b></p>											
8	12031008-Cut	36.1	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	85	Unspecified	Harvest	Clearcut with Retention	6117 - Lowland Deciduous, Mixed Coniferous	Even-Aged	Draft Field Boundary
<p><u>Prescription</u> Final harvest using 2" spec. Leave all Cedar, Hemlock, White Pine, and Oak. Frozen ground only. Do not harvest pure Cedar or far Eastern portions of stand. Reflected in treatment boundary. If bed and bank found at any time, install buffer 50 feet each side. Inform Wildlife Biologist at time of boundary installation.</p> <p><u>Specs:</u> RETENTION: Cedar, Hemlock, White Pine, Oak, uncut portions of stand ACCEPTABLE ALTERNATIVE REGEN: Tamarack/Fir/Aspen</p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable</u> <u>Regen:</u></p> <p><u>Other</u> Much budworm damage evident. Larger White Spruce are getting hit the worst. Stand is a large lowland drainage with no bed and bank found.</p> <p><u>Comment:</u> May want to investigate during no snow conditions for stream. Trace amounts of Jack Pine and White Pine found. Far South side of stand is pure Cedar while East side is very wet swamp hardwoods. These 2 areas are not included in the treatment boundary. Old next step comments: Regen check</p> <p><u>Proposed Start Date:</u> 10/1 /2014</p> <p><b>Site Condition: None</b></p>											
21	12031021-Cut	88.5	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	44	Unspecified	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Draft Field Boundary
<p><u>Prescription</u> Final Harvest using 2 inch spec. Leave all Cedar, Hemlock, Pine, and Oak if found. Leave a small pocket of hardwoods for retention. Reflected in treatment boundary. Frozen or dry soil conditions preferred, but not required. No operations within seeps and drainages.</p> <p><u>Specs:</u> RETENTION: Cedar, Hemlock, Pine, Oak, and HDWD pocket. ACCEPTABLE ALTERNATIVE REGEN: Maple</p> <p><u>Next Step</u> <u>Treatments:</u></p> <p><u>Acceptable</u> <u>Regen:</u></p> <p><u>Other</u> Very diverse stand. Mix of upland and lowlands. Most of stand is 42 yrs old, with some 76 yr old Aspen found. Drainages found. Trace amounts of Black Ash in wetter areas. Scattered supercanopy White Pines. Small HDWD pockets along PVT to South. Budworm evident. Small scattered grassy openings found within stand. These should fill in with trees after harvest. Old next step comments: Inform WLD post harvest. WLD may maintain small openings within harvest.</p> <p><u>Comment:</u> Regen Check.</p> <p><u>Proposed Start Date:</u> 10/1 /2014</p> <p><b>Site Condition: None</b></p>											



Stand Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
24 12031024-Cut	29.3	4319 - Mixed Upland Forest	Poletimber Well	89	Unspecified	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	Draft Field Boundary

Prescription Final Harvest using 2" spec. Leave all Cedar, Hemlock, Oak and Pine. Protect wet areas where rutting is a risk.

Specs: RETENTION: Cedar, Hemlock, Oak, Pine, Wet Areas  
ACCEPTABLE ALTERNATIVE REGEN: Maple

Next Step  
Treatments:

Acceptable  
Regen:

Other Aspen overmature and falling apart. Budworm damage present. Drainage through middle of stand. SE side is younger Aspen. Small grassy openings found throughout stand. Will fill in with trees post harvest. Old next step comments: Inform WLD post harvest. WLD may want to maintain small openings within harvest.  
Comment: Regen Check.

Proposed Start Date: 10/1 /2014

**Site Condition: None**

32 12031032-Cut	97.0	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	97	81-110	Harvest	Seed Tree with Retention	6117 - Lowland Deciduous, Mixed Coniferous	Two-Aged	Draft Field Boundary
-----------------	------	--	-----------------	----	--------	---------	--------------------------	--	----------	----------------------

Prescription Create 1/10th acre seed tree islands spaced approx 3 chains apart where Black Spruce is dominant. Leave all Cedar, Hemlock, Pine, and Oak if found. Buffer Ford River 300 feet. Buffer unnamed creek on East side 100 feet.

Specs: RETENTION: Cedar, Hemlock, Pine, Oak and Buffers.  
ACCEPTABLE ALTERNATIVE REGEN: Swamp HDWDS/Aspen

Next Step  
Treatments:

Acceptable  
Regen:

Other More Tamarack to North. Also, younger trees to North. A couple Pines throughout stand. Patchy stand: pockets of pure Tamarack, pockets of pure Black Spruce. Little conifer understory. Trace amounts of Quaking Aspen. Old next step comments: Regen check  
Comment:

Proposed Start Date: 10/1 /2014

**Site Condition: None**

34 12031034-Cut	58.0	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	50	Unspecified	Harvest	Clearcut with Retention	4130 - Aspen	Even-Aged	Draft Field Boundary
-----------------	------	--	-----------------	----	-------------	---------	-------------------------	--------------	-----------	----------------------

Prescription Final Harvest using 2" spec. Leave Cedar, Hemlock, Pine, and Oak. Protect drainages where rutting may be a risk. If bed and bank found during setup, buffer 100 feet each side.

Specs: RETENTION: Cedar, Hemlock, Pine, Oak, Wet Areas.  
ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir

Next Step  
Treatments:

Acceptable  
Regen:

Other Many different ages of Aspen. Majority of stand is 48 but aged some aspen over 80 yrs old. Drainages throughout. Lowland pocket to far East. Scattered large Pines found throughout most of stand. Small grassy openings found within stand. Harvest 1/2 of stand per WLD request for grouse management. Harvest remaining portion next YOY. Old next step comments: Inform WLD post harvest. WLD may maintain small openings within harvest.  
Comment: Regen Check.

Proposed Start Date: 10/1 /2014

**Site Condition: None**

S  
t  
a  
n  
d

Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
36 12031036 A	37.1	4199 - Other Mixed Upland Deciduous	Poletimber Well	90	81-110	Harvest	Clearcut with Retention	4110 - Sugar Maple Association	Even-Aged	Draft Field Boundary

Prescription Management goal is to release existing advanced regen in the understory.

Specs: Final Harvest reserving all Cedar and Hemlock. Also, leave Maple less than or equal to 4 inches DBH. Winter harvest only and roundwood spec to protect understory.

RETENTION: Cedar, Hemlock, and Maple less than 4"

ACCEPTABLE ALTERNATIVE REGEN: Aspen/ Mixed Hardwoods

Next Step

Treatments:

Acceptable

Regen:

Other Excellent Hard Maple regen. Poor quality overstory trees. May want to release understory if saplings will respond. Talk with TMS about best strategy. Some of saplings are stunted. Very low BAs and heavier Ironwood component on West side. Diameter of overstory trees to West are much larger but still poor quality. Scattered Aspen clones mixed throughout stand. Old next step comments: regen check

Proposed Start Date: 10/1 /2014

**Site Condition: None**

36 12031036 D	24.6	4199 - Other Mixed Upland Deciduous	Poletimber Well	90	81-110	Harvest	Seed Tree with Retention	4110 - Sugar Maple Association	Two-Aged	Draft Field Boundary
---------------	------	-------------------------------------	-----------------	----	--------	---------	--------------------------	--------------------------------	----------	----------------------

Prescription Management goal is to release existing advanced regen in the understory.

Specs: Final Harvest reserving all Cedar and Hemlock. Also, leave Maple less than or equal to 8 inches DBH. Reserve tree mark for seed source and/or higher quality-denser hardwood pockets. Winter harvest only and roundwood spec to protect understory. DG

RETENTION: Cedar, Hemlock, and Maple less than 8"

ACCEPTABLE ALTERNATIVE REGEN: Aspen/ Mixed Hardwoods

Next Step

Treatments:

Acceptable

Regen:

Other Excellent Hard Maple regen. Poor quality overstory trees. May want to release understory if saplings will respond. Talk with TMS about best strategy. Some of saplings are stunted. Very low BAs and heavier Ironwood component on West side. Diameter of overstory trees to West are much larger but still poor quality. Scattered Aspen clones mixed throughout stand.

Proposed Start Date: 10/1 /2014

**Site Condition: None**

36 12031036 T	41.0	4199 - Other Mixed Upland Deciduous	Poletimber Well	90	81-110	Harvest	Shelterwood	4110 - Sugar Maple Association	Two-Aged	Draft Field Boundary
---------------	------	-------------------------------------	-----------------	----	--------	---------	-------------	--------------------------------	----------	----------------------

Prescription Shelterwood reserving all Cedar and Hemlock. Target 40 RBA throughout entire stand. In addition, create patch clearcuts using 2" spec located

Specs: within and extending 1.5-2 chains outside of Aspen clones. TS

RETENTION: Cedar, Hemlock

ACCEPTABLE ALTERNATIVE REGEN: Aspen/ Mixed Hardwoods

Next Step

Treatments:

Acceptable

Regen:

Other Excellent Hard Maple regen. Poor quality overstory trees. May want to release understory if saplings will respond. Talk with TMS about best strategy. Some of saplings are stunted. Very low BAs and heavier Ironwood component on West side. Diameter of overstory trees to West are much larger but still poor quality. Scattered Aspen clones mixed throughout stand.

Proposed Start Date: 10/1 /2014

**Site Condition: None**



S  
t  
a  
n  
d

	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
18	NF_12031018-Burn	114.4	3303 - Mixed Low Density Trees	Nonstocked			Burn	Unspecified	310 - Herbaceous Openland	Unspecified	Draft Field Boundary

Prescription Burn to decrease woody vegetation and maintain opening if opportunity presents  
Specs:

Next Step  
Treatments:

Acceptable  
Regen:

Other  
Comment:

Proposed Start Date: 12/30/1899

**Site Condition: None**

---

**Total Treatment  
Acreage Proposed: 535.3**

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

### Dominant Site Conditions

	2G	5C
Aspen		
Bog		
Cedar		
Low-Density Trees		
Lowland Conifers	68	194
Lowland Deciduous		
Lowland Shrub		
Lowland Spruce/Fir		
Mixed Upland Deciduous		
Northern Hardwood		
Upland Conifers		
Upland Mixed Forest		
Upland Shrub		
Total Forested Acres	68	194
Relative Percent		

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	58	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not quite mature yet.							
3	Unavailable	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	27	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> North half too wet, South half is heavy to Cedar.							
6	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	40	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not mature. 1-2 stick Spruce. This stand is still filling in with trees.							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

### Dominant Site Conditions

	2G	5C
Aspen		
Bog		
Cedar		
Low-Density Trees		
Lowland Conifers	68	194
Lowland Deciduous		
Lowland Shrub		
Lowland Spruce/Fir		
Mixed Upland Deciduous		
Northern Hardwood		
Upland Conifers		
Upland Mixed Forest		
Upland Shrub		
Total Forested Acres	68	194
Relative Percent		

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	58	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not quite mature yet.							
3	Unavailable	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	27	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> North half too wet, South half is heavy to Cedar.							
6	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	40	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not mature. 1-2 stick Spruce. This stand is still filling in with trees.							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

### Dominant Site Conditions

	2G	5C
Aspen		
Bog		
Cedar		
Low-Density Trees		
Lowland Conifers	68	194
Lowland Deciduous		
Lowland Shrub		
Lowland Spruce/Fir		
Mixed Upland Deciduous		
Northern Hardwood		
Upland Conifers		
Upland Mixed Forest		
Upland Shrub		
Total Forested Acres	68	194
Relative Percent		

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	58	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not quite mature yet.							
3	Unavailable	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	27	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> North half too wet, South half is heavy to Cedar.							
6	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	40	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not mature. 1-2 stick Spruce. This stand is still filling in with trees.							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

### Dominant Site Conditions

	2G	5C
Aspen		
Bog		
Cedar		
Low-Density Trees		
Lowland Conifers	68	194
Lowland Deciduous		
Lowland Shrub		
Lowland Spruce/Fir		
Mixed Upland Deciduous		
Northern Hardwood		
Upland Conifers		
Upland Mixed Forest		
Upland Shrub		
Total Forested Acres	68	194
Relative Percent		

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	58	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not quite mature yet.							
3	Unavailable	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	27	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> North half too wet, South half is heavy to Cedar.							
6	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	40	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not mature. 1-2 stick Spruce. This stand is still filling in with trees.							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

### Dominant Site Conditions

	2G	5C
Aspen		
Bog		
Cedar		
Low-Density Trees		
Lowland Conifers	68	194
Lowland Deciduous		
Lowland Shrub		
Lowland Spruce/Fir		
Mixed Upland Deciduous		
Northern Hardwood		
Upland Conifers		
Upland Mixed Forest		
Upland Shrub		
Total Forested Acres	68	194
Relative Percent		

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
2	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	58	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not quite mature yet.							
3	Unavailable	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2015

4	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
5	<b>Unavailable</b>	<b>1C: Other dept or div proc/practices</b>	27	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> North half too wet, South half is heavy to Cedar.							
6	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	40	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Not mature. 1-2 stick Spruce. This stand is still filling in with trees.							

Mgt. Unit

Compartment: #Type!

Year of Entry:



## Report 6 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
----------	--------------	-------------	----------------	-------

---

Comments

---



**Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

\* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	429 - Mixed Upland Conifers	Poletimber Well	9.1	78	141-170	Northern half of stand is Spruce, Southern half of stand is Red Pine. Excellent RP regen in open areas adjacent to the Pine. Budworm damage is bad on the Spruce. Manage for Pine.
4	6120 - Lowland Cedar	Poletimber Well	247.0	85	Unspecified	Fir in open areas and under the Tamarack. Needs more time for Tamarack and Black spruce to become mature. Stand is a mix of swamp conifer with veins of pure Cedar throughout.
5	4130 - Aspen	Sapling Well	66.1	17	Unspecified	Tamarack regen in wetter areas. Cut 1998.
8	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	86.0	85	Unspecified	Much budworm damage evident. Larger White Spruce are getting hit the worst. Stand is a large lowland drainage with no bed and bank found. May want to investigate during no snow conditions for stream. Trace amounts of Jack Pine and White Pine found. Far South side of stand is pure Cedar while East side is very wet swamp hardwoods. Small portions of uplands that did not meet minimum stand requirements are included in the boundary.
8	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	86.0	85	Unspecified	Much budworm damage evident. Larger White Spruce are getting hit the worst. Stand is a large lowland drainage with no bed and bank found. May want to investigate during no snow conditions for stream. Trace amounts of Jack Pine and White Pine found. Far South side of stand is pure Cedar while East side is very wet swamp hardwoods. Small portions of uplands that did not meet minimum stand requirements are included in the boundary.
8	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	86.0	85	Unspecified	Much budworm damage evident. Larger White Spruce are getting hit the worst. Stand is a large lowland drainage with no bed and bank found. May want to investigate during no snow conditions for stream. Trace amounts of Jack Pine and White Pine found. Far South side of stand is pure Cedar while East side is very wet swamp hardwoods. Small portions of uplands that did not meet minimum stand requirements are included in the boundary.
10	4130 - Aspen	Sapling Well	23.7	27	Unspecified	Some stems starting to reach merchantability size.
11	4134 - Aspen, Spruce/Fir	Poletimber Well	6.9	38	Unspecified	Healthy, fully stocked Aspen stand. Just starting to reach merchantability size.
12	4110 - Sugar Maple Association	Sawtimber Well	77.7	89	81-110	Thinned last YOY in 2008.
13	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	11.3	64	Unspecified	Large drainage that is now starting to fill in with trees. Non-stocked in far North.
14	4136 - Aspen, Mixed Conifer	Poletimber Well	15.9	45	Unspecified	Smaller diameters due to lower site indexes. Eastern edge very wet. Much Spruce/Fir in understory. Budworm damage on conifers. Not much merchantable conifer volume. Buffer strip left from harvest along 581 is included in boundary.
15	4130 - Aspen	Poletimber Well	19.1	42	Unspecified	



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4191 - Mixed Upland Deciduous with Conifer	Poletimber Medium	3.0	66	51-80	Much Ironwood! Not enough Aspen to regenerate stand.
21	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	90.2	44	Unspecified	Very diverse stand. Mix of upland and lowlands. Most of stand is 42 yrs old, with some 76 yr old Aspen found. Age class needs to be evened out. Drainages found. Trace amounts of Black Ash in wetter areas. Scattered supercanopy White Pines. Small HDWD pockets along PVT to South. Budworm evident. Small grassy openings found within stand. These should fill in with trees after harvest.
22	4130 - Aspen	Sapling Well	37.1	25	Unspecified	Some trees starting to reach merchantability size. Cut in 1990.
24	4319 - Mixed Upland Forest	Poletimber Well	29.3	89	Unspecified	Aspen overmature and falling apart. Budworm damage present. Drainage through middle of stand. SE side is younger Aspen. Small grassy openings found throughout stand. Will fill in with trees post harvest.
25	4130 - Aspen	Poletimber Well	169.3	45	Unspecified	Healthy Aspen stand. Small scattered grassy openings throughout. Supercanopy Pines within stand.
27	6120 - Lowland Cedar	Poletimber Well	18.6	89	Unspecified	Cedar restrictions prevent management.
30	4130 - Aspen	Poletimber Well	83.4	49	Unspecified	Healthy pocket of White Birch in SE corner of stand. Grassy openings found throughout stand. These openings are slowly filling in with Aspen.
32	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	197.0	97	81-110	More Tamarack to North. Also, younger trees to North. A couple Pines throughout stand. Patchy stand: pockets of pure Tamarack, pockets of pure Black Spruce. Little conifer understory. Trace amounts of Quaking Aspen.
32	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	197.0	97	81-110	More Tamarack to North. Also, younger trees to North. A couple Pines throughout stand. Patchy stand: pockets of pure Tamarack, pockets of pure Black Spruce. Little conifer understory. Trace amounts of Quaking Aspen.
34	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	118.0	50	Unspecified	Many different ages of Aspen. Majority of stand is 48 but aged some aspen over 80 yrs old. Need to even out the age class. Drainages throughout. Lowland pocket to far East. Scattered large Pines found throughout most of stand. Small grassy openings found within stand.
35	4130 - Aspen	Sapling Well	101.4	28	Unspecified	Pockets of Spruce/Fir throughout. Cut 1987
36	4199 - Other Mixed Upland Deciduous	Poletimber Well	113.7	90	81-110	Excellent Hard Maple regen. Poor quality overstory trees. May want to release understory if saplings will respond. Talk with TMS about best strategy. Some of saplings are stunted. Very low BAs and heavier Ironwood component on West side. Diameter of overstory trees to West are much larger but still poor quality. Scattered Aspen clones mixed throughout stand.

S  
t  
a  
n  
d

Crystal Falls Mgt. Unit

## Report 8 – Forested Stands

Compartment: 31  
Year of Entry: 2015

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
<b>39</b>	4130 - Aspen	Sapling Well	19.2	7	Unspecified	Harvested 2008. Scattered supercanopy White Pines and small HDWD knoll left for retention.
<b>40</b>	4130 - Aspen	Poletimber Well	154.8	45	Unspecified	Hard Maple regen mostly along M types. Scattered pockets of Spruce/Fir. Dirty cut last time.
<b>41</b>	6120 - Lowland Cedar	Poletimber Medium	117.0	87	Unspecified	Varying sizes and stocking densities of Q type. BAs range from 10 to 100. Pockets of pure Cedar and pockets of young Tamarack present.
<b>43</b>	4119 - Mixed Northern Hardwoods	Poletimber Well	3.5	87	111-140	Upland island in the swamp. Could thin or final harvest. Upland Cedar mixed throughout. BAM/Fir strip along edge. Harvest when PreInventory stand #41 is being cut (next rotation). Not economically feasible to harvest this YOE.
<b>44</b>	6122 - Black Spruce	Poletimber Medium	30.9	57	Unspecified	Spruce slowly filling in this once bog naturally



Stand	Cover Type	Acres	Managed Site	General Comments:
2	3302 - Low Density Conifer Trees	27.8	No	
3	330 - Low-Density Trees	8.4	No	
6	330 - Low-Density Trees	9.1	No	
7	320 - Upland Shrub	2.5	No	
9	622 - Lowland Shrub	5.7	No	
16	320 - Upland Shrub	3.3	No	
17	622 - Lowland Shrub	133.8	No	
18	3303 - Mixed Low Density Trees	114.4	No	
20	320 - Upland Shrub	6.7	No	
23	320 - Upland Shrub	2.6	No	
26	320 - Upland Shrub	5.8	No	
28	6220 - Alder/willow	2.6	No	
29	320 - Upland Shrub	1.8	No	
31	622 - Lowland Shrub	12.1	No	
33	320 - Upland Shrub	2.1	No	
37	6220 - Alder/willow	8.8	No	
38	622 - Lowland Shrub	7.6	No	
42	6229 - Mixed lowland shrub	14.2	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
45	6225 - Bog	18.9	No	