



# Compartment Review Presentation

## Crystal Falls Forest Management Unit

Compartment 12

Entry Year 2016

Acreage: 2,482

County Dickinson

Management Area: Ralph Ground Moraine

**Revision Date:** 07/24/2014

**Stand Examiner:** Ed Rice

### Legal Description:

T43N R28W sec 5 - 8 T44N R28W sec 31, 32

### Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue to sustainably balance the aspen age class acres. Get the hardwood stands on a 20 year alternating cutting cycle towards regulation. Protect the riparian areas and transition zones during management activity.

### Soil and topography:

Soils consist of fine sandy loams in the uplands to muck soils in the lowland forest types.

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

The compartment is for the most part contiguous in state ownership. The southern end of the compartment does have a block of private lands. State ownership borders the compartment. Active forest management has occurred and will continue within and surrounding the compartment. Deer hunting by far dominates the recreational use patterns.

### Unique Natural Features:

No Unique Natural Features known.

### Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

### Special Management Designations or Considerations:

None identified

### Watershed and Fisheries Considerations:

North Branches of Ford River are listed as cold water streams. 300 foot buffer should be applied where timber activity regenerating aspen would potentially impact streams.

### Wildlife Habitat Considerations:

The compartment is used as wintering cover by deer, noticeably where any cedar is present. Upland conifers also provide thermal cover until snow depths restrict movement. Deer numbers are fair in the area. Wolves also use the compartment and the surrounding area. Upland conifers should be promoted as a balanced component within the aspen stands and lowland conifer stands should be maintained and enhanced to continue providing good winter cover and habitat for grouse/woodcock.

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

Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Formation and the Precambrian Archean granite/gneiss subcrops below the glacial drift. There is not a current economic use for these rocks, although the granite/gneiss has building stone potential. The Groveland Iron mine is located approximately twelve miles to the south. Gravel pits are not indicated in this area, but there appears to be potential on uplands. Most of this area was previously leased for metallic exploration and part of Section 6 and all of Section 7 were leased and recently released. There is no economic oil and gas production in the UP.

### Vehicle Access:

Access is fair overall. There is a road system accessing much of the compartment with overgrown, abandoned roads present.

### Survey Needs:

Survey corners are needed at: T43N R28W sec 7 S 1/16, SW 1/16, verify center 1/4. verify 1/4 corner between sec 6, 7. sec 6 SE 1/16

**Recreational Facilities and Opportunities:**

None

**Fire Protection:**

Overall there is no fuel type that would carry a sustained fire. Light to moderate intensity surface fires would be expected. An unlikely fire in the expansive swamps would pose access problems and would severely limit equipment operation. Water sources are fairly close, with the N. Branch of the Ford River forming the south compartment boundary.

**Additional Compartment Information:**

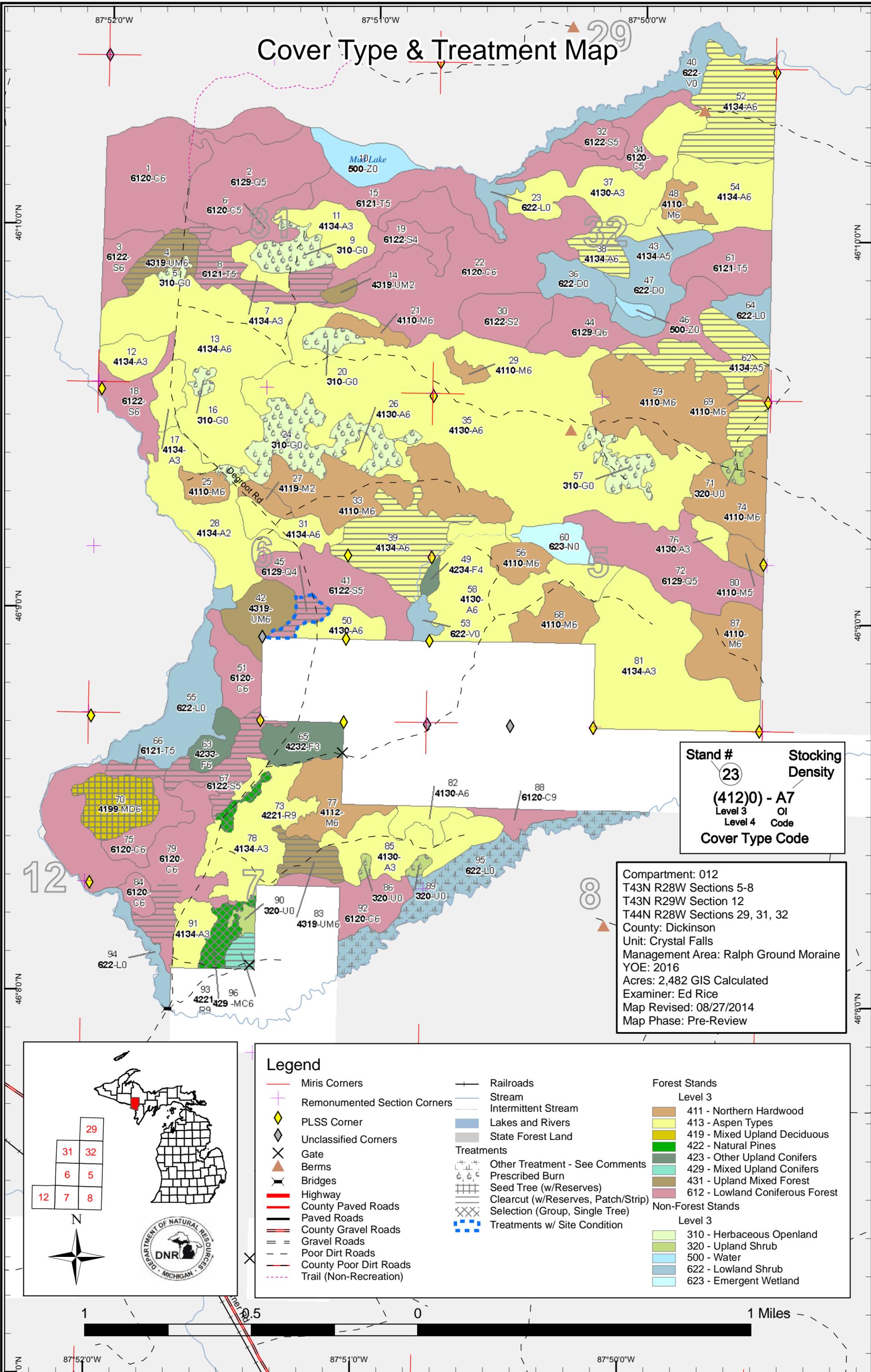
The following reports from the Inventory are attached:

- 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



**Stand #**  
23

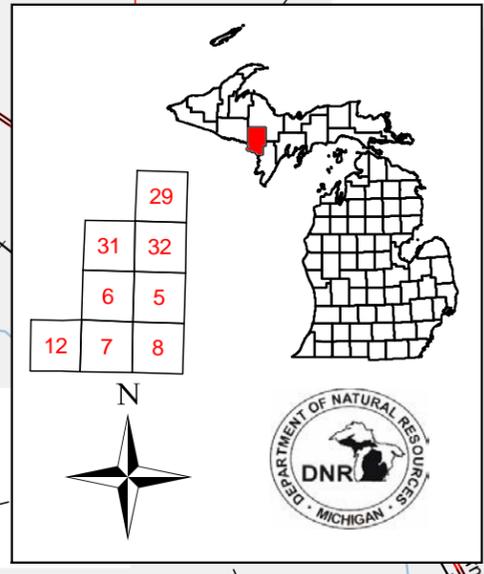
**Stocking Density**  
(4120) - A7

Level 3  
OI

Level 4  
Code

**Cover Type Code**

Compartment: 012  
 T43N R28W Sections 5-8  
 T43N R29W Section 12  
 T44N R28W Sections 29, 31, 32  
 County: Dickinson  
 Unit: Crystal Falls  
 Management Area: Ralph Ground Moraine  
 YOE: 2016  
 Acres: 2,482 GIS Calculated  
 Examiner: Ed Rice  
 Map Revised: 08/27/2014  
 Map Phase: Pre-Review

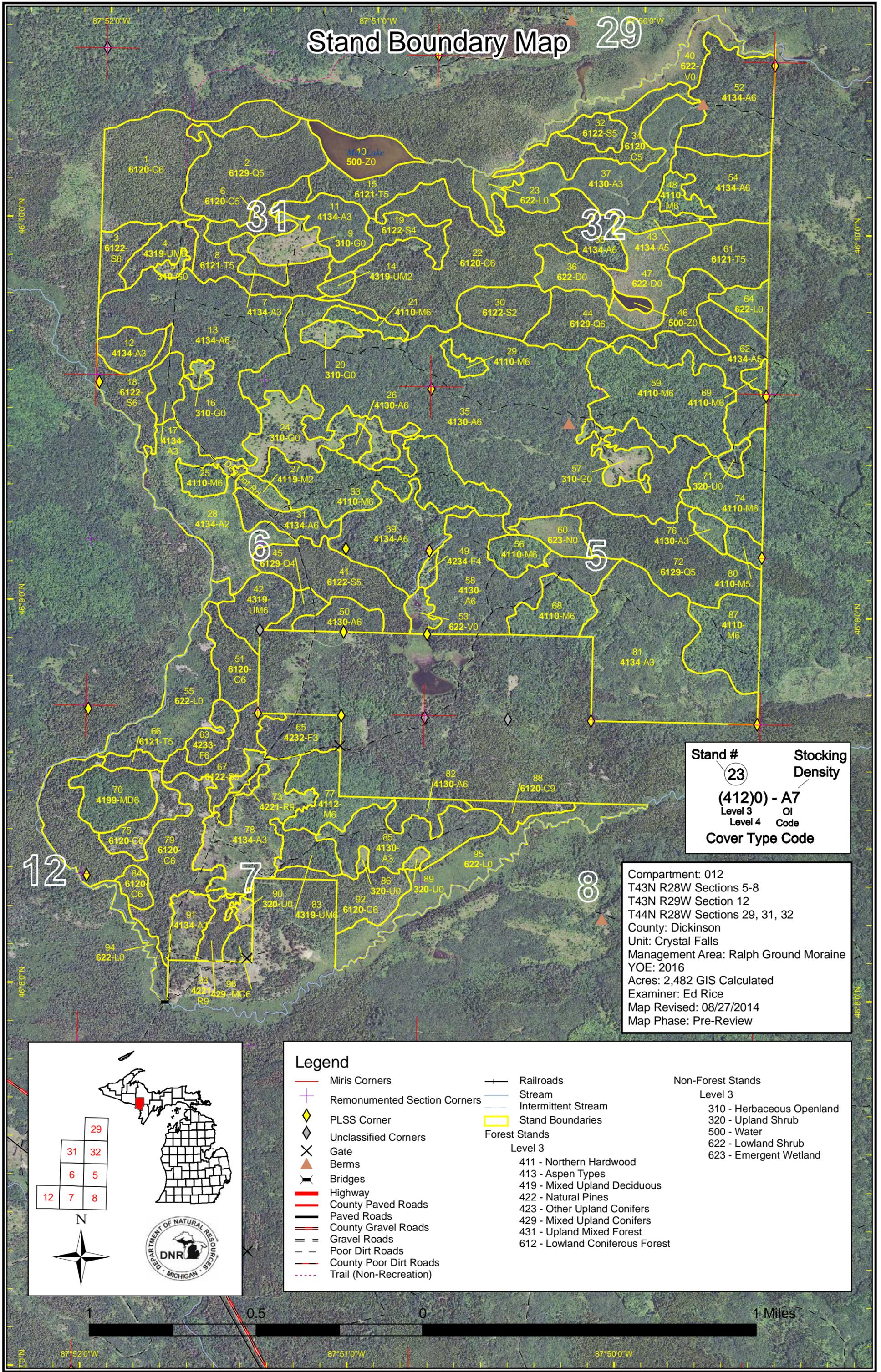


### Legend

<ul style="list-style-type: none"> <li>— Miris Corners</li> <li>— Remonumented Section Corners</li> <li>◆ PLSS Corner</li> <li>◇ Unclassified Corners</li> <li>✕ Gate</li> <li>▲ Berms</li> <li>— Bridges</li> <li>— Highway</li> <li>— County Paved Roads</li> <li>— Paved Roads</li> <li>— County Gravel Roads</li> <li>— Gravel Roads</li> <li>— Poor Dirt Roads</li> <li>— County Poor Dirt Roads</li> <li>— Trail (Non-Recreation)</li> </ul>	<ul style="list-style-type: none"> <li>— Railroads</li> <li>— Stream</li> <li>— Intermittent Stream</li> <li>— Lakes and Rivers</li> <li>— State Forest Land</li> </ul> <p><b>Treatments</b></p> <ul style="list-style-type: none"> <li>— Other Treatment - See Comments</li> <li>— Prescribed Burn</li> <li>— Seed Tree (w/Reserves)</li> <li>— Clearcut (w/Reserves, Patch/Strip)</li> <li>— Selection (Group, Single Tree)</li> <li>— Treatments w/ Site Condition</li> </ul>	<p><b>Forest Stands</b></p> <p>Level 3</p> <ul style="list-style-type: none"> <li>— 411 - Northern Hardwood</li> <li>— 413 - Aspen Types</li> <li>— 419 - Mixed Upland Deciduous</li> <li>— 422 - Natural Pines</li> <li>— 423 - Other Upland Conifers</li> <li>— 429 - Mixed Upland Conifers</li> <li>— 431 - Upland Mixed Forest</li> <li>— 612 - Lowland Coniferous Forest</li> </ul> <p><b>Non-Forest Stands</b></p> <p>Level 3</p> <ul style="list-style-type: none"> <li>— 310 - Herbaceous Openland</li> <li>— 320 - Upland Shrub</li> <li>— 500 - Water</li> <li>— 622 - Lowland Shrub</li> <li>— 623 - Emergent Wetland</li> </ul>
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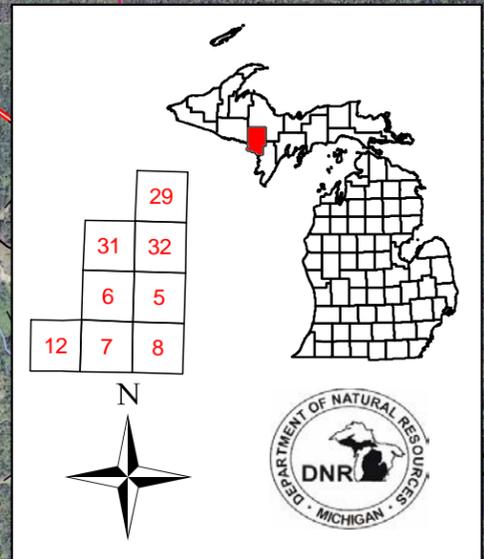


# Stand Boundary Map 29



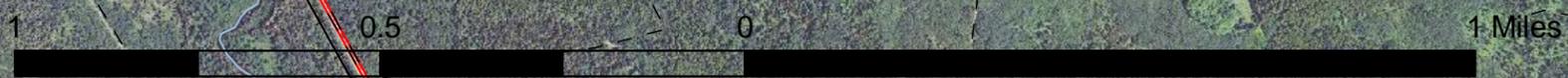
Stand # **23** Stacking Density  
**(4120) - A7**  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

Compartment: 012  
 T43N R28W Sections 5-8  
 T43N R29W Section 12  
 T44N R28W Sections 29, 31, 32  
 County: Dickinson  
 Unit: Crystal Falls  
 Management Area: Ralph Ground Moraine  
 YOE: 2016  
 Acres: 2,482 GIS Calculated  
 Examiner: Ed Rice  
 Map Revised: 08/27/2014  
 Map Phase: Pre-Review

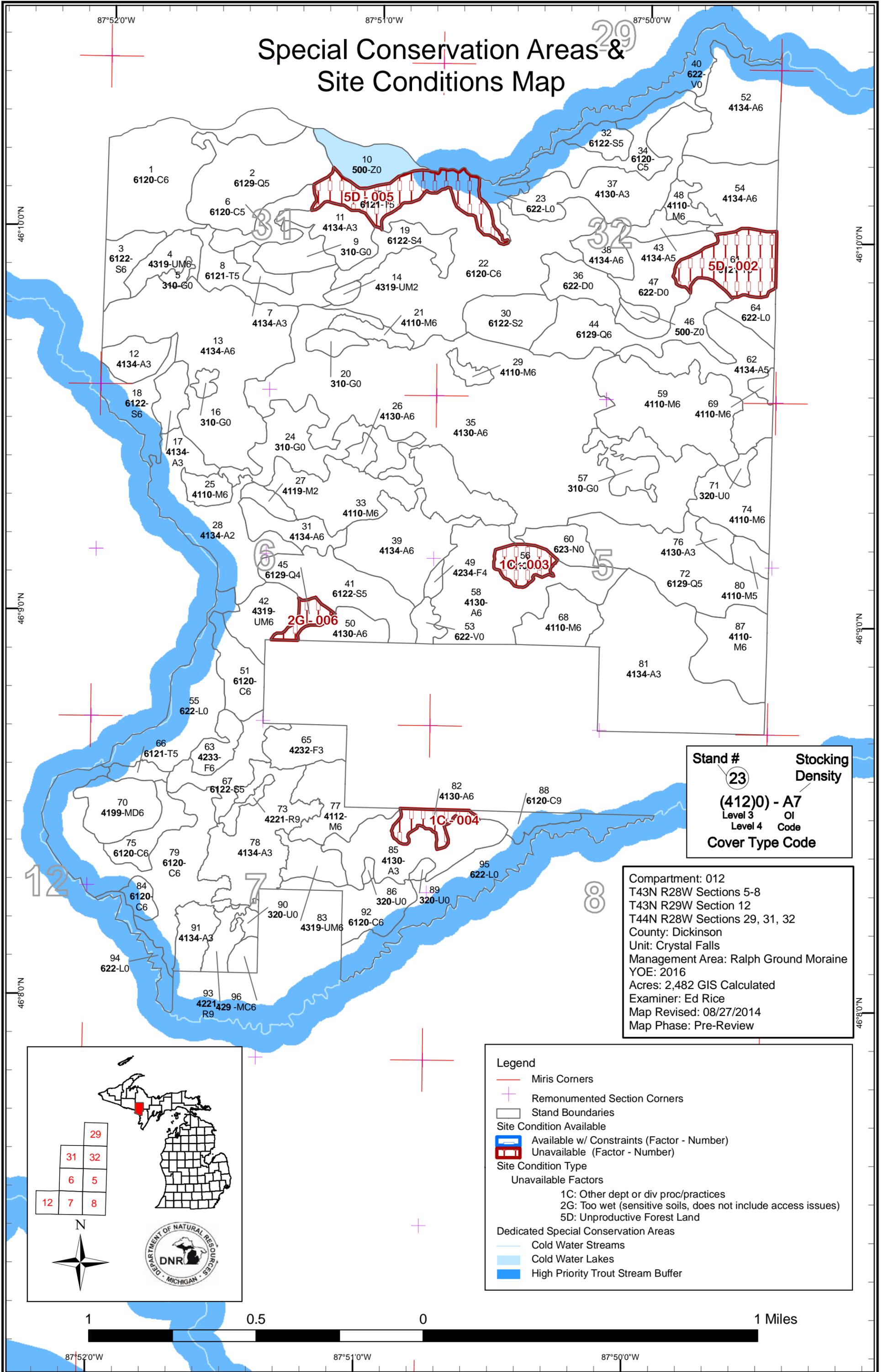


## Legend

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| <ul style="list-style-type: none"> <li><span style="color: red;">+</span> Miris Corners</li> <li><span style="color: purple;">+</span> Remonumented Section Corners</li> <li><span style="color: yellow;">◆</span> PLSS Corner</li> <li><span style="color: grey;">◆</span> Unclassified Corners</li> <li><span style="color: black;">X</span> Gate</li> <li><span style="color: brown;">▲</span> Berms</li> <li><span style="color: black;">X</span> Bridges</li> <li><span style="color: red;">—</span> Highway</li> <li><span style="color: red;">—</span> County Paved Roads</li> <li><span style="color: black;">—</span> Paved Roads</li> <li><span style="color: grey;">—</span> County Gravel Roads</li> <li><span style="color: grey;">—</span> Gravel Roads</li> <li><span style="color: black;">—</span> Poor Dirt Roads</li> <li><span style="color: red;">—</span> County Poor Dirt Roads</li> <li><span style="color: purple;">- - -</span> Trail (Non-Recreation)</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: black;">—</span> Railroads</li> <li><span style="color: blue;">—</span> Stream</li> <li><span style="color: blue;">- - -</span> Intermittent Stream</li> <li><span style="color: yellow;">—</span> Stand Boundaries</li> </ul> <p><b>Forest Stands</b></p> <p>Level 3</p> <ul style="list-style-type: none"> <li>411 - Northern Hardwood</li> <li>413 - Aspen Types</li> <li>419 - Mixed Upland Deciduous</li> <li>422 - Natural Pines</li> <li>423 - Other Upland Conifers</li> <li>429 - Mixed Upland Conifers</li> <li>431 - Upland Mixed Forest</li> <li>612 - Lowland Coniferous Forest</li> </ul> | <p><b>Non-Forest Stands</b></p> <p>Level 3</p> <ul style="list-style-type: none"> <li>310 - Herbaceous Openland</li> <li>320 - Upland Shrub</li> <li>500 - Water</li> <li>622 - Lowland Shrub</li> <li>623 - Emergent Wetland</li> </ul> |
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# Special Conservation Areas & Site Conditions Map



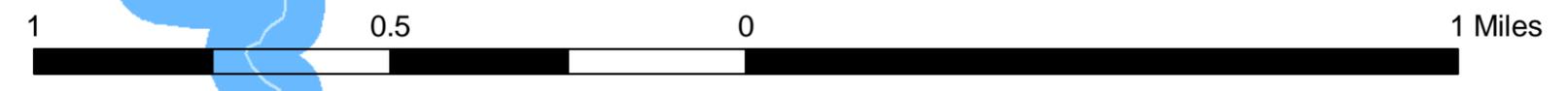
Stand #	23	Stocking Density
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Level 3	OI	
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 County: Dickinson  
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 Management Area: Ralph Ground Moraine  
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 Acres: 2,482 GIS Calculated  
 Examiner: Ed Rice  
 Map Revised: 08/27/2014  
 Map Phase: Pre-Review

**Legend**

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type
- Unavailable Factors
  - 1C: Other dept or div proc/practices
  - 2G: Too wet (sensitive soils, does not include access issues)
  - 5D: Unproductive Forest Land
- Dedicated Special Conservation Areas
  - Cold Water Streams
  - Cold Water Lakes
  - High Priority Trout Stream Buffer

DEPARTMENT OF NATURAL RESOURCES  
 MICHIGAN  
 DNR



87°52'0"W 87°51'0"W 87°50'0"W

46°10'0"N 46°9'0"N 46°8'0"N

46°10'0"N 46°9'0"N 46°8'0"N

Report 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	63	107	251	333	177	47	43	0	0	0	0	0	0	0	1021
Bog	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Cedar	0	0	0	0	0	0	0	14	127	220	0	0	0	0	362
Herbaceous Openland	76	0	0	0	0	0	0	0	0	0	0	0	0	0	76
Lowland Conifers	0	0	0	0	41	58	54	6	0	0	0	0	0	0	158
Lowland Shrub	115	0	0	0	0	0	0	0	0	0	0	0	0	0	115
Lowland Spruce/Fir	0	0	0	0	23	9	17	91	0	0	0	0	0	0	140
Marsh	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Mixed Upland Deciduous	0	0	0	0	0	0	24	0	0	0	0	0	0	0	24
Northern Hardwood	0	6	0	0	0	8	225	38	0	0	0	0	0	0	277
Red Pine	0	0	0	0	0	0	14	0	0	0	0	0	0	0	14
Tamarack	0	0	0	0	0	28	31	24	5	0	0	0	0	0	89
Treed Bog	47	0	0	0	0	0	0	0	0	0	0	0	0	0	47
Upland Conifers	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
Upland Mixed Forest	0	0	3	13	20	14	0	0	0	0	0	0	0	0	49
Upland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Upland Spruce/Fir	0	18	0	11	3	0	0	0	0	0	0	0	0	0	31
Water	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22
<b>Total</b>	<b>374</b>	<b>130</b>	<b>254</b>	<b>356</b>	<b>267</b>	<b>164</b>	<b>409</b>	<b>174</b>	<b>132</b>	<b>220</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2482</b>



## Report 2 – Proposed Treatment Summaries

**Crystal Falls Mgt. Unit**  
**Year of Entry 2016**

**Compartment 012**  
**Total Compartment Acres: 2,482**

### Acres by Treatment Type

Commercial Harvest - 255	Tree Planting - 0	Other - 129
Habitat Cut - 24	Opening Maintenance - 0	

### Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>(Habitat Cut)Mixed Upland Deciduous</b>	0	0	24	0	0	0	0	24
<b>Aspen Types</b>	144	0	0	0	0	0	0	144
<b>Lowland Coniferous Forest</b>	65	0	0	0	0	0	0	65
<b>Mixed Upland Conifers</b>	5	0	0	0	0	0	0	5
<b>Natural Pines</b>	0	14	0	0	0	0	0	14
<b>Upland Mixed Forest</b>	26	0	0	0	0	0	0	26
<b>Total</b>	<b>241</b>	<b>14</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>279</b>



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	12012004-Cut	13.6	4319 - Mixed Upland Forest	High Density Pole	57		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<p><u>Prescription</u> cut to utilize value of fir. remove merchantable aspen and r maple. cut spruce/fir/upland tamarack 2 sticks tall and larger. leave any associated  <u>Specs:</u> pine or cedar that may be present. do not push cut boundary into adjacent conifer swamp types. MO is aspen/spruce/fir</p> <p><u>Other</u> 2 ages of fir - saplings 30 yrs old and sawtimber sized trees 50+ yrs. aspen 7 - 9" dbh and associated low quality r maple  <u>Comments:</u></p> <p><u>Next</u>  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</p>										
8	12012008-Cut	23.6	6121 - Tamarack	Medium Density Pole	76		Harvest	Clearcut with Reserves	612 - Lowland Coniferous Forest	Cmpt. Review Proposal
<p><u>Prescription</u> remove all merchantable trees. leave cedar and balm. leave patches of b spruce 30 - 40' in diameter as seed tree groups. space these groups  <u>Specs:</u> 2 - 3 chains apart. expect a high percent of tamarack regen. MO is for b spruce/tamarack</p> <p><u>Other</u> b spruce 4 - 8" dbh, tamarack 4 - 12" dbh. NW corner heavier to tamarack and more open. E end has slight component of w birch and balm.  <u>Comments:</u> very little to no winter deer usage</p> <p><u>Next</u> monitor for regeneration  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</p>										
38	12012038-Cut	12.5	4134 - Aspen, Spruce/Fir	High Density Pole	48		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> remove merchantable aspen. cut spruce/fir 2 sticks and larger. leave maple component, all w birch and cherry. buffer adjacent lowland stands  <u>Specs:</u> where conifers and hazel are predominate. MO aspen</p> <p><u>Other</u> aspen 4 - 7" dbh, 3 sticks tall on average. fir 3 - 12" dbh and widely scattered w birch saplings. edge of stand adjacent to treed bog appears to  <u>Comments:</u> have had aspen cut off some time ago by beavers - mainly conifers and hazel along this edge. S central area of stand has a small N. hardwood inclusion. S 1/2 of stand has more mature aspen 12 - 14", 6 - 7 sticks tall.</p> <p><u>Next</u>  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</p>										
39	12012039-Cut	43.2	4134 - Aspen, Spruce/Fir	High Density Pole	68		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> remove merchantable aspen and maple. spruce/ fir 2 sticks and larger. leave w birch and cherry. protect young conifers. MO aspen 100 foot  <u>Specs:</u> buffer small creek and its intermittent portion</p> <p><u>Other</u> aspen 10 - 14" dbh. fir 4 - 10" dbh. small pockets of r maple throughout  <u>Comments:</u></p> <p><u>Next</u>  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</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
52	12012052-Cut	47.3	4134 - Aspen, Spruce/Fir	High Density Pole	50		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> remove merchantable aspen and maple. cut spruce/fir 2 sticks and larger. leave cherry, any pine. protect residual and advanced conifer regen.  <u>Specs:</u> leave transition zone to river - establish boundary line where terrain begins dropping down with higher percent of conifers. MO aspen</p> <p><u>Other</u> aspen 6 - 11" dbh, spruce/fir 4 - 12", 5 - 7 stick heights. some evidence of SBW. heavy hazel throughout. N end towards river trends towards  <u>Comments:</u> older aged 12 - 16" dbh aspen</p> <p><u>Next</u>  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</p>										
62	12012062-Cut	41.2	4134 - Aspen, Spruce/Fir	Medium Density Pole	42		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> remove merchantable aspen and maple, spruce/fir 2 sticks and larger. leave w birch, cherry, and oak if present. protect h maple advanced  <u>Specs:</u> regen notably prevalent in W end of stand as much as possible. MO aspen</p> <p><u>Other</u> two aged aspen - 40 yrs and 60 yrs, 4 - 8" dbh , 4 - 5 sticks tall very dense h maple sapling regen. associated fir poletimber 4 - 12" dbh.  <u>Comments:</u></p> <p><u>Next</u>  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</p>										
66	12012066-Cut	5.1	6121 - Tamarack	Medium Density Pole	85		Harvest	Clearcut with Reserves	6121 - Tamarack	Cmpt. Review Proposal
<p><u>Prescription</u> cut merchantable tamarack and b spruce. leave all cedar. MO is tamarack  <u>Specs:</u></p> <p><u>Other</u> nearly a pure tamarack stand 3 - 6 sticks tall, good form. fir understory, very widely scattered cedar and b spruce  <u>Comments:</u></p> <p><u>Next</u> monitor for regeneration  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</p>										
67	12012067-Cut	20.8	6122 - Black Spruce	Medium Density Pole	70		Harvest	Patch or Strip Clearcut	6122 - Black Spruce	Cmpt. Review Proposal
<p><u>Prescription</u> orient strips roughly NW to SE coming out to road. alternate cutting approx 60 feet, leave 60 feet keeping cut strips fairly narrow to discourage  <u>Specs:</u> full tamarack conversion. remove all merchantable trees within cut strips except leave all cedar. MO is b spruce with associated tamarack expected</p> <p><u>Other</u> well formed b spruce/tamarack. tamarack is well interspersed throughout. natural 30 - 50' gaps in canopy have advanced fir regen  <u>Comments:</u></p> <p><u>Next</u> monitor for regeneration  <u>Steps:</u></p> <p><u>Proposed</u>  <u>Start Date:</u> 10/01/2015</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
70	12012070-Cut	24.0	4199 - Other Mixed Upland Deciduous	High Density Pole	67	81-110	Harvest	Seed Tree with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> seed tree cut, leave 30 - 40 BA of r maple and w birch. leave scattered w spruce. no w pine, cedar, hemlock or oak if present. protect advanced</p> <p><u>Specs:</u> hardwood regen where possible. *access is an issue - high ground island surrounded by swamp. MO maple, birch, spruce/fir</p> <p><u>Other</u> low quality r maple. small areas of r maple M3 throughout</p> <p><u>Comments:</u></p> <p><u>Next</u> monitor for regeneration if cut occurs</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
73	12012073-Cut	4.0	42210 - Natural Red Pine	High Density Log	64	111-140	Harvest	Single Tree Selection	4221 - Natural Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> thin to 120 - 130 BA. leave w pine where possible, keep removals to absolute minimum only for equipment access. mark all trees for removal.</p> <p><u>Specs:</u> leave a slight aspen component. leave w birch. intermediate thin - no regen</p> <p><u>Other</u> well formed r pine overall</p> <p><u>Comments:</u></p> <p><u>Next</u></p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
79	12012079-Cut	9.7	6120 - Lowland Cedar	High Density Pole	95		Harvest	Patch or Strip Clearcut	612 - Lowland Coniferous Forest	Cmpt. Review Proposal
<p><u>Prescription</u> could cut portions of stand - S end has good b spruce runs between cedar thickets. remove merchantable b spruce and tamarack. leave all</p> <p><u>Specs:</u> cedar. MO for b spruce, tamarack, cedar</p> <p><u>Other</u> cedar predominates much of stand with scattered areas of bed rock out crop throughout. tag alder prevalent. very S end has small (1 acre)</p> <p><u>Comments:</u> inclusion of high ground with large w pine and thick fir understory. NW edge transitions to uplands with w spruce, rock, and fir saplings. No winter deer use 4/2/14, 2' snow.</p> <p><u>Next</u> monitor for regeneration</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
83	12012083-Cut	12.8	4319 - Mixed Upland Forest	High Density Pole	38		Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> remove merchantable aspen and r maple. cut spruce/fir 2 sticks and larger. leave w pine, w birch and protect conifer saplings as much as</p> <p><u>Specs:</u> possible. MO mixed species, maple, aspen, spruce/fir</p> <p><u>Other</u> fir poletimber in rough shape W of road due to SBW. poor quality r maple. E of road is has higher stocking of spruce/fir. very scattered w birch</p> <p><u>Comments:</u></p> <p><u>Next</u></p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</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
93	12012093-Cut	9.9	42210 - Natural Red Pine	High Density Log	62	171-200	Harvest	Single Tree Selection	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> thin to 120 - 140 BA. create equipment access trails - no real discernable rows. thin lightly on N end where previous cut occurred. leave <u>Specs:</u> components of w pine and r maple, remove for equipment access if needed. protect advanced regen where possible. intermediate thin - no regen <u>Other</u> decent form on r pine - possible utility poles scattered. N end had aspen and r maple cut out during previous cut - area is still a r pine stand with <u>Comments:</u> little regen from past cut. <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
96	12012096-Cut	5.1	429 - Mixed Upland Conifers	High Density Pole	45	81-110	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<u>Prescription</u> cut with adjacent pine. remove merch r maple and aspen. cut spruce/fir 2 sticks and larger. mark to leave w pine - leave 40 BA, reserving the <u>Specs:</u> large diameter w pine from cutting. leave slight component of w birch. MO w pine, r maple, aspen, spruce/fir <u>Other</u> highly variable stand. large diameter w pine scattered throughout with dense w pine/spruce poletimber 5 - 8"dbh. thick fir understory. widely <u>Comments:</u> scattered aspen with isolated pockets of A6. low quality r maple. E edge has opening inclusion with open grown w pine. stand appears to be part of adjacent r pine plantation that failed in this area <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
5	NF_12012005- Burn	2.6	3102 - Grass				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening and kill encroaching brush/seedlings. many large boulders throughout <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
9	NF_12012009- Burn	14.0	3102 - Grass				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening and kill encroaching brush/saplings. protect thick conifers at edges. <u>Specs:</u> <u>Other</u> opening with choke cherry encroaching. egdes heavily ringed with open grown w spruce and upland b spruce <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	NF_12012016- Burn	3.1	3102 - Grass				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening. protect edges of spruce/fir										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
20	NF_12012020- Burn	6.1	3102 - Grass				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening and kill encroaching brush/saplings.										
<u>Specs:</u>										
<u>Other</u> semi open with scattered b cherry and open grown spruce/fir. occasional open grown h maple.										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
24	NF_12012024- Burn	38.6	3102 - Grass				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening and kill encroaching brush/saplings. protect edges of thick spruce/fir										
<u>Specs:</u>										
<u>Other</u> open to semi open with scattered b cherry saplings and dense, open grown spruce/fir along edges. aspen saplings encroaching in areas										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
57	NF_12012057- Burn	12.1	310 - Herbaceous Openland				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening and kill encroaching brush/saplings. protect conifer at edges										
<u>Specs:</u>										
<u>Other</u> open to semi open with aspen sapling/seedlings growing in especially at edges. scattered cherry and spruce/fir										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
71	NF_12012071- Burn	3.7	320 - Upland Shrub				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening										
<u>Specs:</u>										
<u>Other</u> upland brush - semi open with pockets of open grown spruce/fir and aspen										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
86	NF_12012086- Burn	1.4	320 - Upland Shrub				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening										
<u>Specs:</u>										
<u>Other</u> semi open - edges have A3 and cherry saplings. scattered w pine										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
89	NF_12012089- Burn	2.0	320 - Upland Shrub				Prescribed Burn	Unspecified	3102 - Grass	Cmpt. Review Proposal
<u>Prescription</u> burn to maintain opening										
<u>Specs:</u>										
<u>Other</u> semi open - edges have A3 and cherry saplings. scattered w pine										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
95	NF_12012095- Other	45.5	6229 - Mixed lowland shrub				Other	Other - Specify	6220 - Alder/willow	Cmpt. Review Proposal
<u>Prescription</u> stand planned to have tag alder/willow chopped for wood cock habitat improvement										
<u>Specs:</u>										
<u>Other</u> open swamp grass/willow/tag alder along river. scattered tamarack										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
<b>Total Treatment Acreage Proposed:</b>		<b>401.9</b>								

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45 12012045-Cut	6.0	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	76		Harvest	Clearcut with Reserves	6121 - Tamarack	Cmpt. Review Proposal

Prescription remove merchantable tamarack and b spruce. leave cedar, w birch and pine. \*potential for being wet for equipment operations: with sparse areas there will be less slash for a support mat and little root system. tag alder throughout. no winter deer use. MO tamarack

Other Comment: appears to have had b spruce/fir cut out of stand in past. small upland inclusion with w pine and fir saplings. overall stand is conifer swamp - areas that are fairly sparse and wet. no winter deer usage

Next Steps: monitor for regeneration

Proposed Start Date: 10/01/2015

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

**Total Treatment  
Acreage Proposed: 6.0**

## Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 012

Year of Entry 2016

### Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5D	2G	1C
	Available	Not Available					
943	934	9	Aspen	934			9
362	362		Cedar	362			
104	98	6	Lowland Conifers	98		6	
194	194		Lowland Spruce/Fir	194			
24	24		Mixed Upland Deciduous	24			
277	267	11	Northern Hardwood	267			11
14	14		Red Pine	14			
88	29	59	Tamarack	29	59		
5	5		Upland Conifers	5			
112	112		Upland Mixed Forest	112			
46	46		Upland Spruce/Fir	46			
2,170	2,085	86	Total Forested Acres	2,085	59	6	20
	96%	4%	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
002	Not Available	5D: Unproductive Forest Land	29				
<b>Comments:</b> very scattered tamarack, little volume - open areas with tag alder							
003	Not Available	1C: Other dept or div proc/practices	11				
<b>Comments:</b> stand held to be thinned with adjacent hardwood stands next entry instead of making a small acreage unit.							
004	Not Available	1C: Other dept or div proc/practices	9				
<b>Comments:</b> well formed aspen, needs time for diameter growth							

005    **Not Available**    **5D: Unproductive Forest Land**    31

**Comments:**

very scattered trees and hummocks with swamp grass transitioning to Mud Lake bog

006    **Not Available**    **2G: Too wet (sensitive soils, does not include access issues)**    6

**Comments:**



### 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
<b>Comments</b>				



**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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
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	6120 - Lowland Cedar	High Density Pole	66.8	91		good cedar with associated fir poletimber and saplings. widely scattered w birch. scattered small semi open areas from windthrow with w birch and fir advanced regen. no sign of cedar regen. East end has slightly higher stocking of tamarack.
2	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	54.1	60		small scattered pockets of higher stocked tamarack, tamarack 4 - 6" dbh, b spruce 3 - 6 " dbh. very widely scattered cedar 12 - 14" dbh
3	6122 - Black Spruce	High Density Pole	13.7	77		b spruce 4 - 8" dbh with widely scattered 10" dbh trees. Tamarack is a minor component. sphagnum, lab tea - true b spruce swamp.
4	4319 - Mixed Upland Forest	High Density Pole	13.6	57		2 ages of fir - saplings 30 yrs old and sawtimber sized trees 50+ yrs. aspen 7 - 9" dbh and associated low quality r maple
6	6120 - Lowland Cedar	Medium Density Pole	14.3	72		scattered small openings throughout.
7	4134 - Aspen, Spruce/Fir	High Density Sapling	6.8	23		aspen 2 - 3" dbh heavy fir/w spruce/upland b spruce 2 - 8" dbh with scattered 10" trees. appears that in previous timber sale no conifers were removed?
8	6121 - Tamarack	Medium Density Pole	23.6	76		b spruce 4 - 8" dbh, tamarack 4 - 12" dbh. NW corner heavier to tamarack and more open. E end has slight component of w birch and balm
11	4134 - Aspen, Spruce/Fir	High Density Sapling	20.3	23		aspen 2 - 4" dbh. good distribution of associated spruce/fir
12	4134 - Aspen, Spruce/Fir	High Density Sapling	12.9	27		aspen 3 - 5" dbh associated fir saplings
13	4134 - Aspen, Spruce/Fir	High Density Pole	105.8	44		aspen 6 - 8" dbh with scattered 10 - 12" dbh trees. fir 4 - 8" dbh and associated h maple poletimber scattered throughout. High percent of small poletimber - overall stand is just beginning to move into 8 - 10" diameter classes. In NE end, small pocket of more mature aspen 10 - 12" dbh with heavy h maple sapling understory. scattered larger diameter w spruce. W end of stand has higher stocking of spruce/fir poletimber
14	4319 - Mixed Upland Forest	Medium Density	3.2	23		aspen saplings 30 - 40' tall. associated upland b spruce/fir saplings, scattered tamarack saplings notably along swamp edge
15	6121 - Tamarack	Medium Density Pole	31.4	69		tamarack 4 - 7" dbh, b spruce 3 - 6" dbh and small pockets of cedar. hummocky stand - transitioning to adjacent Mud Lake bog
17	4134 - Aspen, Spruce/Fir	High Density Sapling	10.4	27		pockets of very dense F3, notably along E side



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	6122 - Black Spruce	High Density Pole	19.1	75		good b spruce 5 - 7" dbh. higher stocking of cedar in N end of stand. cedar 12 - 18" dbh. Mid to S portion of stand moves towards semi upland b spruce with trace amounts of tamarack and w birch. S end transitions to smaller run of spruce 3 - 7" dbh. far NW end is tag alder and semi open tamarack in transition to creek
19	6122 - Black Spruce	Low Density Pole	16.9	69	51-80	heavy tag alder understory, scattered b spruce/tamarack. slight w birch component
21	4110 - Sugar Maple Association	High Density Pole	6.8	75	81-110	widely scattered fir. low to fair quality h maple and r maple, mainly an open grown stand.
22	6120 - Lowland Cedar	High Density Pole	106.7	87		edges are b spruce poletimber 3 - 7" dbh and tamarack 6 - 10" quickly transitioning to heavy cedar. small interspersed high ground islands in W end with fir poletimber/saplings 2 - 7" dbh, aspen saplings and scattered large aspen/r maple - majority of larger timber is windthrown
25	4110 - Sugar Maple Association	High Density Pole	7.8	67	51-80	well formed boles. occasional 12 - 16" dbh. r maple towards edges of stand. scattered w birch snags throughout
26	4130 - Aspen	High Density Pole	4.3	35		edges have scattered aspen 7 - 9" dbh, trace amounts of w birch. very thick hazel. aspen seedlings filling into field edges
27	4119 - Mixed Northern Hardwoods	Medium Density	5.5	13		H maple saplings 1 - 2" dbh from stump sprouts. associated fir saplings 1 - 2"
28	4134 - Aspen, Spruce/Fir	Medium Density	52.3	13		NW end heavier to fir saplings 1 - 3" dbh - little aspen regen in this area, r maple stump sprouts. areas of tag alder in S central of stand - previous cut went into lowland inclusions - these areas did not regenerate. Buffer strip along creek inclusion with spruce/fir 7 - 8" dbh, windthrow and tag alder.
29	4110 - Sugar Maple Association	High Density Pole	4.2	67	81-110	fair to good form on maple 3 - 4 sticks to first limbs, little defect. H maple 4 - 10" dbh. nice basswood 10 - 16" dbh. very scattered w spruce saplings
30	6122 - Black Spruce	Medium Density	22.6	42		b spruce, tamarack, fir thicket - trees 1 - 4" dbh. very thick
31	4134 - Aspen, Spruce/Fir	High Density Pole	14.8	35		small poletimber 4 - 7" dbh. aspen 2 - 3 sticks tall with scattered 4 stick trees. aspen is in pockets interspersed among F6. thick spruce/fir
32	6122 - Black Spruce	Medium Density Pole	9.4	56		b spruce 3 - 6" dbh, tamarack 6 - 10" dbh. high percentage of submerchantable b spruce
33	4110 - Sugar Maple Association	High Density Pole	59.5	69	51-80	well formed h maple 24 - 32' to first limbs, clear boles. light raspberry in areas with less canopy closure. N end has higher stocking of ironwood. E end has higher stocking of basswood



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
34	6120 - Lowland Cedar	Medium Density Pole	27.6	95		heavy fir understory in areas heavier to cedar. tamarack distributed throughout stand 8 - 12" dbh
35	4130 - Aspen	High Density Pole	268.8	35		aspen 4 - 7" dbh with scattered 8" dbh, 3 - 4 sticks tall. heavy hazel. associated spruce/fir poletimber. pockets of dense M3 and small diameter poles
37	4130 - Aspen	High Density Sapling	48.8	15		aspen 1 - 2" dbh spruce/fir 3 - 7" dbh
38	4134 - Aspen, Spruce/Fir	High Density Pole	12.5	48		aspen 4 - 7" dbh, 3 sticks tall on average. fir 3 - 12" dbh and widely scattered w birch saplings. edge of stand adjacent to treed bog appears to have had aspen cut off some time ago by beavers - mainly conifers and hazel along this edge. S central area of stand has a small N. hardwood inclusion. S 1/2 of stand has more mature aspen 12 - 14", 6 - 7 sticks tall.
39	4134 - Aspen, Spruce/Fir	High Density Pole	43.2	68		aspen 10 - 14" dbh. fir 4 - 10" dbh. small pockets of r maple throughout
41	6122 - Black Spruce	Medium Density Pole	37.7	76		far SE end graduates to F3F4 - very thick b. spruce/fir saplings. E 1/2 has heavier cedar component and W end dense S6 with slightly smaller diameters 4 - 6" dbh
42	4319 - Mixed Upland Forest	High Density Pole	19.7	47		heavy spruce/fir understory 3 - 5" dbh
43	4134 - Aspen, Spruce/Fir	Medium Density Pole	7.7	45		open grown stand transitioning to adjacent swamp. fair to heavy hazel understory. aspen 2 - 7" dbh with scattered 10" trees
44	6129 - Mixed Coniferous Lowland Forest	High Density Pole	40.7	45		strips of cedar 10 - 12" dbh between tamarack, b spruce regen 16 - 20' tall. inclusion of high ground at far W and E ends with associated aspen. W end of stand has higher stocking of b spruce poletimber 4 - 7" dbh. thick tamarack and fir regen throughout
45	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	6.0	76		appears to have had b spruce/fir cut out of stand in past. advanced regen to w pine, fir, spruce. w birch poletimber throughout with top die back. small upland inclusion with w pine and fir saplings. overall stand is conifer swamp - areas that are fairly sparse and wet
48	4110 - Sugar Maple Association	High Density Pole	8.0	57	81-110	fair quality maple - has potential for future quality sawtimber production. areas of open grown
49	42340 - Upland Spruce/Fir	Low Density Pole	2.7	40		semi open F4F5. openings throughout with spruce/fir 10 - 40' tall
50	4130 - Aspen	High Density Pole	12.6	35		aspen 3 - 4 sticks tall. very thick fir understory



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
51	6120 - Lowland Cedar	High Density Pole	19.1	98		good cedar stand 7 - 12" dbh with associated b spruce. fairly open understory. very small pockets of purer b spruce/tamarack scattered throughout. extreme W end graduates to higher stocking of tamarack/b spruce and small high ground "island" inclusion
52	4134 - Aspen, Spruce/Fir	High Density Pole	47.3	50		aspen 6 - 11" dbh, spruce/fir 4 - 12", 5 - 7 stick heights. some evidence of SBW. heavy hazel throughout. N end towards river trends towards older aged 12 - 16" dbh aspen
54	4134 - Aspen, Spruce/Fir	High Density Pole	32.4	37		aspen 4 - 6" dbh 2 - 3 sticks tall. fir 2 - 5" dbh. heavier fir component at edges of stand and scattered fir throughout. heavy hazel understory. small seasonal pond/swamp grass inclusion in SE of stand
56	4110 - Sugar Maple Association	High Density Pole	10.8	69	111-140	fair form on maple - eutypella and defect are present. appears not to be a great site for producing quality hardwoods - drier site with hazel present and denser in more open areas of stand
58	4130 - Aspen	High Density Pole	63.0	26		stand just moving into poletimber size classes with scattered 7 - 8" aspen. scattered spruce/fir throughout. heavy hazel understory
59	4110 - Sugar Maple Association	High Density Pole	61.2	69	51-80	fair to good form on maple. ironwood in understory 3 - 35' tall. light raspberry in areas with more open canopy. thinned last entry
61	6121 - Tamarack	Medium Density Pole	28.5	58		fairly open tamarack, cedar and scattered b spruce. isolated 12" dbh tamarack throughout with S edge heavier to cedar component 8 - 16" dbh. possibly species designated cut in the past - appears open in areas with tamarack/fir saplings
62	4134 - Aspen, Spruce/Fir	Medium Density Pole	41.2	42		two aged aspen - 40 yrs and 60 yrs, 4 - 8" dbh, 4 - 5 sticks tall very dense h maple sapling regen. associated fir poletimber 4 - 12" dbh.
63	42330 - Upland Fir	High Density Pole	10.5	35		w birch, r maple poletimber - sawtimber sized trees throughout. w birch a heavier component in NE end. heavy spruce/fir saplings and small poletimbre 3 - 6" dbh
65	42320 - Upland Spruce	High Density Sapling	17.9	15		very thick upland b spruce 1 - 3" dbh, 10 - 20' tall. scattered w pine and r pine log sized trees. small rock hills and large boulders present. small component of aspen mainly along road edge. small (1 ac) inclusion of aspen 12 - 14" dbh, w pine, spruce/fir at far E edge
66	6121 - Tamarack	Medium Density Pole	5.1	85		nearly a pure tamarack stand 3 - 6 sticks tall, good form. fir understory, very widely scattered cedar and b spruce
67	6122 - Black Spruce	Medium Density Pole	20.8	70		well formed b spruce/tamarack. tamarack is well interspersed throughout. natural 30 - 50' gaps in canopy have advanced fir regen



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
68	4110 - Sugar Maple Association	High Density Pole	20.4	69	81-110	w pine inclusion 24 - 28" dbh. heavy ironwood saplings
69	4110 - Sugar Maple Association	High Density Pole	3.1	65	51-80	fair to good form on h maple. heavy ironwood regen, few h maple saplings
70	4199 - Other Mixed Upland Deciduous	High Density Pole	24.0	67	81-110	low quality r maple. small areas of r maple M3 throughout
72	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	57.6	52		open pockets heavier to tag alder and fir saplings. cedar throughout with inclusions of higher stocking. S edge of stand has higher stocking of small diameter b ash and balm saplings with small diameter poletimber.
73	42210 - Natural Red Pine	High Density Log	4.0	64	111-140	well formed r pine overall
74	4110 - Sugar Maple Association	High Density Pole	28.9	67	81-110	good to fair form 1 1/2 - 2 log heights before first limbs. occasional h maple 18 - 20" dbh and basswood 12 - 18" dbh. scattered eutypella. very scattered h maple seedlings/saplings - more present in S end of stand. heavy ironwood understory 16 - 20' tall.
75	6120 - Lowland Cedar	High Density Pole	14.8	80		mixed conifer stand interspersed with bed rock knobs. knobs are sparsely timbered with fir, r pine, and w pine
76	4130 - Aspen	High Density Sapling	5.7	14		aspen 1 - 2" dbh, heavy h maple saplings 10 - 15' tall at edges. very scattered basswood and cedar
77	4112 - Maple, Beech, Cherry Association	High Density Pole	23.5	67	81-110	occasional r maple/h maple sawtimber. N end heavier to r maple. y birch and w birch scattered throughout. very widely scattered hemlock. far W end has component of large w pine 24" dbh + and higher stocking of fir saplings 3 - 10'
78	4134 - Aspen, Spruce/Fir	High Density Sapling	49.5	5		aspen 6 - 12' tall. large w pine and pockets of conifer saplings throughout. scattered r pine with some inclusions having higher stocking of r pine 30 - 50 BA.
79	6120 - Lowland Cedar	High Density Pole	75.4	95		cedar predominates much of stand with scattered areas of bed rock out crop throughout. tag alder prevalent. very S end has small (1 acre) inclusion of high ground with large w pine and thick fir understory. NW edge transitions to uplands with w spruce, rock, and fir saplings.
80	4110 - Sugar Maple Association	Medium Density Pole	6.0	67	81-110	h maple overall low quality 12 - 16" dbh, a lot of defect. good h maple sapling growth 1 - 3" dbh 25 - 30' tall. very scattered w birch saplings. small lowland conifer inclusion at W end, fir at S edge
81	4134 - Aspen, Spruce/Fir	High Density Sapling	98.4	22		scattered semi open areas with tag alder understory. pockets of spruce/fir
82	4130 - Aspen	High Density Pole	9.4	49		good aspen 3 - 4 sticks tall - needs time for diameter growth



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
83	4319 - Mixed Upland Forest	High Density Pole	12.8	38		fir poletimber in rough shape W or road due to SBW. poor quality r maple. E of road is has higher stocking of spruce/fir. very scattered w birch
84	6120 - Lowland Cedar	High Density Pole	5.9	80		just about a pure cedar overstory. very thick fir understory in areas
85	4130 - Aspen	High Density Sapling	39.3	27		aspen 2 - 5" dbh. very widely scattered r maple poletimber throughout. heavy hazel understory. pockets of tag alder in low areas that were cut through.
87	4110 - Sugar Maple Association	High Density Pole	31.6	75	81-110	scattered log sized h maple 16 - 18" dbh. good to fair form on sawtimber - good clear heights. good h maple sapling establishment in pockets throughout. rolling hills - areas with large rocks in gullies - potential for springs/seeps/drainages.
88	6120 - Lowland Cedar	High Density Log	8.7	91		nearly pure cedar in overstory - very little understory. classic cedar swamp with open understory. pockets of fir saplings in natural canopy openings
91	4134 - Aspen, Spruce/Fir	High Density Sapling	13.1	5		aspen 6 - 12' tall. large w pine and pockets of conifer saplings throughout. scattered r pine with some inclusions having higher stocking of r pine 30 - 50 BA.
92	6120 - Lowland Cedar	High Density Pole	22.8	91		
93	42210 - Natural Red Pine	High Density Log	9.9	62	171-200	decent form on r pine - possible utility poles scattered. N end had aspen and r maple cut out during previous cut - area is still a r pine stand with little regen from past cut.
96	429 - Mixed Upland Conifers	High Density Pole	5.1	45	81-110	highly variable stand. large diameter w pine scattered throughout with dense w pine/spruce poletimber 5 - 8" dbh. thick fir understory. widely scattered aspen with isolated pockets of A6. low quality r maple. E edge has opening inclusion with open grown w pine. stand appears to be part of adjacent r pine plantation that failed in this area



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	3102 - Grass	2.6	Yes	Low	
9	3102 - Grass	14.0	Yes	Low	burn to maintain opening
10	50 - Water	18.8	No	Unspecified	
16	3102 - Grass	3.1	Yes	Low	
20	3102 - Grass	6.1	Yes	Low	burn to maintain opening.
23	6229 - Mixed lowland shrub	7.4	Unspecified	Unspecified	
24	3102 - Grass	38.6	Yes	Low	burn to maintain opening.
36	6224 - Treed Bog	15.5	No	Unspecified	
40	6225 - Bog	23.9	No	Unspecified	
46	50 - Water	2.7	No	Unspecified	
47	6224 - Treed Bog	31.7	No	Unspecified	
53	6225 - Bog	5.7	No	Unspecified	
55	622 - Lowland Shrub	43.3	No	Unspecified	
57	310 - Herbaceous Openland	12.1	Yes	Low	burn to maintain opening
60	6233 - Wet Meadow	12.0	No	Unspecified	
64	622 - Lowland Shrub	10.2	No	Unspecified	
71	320 - Upland Shrub	3.7	Yes	Low	burn to maintain opening
86	320 - Upland Shrub	1.4	Yes	Low	burn to maintain opening



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
89	320 - Upland Shrub	2.0	Yes	Low	burn to maintain opening
90	320 - Upland Shrub	2.9	No	Unspecified	
94	622 - Lowland Shrub	8.7	No	Unspecified	
95	6229 - Mixed lowland shrub	45.5	Yes	Medium	stand planned to have tag alder/willow chopped for wood cock habitat improvement