



**Crystal Falls Forest Management Unit  
Compartment Review Presentation  
Compartment # 27 Entry Year: 2014  
Compartment Acreage: 2298 (GIS calculated) County: Dickinson**

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**Revision Date:** 06/19/12

**Stand Examiner:** Andy Church

**Legal Description:** T43N R27W Sections 4, 5, 8-11, 13, 15, 16

**RMU (if applicable):**

**Management Goals:** Optimize sustainable timber production while enhancing and protecting wildlife habitat. Protect the riparian areas and transition zones during management activity.

**Soil and Topography:** Soils are very poorly drained Cathro mucks with some areas of well drained fine sandy loams. The topography is mostly flat with small hills.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Blocks of private ownership are scattered within the compartment. Active forest management has occurred and will continue within and surrounding the compartment. Hunting is the main recreational use pattern.

**Unique, Natural Features:** None identified

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

**Special Management Designations or Considerations:** Some areas lie within the Designated '78 Deeryard map.

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

**Wildlife Habitat Considerations:** Compartment 27 encompasses the Ford River Deer Wintering Complex. Both upland and lowland conifer stand provide winter cover for deer with intact transition zones between upland and lowland enabling deer to travel between the upland and lowlands and between conifer stands to access both food and cover. An extensive outbreak of spruce budworm will greatly reduce the spruce and fir components of the area, making cedar, hemlock and pine even more essential as cover for wintering wildlife. Retaining coniferous cover in more intensively managed aspen and hardwood stands will provide desirable habitat features for grouse and other wildlife.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of medium-textured glacial till and peat and muck. There is insufficient data to determine the glacial drift thickness, some glacial drumlins exist. The Cambrian Trempealeau Formation and Munising Group subcrop below the glacial drift. The Trempealeau could be used for stone. Randville Dolomite marble quarries are located seven miles to the southwest. Part of the compartment is leased for metallic exploration. Gravel pits are located to the east and south of the compartment. There appears to be gravel potential on the uplands. There is no economic oil and gas production in the UP.

**Vehicle Access:** Excellent road systems are in place throughout entire compartment. However, access to this road system is through Private landowners. Many State forest poor dirt roads are also present.

**Survey Needs:** Corners are needed adjacent to private lands.

**Recreational Facilities and Opportunities:** None

**Fire Protection:** Felch Protection Area. Access for fire suppression in the more fire prone forest types is fairly good.

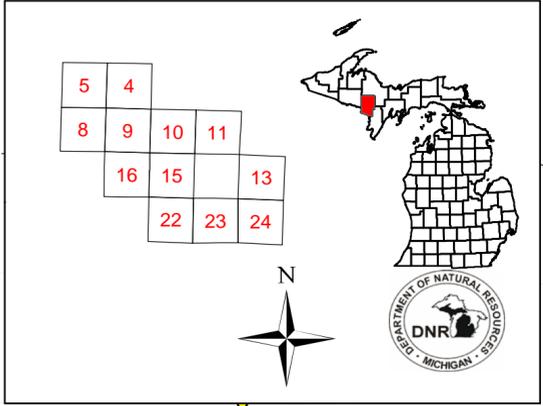
**Additional Compartment Information:**

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
  - ◆ **Cover Type by Age Class**
  - ◆ **Cover Type by Management Objective**
  - ◆ **Compartment Volume Summary**
  - ◆ **Proposed Treatments – No Limiting Factors**
  - ◆ **Proposed Treatments – With Limiting Factors**
  
- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - ◆ **Base feature information, stand numbers, cover types**
  - ◆ **Proposed treatments**
  - ◆ **Proposed road access system**
  - ◆ **Suggested potential old growth**

# Cover Type & Treatment Map

Compartment: 027  
 T43N R27W Sec. 4, 5, 8 - 11, 13, 15, 16, 22 - 24  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2014  
 Acres: 2,299 GIS Calculated  
 Examiner: Andy Church  
 Map Revised: 07/16/2012  
 Map Phase: Pre-Review

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



**Legend**

- Miris Corners
- Remonumented Section Corners
- Corners
- Mining
- Gate
- Berms
- Bridges
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Lakes and Rivers

**Treatments**

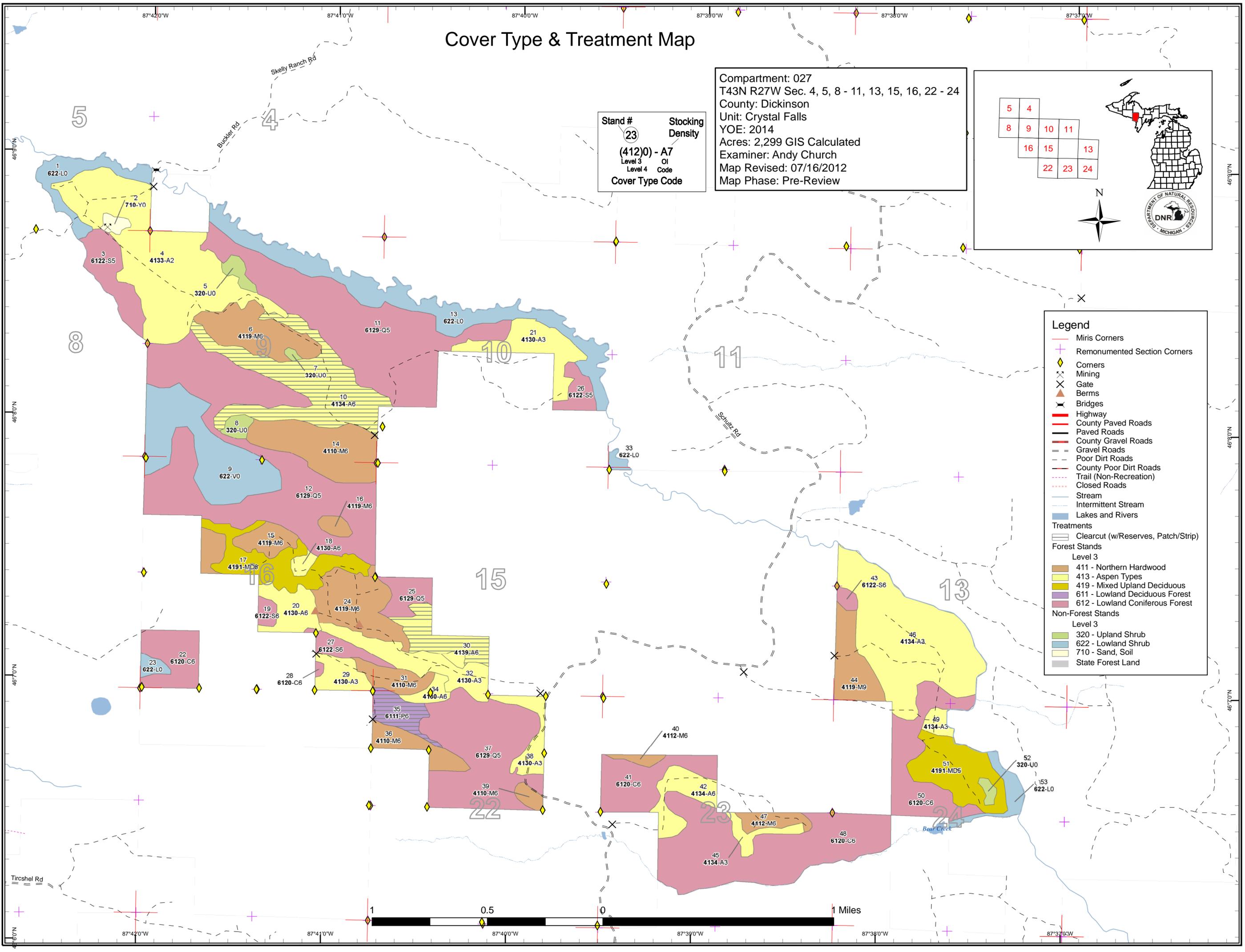
- Clearcut (w/Reserves, Patch/Strip)

**Forest Stands**

- Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

**Non-Forest Stands**

- Level 3
- 320 - Upland Shrub
- 622 - Lowland Shrub
- 710 - Sand, Soil
- State Forest Land

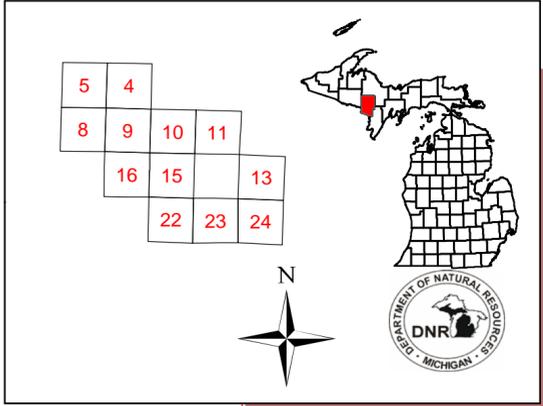




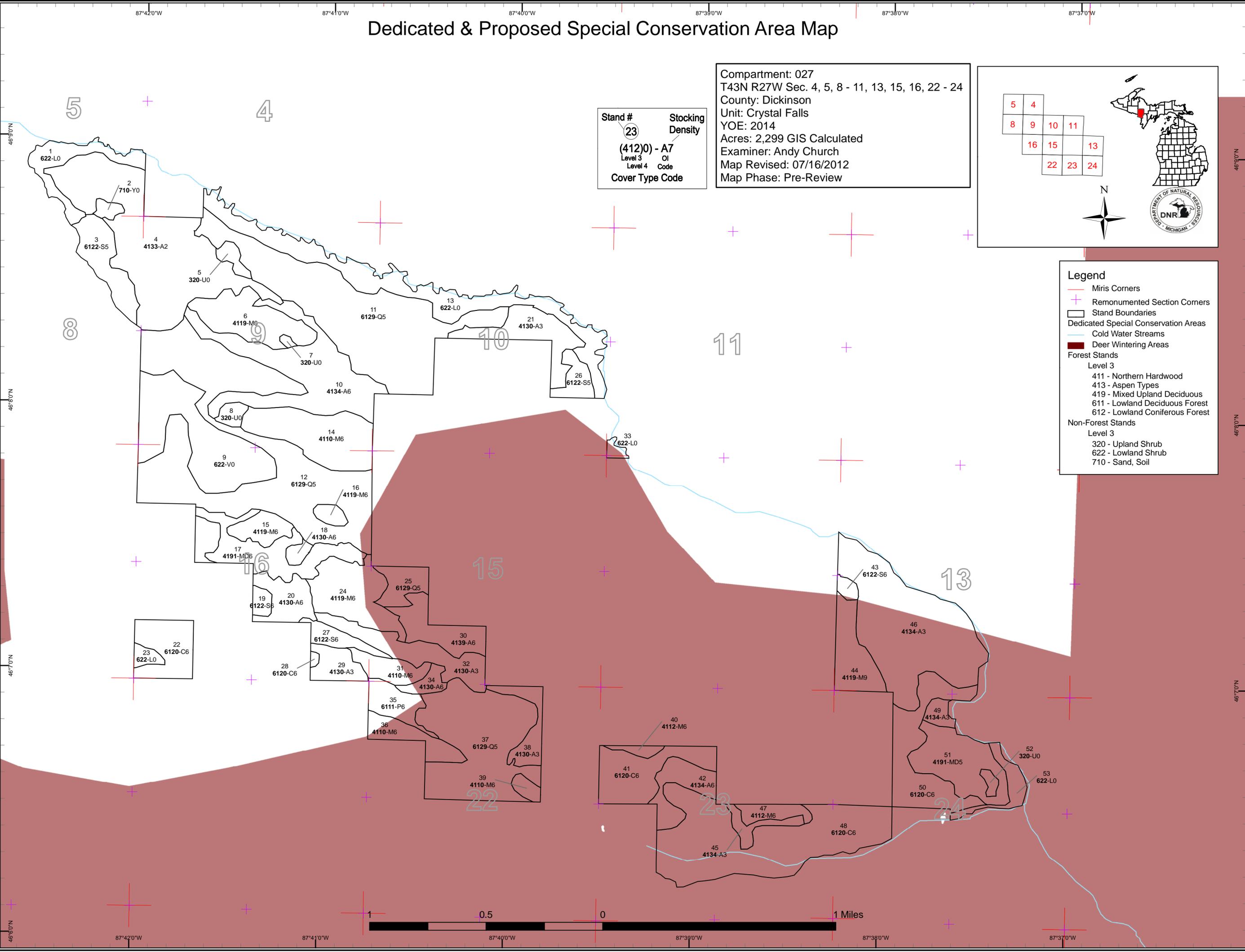
# Dedicated & Proposed Special Conservation Area Map

Compartment: 027  
 T43N R27W Sec. 4, 5, 8 - 11, 13, 15, 16, 22 - 24  
 County: Dickinson  
 Unit: Crystal Falls  
 YOE: 2014  
 Acres: 2,299 GIS Calculated  
 Examiner: Andy Church  
 Map Revised: 07/16/2012  
 Map Phase: Pre-Review

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



- Legend**
- Miris Corners
  - + Remonumented Section Corners
  - Stand Boundaries
  - Dedicated Special Conservation Areas
  - Cold Water Streams
  - Deer Wintering Areas
  - Forest Stands
  - Level 3
    - 411 - Northern Hardwood
    - 413 - Aspen Types
    - 419 - Mixed Upland Deciduous
    - 611 - Lowland Deciduous Forest
    - 612 - Lowland Coniferous Forest
  - Non-Forest Stands
  - Level 3
    - 320 - Upland Shrub
    - 622 - Lowland Shrub
    - 710 - Sand, Soil



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



	Age Class														Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen	61	209	218	38	0	0	104	33	0	0	0	0	0	0	663
Bog	95	0	0	0	0	0	0	0	0	0	0	0	0	0	95
Cedar	0	0	0	0	0	0	0	0	110	191	0	0	0	0	301
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
Lowland Conifers	0	0	0	0	0	0	256	124	185	0	0	0	0	0	565
Lowland Shrub	149	0	0	0	0	0	0	0	0	0	0	0	0	0	149
Lowland Spruce/Fir	0	0	0	0	0	14	54	5	0	0	0	0	0	0	73
Mixed Upland Deciduous	0	0	0	54	0	51	0	0	0	0	0	0	0	0	105
Northern Hardwood	0	0	0	0	0	0	5	0	299	0	0	0	0	0	304
Sand, Soil	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Upland Shrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19
<b>Total</b>	<b>329</b>	<b>209</b>	<b>218</b>	<b>92</b>	<b>0</b>	<b>65</b>	<b>418</b>	<b>182</b>	<b>594</b>	<b>191</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2299</b>



## Table 2 – Proposed Treatment Summaries

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

**Compartment 027**  
**Total Compartment Acres: 2299**

### Acres by Treatment Type

Commercial Harvest - 155	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	134	0	0	0	0	0	134
<b>Lowland Aspen/Balsam Poplar</b>	21	0	0	0	0	0	21
<b>Total</b>	155	0	0	0	0	0	155



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
10	12027010-Cut	103.8	4134 - Aspen, Spruce/Fir	High Density Pole	65		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Final Harvest using 2" spec. Leave Pine, Cedar, Hemlock, Oak, submerchantable conifers if found and wetter pocket in middle of stand. <u>Specs:</u> RETENTION: Pine, Cedar, Hemlock, Oak, submerchantable conifers and wetter pocket in middle of stand. ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir <u>Other</u> Much mortality throughout stand. Aspen varies in size. Small wet pocket in middle of stand. Exclude from treatment area. Check for survey <u>Comments:</u> needs. Not designated '78 deeryard. <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
30	12027030-Cut	30.0	4139 - Aspen, Mixed Deciduous	High Density Pole	73		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Final Harvest using 2" spec. Leave all Pine, Cedar, Hemlock, Oak and submerchantable conifers if found. Avoid wetter areas. Operations <u>Specs:</u> limited to Frozen Conditions only. RETENTION: Pine, Cedar, Hemlock, Oak, submerchantable conifers and wetter areas ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir <u>Other</u> Mostly upland with lowland fingers. Windthrow and mortality evident. Not designated '78 deeryard. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
35	12027035-Cut	20.9	6111 - Lowland Balsam Poplar	High Density Pole	73		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Final Harvest using 2" spec. Leave all Pine, Cedar, Hemlock, Oak and submerchantable conifers if found. Operations limited to frozen conditions <u>Specs:</u> only. RETENTION: Pine, Cedar, Hemlock, Oak, and submerchantable conifers ACCEPTABLE ALTERNATIVE REGEN: Ash/Fir <u>Other</u> Windthrow evident. Dogwood understory is thick. Not a designated '78 deeryard. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										

**Total Treatment  
Acreage Proposed: 154.7**

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

Other  
Comment:

Next  
Steps:

Proposed  
Start Date: #Error

Limiting Factor and No  
Treatment Reason

**Total Treatment**  
**Acreage Proposed: 0**

**Out of YOE -- Treatments  
Prescribed with No Limiting Factor**

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12091001-Cut	31.4	4110 - Sugar Maple Association	High Density Log	87		Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal - Incomplete

Prescription: Mark trees to 80 BA leaving best tree in place according to the Compleat Marker but focusing on White Ash to avoid Emerald Ash borer devastation. Create canopy gaps for regeneration

Other Comments:

Next Steps: Regen check according to certification

Proposed Start Date: 10/01/2013

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**Total Treatment Acreage Proposed: 31.4**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	6122 - Black Spruce	Medium Density Pole	34.3	64		Spruce not quite mature yet. More stocking to North.
4	4133 - Aspen, Mixed Pine	Medium Density	169.6	17		Mixed stand of Supercanopy Pines with Aspen saplings. Openings throughout stand. A couple 1972 planted Jack Pine pockets to South. Highly diverse stand.
6	4119 - Mixed Northern Hardwoods	High Density Pole	49.2	85	81-110	Hold for one more rotation. Will be ready then.
10	4134 - Aspen, Spruce/Fir	High Density Pole	103.8	65		Much mortality throughout stand. Aspen varies in size. Small wet pocket in middle of stand. Exclude from treatment area. Check for survey needs. Not designated '78 deeryard.
11	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	185.2	81		Patchy. Pockets of Tamarack, pockets of Cedar, pockets of Spruce, pockets of Tag Alder. Some supercanopy White Pines found throughout. BAM and TAM saplings found in wetland pockets.
12	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	236.8	61		Pockets of mature trees mostly along transition zone to upland areas. Small diameters within the stand.
14	4110 - Sugar Maple Association	High Density Pole	65.8	84	81-110	Western portion more open grown. Steep along south line. Wait one more rotation to thin.
15	4119 - Mixed Northern Hardwoods	High Density Pole	28.1	84	81-110	Cut iff Preinventory Stand #25 is cut. Large defective trees. BA low, but quality is poor.
16	4119 - Mixed Northern Hardwoods	High Density Pole	6.5	88	81-110	Scattered supercanopy White Pines. Low BA. Not ready to be thinned yet.
17	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	50.9	53		Very diverse stand. Great recruitment in understory of Red and Sugar maple. Mix of upland and lowland. Most of Aspen on upland areas of stand or in transition zones to swamp. Black Ash and Cedar in wetter spots.
18	4130 - Aspen	High Density Pole	5.1	21		Stand starting to reach merchantable size. Tamarack regen in wetter spots.
19	6122 - Black Spruce	High Density Pole	6.0	65		
20	4130 - Aspen	High Density Pole	25.2	21		Stand is starting to reach merchantable sized. Tamarack regen in wetter spots.
21	4130 - Aspen	High Density Sapling	39.5	19		Pockets of Tamarack regen where wet. Small upland shrub opening to North.
22	6120 - Lowland Cedar	High Density Pole	35.0	95		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4119 - Mixed Northern Hardwoods	High Density Pole	54.2	88	81-110	Large Aspen along transition zone to lowland. Small, old cedar pocket in North part of stand. Not enough BA to thin.
25	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	18.8	61		Pockets of mature trees mostly along transition zone to upland areas. Small diameters within the stand.
26	6122 - Black Spruce	Medium Density Pole	14.4	55		More Spruce to North. Cedar strip along South. Stand is not mature
27	6122 - Black Spruce	High Density Pole	13.5	65		More BAM to East, and Black Spruce to West
28	6120 - Lowland Cedar	High Density Pole	1.4	94		
29	4130 - Aspen	High Density Sapling	18.3	6		Tamarack regen in wetter areas.
30	4139 - Aspen, Mixed Deciduous	High Density Pole	32.9	73		Mostly upland with lowland fingers. Windthrow and mortality evident. Not designated '78 deeryard.
31	4110 - Sugar Maple Association	High Density Pole	18.7	84	81-110	Thinned last YOE (2006)
32	4130 - Aspen	High Density Sapling	42.7	6		Tamarack regen in wetter areas
34	4130 - Aspen	High Density Pole	8.9	27		Just starting to reach merchantable size.
35	6111 - Lowland Balsam Poplar	High Density Pole	20.9	73		Windthrow evident. Dogwood understory is thick. Not a designated '78 deeryard.
36	4110 - Sugar Maple Association	High Density Pole	22.7	84	81-110	Thinned last YOE (2006)
37	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	123.9	71		A few supercanopy White Pines throughout. Pockets of spruce, pockets of Cedar. Cedar mostly 2-3 sticks. Spruce not ready. Stand was cut in 40s. Wait for spruce to mature.
38	4130 - Aspen	High Density Sapling	19.6	27		Stand starting to reach merchantable size. Some supercanopy Pines scattered throughout.
39	4110 - Sugar Maple Association	High Density Pole	6.2	84	81-110	Thinned last YOE (2006)
40	4112 - Maple, Beech, Cherry Association	High Density Pole	5.0	68		Poor quality. Smaller diameters
41	6120 - Lowland Cedar	High Density Pole	47.4	84		Designated '78 deeryard

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## Crystal Falls Mgt. Unit

## 5 – Forested Stands

Compartment: 027  
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4134 - Aspen, Spruce/Fir	High Density Pole	27.1	31		Trees just starting to become merchantable sized. Mix of Aspen/Fir/Spruce
43	6122 - Black Spruce	High Density Pole	4.7	73		Majority of trees are 2-3 sticks
44	4119 - Mixed Northern Hardwoods	High Density Log	34.8	89	81-110	Aspen around edges. Not enough BA to thin. Access through private.
45	4134 - Aspen, Spruce/Fir	High Density Sapling	11.0	30		
46	4134 - Aspen, Spruce/Fir	High Density Sapling	151.4	27		Very healthy Aspen stand. Good stocking and vigor.
47	4112 - Maple, Beech, Cherry Association	High Density Pole	13.1	87	81-110	Poor quality. Not economically feasible to harvest unless cutting something else in this area. Access through private. Wait to thin.
48	6120 - Lowland Cedar	High Density Pole	154.2	98		Great diameter distribution on the Cedar 4"-16". 200-400 BA in Cedar zones. More Spruce/Tamarack near Bear Creek. Old logging freeze road runs through middle. Designated '78 deeryard.
49	4134 - Aspen, Spruce/Fir	High Density Sapling	7.7	27		Healthy, vigorous Aspen stand. Fully stocked
50	6120 - Lowland Cedar	High Density Pole	62.5	87		Cedar to north, more Tamarack and Spruce to South.
51	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	53.7	35		Stand is very diverse and patchy. Small upland openings throughout. Trees slowly filling in these openings. Isolated small pockets of mixed hardwoods. Some scattered supercanopy pines and Cedars. Aspen very healthy.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6229 - Mixed lowland shrub	30.0	No	Unspecified	
2	710 - Sand, Soil	5.0	Yes	Medium (NonForested)	
5	3205 - Mixed Upland Shrub	7.1	No	Unspecified	
7	3205 - Mixed Upland Shrub	1.6	No	Unspecified	
8	3205 - Mixed Upland Shrub	6.7	No	Unspecified	
9	6225 - Bog	94.8	No	Unspecified	
13	6220 - Alder/willow	95.5	No	Unspecified	
23	6220 - Alder/willow	5.8	No	Unspecified	
33	6220 - Alder/willow	3.5	No	Unspecified	
52	3205 - Mixed Upland Shrub	3.6	No	Unspecified	
53	6220 - Alder/willow	14.4	No	Unspecified	



**7 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS**

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Stand	SCA Type	SCA Name	Acres	Comments



**8 – DEDICATED CONSERVATION AREA DETAILS**

\* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.