

# Crystal Falls Forest Management Unit Compartment Review Presentation

Compartment #91 Entry Year: 2013 Compartment Acreage: 2224 County: Dickinson

**Revision Date:** 6-22-2011

**Stand Examiner:** Andy Church

**Legal Description:** T40N R28W Sections 4,5,8,9,16,17

### RMU (if applicable):

**Management Goals:** Optimize sustainable timber production while maintaining species diversity, recreational opportunities, and protecting wildlife habitat.

**Soil and Topography:** Soils range from wet Cathro muck to dry Emmet fine sandy loams. Topography also differs from flat lowlands, hardwood ridges, to small

Ownership Patterns, Development, and Land Use in and Around the Compartment: Compartment 91 is separated by a large block of private and commercial forest landowners. Deer hunting is evident in and around this compartment. The snowmobile trail #115 is operating in several sections of this compartment offering additional outdoor recreation activities. Blomgren Marsh, located in Section 8, is an excellent wildlife viewing spot for many people.

Unique, Natural Features: Blomgren Marsh.

Archeological, Historical, and Cultural Features: None known.

**Special Management Designations or Considerations:** None known.

#### **Watershed and Fisheries Considerations:**

Wildlife Habitat Considerations: Upland conifer types, particularly white pine and hemlock have declined substantially. Upland and lowland conifer components should be restored, and maintained where present and enhanced whenever possible. This area has the tendency to regenerate to red and white pine, naturally. All species of wildlife need to be considered and a full range of habitat conditions should be provided. Conditions from early-successional to old growth must be provided to meet these needs. Lowland hardwood types and drainages are sensitive areas that provide excellent wildlife habitat in this intensively managed area. Riparian and transition zones were set aside in prior years of entry to provide some of these habitat requirements. This will be particularly important around the flooding so that species using this

riparian area are provided appropriate habitat. Eagles, ospreys, herons, loons and various waterfowl use this impoundment and will be taken into consideration when management is proposed. Openings will be treated as logistics allow.

# Mineral Resource and Development Concerns and/or Restrictions:

Sections 4, 5, 8, 9, 16 and 17, T40N-R28W, Dickinson County

Surface sediments consist of outwash sand and gravel and postglacial alluvium and thin to discontinuous glacial till over bedrock. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Group and the Precambrian Michigamme Formation and Archean granite/gneiss outcrops beneath the glacial drift. There is not a current economic use for these rocks. The Hancock iron mine is located approximately three miles to the northeast. State land in the area of this compartment was previously leased for metallic exploration and potential may still exist. A gravel pit is located one-half mile to the east and another one is located one mile to the north. There appears to be some gravel potential in the compartment. There is no economic oil and gas production in the UP.

**Vehicle Access:** Access is good with the Foster City Rd providing the main entry point into this compartment. Many state forest two tracks are constructed within the boundary of Compartment 91.

**Survey Needs:** None necessary for this year of entry.

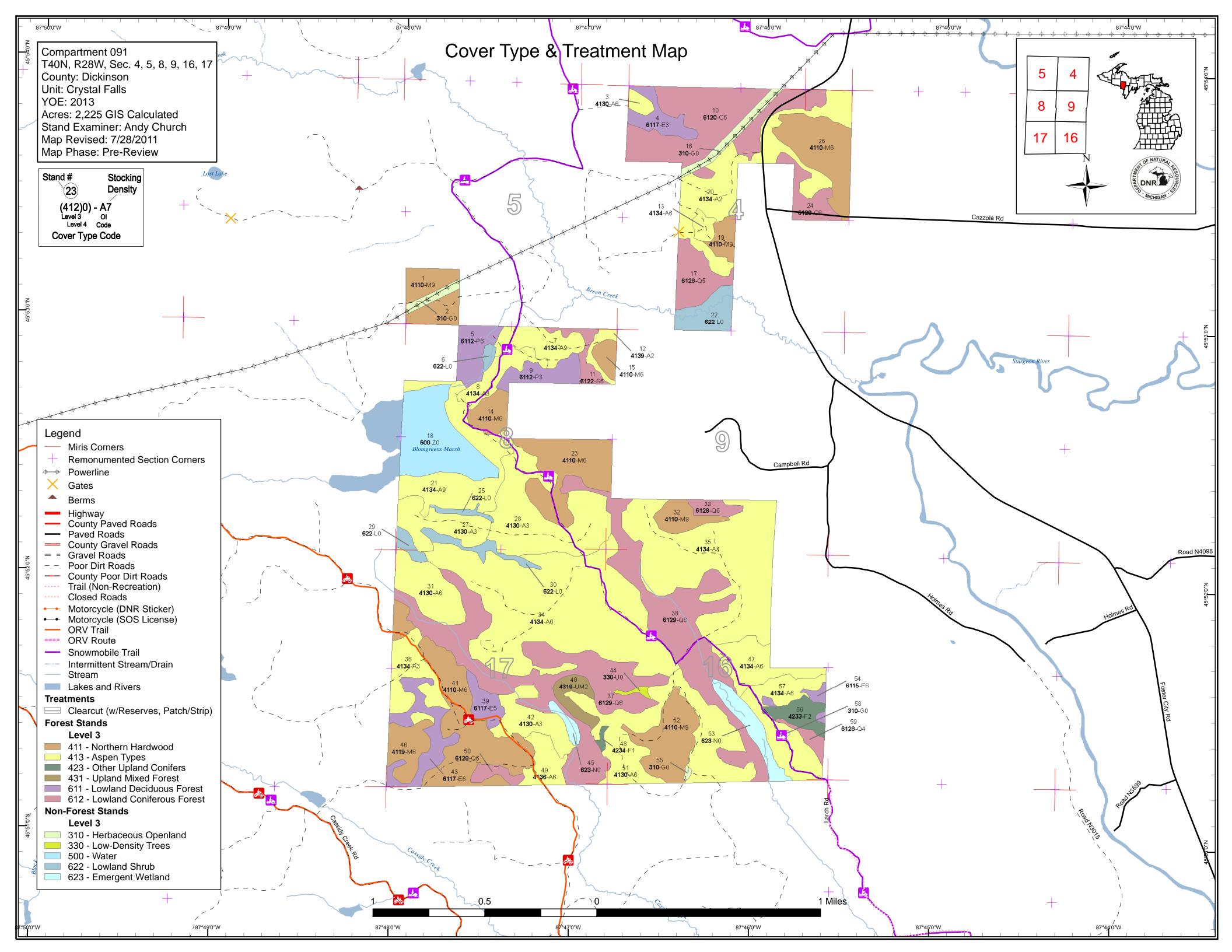
**Recreational Facilities and Opportunities:** Hunting, camping, fishing, trapping, hiking, canoeing, snowmobiling.

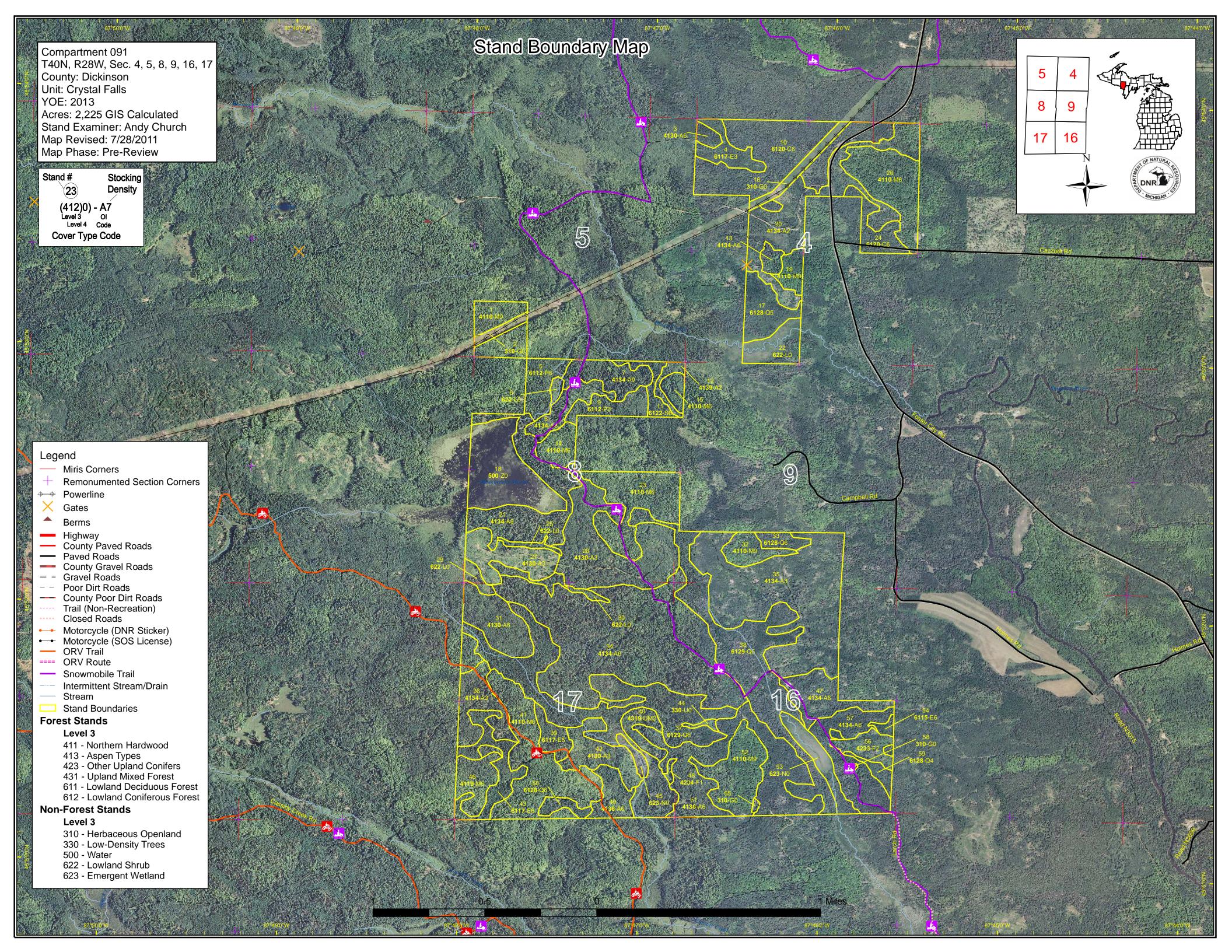
**Fire Protection:** Felch protection area. Access to most upland stands is fair. Access to swamp types would be difficult.

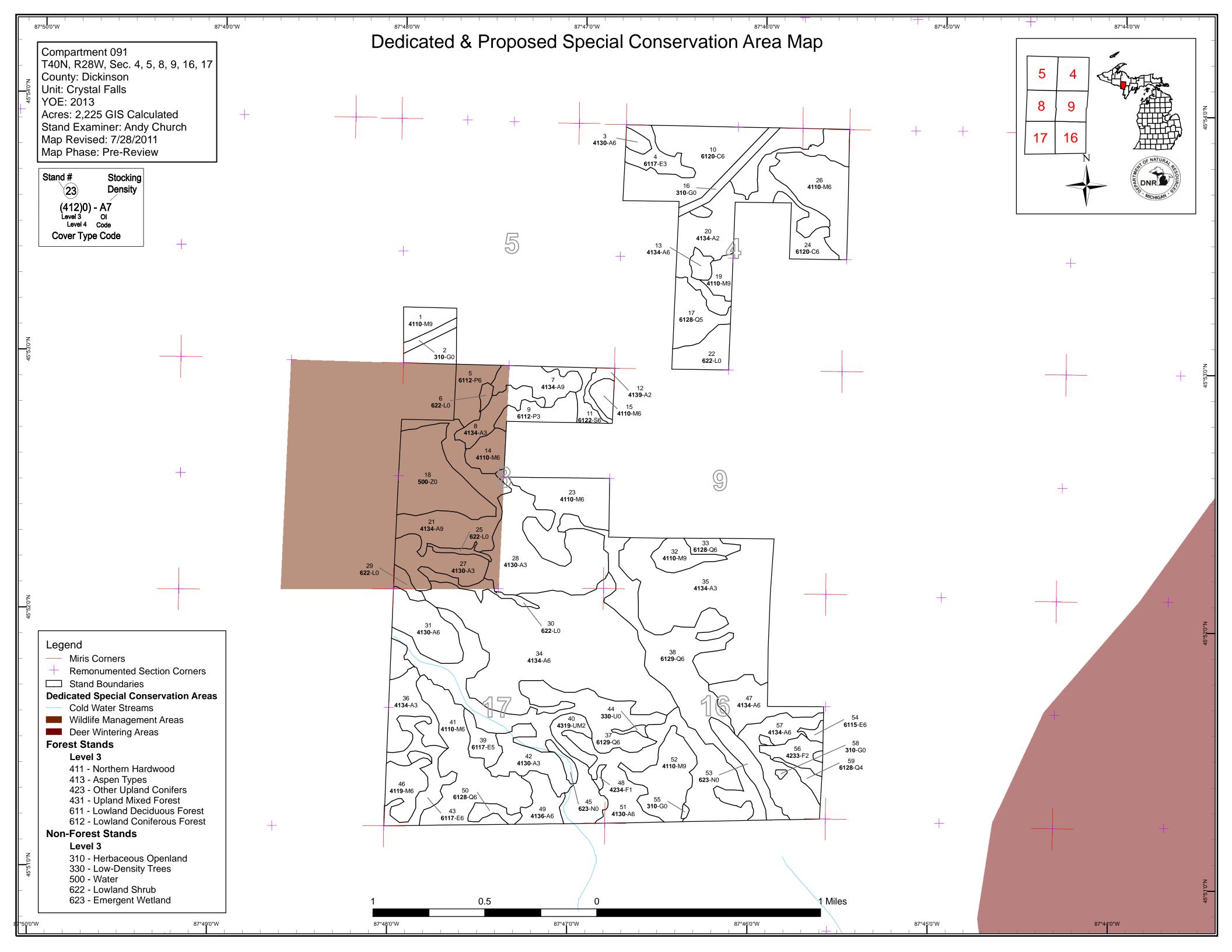
### **Additional Compartment Information:**

- **➤** The following reports from the Inventory are attached:
  - **♦** Total Acres by Cover Type and Age Class
  - **♦** Proposed Treatment Summary
  - **♦** Proposed Treatments No Limiting Factors
  - **♦** Proposed Treatments With Limiting Factors
  - **♦ Stand Details (Forested and Nonforested)**
  - ♦ Dedicated and Proposed Special Conservation Areas

- > The following information is displayed, where pertinent, on the attached compartment maps:
  - ♦ Base feature information, stand boundaries, cover types, and numbers
  - **♦** Proposed treatments
  - ♦ Details on the road access system







Compartment 091 Year of Entry 2013

Crystal Falls Mgt. Unit
Andrew Church : Examiner



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Aspen	0	35	318	169	355	101	12	67	28	0	0	0	0	0	0	1085	ĺ
Cedar	0	0	0	0	0	0	0	0	20	107	0	0	0	0	0	127	l
Herbaceous Openland	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	
Low-Density Trees	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	l
Lowland Aspen/Balsam Poplar	0	0	20	0	23	0	0	0	0	0	0	0	0	0	0	43	l
Lowland Conifers	0	0	0	0	0	0	0	0	0	310	8	0	0	0	0	318	l
Lowland Deciduous	0	0	0	19	14	0	0	0	0	32	6	0	0	0	0	70	l
Lowland Shrub	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	l
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12	l
Marsh	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	1
Northern Hardwood	0	0	0	0	0	0	0	0	66	276	24	0	0	0	0	366	l
Upland Mixed Forest	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15	l
Upland Spruce/Fir	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	19	l
Water	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71	
Total	171	35	371	187	392	101	12	67	114	736	38	0	0	0	0	2225	1



# **Table 2 – Proposed Treatment Summaries**

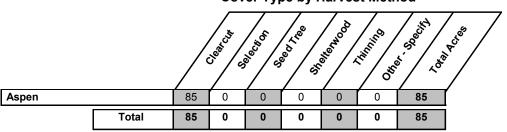
Crystal Falls Mgt. Unit Year of Entry 2013 **Total Compartment Acres: 2225** 

**Acres by Treatment Type** 

Commercial Harvest - 85 Site Prep - 0 Tree Planting - 0 Prescribed Burn - 0 Other - 0

Habitat Cut - 0 Tree Seeding - 0 Pesticide - 0 Opening Maintenance - 0

**Cover Type by Harvest Method** 



Compartment 091

Crystal Falls Mgt. Unit

### Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 091 Year of Entry 2013

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t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	12091003-Cut	5.6	4130 - Aspen	High Density Pole	56	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Final Harvest using 2 inch spec. Leave all Pine, Cedar, Hemlock if found. RETENTION: Pine, Cedar, Hemlock ACCEPTABLE ALTERNATIVE

REGEN: Maple/Fir Specs:

**Other** Comments:

s

**Next** Steps:

> 4134 - Aspen, 4130 - Aspen 12091007-Cut 27.6 High Density Log Harvest Clearcut with Cmpt. Review Spruce/Fir Reserves Proposal

> Prescription Final harvest using 2 inch spec. Leave Hemlock, Oak, and Cedar. Buffer South Branch of Breen Creek 100 feet along Western boundary of stand. Summertime only for snowtrail protection. RETENTION: Hemlock, Oak, Cedar, and the buffer near creek. ACCEPTABLE ALTERNATIVE Specs: REGEN: Maple/Fir

Patchy stand. Aspen varies in diameter, density, and age. 2 ages of Aspen: 32, and 74. Evidence of Budworm on the fir and spruce. Much conifer mortality. The White Birch is also declining. Comments:

<u>Next</u>

<u>Other</u>

Steps:

4134 - Aspen, 13 12091013-Cut High Density Pole Clearcut 4130 - Aspen Cmpt. Review 6.9 Harvest Spruce/Fir Proposal

Prescription Final harvest using 2 inch spec. Leave Hemock, Oak, and Cedar if found. RETENTION: none due to budworm infestation. ACCEPTABLE

Specs: ALTERNATIVE REGEN: Maple/Fir

<u>Other</u> Spruce budworm killing fir. Maples mixed throughout the Aspen/Fir stand are open grown, and poor quality.

Comments:

<u>Next</u> Steps:

> 12091021-Cut 44.7 4134 - Aspen, Clearcut with High Density Log Harvest 4130 - Aspen Cmpt. Review Spruce/Fir Reserves Proposal

Prescription Final Harvest using 2 inch spec. Leave all Hemlock, Beech and Cedar if found. Buffer Blomgren Marsh 100 feet. Protect OFS with a 10 chain Specs: no cut buffer. Operations limited to August 1 - November 31 for protection of snowtrail and OFS. RETENTION: Hemlock, Beech, Cedar, and Buffers. ACCEPTABLE ALTERNATE REGEN: Maple/Fir

Aspen falling apart. Trace amounts of Ironwood and Beech in understory. Terrain is rocky with lowland tag alder pockets and drainages mixed Other\_ throughout. OFS found on SW side of stand. Comments:

<u>Next</u> Steps:

**Total Treatment** 

84.7 Acreage Proposed:

Crystal Falls Mgt. Unit Table 4 -- Treatments Prescribed with Compartment: 091 a Limiting Factor s Year of Entry 2013 t **Treatment Cover Type** n **Treatment Acres** Stage1 Size Stand **Treatment Approval** Name CoverType Density Method Objective Status Age Type d #Error **Prescription** Specs: <u>Other</u> Comment: <u>Next</u> Steps: Limiting Factor and No

Total Treatment
Acreage Proposed: 0

Treatment Reason

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

Year of Entry: 2013

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12060_OutOfY OE-Cut	6.0				Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
Prescription Clea	arcut 2" db	h and above except	cedar, hemlock a	and pine if r	oresent.			

Specs:

<u>Other</u> Comments:

<u>Next</u> Steps:

**Total Treatment** 

6.0 Acreage Proposed:

S t	Crystal Fall	Crystal Falls Mgt. Unit			Crystal Falls Mgt. Unit 5 – Forested Stands			Ands Compartment: 091 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:		
1	4110 - Sugar Maple Association	High Density Log	31.4	86	81-110	Thinned 1993. More Yellow Birch to South. Large canopy overstory trees, but smaller diameters are growing well in openings. Wait one more rotation, or look at harvesting when hardwoods in Compartment 92 are treated.		
3	4130 - Aspen	High Density Pole	5.6	56	51-80	OJ: Aspen is falling down. Cut.		
4	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	18.8	27		OJ: Lots of Tamarack mixed with Aspen. Kind of wet site.		
5	6112 - Lowland Aspen	High Density Pole	22.5	39	51-80	Heavily Browsed. Trees very healthy. Wetter further South. Upland in North part of stand. Wait 10 years to harvest.		
7	4134 - Aspen, Spruce/Fir	High Density Log	27.8	74	81-110	Patchy stand. Aspen varies in diameter, density, and age. 2 Aspens were aged: one 32, one 74. Evidence of Budworm on the fir and spruce. Much conifer mortality. The White Birch is also declining.		
8	4134 - Aspen, Spruce/Fir	High Density Sapling	21.8	17		Good amount of mixed conifer coming back with the Aspen		
9	6112 - Lowland Aspen	High Density Sapling	20.2	17		Wet		
10	6120 - Lowland Cedar	High Density Pole	107.4	80	51-80	OJ: Balsam is dead or dying fast. Variable patches of Tamarack and Cedar.		
11	6122 - Black Spruce	High Density Pole	11.5	88	51-80	wet		
12	4139 - Aspen, Mixed Deciduous	Medium Density	6.7	17		Some supercanopy conifers scattered throughout. Mostly an upland site with lowland areas.		
13	4134 - Aspen, Spruce/Fir	High Density Pole	6.9	56	51-80	OJ: Spruce budworm killing fir. Cut. AC: Hardwoods mixed throughout the Aspen/Fir stand. Hardwoods are open grown, and poor quality.		
14	4110 - Sugar Maple Association	High Density Pole	16.9	86	51-80	OJ: Low to fair Quality. Thinned last YOE.		
15	4110 - Sugar Maple Association	High Density Pole	8.7	87	51-80	Poor quality. Cedar around edges		
17	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	29.2	86	1-50	Wet. Patchy Swamp Hardwoods, and Swamp Conifer types.  More conifer to South.		
19	4110 - Sugar Maple Association	High Density Log	11.4	78	81-110	OJ: Real nice stand. High quality.		

s t	Crystal Fall	s Mgt. Unit		5 – Fo	orested Sta	nds Compartment: 091 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	4134 - Aspen, Spruce/Fir	Medium Density	86.3	17		OJ: Poor site. Sparse low quality AC: Tag alder pocket located in Southern portion of stand. Very Southern reaches of stand has poor recruitment.
21	4134 - Aspen, Spruce/Fir	High Density Log	67.2	66	51-80	Aspen falling apart. Some Aspen over 20 inches. Low BAs due to dying Aspen. Trace amounts of Ironwood and Beech in understory. Terrain is rocky with a mix of highland with lowland tag alder pockets and drainages throughout. OFS found on SW side of stand.
23	4110 - Sugar Maple Association	High Density Pole	60.7	86	81-110	OJ: Carpet of Ironwood seedlings. Stand has large diameter variation. Thinned last YOE. Snowmobile trail to South. Black Ash and Yellow Birch drainages thoughout.
24	6120 - Lowland Cedar	High Density Pole	20.1	78	141-170	OJ: Fir mostly fallen due to spruce budworm. AC: Will likely damage residual Cedar in a salvage harvest.
26	4110 - Sugar Maple Association	High Density Pole	54.3	78	81-110	OJ: Thinned last YOE. Birch is poor quality.
27	4130 - Aspen	High Density Sapling	35.4	6		Cut last YOE. Fir, RP, WP, Cedar, and Spruce left scattered in resdual overstory.
28	4130 - Aspen	High Density Sapling	98.0	27		OJ: Dense and uniform. High quality site. AC: Scattered lowland drainages mixed throughout.
31	4130 - Aspen	High Density Pole	38.9	36	51-80	Aspen stand with some fir in understory. Windthrow on top of hill. BAM along wetter areas on perimeter.
32	4110 - Sugar Maple Association	High Density Log	17.1	88	51-80	OJ: Thin soil on rock. Some places with poor stocking, but mostly good Hardwoods. Thinned last YOE.
33	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	9.1	87	51-80	
34	4134 - Aspen, Spruce/Fir	High Density Pole	245.9	38	51-80	OJ: Highly variable stand. Rock and water. Looks like 2 aged aspen about 35 and 70 years old. Fir mortality high. AC: Rocky mostly Aspen stand with drainages, swamp hardwoods, and fir pockets mixed throughout. Wait to harvest.
35	4134 - Aspen, Spruce/Fir	High Density Sapling	170.6	17		AC: Swamp Hardwood pockets mixed throughout. Especially in SE part of stand.
36	4134 - Aspen, Spruce/Fir	High Density Sapling	36.2	27		Stand just starting to become merchantable. Older aspen to North. Sapling Fir pocket in SE portion of stand.
37	6129 - Mixed Coniferous Lowland Forest	High Density Pole	144.8	83	81-110	Lowland conifer stand

s t	Crystal Fall	s Mgt. Unit		5 – Fo	orested Sta	Ands Compartment: 091 Year of Entry: 2013
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	6129 - Mixed Coniferous Lowland Forest	High Density Pole	120.2	80	81-110	OJ: Fir mortality is high. It is becoming a minor part of stand. Small patches of pure Cedar. AC: Small high gound ridge in middle of stand.
39	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	14.0	38	51-80	Small pockets of Cedar and Black Ash drainages throughout. Aspen needs more time to become mature. Wait to harvest. Mostly wet with a small upland ridge along North stand boundary.
40	4319 - Mixed Upland Forest	Medium Density	14.8	17		Fir, Spruce, Maple in residual overstory. Much of regen chewed off by beavers. Terrain is rock.
41	4110 - Sugar Maple Association	High Density Pole	94.8	86	51-80	thinned. heavily browsed. high mortality in white birch. Thinned last YOE.
42	4130 - Aspen	High Density Sapling	32.3	19		Scattered supercanopy White Pines throughout.
43	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	31.5	89	81-110	mostly lowland hdwds with scattered conifers. More conifer component to South.
46	4119 - Mixed Northern Hardwoods	High Density Pole	24.1	96	81-110	thinned last YOE.
47	4134 - Aspen, Spruce/Fir	High Density Pole	34.4	27	51-80	Several drainages throughout. Just starting to become merchantable. About one acre of Red Pine along road.
48	42340 - Upland Spruce/Fir	Low Density Sapling	1.8	12		low density. G0 last YOE, seems to be filling in from sides.
49	4136 - Aspen, Mixed Conifer	High Density Pole	20.2	39	51-80	Wetter to North. Highly varible stand. Rocky with wet areas.  Best Aspen is in wetter area to North.
50	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	8.0	97	51-80	
51	4130 - Aspen	High Density Pole	101.1	46	81-110	Aspen ages vary greatly. 20-50 years old. Density and quality is patchy. Scattered rocks mixed throughout. White Birch is declining. Many conks on Aspen. A few scattered supercanopy White Pines. Aspen will hold for one more rotation.
52	4110 - Sugar Maple Association	High Density Log	46.4	85	51-80	Thinned last YOE. Western portion not harvested. Few scattered conifers mixed throughout.
54	6115 - Lowland Ash	High Density Pole	5.7	95	51-80	Wet Black Ash stand
56	42330 - Upland Fir	Medium Density	16.7	17		Rock and Black Ash swails. Due to terrain, much of overstory was not harvested when this stand was treated in 1993.  Regenerating many different species. Regen density is poor.  Heavily browsed. Many pockets of merchantable timber uncut.

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a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
57	4134 - Aspen, Spruce/Fir	High Density Pole	50.0	35	81-110	MANY Black Ash swails throughout. Too many to type out. Terrain is rock and swails. Wait to harvest. Scattered supercanopy White Pines.	
59	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	6.7	89	1-50	Scattered supercanopy Tamarack, Fir, Spruce.	_

Compartment: 091 Year of Entry: 2013



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	3105 - Mixed Upland Herbaceous	6.5	No	Unspecified	
6	6229 - Mixed lowland shrub	3.3	No	Unspecified	
16	3105 - Mixed Upland Herbaceous	13.3	No	Unspecified	
18	50 - Water	71.2	No	Unspecified	
22	6220 - Alder/willow	23.2	No	Unspecified	
25	6220 - Alder/willow	4.0	No	Unspecified	
29	6229 - Mixed lowland shrub	6.3	No	Unspecified	
30	6229 - Mixed lowland shrub	11.2	No	Unspecified	
44	3302 - Low Density Conifer Trees	2.3	No	Unspecified	
45	6239 - Mixed Emergent Wetland	5.6	No	Unspecified	
53	6230 - Cattail	21.6	No	Unspecified	
55	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	
58	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	

Crystal Falls Mgt. Unit

Compartment: 091 Year of Entry: 2013



## 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.

Conservation Area	туре	Description	HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen constocked trout populations and those of other coldwater fish specyear to year. Coldwater streams in Michigan typically provide th contributions of groundwater to their stream flows. Such stream designated as trout resources by Fisheries Order 210.	cies (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wild and Waterfowl Production Areas, deer wintering complexes in loopenings and savannas. Habitat areas are distinct from critical endangered or threatened species (such as Kirtland's warbler of general in nature, are not primarily associated with threatened covered by species recovery plans that are developed in coope	owland conifer communities, grassland habitat designated for recovery of or piping plover areas) in that they are more or endangered species, and are not
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