



**Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #88 Entry Year: 2013
Compartment Acreage: 1075 County: Dickinson**

Revision Date: 6-22-11

Stand Examiner: Andy Church

Legal Description: T41N R28W Sections 28,29,33

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

Soil and Topography: Soils are mostly Carbondale and Cathro wet muck soils that are very poorly drained. The higher ground is a sandy loam. The topography is generally flat with little variation.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Compartment 88 is separated by large blocks of private ownership. Deer hunting is evident in and around this compartment. The State owned and the privately owned land in the area practice active forest management.

Unique, Natural Features: West Branch of Sturgeon River located towards North, and Breen Creek to South.

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. Large aspen types should be harvested in smaller acreages to increase age class diversity.

MINERAL, OIL AND GAS CONSIDERATIONS:

Sections 28, 29 and 33, T41N-R28W, Dickinson County

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. There is insufficient data to determine the glacial drift thickness. The Precambrian Michigamme Formation outcrops beneath the glacial drift. There is not a current economic use for the Michigamme. The Hancock iron mine is located approximately three miles to the east. Part of this compartment was previously leased for metallic exploration and potential may still exist. A gravel pit is located three miles to the north and also two miles to the east. There appears to be limited gravel potential in the compartment. There is no economic oil and gas production in the UP.

Vehicle Access: Access is very limited due to the large blocks of private ownership, and the wet soils.

Survey Needs: Internal 1/16th in Section 28

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

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**

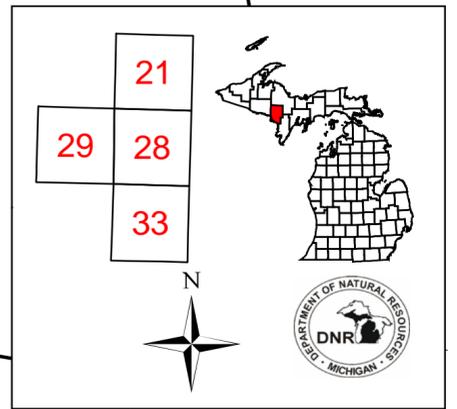
- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand boundaries, cover types, and numbers**
 - ◆ **Proposed treatments**
 - ◆ **Details on the road access system**

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Cover Type & Treatment Map

Compartment 088
 T41N, R28W, Sec. 21, 28, 29, 33
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2013
 Acres: 1,075 GIS Calculated
 Stand Examiner: Andy Church
 Map Revised: 7/28/2011
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- ⊕ Remonumented Section Corners
- ⚡ Powerline
- ✂ Gates
- ▲ Berms
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- ▨ Clearcut (w/Reserves, Patch/Strip)

Forest Stands

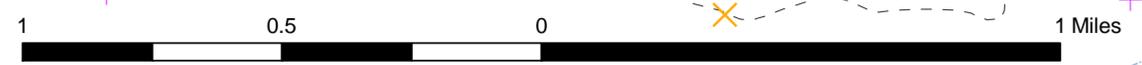
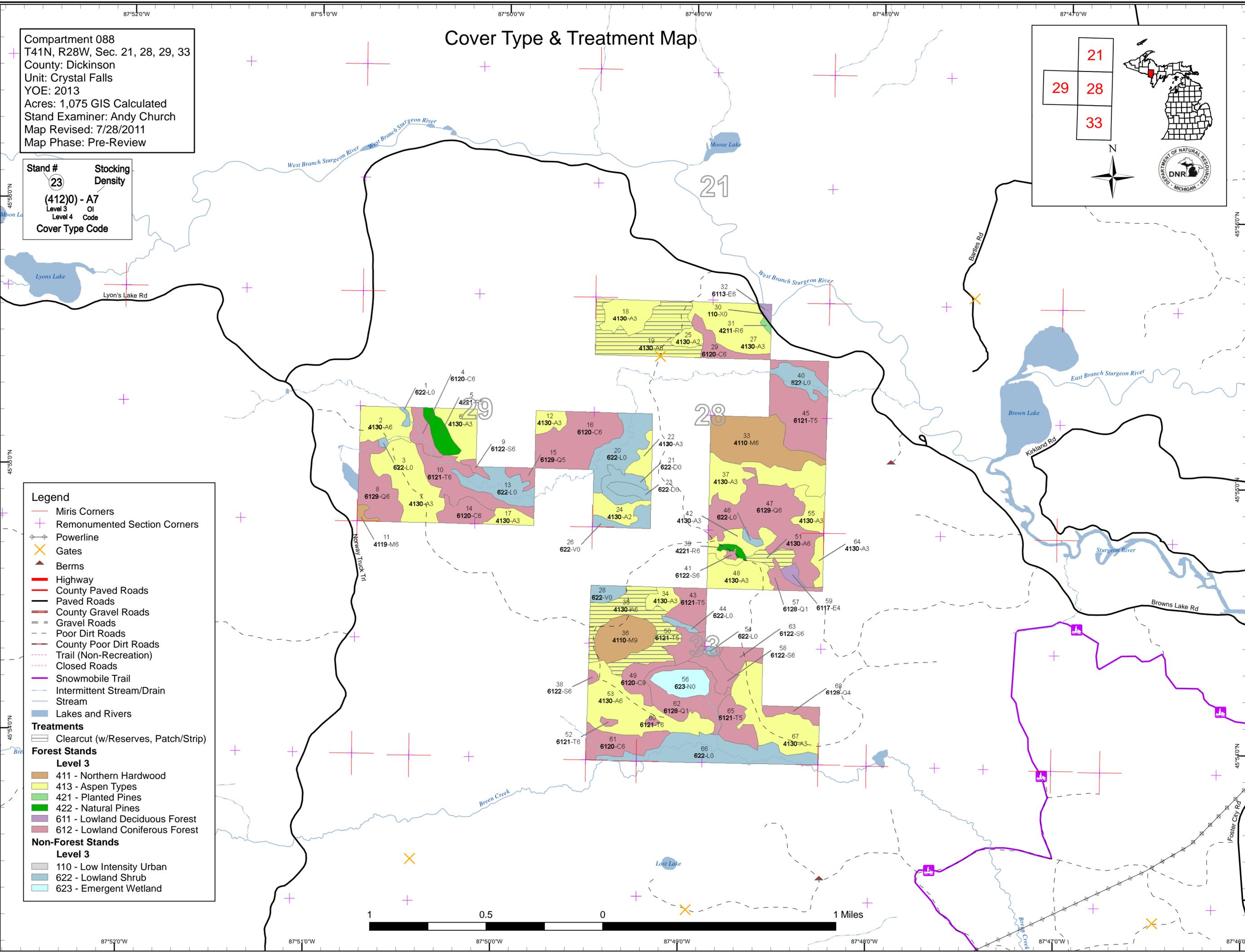
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

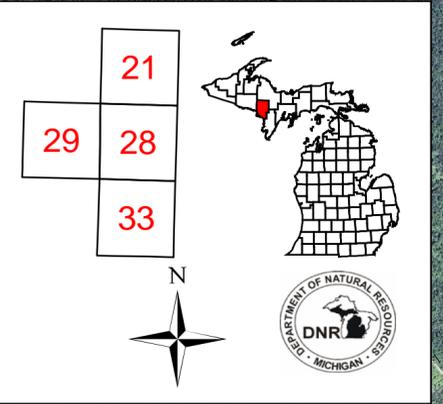
- 110 - Low Intensity Urban
- 622 - Lowland Shrub
- 623 - Emergent Wetland



Stand Boundary Map

Compartment 088
 T41N, R28W, Sec. 21, 28, 29, 33
 County: Dickinson
 Unit: Crystal Falls
 YOY: 2013
 Acres: 1,075 GIS Calculated
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- Legend**
- Miris Corners
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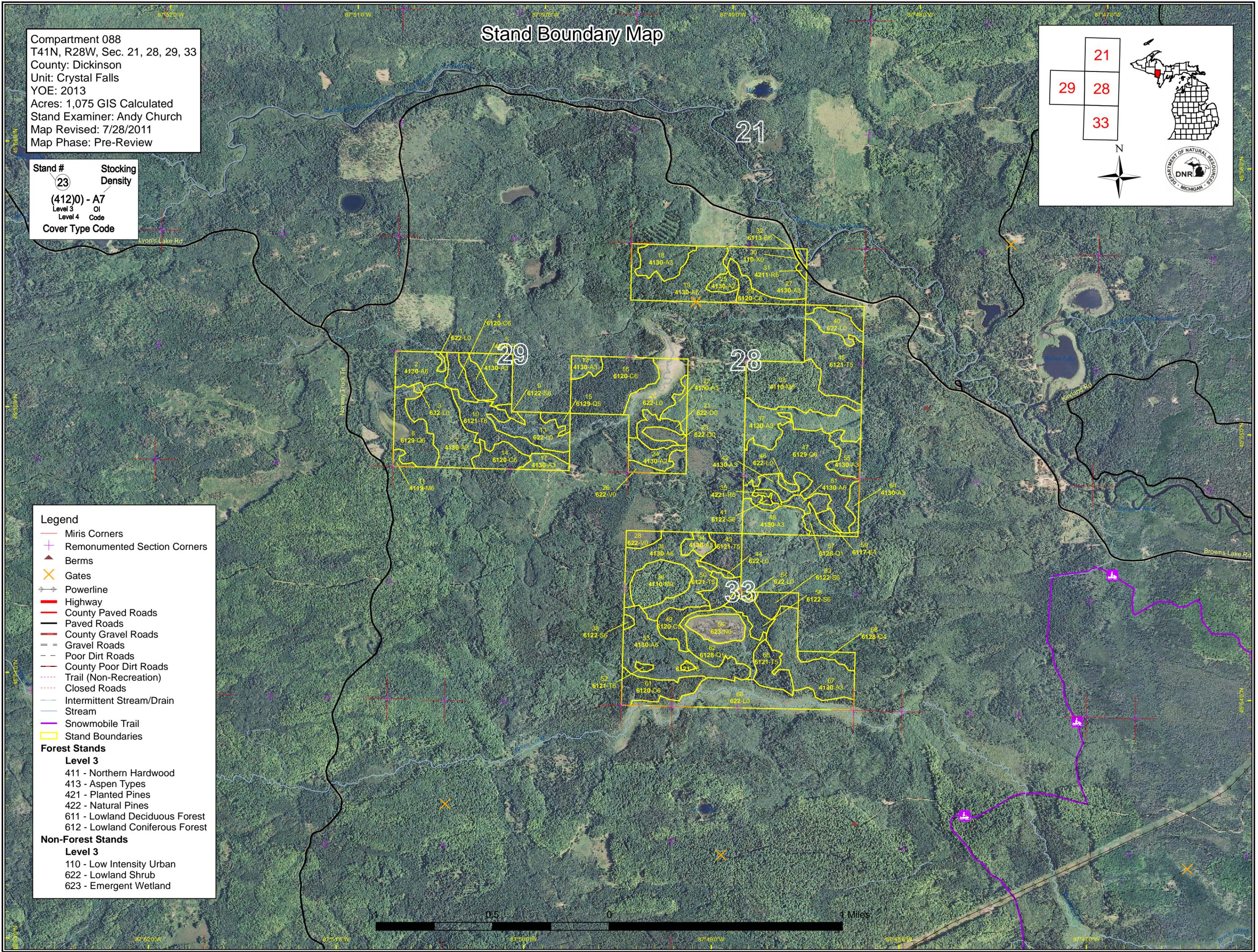


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Unretn Age
Aspen	0	72	109	62	91	19	44	0	47	0	0	0	0	0	0	444
Bog	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Cedar	0	0	0	0	0	0	0	0	0	115	0	0	0	0	0	115
Lowland Conifers	0	0	0	32	0	0	0	0	0	102	0	0	0	0	0	135
Lowland Deciduous	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
Lowland Shrub	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	24	1	0	0	0	0	0	25
Marsh	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Northern Hardwood	0	0	0	0	0	0	0	0	2	72	0	0	0	0	0	75
Red Pine	0	0	0	0	2	1	10	0	0	0	0	0	0	0	0	13
Tamarack	0	0	0	0	0	0	0	15	0	91	0	0	0	0	0	106
Treed Bog	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Urban	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	158	72	109	95	93	20	53	15	78	381	0	0	0	0	0	1075



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2013

Compartment 088
Total Compartment Acres: 1075

Acres by Treatment Type

Commercial Harvest - 90	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
Aspen		90	0	0	0	0	0	90
	Total	90	0	0	0	0	0	90

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19 12088019-Cut	43.7	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Final Harvest with Reserves. Use 2" spec to promote sprouting and a fully stocked Aspen stand in future. Wetter in West. Avoid wet areas where rutting is likely. Leave all: Cedar, Hemlock, and Oak if found. RETENTION: Wet areas, Cedar, Hemlock, and Oak if found.
Specs: ACCEPTABLE ALTERNATIVE REGEN: Maple/Fir.

Other
Comments:

Next
Steps:

35 12088035-Cut	39.4	4130 - Aspen	High Density Pole	77	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription Clearcut with reserves of Cedar, Hemlock, and Pine if present. Reserve conifer 6" and less at stump.
Specs:

Other Setup for harvest FY 2011 as part of "additional acres."
Comments:

Next
Steps:

51 12088051-Cut	7.2	4130 - Aspen	High Density Pole	77	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription Clearcut with reserves of Cedar, Hemlock, and Pine if present. Reserve conifer 6" and less at stump.
Specs:

Other Setup for harvest FY 2011 as part of "additional acres."
Comments:

Next
Steps:

**Total Treatment
 Acreage Proposed: 90.3**

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 0

**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_OutOfYOE-Cut	6.0				Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription: Clearcut 2" dbh and above except cedar, hemlock and pine if present.

Specs:

Other

Comments:

Next

Steps:

**Total Treatment
Acreage Proposed: 6.0**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4130 - Aspen	High Density Pole	19.4	40		
4	6120 - Lowland Cedar	High Density Pole	9.3	82		
5	42210 - Natural Red Pine	Medium Density Pole	9.6	52	51-80	Good pine regen. All aged stand was cut in 1994 to remove other than pine.
6	4130 - Aspen	High Density Sapling	17.4	16		
7	4130 - Aspen	High Density Sapling	40.3	27		
8	6129 - Mixed Coniferous Lowland Forest	High Density Pole	26.3	80		
9	6122 - Black Spruce	High Density Pole	2.5	75		
10	6121 - Tamarack	High Density Pole	26.0	80		Very clumpy with tamarack patches of regen and of poles. Pretty dry lowland with creek.
11	4119 - Mixed Northern Hardwoods	High Density Pole	2.3	75		A small stand of big red pine on south end of the stand
12	4130 - Aspen	High Density Sapling	7.1	16		Fair quality aspen on droughty ground. Stocking variable.
14	6120 - Lowland Cedar	High Density Pole	13.3	82		
15	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	4.4	82		
16	6120 - Lowland Cedar	High Density Pole	42.2	82		
17	4130 - Aspen	High Density Sapling	7.0	7		
18	4130 - Aspen	High Density Sapling	17.7	16		
19	4130 - Aspen	High Density Pole	43.7	50		
22	4130 - Aspen	High Density Sapling	7.8	5		
24	4130 - Aspen	Medium Density	11.7	16		



Stand	Crystal Falls Mgt. Unit			5 – Forested Stands		Compartment: 088 Year of Entry: 2013	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
25	4130 - Aspen	Medium Density	5.4	27			
27	4130 - Aspen	High Density Sapling	35.4	16			Dense stocking with good site.
29	6120 - Lowland Cedar	High Density Pole	17.7	82			
31	42110 - Planted Red Pine	High Density Pole	1.1	40	81-110		It appears that the neighbor planted the pine over the line onto state land.
32	6113 - Lowland Maple	High Density Pole	1.6	70			River flood plain.
33	4110 - Sugar Maple Association	High Density Pole	47.0	80	81-110		This stand was thinned on the last yoe.
34	4130 - Aspen	High Density Sapling	7.0	16			
35	4130 - Aspen	High Density Pole	39.4	77			
36	4110 - Sugar Maple Association	High Density Log	25.2	80	81-110		Thinned last yoe
37	4130 - Aspen	High Density Sapling	36.4	6			
38	6122 - Black Spruce	High Density Pole	1.4	82			
39	42210 - Natural Red Pine	High Density Pole	2.4	38	111-140		
41	6122 - Black Spruce	High Density Pole	1.1	70			
42	4130 - Aspen	High Density Sapling	13.0	16			
43	6121 - Tamarack	Medium Density Pole	14.6	82			Some mortality.
45	6121 - Tamarack	Medium Density Pole	38.0	82			Wet and flat ground with tamarack of all sizes in patches. More black spruce on south side.
47	6129 - Mixed Coniferous Lowland Forest	High Density Pole	64.4	82			
48	4130 - Aspen	High Density Sapling	20.8	5			



S t a n d	Crystal Falls Mgt. Unit		5 – Forested Stands		Compartment: 088 Year of Entry: 2013	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
49	6120 - Lowland Cedar	High Density Log	11.5	82		
50	6121 - Tamarack	Medium Density Pole	9.6	82		
51	4130 - Aspen	High Density Pole	7.2	77		Many potholes. Portion of aspen is in wetland.
52	6121 - Tamarack	High Density Pole	1.3	80		
53	4130 - Aspen	High Density Pole	48.5	35		
55	4130 - Aspen	High Density Sapling	11.9	27		
57	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Sapling	6.4	25		
58	6122 - Black Spruce	High Density Pole	11.1	78		
59	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	3.4	78		
60	6121 - Tamarack	High Density Pole	1.1	80		
61	6120 - Lowland Cedar	High Density Pole	20.5	82		
62	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Sapling	26.0	27		
63	6122 - Black Spruce	High Density Pole	9.4	78		
64	4130 - Aspen	High Density Sapling	4.9	27		
65	6121 - Tamarack	Medium Density Pole	15.0	60		
67	4130 - Aspen	High Density Sapling	42.0	35		
68	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	7.1	82		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6229 - Mixed lowland shrub	1.2	No	Unspecified	
3	6229 - Mixed lowland shrub	1.0	No	Unspecified	
13	6229 - Mixed lowland shrub	20.4	No	Unspecified	
20	6229 - Mixed lowland shrub	27.2	No	Unspecified	
21	6224 - Treed Bog	9.9	No	Unspecified	
23	6224 - Treed Bog	5.7	No	Unspecified	
26	6225 - Bog	7.6	No	Unspecified	
28	6225 - Bog	6.2	No	Unspecified	
30	11 - Low Intensity Urban	0.6	No	Unspecified	
40	6229 - Mixed lowland shrub	12.4	No	Unspecified	
44	6220 - Alder/willow	2.3	No	Unspecified	
46	6229 - Mixed lowland shrub	2.0	No	Unspecified	
54	6229 - Mixed lowland shrub	1.1	No	Unspecified	
56	6239 - Mixed Emergent Wetland	15.7	No	Unspecified	
66	6220 - Alder/willow	44.8	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
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