



**Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #92 Entry Year: 2014
Compartment Acreage: 1861 GIS County: Dickinson**

Revision Date: May 8, 2012

Stand Examiner: Linda Lindberg

Legal Description: T40N,R28W Sections 6, 7 and 18

RMU (if applicable): Text

Management Goals: There is quite a bit of hardwood in this compartment that has been managed long enough to produce nice logs especially ash. To continue growing great hardwood, keeping a good amount of age class diversity in the aspen and to harvest other stands as the silvicultural application comes up. There are some steeper areas in this compartment but most have been harvested. The wetlands have been harvested to some degree also and some were left but moved through to access other stands. Also, Blomgren marsh is on the east central part of the compartment with the south branch of Breen creek running out of it.

Soil and Topography: The soil in this compartment is a lot of Pemene-Rock outcrop but there is not quite as much rock here as in some places. There are a few stands with small rock areas that just have to be left out for lack of good access but much of the compartment has been logged. To the south central area, the ATV trails are rather primitive and this seems to be the way to log the area. Much of the trail is rock.

Ownership Patterns, Development, and Land Use in and Around the Compartment: To the north, there is some private ownership on the west side and the east side has a good piece of industry land that we must travel through to access our land.

Unique, Natural Features: Blomgren marsh is wildlife controlled and managed.

Archeological, Historical, and Cultural Features: Text

Special Management Designations or Considerations: Text

Watershed and Fisheries Considerations: Text

Wildlife Habitat Considerations: This compartment runs along the west side of Blomgren's Marsh. The Marsh is a Wildlife Management Area that is managed by Wildlife Division. A dike is designed to hold back a shallow water impoundment for waterfowl management. In addition to waterfowl, eagles, ospreys, loons, shorebirds, herons and furbearers have inhabited the shore lines of Blomgren's Marsh. Shoreline buffers, super canopy pine and shoreline habitat providing snags, perches, and cavities are important for productive management of wildlife in this area. This area is also adjacent to the Rock Lake Deeryard Project Area. Management emphasis in this area is for enhancement of upland and lowland conifer types and stand components.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial 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 outcrop beneath the glacial drift. There is not a current economic use for these rocks, although the granite/gneiss might have dimension stone potential. The Hancock iron mine is located approximately two 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 two miles to the east and there may be some potential. There is no economic oil and gas production in the UP.

Vehicle Access: As mentioned except to the north, vehicle access through the compartment will be a 4 wheel type vehicle.

Survey Needs: I am not in need of any surveying for this year of entry.

Recreational Facilities and Opportunities: Text

Fire Protection: Text

Additional Compartment Information: Text

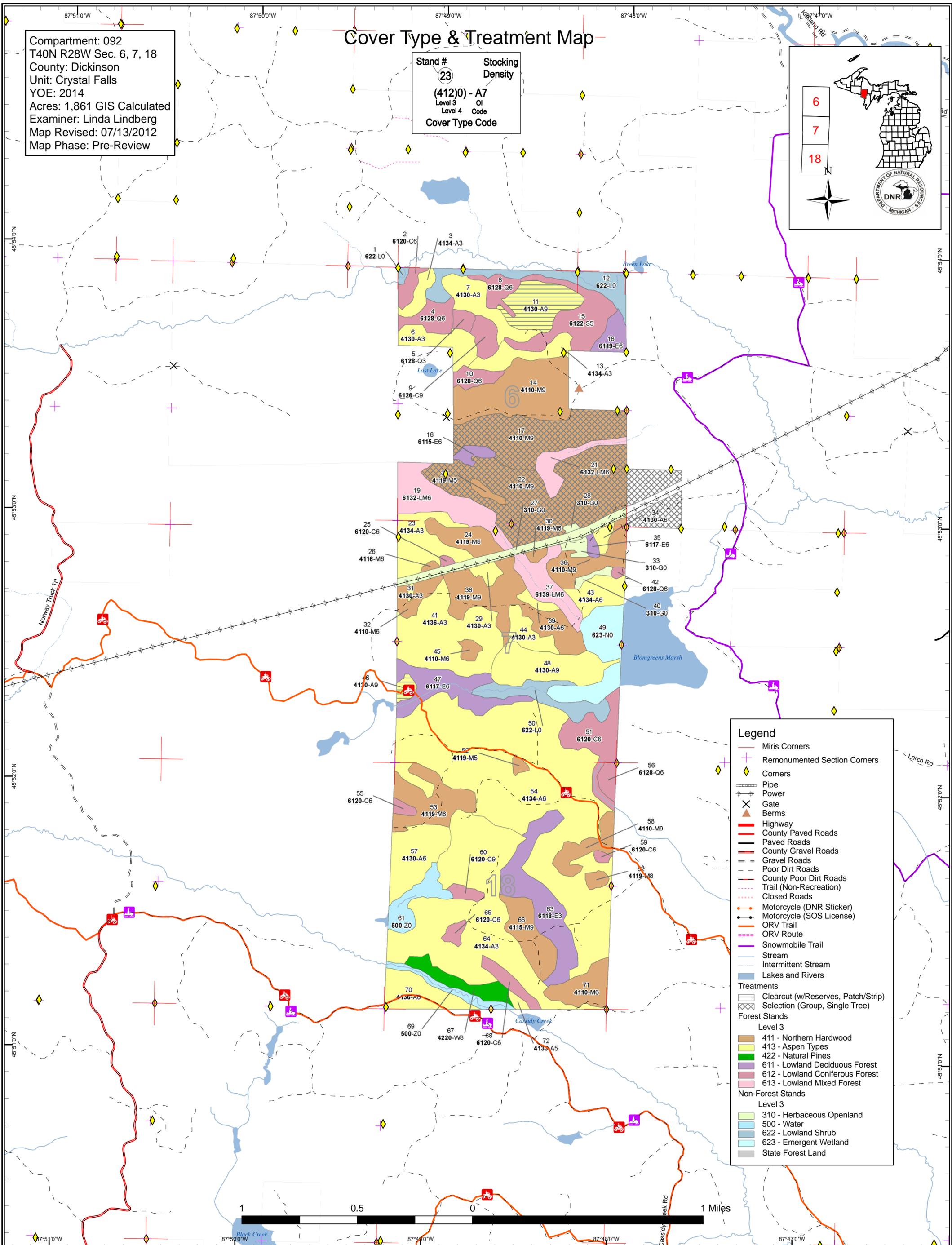
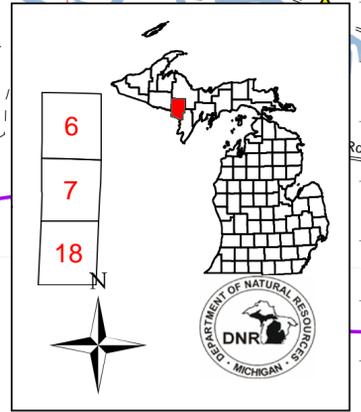
- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**

- **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: 092
 T40N R28W Sec. 6, 7, 18
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2014
 Acres: 1,861 GIS Calculated
 Examiner: Linda Lindberg
 Map Revised: 07/13/2012
 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
- Pipe
- Power
- Gate
- Berms
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

Forest Stands

Level 3

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

Non-Forest Stands

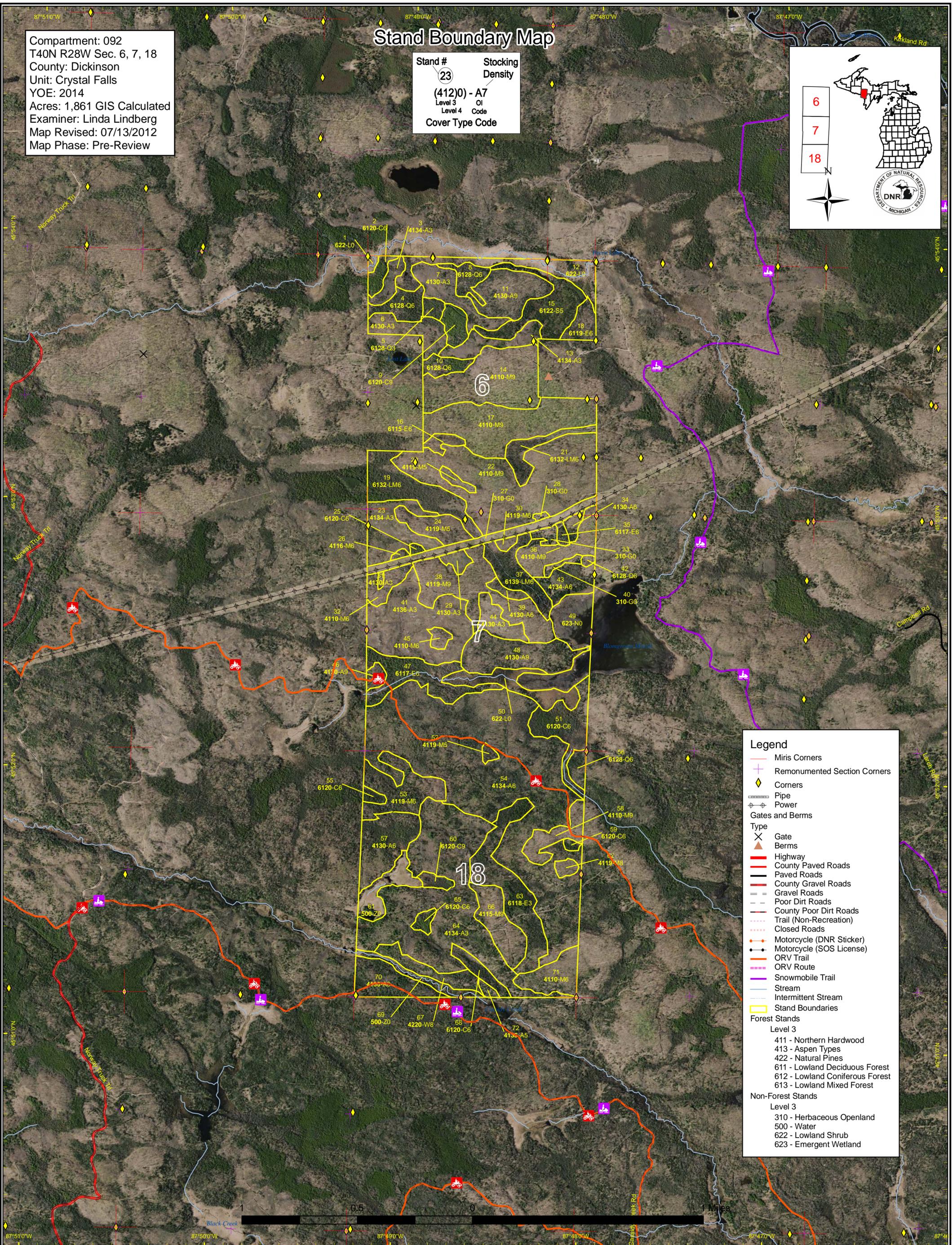
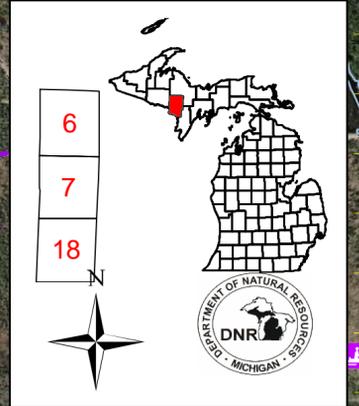
Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- State Forest Land

Stand Boundary Map

Compartment: 092
 T40N R28W Sec. 6, 7, 18
 County: Dickinson
 Unit: Crystal Falls
 YOY: 2014
 Acres: 1,861 GIS Calculated
 Examiner: Linda Lindberg
 Map Revised: 07/13/2012
 Map Phase: Pre-Review

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



Legend

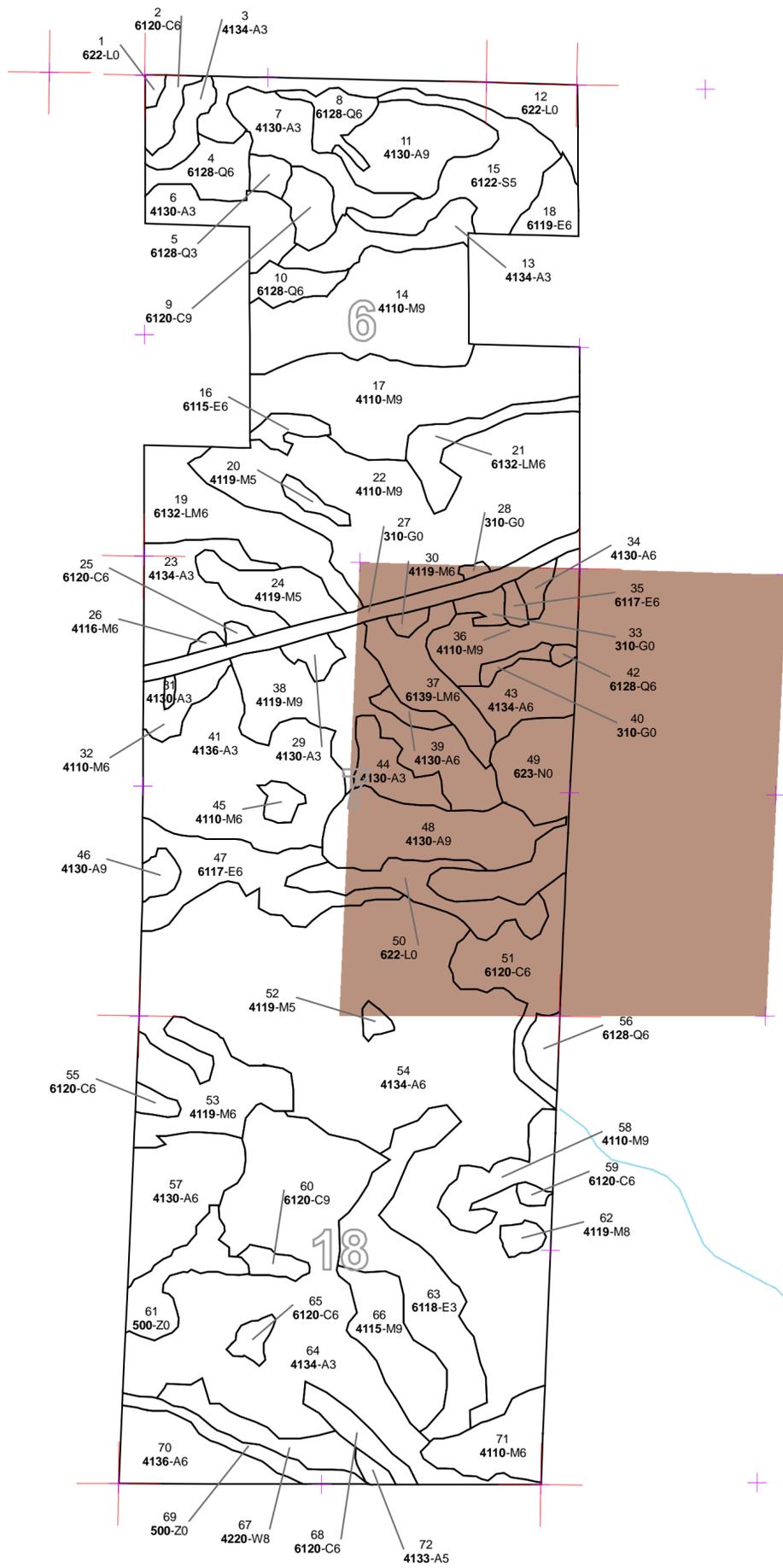
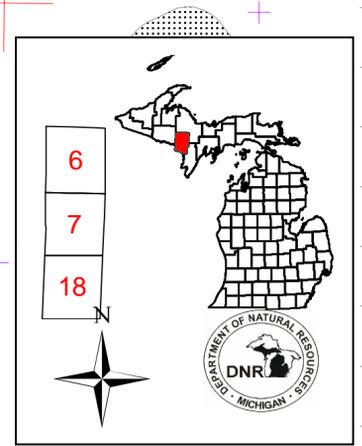
- Miris Corners
- Remonumented Section Corners
- ◆ Corners
- Pipe
- Power
- Gates and Berms
- Type
- Gate
- Berms
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
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- ORV Trail
- ORV Route
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries
- Forest Stands
- Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
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- 611 - Lowland Deciduous Forest
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- 613 - Lowland Mixed Forest
- Non-Forest Stands
- Level 3
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Dedicated & Proposed Special Conservation Area Map

Compartment: 092
 T40N R28W Sec. 6, 7, 18
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2014
 Acres: 1,861 GIS Calculated
 Examiner: Linda Lindberg
 Map Revised: 07/13/2012
 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
 - Stand Boundaries
 - Proposed Special Conservation Areas
 - ▨ SCA - Special Conservation Area
 - ▩ SCA Removal
 - Dedicated Special Conservation Areas
 - Cold Water Streams
 - Wildlife Management Areas
 - Forest Stands
 - Level 3
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 422 - Natural Pines
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
 - Non-Forest Stands
 - Level 3
 - 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub
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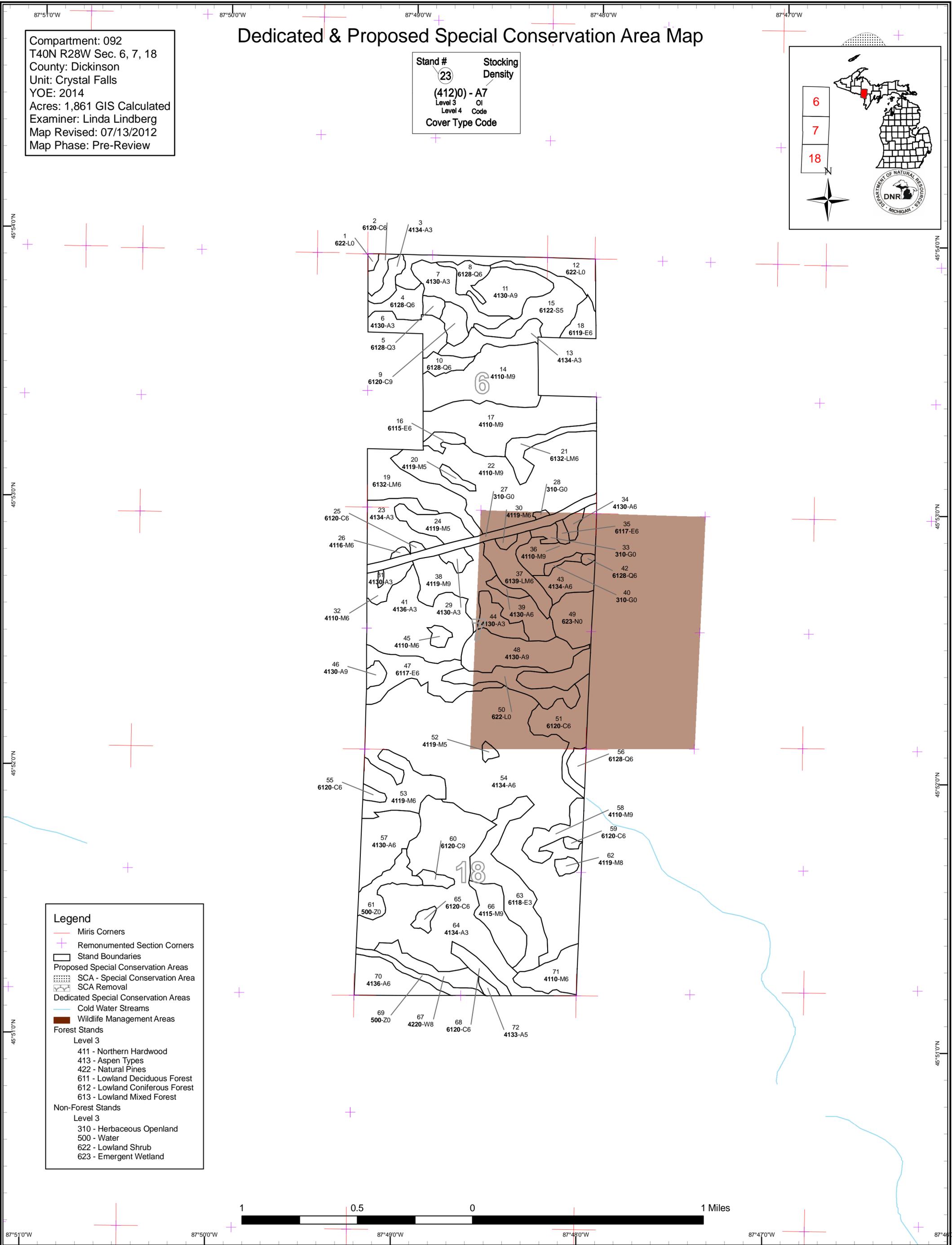


Table 1 – Total Acres by Cover Type and Age Class



	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	14	185	188	362	0	33	0	0	49	0	0	0	0	0	831
Cedar	0	0	0	0	0	0	0	0	74	0	0	0	0	0	74
Herbaceous Openland	32	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Lowland Conifers	0	0	5	0	0	0	11	0	32	0	0	0	0	0	47
Lowland Deciduous	0	0	52	11	0	0	9	0	37	0	0	0	0	0	108
Lowland Mixed Forest	0	0	0	0	0	0	15	0	65	0	0	0	0	0	81
Lowland Shrub	58	0	0	0	0	0	0	0	0	0	0	0	0	0	58
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	38	0	0	0	0	0	38
Marsh	39	0	0	0	0	0	0	0	0	0	0	0	0	0	39
Northern Hardwood	0	0	0	0	0	0	0	0	505	0	0	0	0	0	505
Water	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30
White Pine	0	0	0	0	0	0	0	0	0	17	0	0	0	0	17
Total	174	185	245	373	0	33	35	0	800	17	0	0	0	0	1861



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2014

Compartment 092
Total Compartment Acres: 1861

Acres by Treatment Type

Commercial Harvest - 283	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		80	0	0	0	0	0	80
Northern Hardwood		0	204	0	0	0	0	204
Total		80	204	0	0	0	0	283



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
11	12092011-Cut	32.6	4130 - Aspen	High Density Log	55	51-80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Prescription</u> Cut all trees 2 inches and over except oak, cherry, elm, red and white pine, hemlock and cedar.										
<u>Specs:</u>										
<u>Other</u> This stand is already on proposal as extra aspen acres and has been sold.										
<u>Comments:</u>										
<u>Next</u> Check regeneration timeclock										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 01/02/2012										
17	12092017-Cut	73.1	4110 - Sugar Maple Association	High Density Log	85	81-110	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> This stand can be thinned with a focus on the White Ash logs which are very merchantable and as a result of the Ash borer, can be utilized										
<u>Specs:</u> before an emergency harvest is needed										
<u>Other</u> Retain hemlock, pine and cedar										
<u>Comments:</u>										
<u>Next</u> Regeneration timeclock.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
22	12092022-Cut	130.7	4110 - Sugar Maple Association	High Density Log	85	81-110	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Thin from above choosing best tree in place but thinning around crop trees according to the complete marker. Also, discriminate against good ash										
<u>Specs:</u> logs which would be targeted by the Emerald Ash Borer. Make 30 foot canopy gaps..										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Regen check per work instructions										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
Total Treatment Acreage Proposed: 236.5										

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
46 12092046-Cut	4.7	4130 - Aspen	High Density Log	85	51-80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription Cut all trees 2 inches or greater except oak, red and white pine, elm, cherry, hemlock and cedar.

Specs:

Other This stand is already on proposal and sold per extra aspen acres.

Comment:

Next Regen timeclock

Steps:

Proposed

Start Date: 01/02/2012

Limiting Factor and No 3J: Water quality / BMPs (stream,
Treatment Reason river, or lake)

**Total Treatment
Acreage Proposed: 4.7**

**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

Total Treatment Acreage Proposed: 31.4



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6120 - Lowland Cedar	High Density Pole	6.8	88		
3	4134 - Aspen, Spruce/Fir	High Density Sapling	8.7	18		
4	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	14.3	88	81-110	
5	6128 - Lowland Coniferous, Mixed Deciduous	High Density Sapling	4.7	25		
6	4130 - Aspen	High Density Sapling	20.8	18		
7	4130 - Aspen	High Density Sapling	25.0	18		
8	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	11.1	62	81-110	
9	6120 - Lowland Cedar	High Density Log	10.3	88	81-110	
10	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	9.1	88	81-110	
11	4130 - Aspen	High Density Log	32.6	55	51-80	
13	4134 - Aspen, Spruce/Fir	High Density Sapling	17.9	18		
14	4110 - Sugar Maple Association	High Density Log	65.7	85	51-80	
15	6122 - Black Spruce	Medium Density Pole	37.8	85	51-80	
16	6115 - Lowland Ash	High Density Pole	5.9	62		
17	4110 - Sugar Maple Association	High Density Log	73.1	85	81-110	
18	6119 - Mixed Lowland Deciduous Forest	High Density Pole	10.9	37	51-80	
19	6132 - Mixed Lowland Forest with Cedar	High Density Pole	40.9	88	81-110	
20	4119 - Mixed Northern Hardwoods	Medium Density Pole	4.0	85		



S t a n d	Crystal Falls Mgt. Unit		5 – Forested Stands			Compartment: 092 Year of Entry: 2014
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	6132 - Mixed Lowland Forest with Cedar	High Density Pole	15.4	62		
22	4110 - Sugar Maple Association	High Density Log	130.7	85	81-110	
23	4134 - Aspen, Spruce/Fir	High Density Sapling	33.6	18		
24	4119 - Mixed Northern Hardwoods	Medium Density Pole	18.1	85	81-110	
25	6120 - Lowland Cedar	High Density Pole	1.5	88	51-80	
26	4116 - Mixed N. Hardwood - Aspen	High Density Pole	1.5	85	51-80	
29	4130 - Aspen	High Density Sapling	5.3	18		
30	4119 - Mixed Northern Hardwoods	High Density Pole	2.5	85		
31	4130 - Aspen	High Density Sapling	1.0	18		
32	4110 - Sugar Maple Association	High Density Pole	11.1	85	51-80	
34	4130 - Aspen	High Density Pole	4.3	37		
35	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	2.7	62	51-80	
36	4110 - Sugar Maple Association	High Density Log	25.9	85	51-80	
37	6139 - Mixed Lowland Forest	High Density Pole	24.5	88	51-80	
38	4119 - Mixed Northern Hardwoods	High Density Log	57.9	85	81-110	
39	4130 - Aspen	High Density Pole	4.4	37	51-80	
41	4136 - Aspen, Mixed Conifer	High Density Sapling	72.5	10		
42	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	1.5	88		

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	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	4134 - Aspen, Spruce/Fir	High Density Pole	18.6	37	51-80	
44	4130 - Aspen	High Density Sapling	14.3	8		
45	4110 - Sugar Maple Association	High Density Pole	4.2	85	81-110	
46	4130 - Aspen	High Density Log	4.7	85	51-80	
47	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	36.6	88	81-110	
48	4130 - Aspen	High Density Log	42.2	85	51-80	
51	6120 - Lowland Cedar	High Density Pole	31.6	88		
52	4119 - Mixed Northern Hardwoods	Medium Density Pole	2.5	85	51-80	
53	4119 - Mixed Northern Hardwoods	High Density Pole	36.3	85	51-80	
54	4134 - Aspen, Spruce/Fir	High Density Pole	298.5	39		
55	6120 - Lowland Cedar	High Density Pole	3.3	88	51-80	
56	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	6.6	88	51-80	
57	4130 - Aspen	High Density Pole	36.2	37		
58	4110 - Sugar Maple Association	High Density Log	18.0	85	81-110	
59	6120 - Lowland Cedar	High Density Pole	1.9	88	81-110	
60	6120 - Lowland Cedar	High Density Log	5.0	88	51-80	
62	4119 - Mixed Northern Hardwoods	Medium Density Log	4.0	85	51-80	
63	6118 - Lowland Deciduous with Cedar	High Density Sapling	52.3	24		

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Crystal Falls Mgt. Unit

5 – Forested Stands

Compartment: 092
Year of Entry: 2014



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
64	4134 - Aspen, Spruce/Fir	High Density Sapling	160.6	27		
65	6120 - Lowland Cedar	High Density Pole	4.3	88	51-80	
66	4115 - Y.Birch, Hemlock NH	High Density Log	27.3	85	51-80	
67	42200 - Natural White Pine	Medium Density Log	16.8	92	51-80	
68	6120 - Lowland Cedar	High Density Pole	9.7	88	51-80	
70	4136 - Aspen, Mixed Conifer	High Density Pole	26.9	27		
71	4110 - Sugar Maple Association	High Density Pole	21.9	85	51-80	
72	4133 - Aspen, Mixed Pine	Medium Density Pole	2.5	85	51-80	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6220 - Alder/willow	1.7	No	Unspecified	
12	6220 - Alder/willow	32.3	No	Unspecified	
27	3102 - Grass	23.8	No	Unspecified	power line
28	3102 - Grass	1.1	No	Unspecified	
33	3102 - Grass	4.4	No	Unspecified	
40	3102 - Grass	3.1	No	Unspecified	this has conifers and A3 here and there with alder but seems to be an opening
49	6239 - Mixed Emergent Wetland	39.5	No	Unspecified	This will probably have water in it now because it was fixed but it was fairly dry when I was in there and there is a beaver dam on the west side.
50	6220 - Alder/willow	24.3	No	Unspecified	There is a stream running through this stand from Blomgren Marsh.
61	50 - Water	18.8	No	Unspecified	
69	50 - Water	11.1	No	Unspecified	Cassidy Creek



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
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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.