



**Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment #5 Entry Year: 2012
Compartment Acreage: 1355 County: Dickinson**

Revision Date: 6/3/2010

Stand Examiner: Otto Jacob

Legal Description: Sections 12, 13, 23,24 T44N R30W

Identified Planning Goals ('Management Area' or 'RMU',if applicable): Promote pine succession.

Management Goals: On sites where pine is regenerating, encourage the pine succession. Harvest aspen for age distribution. Encourage oak regeneration. Wet drainages should be protected for water quality and for wildlife habitat. Hardwoods should be thinned for optimum value and growth, while preserving wildlife qualities.

Soil and Topography: The topography is flat to rolling sand. The growing site is mostly high in these soils. The soils seem best suited for a mix of hardwoods, oak, aspen and pine. There are big depressions scattered in the compartment that were likely glacial ice blocks.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Privately owned lands are of impact. This has easy state land access and has a large block of private lands in the center of the compartment. Access in section 23 is controlled by private lands.

Unique, Natural Features: This appears to be the southern end of the Floodwood outwash plains. It has Two mile creek as the Eastern boundary.

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: There are oak stands that are quite pure which should be managed carefully to promote oak regeneration. Harvest areas should be cut with consideration of heavy deer browse. Transitions should be left against the wetlands with mature aspen left as budding trees for grouse. Some of the deep depressions may be wetlands needing protection from harvest operations. Pine should be left for regeneration where it is present.

Watershed and Fisheries Considerations: Protect creek corridors and encourage late stage succession near creeks.

Wildlife Habitat Considerations: Encourage White Pine succession. Retain den trees and dead snags. Leave transition zones where present. Retain some old aspen on stand edges.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of end moraines of coarse-textured glacial till. The glacial drift thickness varies between 10 and 200 feet. The Precambrian Michigamme Formation subcrops below the glacial drift. There is not an economic use for the Michigamme. Iron mines are located approximately fifteen miles to the southwest. A gravel pit is indicated one mile to the north and another one mile to the west. There appears to be good gravel potential in the

compartment. Section 24 was previously leased for metallic exploration and potential may still exist. There is no economic oil and gas production in the UP.

Vehicle Access: Good sand roads.

Survey Needs: Needs more research.

Recreational Facilities and Opportunities: Hunting should be good. There are many age classes of aspen with much conifer content.

Fire Protection: Good access to fires.

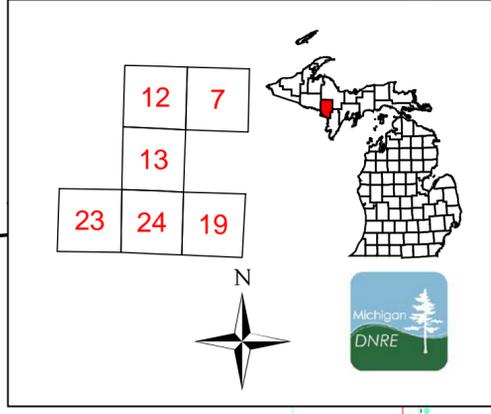
Additional Compartment Information: Manage for diversity. Consider high deer numbers for management.

- **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**

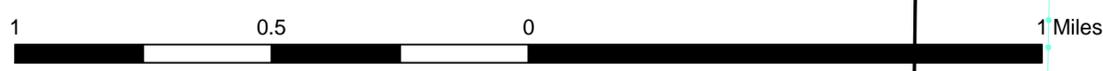
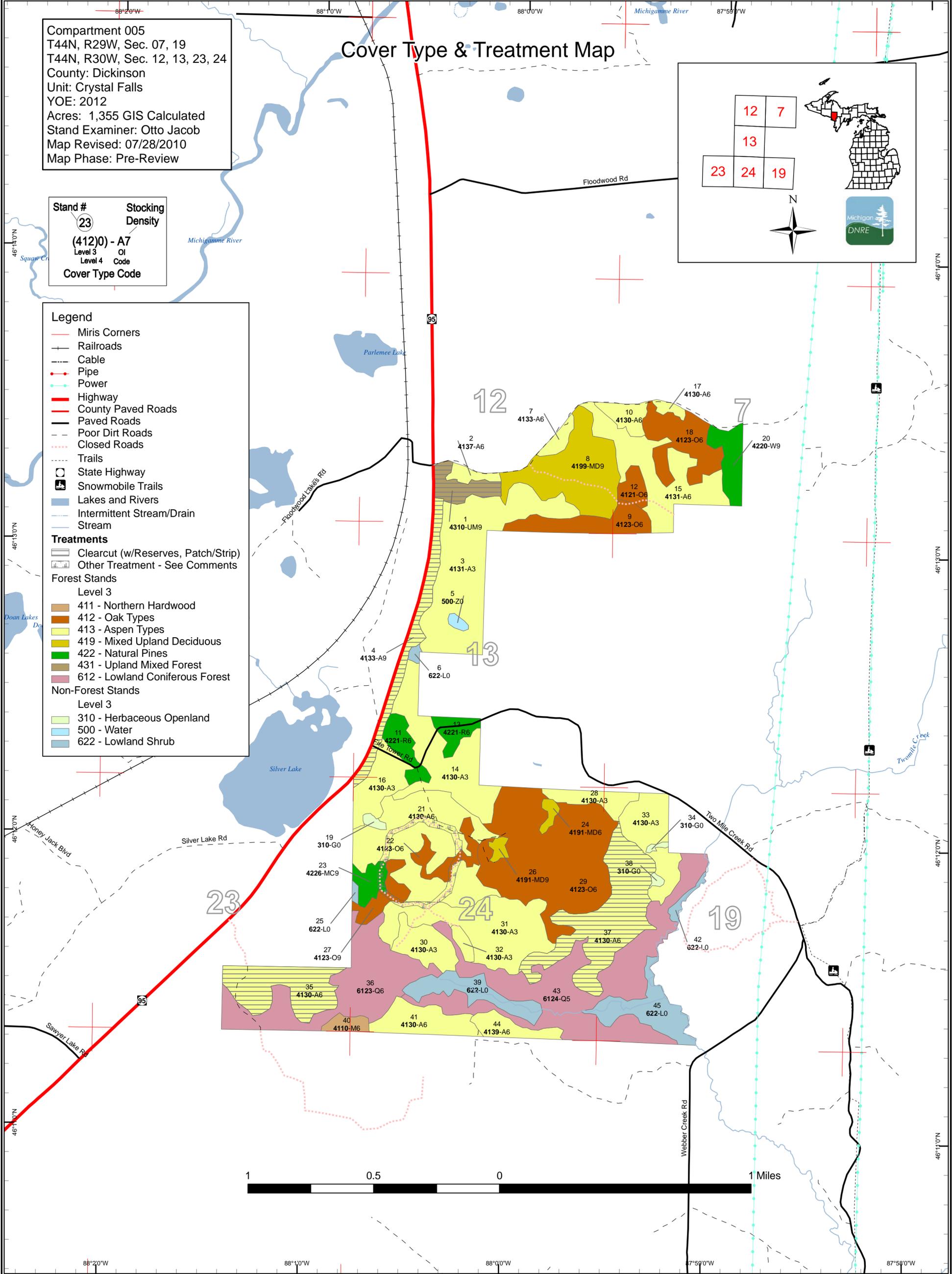
Cover Type & Treatment Map

Compartment 005
 T44N, R29W, Sec. 07, 19
 T44N, R30W, Sec. 12, 13, 23, 24
 County: Dickinson
 Unit: Crystal Falls
 YOE: 2012
 Acres: 1,355 GIS Calculated
 Stand Examiner: Otto Jacob
 Map Revised: 07/28/2010
 Map Phase: Pre-Review



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

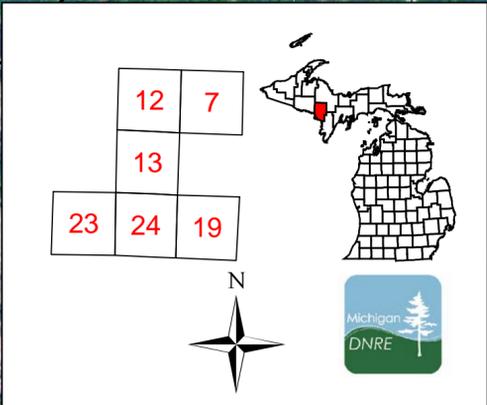
- Legend**
- Miris Corners
 - Railroads
 - Cable
 - Pipe
 - Power
 - Highway
 - County Paved Roads
 - Paved Roads
 - Poor Dirt Roads
 - Closed Roads
 - Trails
 - State Highway
 - Snowmobile Trails
 - Lakes and Rivers
 - Intermittent Stream/Drain
 - Stream
- Treatments**
- Clearcut (w/Reserves, Patch/Strip)
 - Other Treatment - See Comments
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub



88°20'W 88°10'W 88°00'W 87°50'W
 46°10'N 46°11'0"N 46°12'0"N 46°13'0"N

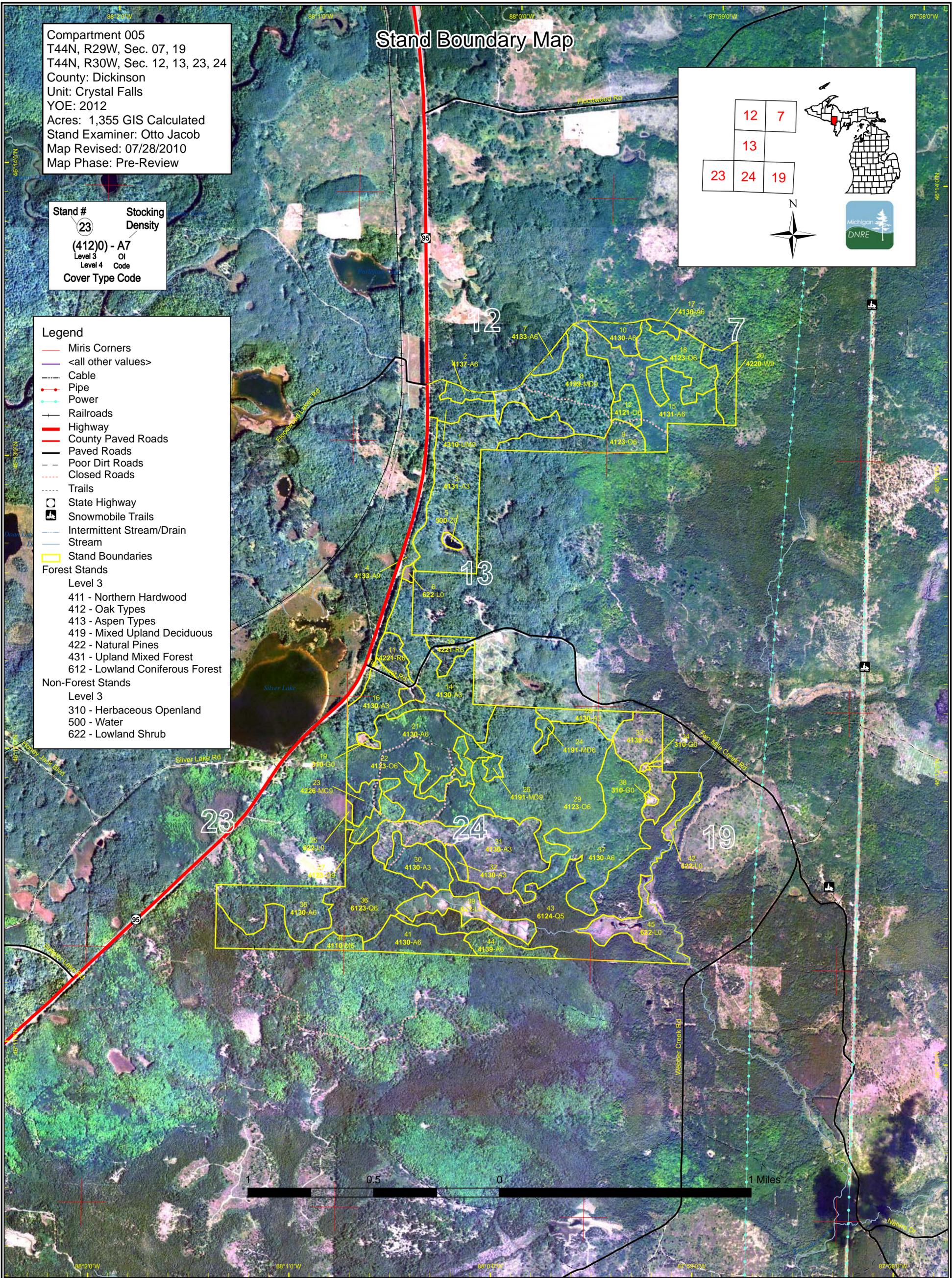
Stand Boundary Map

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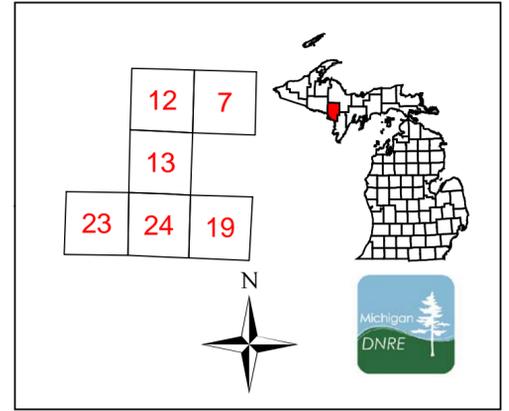
Stand #
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Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

- Legend**
- Miris Corners
 - <all other values>
 - Cable
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Dedicated & Proposed Special Conservation Area Map



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

- Legend**
- Miris Corners
 - Stand Boundaries
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 - Proposed Special Conservation Areas**
 - ▨ SCA - Special Conservation Area
 - ▨ SCA Removal
 - Dedicated Special Conservation Areas**
 - Deer Wintering Areas
 - Cold Water Streams
 - Boat Access Sites

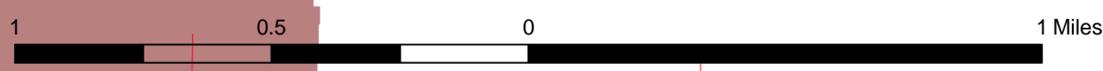


Table 1 – Total Acres by Cover Type and Age Class



	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 +		Uneven Age
Aspen	0	104	199	26	121	40	0	0	153	0	0	0	0	0	56	699
Herbaceous Openland	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	214
Lowland Shrub	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	68	0	0	3	0	0	0	71
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10
Northern Hardwood	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
Oak	0	0	0	0	0	0	0	0	228	0	0	0	0	0	0	228
Red Pine	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18
Total	69	104	199	26	121	40	0	0	480	25	0	3	0	0	288	1355



Table 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2012

Compartment 005
Total Compartment Acres: 1355

Acres by Treatment Type

Commercial Harvest - 168	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 16	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen	153	0	0	0	0	0	153
Upland Mixed Forest	15	0	0	0	0	0	15
Total	168	0	0	0	0	0	168



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	12005001-Cut	14.9	4310 - Pine, Oak Mix	High Density Log	80	Harvest	Clearcut with Reserves	Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription: Cut aspen, birch and maple. Protect Pine

Specs:

Other

Comments:

Next

Steps:

4	12005004-Cut	29.1	4133 - Aspen, Mixed Pine	High Density Log	70	Harvest	Clearcut with Reserves	Aspen, Mixed Pine	Cmpt. Review Proposal
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Prescription: Cut all trees over 2 inches dbh except pines and oak. Leave clumps of submerchantable conifer regeneration. Stump height no greater than

Specs: stump diameter or six inches, whichever is greater.

Other

Comments: This stand has areas that are wetlands and areas that are mostly pine, so a cut should not appear continuous. The wetlands will be lined out of the cut, if of significant size.

Next

Steps: Check for regeneration.

35	12005035-Cut	44.4	4130 - Aspen	High Density Pole	70	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription: Clearcut to two inches. Reserve pine, oak and some small spruce and fir if present. Leave transitions around wet areas where practical.

Specs:

Other

Comments:

Next

Steps:

37	12005037-Cut	79.5	4130 - Aspen	High Density Pole	70	Harvest	Clearcut with Reserves	Aspen, Oak	Cmpt. Review Proposal
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Prescription: Clearcut to 2 inch diam. Reserve oak in the Southern half of the stand. Reserve pine and submerchantable spruce and fir, if present, in all of the

Specs: stand.

Other

Comments: Stack brush on oak stumps to protect regeneration.

Next

Steps: Check for successful regeneration.

21	12005021- NonFor	16.0	4130 - Aspen	High Density Pole	35	Non-Forest Management	Other - Specify	Cool Season Grass	Cmpt. Review Proposal
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Prescription: Opening Maintenance Disc, Seed and Berm.

Specs:

Other

Comments:

Next

Steps:

**Total Treatment
Acreage Proposed: 183.9**

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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

Stand	Crystal Falls Mgt. Unit		5 – Forested Stands			Compartment: 005	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
1	4310 - Pine, Oak Mix	High Density Log	14.9	80	111-140		Big Red and White pine with Aspen and Birch over mature.
2	4137 - Aspen, Birch	High Density Pole	6.0	45			
3	4131 - Aspen, Oak	High Density Sapling	100.3	14			Lots of residual overstory oak was left with pine of all sizes when cut.
4	4133 - Aspen, Mixed Pine	High Density Log	29.1	70			Highway buffer strip
7	4133 - Aspen, Mixed Pine	High Density Pole	6.3	45			
8	4199 - Other Mixed Upland Deciduous	High Density Log	64.1	70			
9	4123 - Red Oak	High Density Pole	26.3	70			
10	4130 - Aspen	High Density Pole	10.9	45			
11	42210 - Natural Red Pine	High Density Pole	14.2	70			
12	4121 - Oak, Aspen	High Density Pole	8.7	70			
13	42210 - Natural Red Pine	High Density Pole	10.8	70			
14	4130 - Aspen	High Density Sapling	59.8	13			
15	4131 - Aspen, Oak	High Density Pole	56.1	Uneven Age			
16	4130 - Aspen	High Density Sapling	24.8	13			
17	4130 - Aspen	High Density Pole	3.5	45			
18	4123 - Red Oak	High Density Pole	35.4	70			
20	42200 - Natural White Pine	High Density Log	17.8	Uneven Age			Old aspen stumps scattered in stand.
21	4130 - Aspen	High Density Pole	95.1	35			



S t a n d	Crystal Falls Mgt. Unit		5 – Forested Stands			Compartment: 005	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
22	4123 - Red Oak	High Density Pole	13.9	70			
23	42260 - Natural Pine, Mixed Deciduous	High Density Log	10.4	80			
24	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	3.7	70			Hemlock patch on N. end. Widely scattered big pine in rough condition. Regen cut probably not good because deer numbers are high year round.
26	4191 - Mixed Upland Deciduous with Conifer	High Density Log	3.4	100			Primarily a hemlock stand.
27	4123 - Red Oak	High Density Log	12.8	70			
28	4130 - Aspen	High Density Sapling	14.1	14			
29	4123 - Red Oak	High Density Pole	130.6	70	141-170		Some of the purest oak stocking that I have seen in the county. I would not recommend a thin because of the danger of infecting with oak wilt.
30	4130 - Aspen	High Density Sapling	21.2	24			
31	4130 - Aspen	High Density Sapling	69.8	7			
32	4130 - Aspen	High Density Sapling	4.6	24			
33	4130 - Aspen	High Density Sapling	33.8	7			
35	4130 - Aspen	High Density Pole	44.4	70	51-80		
36	6123 - Lowland Fir	High Density Pole	82.4	Uneven Age			Sand ridges and drainages with all sized trees on a variety of wet and dry sites.
37	4130 - Aspen	High Density Pole	79.5	70	111-140		
40	4110 - Sugar Maple Association	High Density Pole	6.5	70			Recent thins and aspen removal is evident.
41	4130 - Aspen	High Density Pole	26.2	39			High site aspen with good stocking. Fir is just below aspen canopy and well stocked.
43	6124 - Lowland Spruce- Fir	Medium Density Pole	131.6	Uneven Age			



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Crystal Falls Mgt. Unit

5 – Forested Stands

Inventory Method: IFMAP

Compartment: 005

Year of Entry: 2012



**Level 4
Cover Type**

**Size
Density**

Acres

**Stand
Age**

**BA
Range**

**General
Comments:**

44	4139 - Aspen, Mixed Deciduous	High Density Pole	13.8	40		High birch mortality. Hardwoods and oak and fairly open crowned. Heavy deer browse.
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Stand	Cover Type	Acres	Gen Cmts:
5	50 - Water	2.2	
6	6221 - Fen	1.7	
19	310 - Herbaceous Openland	2.3	
25	6221 - Fen	1.2	
34	310 - Herbaceous Openland	1.2	
38	310 - Herbaceous Openland	1.4	
39	6220 - Alder/willow	25.2	
42	622 - Lowland Shrub	3.5	
45	622 - Lowland Shrub	29.9	



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.

Inventory Method: IFMAP

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	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
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.