



**SAULT FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 175 ENTRY YEAR: 2011

Compartment Acreage: 1,845 County: Mackinac

Revision Date: August 11, 2009

Stand Examiner: Cory Luoto

Legal Description: T42N R10W Sections 7, 8, 9, 17, & 18 ; Garfield Township

RMU (if applicable):

Management Goals: This compartment contains the Crow Lake Pathway and the Marsh Lake Pathway along with the Big Knob Campground. It is within the Lake Michigan Shoreline Management Area. Plans for this Management Area are currently being written. A large area along the Lake Michigan shoreline is designated as a proposed old growth/natural area. Most of the compartment is closed to off-road vehicle traffic. There is a large component of cedar within the compartment, which provides a deer yarding area. Other timber types include large components of aspen and white pine, some red pine and hemlock stands, and numerous lowland areas, bogs and marshes.

Soil and Topography: This compartment consists of ridge and swale and shoreline type landforms. There is a very large component of marshes and associated Cedar and Spruce/ Fir stands. Croswell AuGres, Eastport sand (Bench Phase), AuTrain sand, Saugatuck, Markey, and Roscommon sand soils are all present in this compartment.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment consists entirely of State of Michigan ownership and surrounding the compartment.

Unique, Natural Features (include only non-site specific and non-sensitive information): There are also two Oak stands in this compartment that are unique to the area.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None.

Special Management Designations or Considerations: Big Knob State Forest Campground is located in this compartment.

Watershed and Fisheries Considerations: This compartment contains stream reaches of McNeil Creek. No file exists and the composition of the fish community is unknown at this time. Implementation of BMP's will aid in preventing sediment input from road crossings and upland areas are critically important to protect spawning areas for stream-resident fishes. Buffering the river is also critical to ensure future inputs of woody material to the stream channel and provide shading.

Wildlife Habitat Considerations: Located approximately three miles south of the intersection of M-117 and US-2, this compartment lies along the shoreline of Lake Michigan southeast of Gould City. Michigan Natural Features Inventory classifies much of the landscape from the shoreline inland as wooded dune-and-

swale complex. Numerous ponds or ponded swales between upland ridges as is characteristic of this complex that provide habitat for frogs and other wildlife. Upland areas are dominated by pine, although aspen is common especially further inland. McNeil Creek flows northeast across the compartment within approximately a half mile of the lakeshore. The entire compartment is in area considered to be part of the critical wintering habitat for white-tailed deer. Closed-canopy conifer cover offers shallower snow depths and some protection from the winter weather. Lowland cedar is also important for birds migrating through the area near the lakeshore. Shoreline areas offer habitat for waterfowl and other species.

Wildlife objectives include protecting the wooded dune-and-swale complex and shoreline for waterfowl and migratory song birds, maintaining the closed-canopy cover for deer wintering habitat, and maintaining diversity within and between stands. A component of mature trees will be left within or on the margin of any final harvest stands to provide budding and roosting or perching trees, and to increase diversity. Cuts will take place such that remaining tops are available as late fall or winter browse. Wetlands and other waterbodies will be buffered to protect these features. The wooded dune and swale complex will be protected to retain this special landscape feature. Species utilizing habitats within this compartment include white-tailed deer, snowshoe hare, moose, bobcat, gray wolf, osprey, hairy woodpecker, and great blue heron.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 0 and 100 feet. The Silurian Engadine Group subgroups below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. Gravel pits are located just to the west and potential is good on the uplands. There is no current economic oil and gas production in the UP.

Vehicle Access: Big Knob Road originates at US Highway 2 and runs south passing through the compartment and ending at Big Knob campground.

Survey Needs: No survey needs at this time.

Recreational Facilities and Opportunities: This compartment has heavy recreational use. Hunting of deer, grouse and other small game, and fishing are the primary recreational uses. The Crow Lake Pathway and the Marsh Lakes Pathway offer areas for hiking. Big Knob campground offers rustic camping on the shores of Lake Michigan and sees heavy use during the camping season.

Fire Protection: There is limited access in this compartment. The predominantly lower ground in this compartment reduces the potential for any large-scale fires; however the potential for fires in the pine along isolated ridge tops does exist.

Additional Compartment Information:

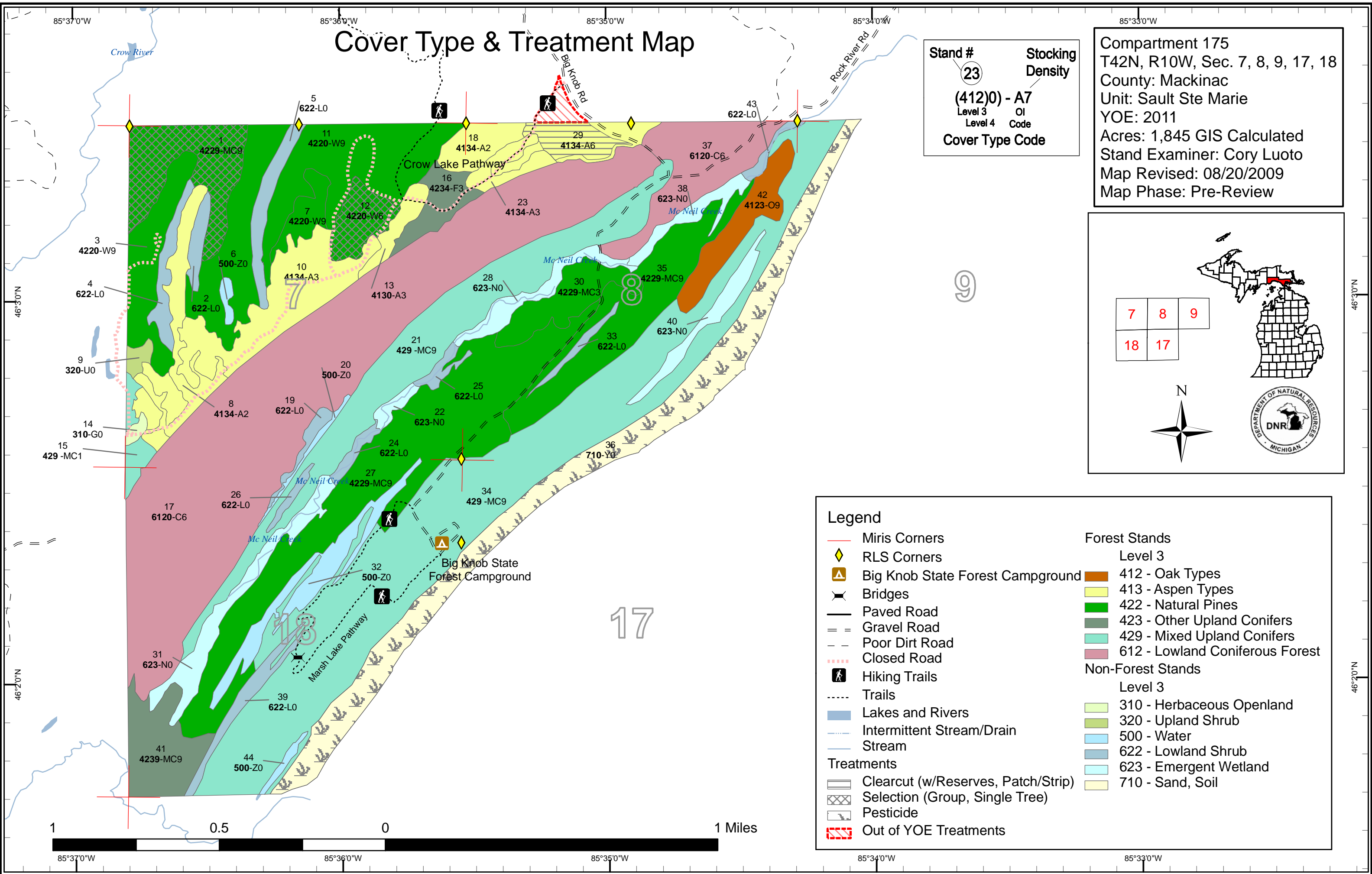
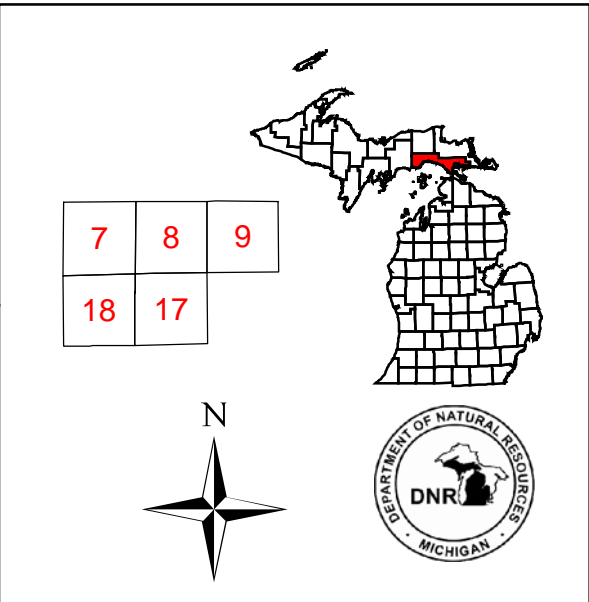
- **Cover Type details, Proposed Treatments, and Stand listings are listed in the attached reports:**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**
 - ◆ **Stand Listing – Forested**
 - ◆ **Stand Listing – Non Forested**
 - ◆ **Special Conservation Area (SCA) Details**

- **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**
 - ◆ **SCA – Special Conservation Areas**

Cover Type & Treatment Map

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

Compartment 175
 T42N, R10W, Sec. 7, 8, 9, 17, 18
 County: Mackinac
 Unit: Sault Ste Marie
 YOE: 2011
 Acres: 1,845 GIS Calculated
 Stand Examiner: Cory Luoto
 Map Revised: 08/20/2009
 Map Phase: Pre-Review



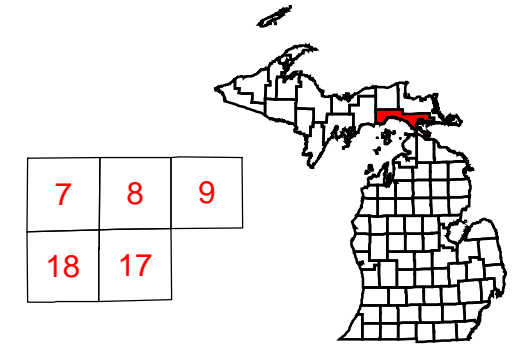
Legend

- Miris Corners
 - ◆ RLS Corners
 - ▲ Big Knob State Forest Campground
 - ✕ Bridges
 - Paved Road
 - Gravel Road
 - Poor Dirt Road
 - Closed Road
 - 🚶 Hiking Trails
 - Trails
 - Lakes and Rivers
 - Intermittent Stream/Drain
 - Stream
 - Clearcut (w/Reserves, Patch/Strip)
 - Selection (Group, Single Tree)
 - Pesticide
 - Out of YOE Treatments
-
- | | |
|--------------------------|---------------------------------|
| Forest Stands | |
| Level 3 | |
| | 412 - Oak Types |
| | 413 - Aspen Types |
| | 422 - Natural Pines |
| | 423 - Other Upland Conifers |
| | 429 - Mixed Upland Conifers |
| | 612 - Lowland Coniferous Forest |
| Non-Forest Stands | |
| Level 3 | |
| | 310 - Herbaceous Openland |
| | 320 - Upland Shrub |
| | 500 - Water |
| | 622 - Lowland Shrub |
| | 623 - Emergent Wetland |
| | 710 - Sand, Soil |

Stand Boundary Map

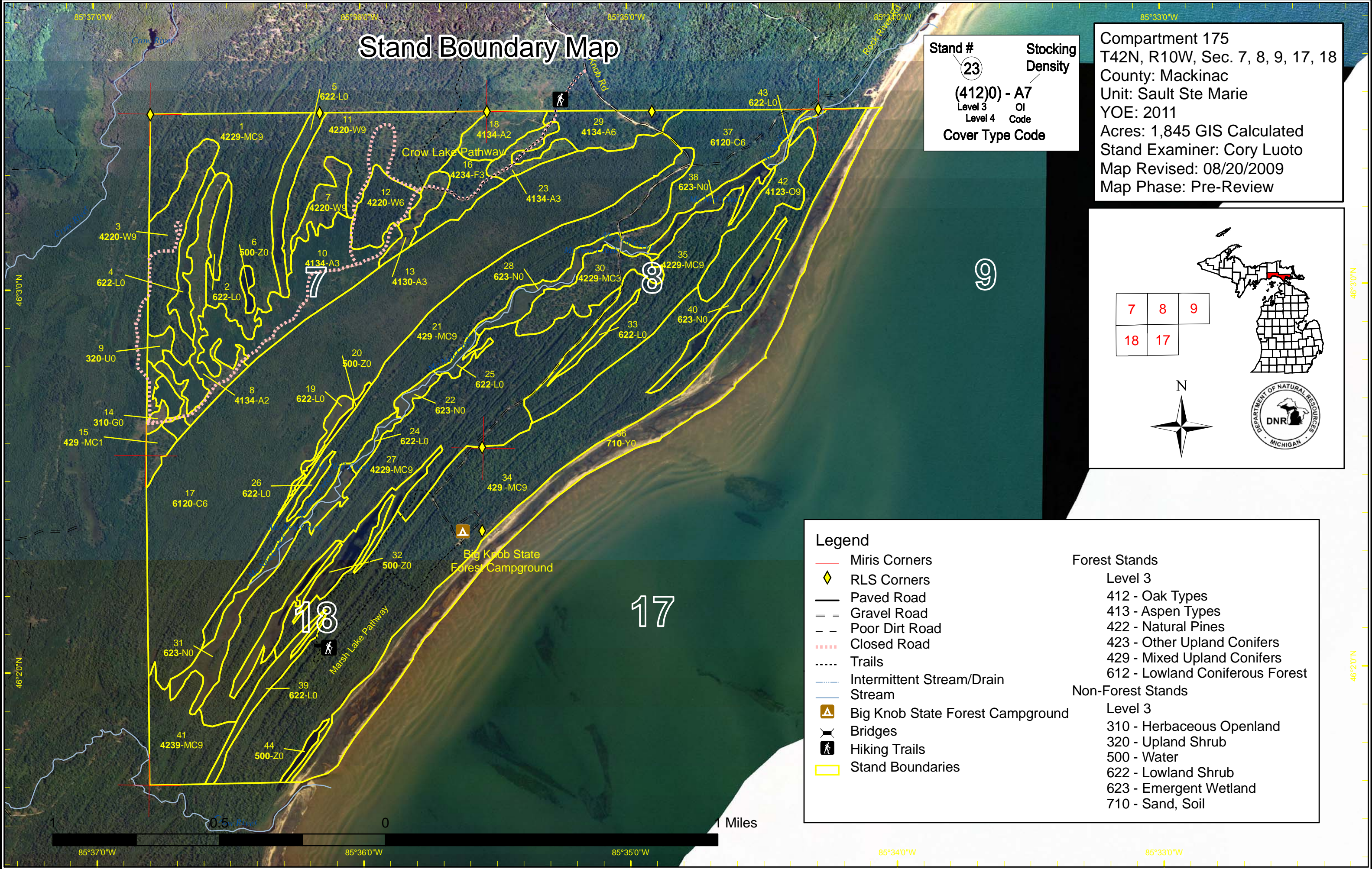
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Legend

	Miris Corners	Forest Stands
	RLS Corners	Level 3
	Paved Road	412 - Oak Types
	Gravel Road	413 - Aspen Types
	Poor Dirt Road	422 - Natural Pines
	Closed Road	423 - Other Upland Conifers
	Trails	429 - Mixed Upland Conifers
	Intermittent Stream/Drain	612 - Lowland Coniferous Forest
	Stream	Non-Forest Stands
	Big Knob State Forest Campground	Level 3
	Bridges	310 - Herbaceous Openland
	Hiking Trails	320 - Upland Shrub
	Stand Boundaries	500 - Water
		622 - Lowland Shrub
		623 - Emergent Wetland
		710 - Sand, Soil

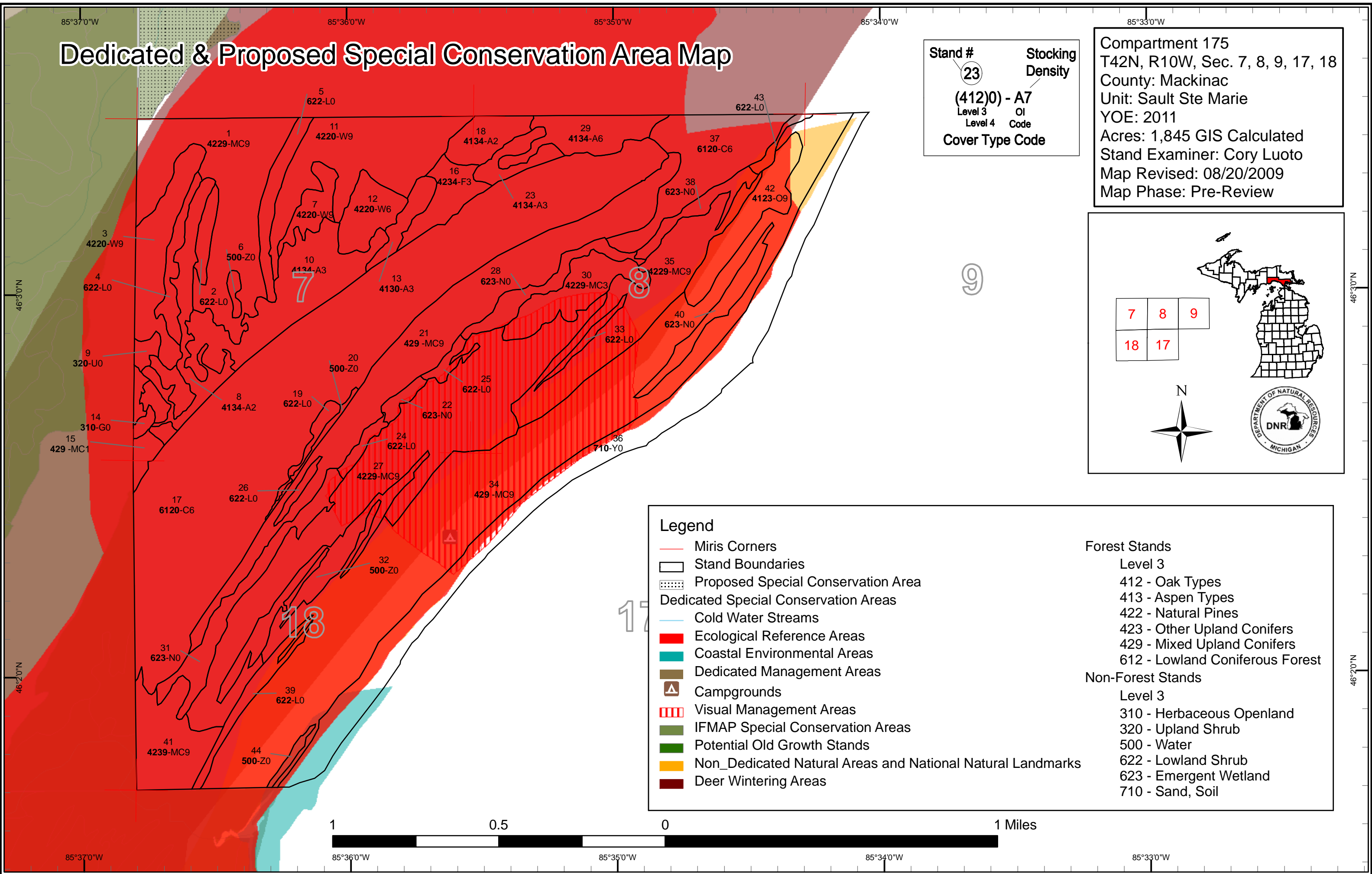
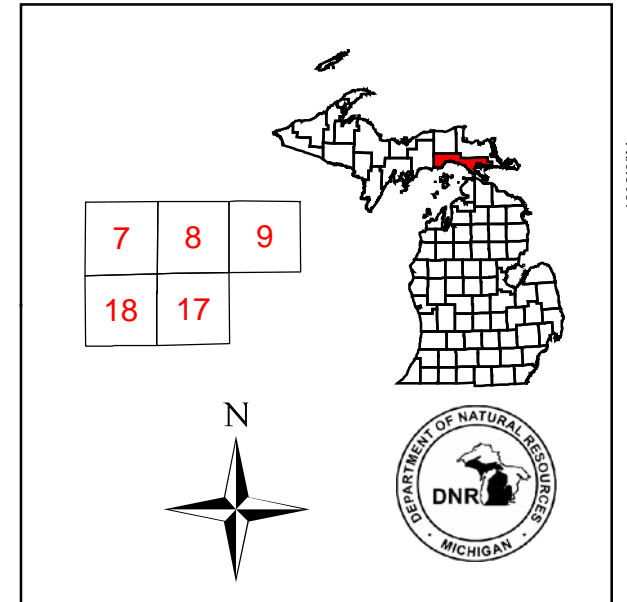


Dedicated & Proposed Special Conservation Area Map

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

Stocking Density
 OI
 Code

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 T42N, R10W, Sec. 7, 8, 9, 17, 18
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Legend

- Miris Corners
- Stand Boundaries
- Proposed Special Conservation Area
- Dedicated Special Conservation Areas**
- Cold Water Streams
- Ecological Reference Areas
- Coastal Environmental Areas
- Dedicated Management Areas
- Campgrounds
- Visual Management Areas
- IFMAP Special Conservation Areas
- Potential Old Growth Stands
- Non_Dedicated Natural Areas and National Natural Landmarks
- Deer Wintering Areas

Forest Stands

Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 710 - Sand, Soil



Covertypes, Acres, and Age summary (Level 3 Cover Type)

Sault Ste. Marie Mgt. Unit

Compartment 175 Year of Entry 2011

Report Date: 08/11/2009



	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 Types	0	21	98	16	0	0	0	0	25	0	0	0	0	0	0	160
Emergent Wetland	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Coniferous Forest	0	0	0	0	0	0	0	0	0	0	52	0	0	352	0	403
Lowland Shrub	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68
Mixed Upland Conifers	0	9	0	0	0	0	0	0	0	113	301	0	0	0	0	423
Natural Pines	0	0	0	0	0	0	0	0	0	152	68	133	94	0	27	474
Oak Types	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	27
Other Upland Conifers	0	0	0	0	0	0	0	0	37	0	0	0	0	0	17	54
Sand, Soil	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122
Upland Shrub	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Water	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Total	304	30	98	16	0	0	0	0	62	293	421	133	94	352	45	1845

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 1 of 1
36	NF_45175036-Spray	121.7	Unspecified		0	Pesticide	Hand Sprayer	Multiple/Other – Specify in Comments	

Rev Cmmt: Possible Phragmites patches along beach. Control through appropriate methods.

Rev Spec: Spray invasive species of phragmites found along beach. Choose appropriate herbicide based on site, work instructions, and manufactures recommendations.

Next Steps: Spray as needed to control invasive species.

**Total Treatment
Acreage Proposed: 121.7**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**



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Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
29 45175029-Cut	14.6	4134 - Aspen, Spruce/Fir	High Density Pole	74	Harvest	Clearcut with Reserves	Aspen, Mixed Conifer

Limiting Factor and Comment: 3B: T & E or special concern (name)
ERA = wooded dune and swale complex. The aspen age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

Rev Cmnt: Area of the stand were left for retention.
ERA = wooded dune and swale complex. The aspen age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

Rev Spec: Cut all deciduous 2" or more and conifer 4" or more.

Next Steps: Follow-up treatment with regeneration survey according to work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and paper birch, ironwood, balsam fir, white spruce and white pine.

No Treatment Reason: ERA = wooded dune and swale complex. The aspen age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

12 45175012-Cut	18.7	42200 - Natural White Pine	High Density Pole	105	Harvest	Group Selection	Natural Mixed Pine
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Limiting Factor and Comment: 3B: T & E or special concern (name)
ERA = wooded dune and swale complex. The jack pine age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

Rev Cmnt: ERA = wooded dune and swale complex. The jack pine age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

Rev Spec: Cut all merchantable jack pine, red maple, spruce, balsam, paper birch and aspen. Mark some red pine and white pine in areas where they are more dense. Sale can only be active From Labor Day until Memorial Day. This is because of camping traffic and harvesting within a deer yard.

Next Steps: Follow-up treatment with regeneration survey according to work instructions. Acceptable regeneration is aspen, maple, cherry, paper birch, balsam fir, white spruce, red pine and white pine.

No Treatment Reason: ERA = wooded dune and swale complex. The jack pine age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

1 45175001-Cut	48.5	42290 - Natural Mixed Pine	High Density Log	112	Harvest	Group Selection	Natural Mixed Pine
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Limiting Factor and Comment: 3B: T & E or special concern (name)
ERA = wooded dune and swale complex. The jack pine age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

Rev Cmnt: ERA = wooded dune and swale complex. The jack pine age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

Rev Spec: Cut all merchantable jack pine, red maple, spruce, balsam, paper birch and aspen. Mark some red pine and white pine in areas where they are more dense. This sale can only be active from Labor Day until Memorial Day. This because of camping traffic and harvesting within a deer yard.

Next Steps: Follow-up treatment with regeneration survey according to work instructions. Acceptable regeneration is aspen, maple, cherry, paper birch, balsam fir, white spruce, red pine and white pine.

No Treatment Reason: ERA = wooded dune and swale complex. The jack pine age triggers silvicultural criteria, but due to ERA designation, this might not be harvested.

**Total Treatment
Acreage Proposed: 81.8**



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 Name	Acres	Comments



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
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.
HCVA	Coastal Environmental Areas	The public designation process is defined by Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the Michigan Department of Environmental Quality (DEQ). This is an inactive program with no new areas currently under consideration by the DEQ.
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR.
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
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.
SCA	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.



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Conservation Area	Type	Description
SCA	Visual Management Area	An area of general social appreciation that is managed to recognize and preserve a particular visual value. Examples of these areas include scenic vistas, scenic or natural beauty roads, and lakeshore areas.