



# COMPARTMENT REVIEW PRESENTATION

## *GAYLORD FOREST MANAGEMENT UNIT*

### COMPARTMENT: 69

**ENTRY YEAR: 2012**

**ACREAGE: 1,166**

**COUNTY: Charlevoix**

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**Revision Date:** 04/28/2010

**Stand Examiner:** Ric Barta

**Legal Description:** T37N R11W Sec. 1, 2, 11, 12, 13, 14, 23, 24

**Management Goals:** To provide for the protection, integrated management and responsible use of a healthy, productive, and undiminished forest resource base for the social, recreational, environmental, and economic benefit of the State of Michigan.

**Soil and Topography:** The major feature of this compartment is Greene's Bluff, which runs the entire length of the compartment. Above the bluff the terrain is relatively flat and dominated by northern hardwoods on somewhat excessively drained loamy sand of the Kalkaska-Leelanau association. Below the bluff there is a mix of northern hardwoods and swamp conifers on poorly drained Roscommon sand or on excessively drained dunes and beach terraces (Deer Park-Dune association or Alpena, Kiva, East Lake soils). The shoreline is rocky with some sand.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** State ownership consists of three parcels along Lake Michigan. Adjacent private land is generally undeveloped and forested.

**Unique, Natural Features:** Lake Huron locust, common moorhen, bald eagle .

**Archeological, Historical, and Cultural Features:** None known.

**Special Management Designations or Considerations:** None

**Watershed and Fisheries Considerations:** Lake Michigan borders the compartment along its entire length, but the compartment itself does not contain any water. Fisheries Division has no concerns at this time.

**Wildlife Habitat Considerations:** This compartment lies along the southwest side of Beaver Island and consists mostly of upland hardwoods. Portions of stand 6, 13, and 17 are going to be treated which will some structural diversity to these areas.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of lacustrine (lake) sand and gravel and dune sand. The glacial drift thickness is approximately 310 feet based on a well drilled in Section 19. Beneath the glacial drift is the Devonian Detroit River Group. The Detroit River is mined for salt in the Detroit area. The State's French Bay Road gravel pit is located in Section 13 and gravel potential appears to be good. Oil and gas potential appears to be limited. The well in Section 19 was drilled in 1961 as a dry hole down to the Precambrian. None of the State land is currently leased in the compartment.

**Vehicle Access:** Access is good to the southernmost parcel. Access to the two northern parcels is across private.

**Survey Needs:** All of the proposed treatments bound private property. Some survey assistance may be needed.

**Recreational Facilities and Opportunities:** There is a hiking trail that runs to French Bay in section 11.

**Fire Protection:**

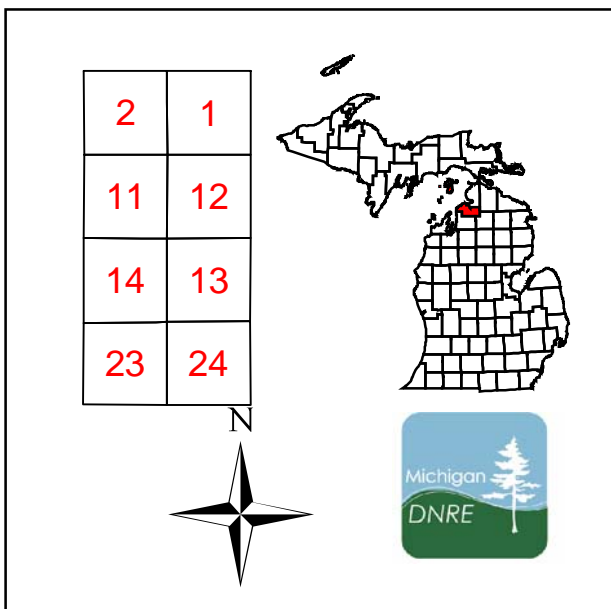
**Additional Compartment Information:**

- **The following 3 reports from the IFMAP Inventory System are attached:**
  - ◆ **Cover Type by Age Class**
  - ◆ **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 and current SCA's**

# Cover Type & Treatment Map

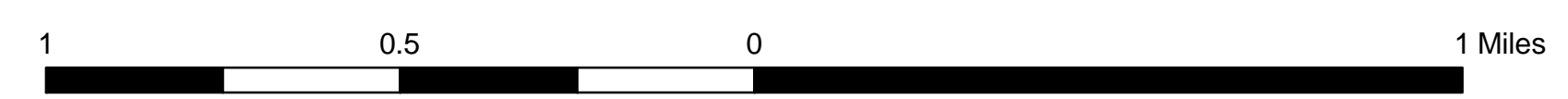
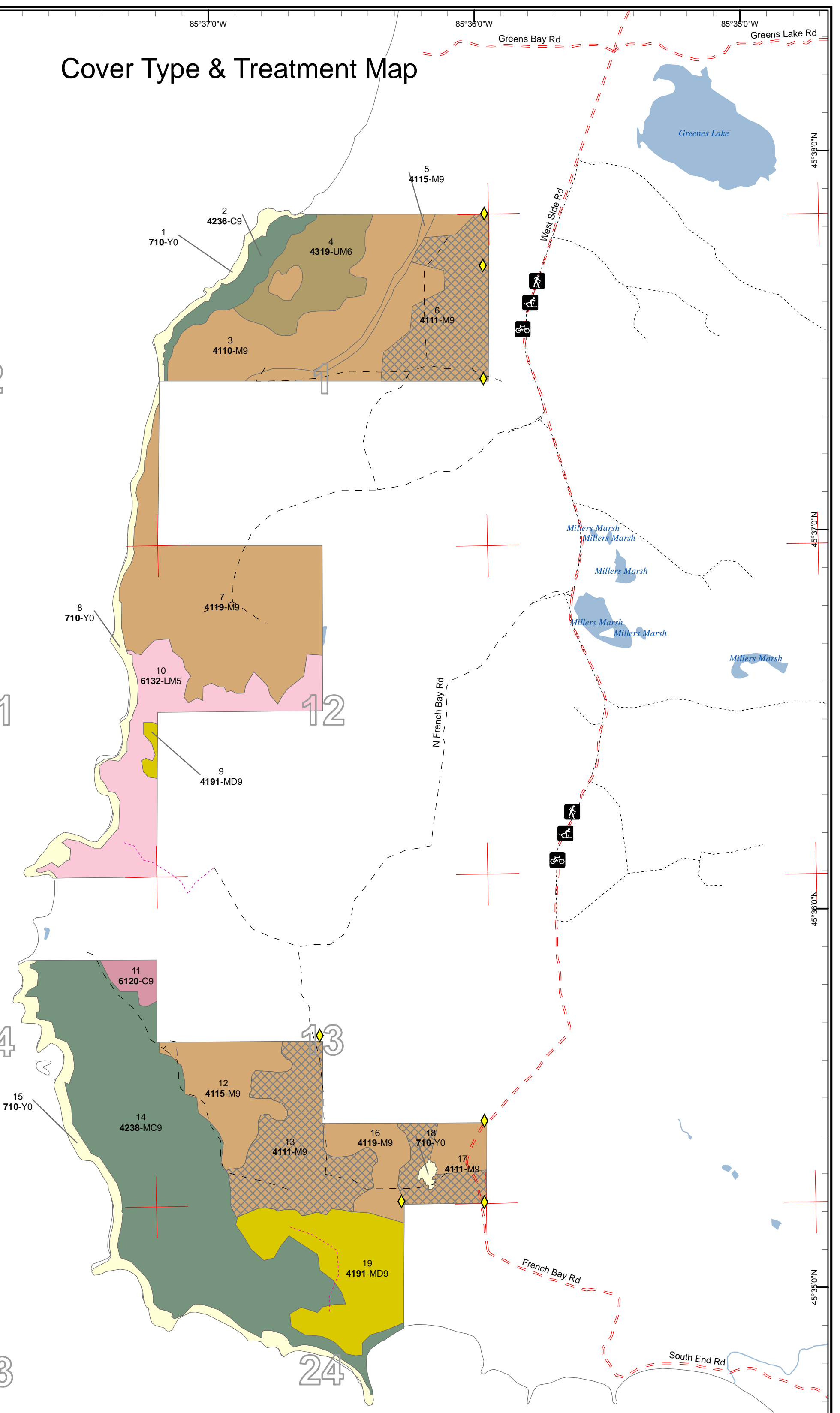
Stand # **(23)** Stocking Density  
**(4120) - A7**  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

Compartment 069  
 T37N, R11W, Sec. 1, 2, 11-14, 23, 24  
 County: Charlevoix  
 Unit: Gaylord  
 YOY: 2012  
 Acres: 1,166 GIS Calculated  
 Stand Examiner: Ric Barta  
 Map Revised: 05/27/2010  
 Map Phase: Pre-Review



- Legend**
- ◆ RLS Corners
  - Miris Corners
  - - - County Gravel Roads
  - - - Poor Dirt Roads
  - - - Trail (Non-Recreation)
  - ..... Trails
  - ⛷ Ski Trails
  - 🚲 Bike Trails
  - 🚶 Hiking Trails
  - Intermittent Stream/Drain
  - Stream
  - 🌊 Lakes and Rivers
  - Treatments
  - ▨ Selection (Group, Single Tree)
  - Forest Stands
  - Level 3
  - 411 - Northern Hardwood
  - 419 - Mixed Upland Deciduous
  - 423 - Other Upland Conifers
  - 431 - Upland Mixed Forest
  - 612 - Lowland Coniferous Forest
  - 613 - Lowland Mixed Forest
  - Non-Forest Stands
  - Level 3
  - 710 - Sand, Soil

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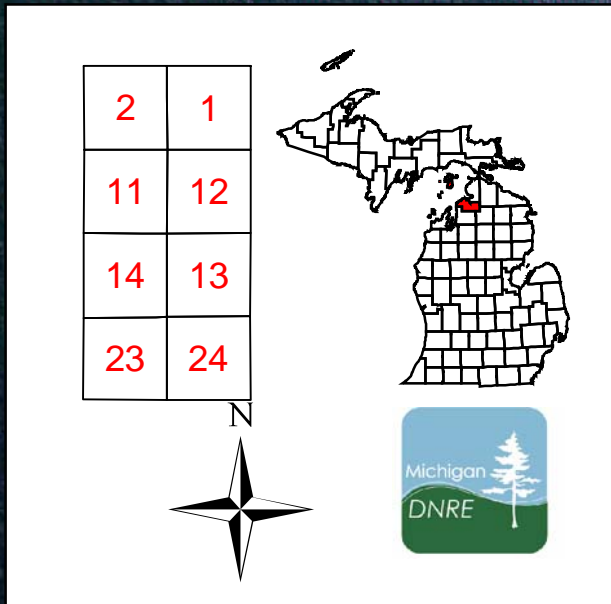
85°39'0"W 85°38'0"W 85°37'0"W 85°36'0"W 85°35'0"W

45°38'0"N  
45°37'0"N  
45°36'0"N  
45°35'0"N

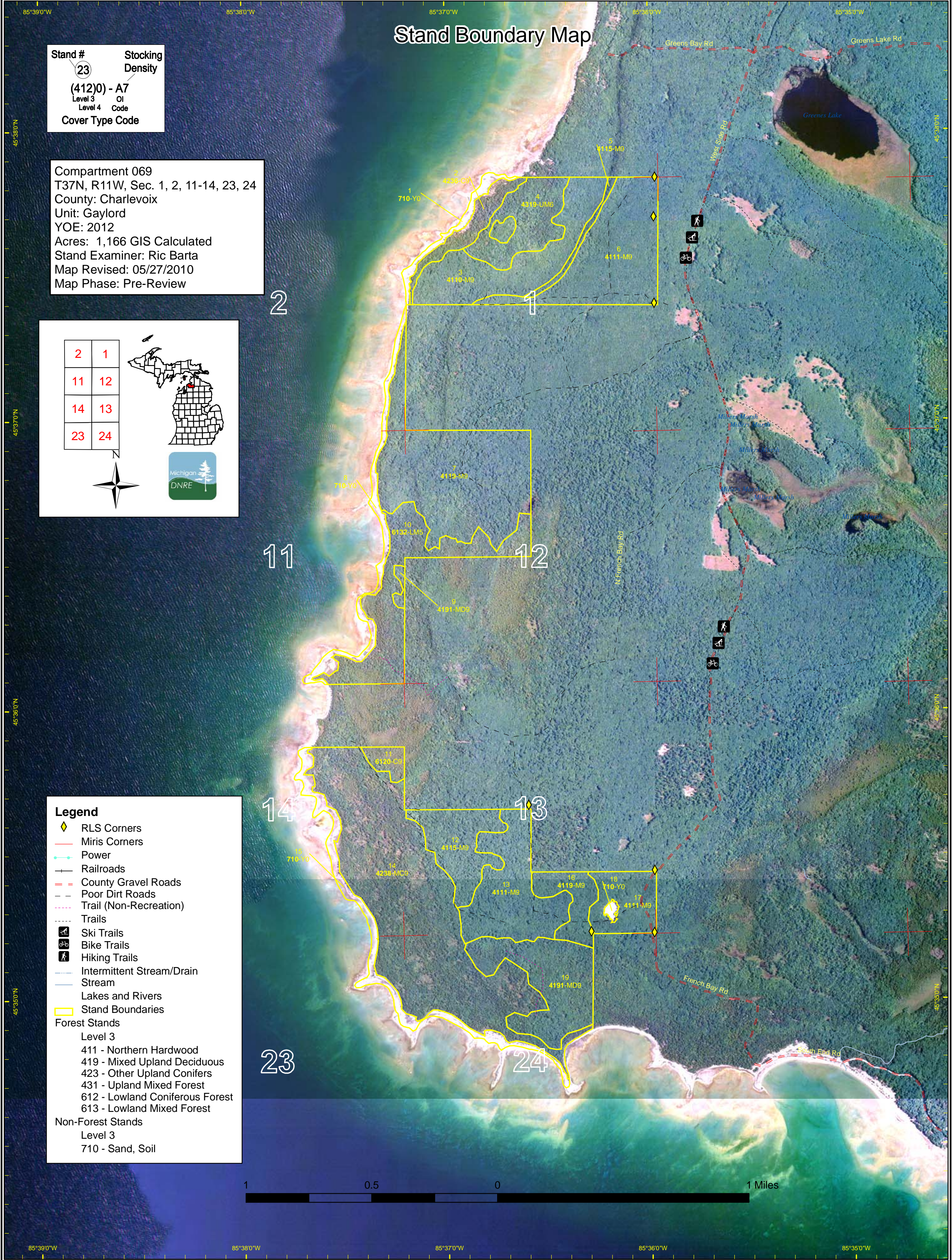
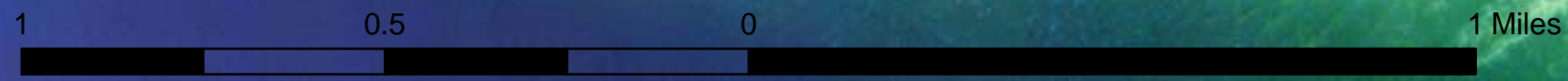
# Stand Boundary Map

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

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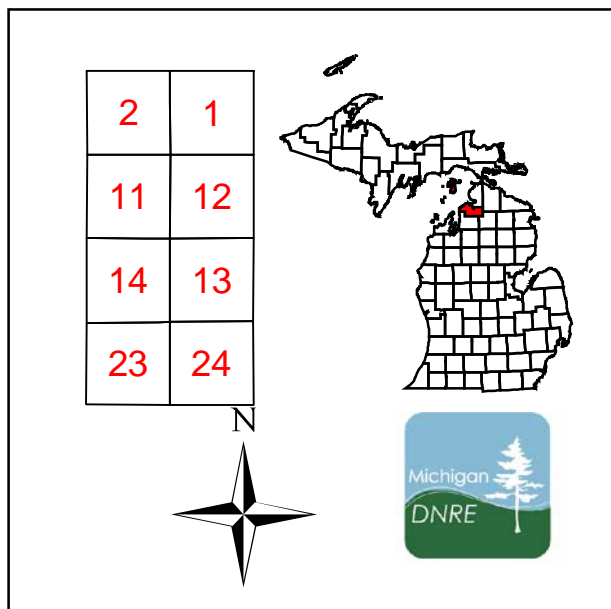
- Legend**
- ◆ RLS Corners
  - Miris Corners
  - Power
  - Railroads
  - County Gravel Roads
  - Poor Dirt Roads
  - Trail (Non-Recreation)
  - Trails
  - Ski Trails
  - Bike Trails
  - Hiking Trails
  - Intermittent Stream/Drain
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# Dedicated & Proposed Special Conservation Area Map

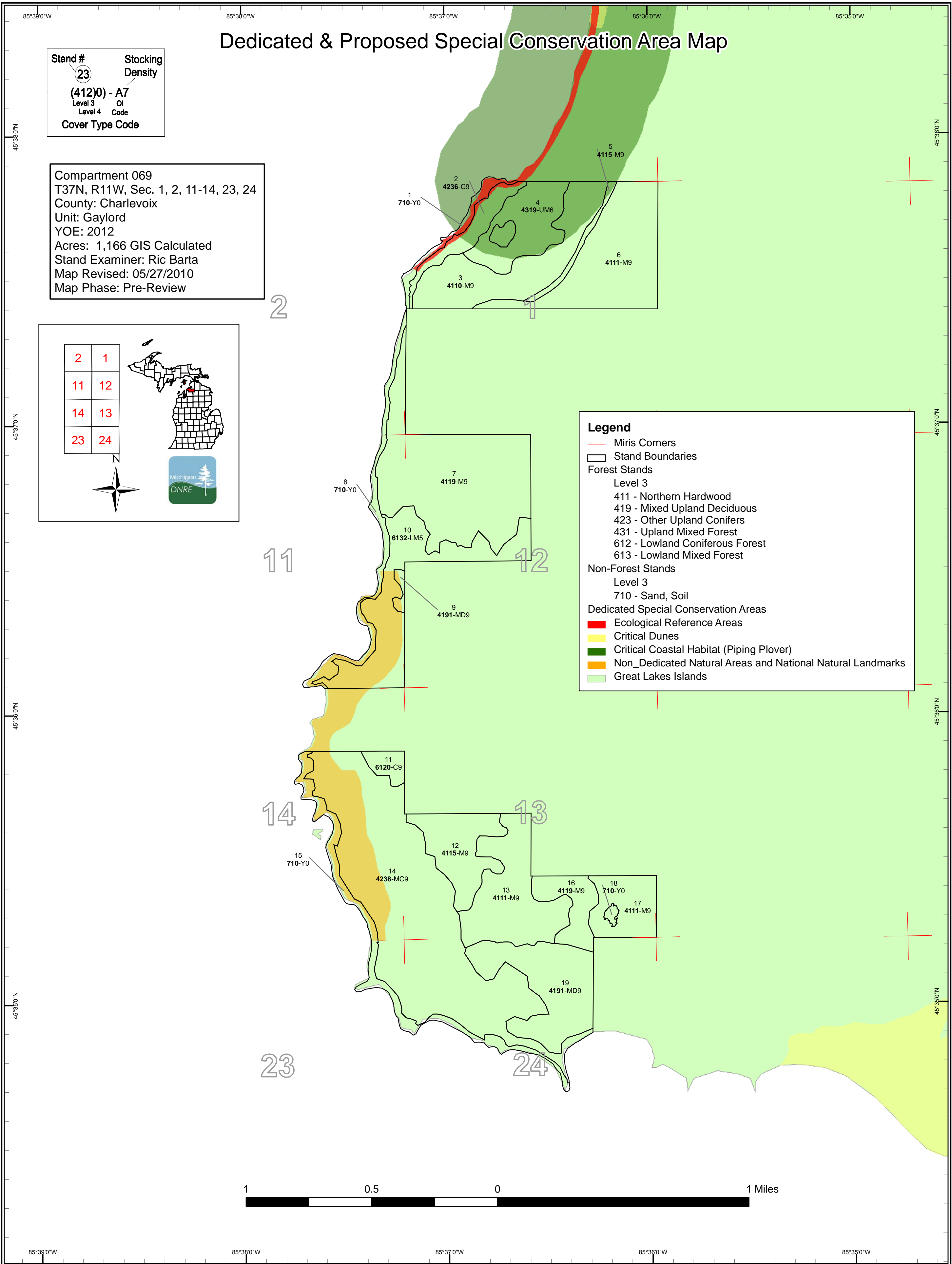
Stand #  
 (4120) - A7  
 Level 3 OI  
 Level 4 Code  
 Cover Type Code

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 Map Revised: 05/27/2010  
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**Legend**

- Miris Corners
- Stand Boundaries
- Forest Stands
  - Level 3
  - 411 - Northern Hardwood
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  - 613 - Lowland Mixed Forest
- Non-Forest Stands
  - Level 3
  - 710 - Sand, Soil
- Dedicated Special Conservation Areas
  - Ecological Reference Areas
  - Critical Dunes
  - Critical Coastal Habitat (Piping Plover)
  - Non-Dedicated Natural Areas and National Natural Landmarks
  - Great Lakes Islands



**Table 1 – Total Acres by Cover Type and Age Class**  
 (Level 3 Cover Type)



	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
Lowland Coniferous Forest	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	88
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	84
Northern Hardwood	0	0	0	0	0	0	0	38	0	111	0	0	0	249	162	560
Other Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	274	0	23	297
Sand, Soil	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	50
<b>Total</b>	<b>78</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>0</b>	<b>111</b>	<b>0</b>	<b>50</b>	<b>284</b>	<b>249</b>	<b>357</b>	<b>1166</b>



## Table 2 – Proposed Treatment Summaries

**Gaylord Mgt. Unit**  
**Year of Entry 2012**

**Compartment 069**  
**Total Compartment Acres: 1166**

### Acres by Treatment Type

Commercial Harvest - 173	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
Northern Hardwood	0	173	0	0	0	0	0	173
Total	0	173	0	0	0	0	0	173

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



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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  
Comments:

Next  
Steps:

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**Total Treatment  
Acreage Proposed: 0**





Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	52069006-Cut	68.5	4111 - S.Maple, Hard Mast Association	High Density Log	80	Harvest	Single Tree Selection	S.Maple, Hard Mast Association	Cmpt. Review Proposal

Prescription Specs: If possible, salvage nice paper birch logs and remove defective (mostly forked) hard maple and beech. Create and clean regeneration gaps to 100-200 ft diameter.

Other Comment: Access is apparently across private. Producer may need to secure permission. Areas of decent quality small logs. Lots of wolf beech and hard maple with defect. Sweep, forks and holes common. Birch is nice. Good quality 12" logs present. Many are dead or dying. Lots of dead and down, mostly birch. Signs of BBD common. Flat Ground.

Next Steps:

Limiting Factor and No. 1F: Other dept or div proc/practices

Treatment Reason Access is apparently across private. Producer may need to secure permission. This treatment is on hold until Wildlife Division finishes their treatment plan for the island.

13	52069013-Cut	82.5	4111 - S.Maple, Hard Mast Association	High Density Log	122	Harvest	Single Tree Selection	S.Maple, Hard Mast Association	Cmpt. Review Proposal
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Prescription Specs: Selection cut to 80-90 BA. Create regeneration gaps where appropriate. Maintain diversity.

Other Comment: Better quality, good access.

Next Steps:

Limiting Factor and No. 1F: Other dept or div proc/practices

Treatment Reason This treatment should be put on hold until Wildlife Division finishes their management plan for the island.

17	52069017-Cut	22.3	4111 - S.Maple, Hard Mast Association	High Density Log	65	Harvest	Single Tree Selection	S.Maple, Hard Mast Association	Cmpt. Review Proposal
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Prescription Specs: Thin to 80 ft2 residual BA. Cut larger diameter defective trees (fork and sweep). Cut mature paper birch and create clean 100-200 foot diameter regeneration gaps.

Other Comment: Areas heavy to birch and poor quality beech. Dead or dying paper birch common. Lots of down paper birch. Other areas have decent small logs. Scattered larger diameter trees with defect common. Forked trees common. Flat. 120 ft2 from 6 plots, Hard maple site index = 60,

Next Steps:

Limiting Factor and No. 1F: Other dept or div proc/practices

Treatment Reason This treatment is on hold until Wildlife Division finishes their management plan for the island.

**Total Treatment  
Acreage Proposed: 173.3**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	42360 - Upland Cedar	High Density Log	23.2	Uneven Age		Transition from hardwood to beach. Old lake shores visible. Moderate amount of wind thrown cedar.
3	4110 - Sugar Maple Association	High Density Log	87.7	146	111-140	Balsam fir is in clumps, heavily browsed. Lots of boulders, coarse woody debris from wind throw. Sugar maple is poor quality; ash is pretty decent. No sugar maple seedlings present; little to no regeneration of any species. Just starting to get ash coming back where large wind throw has taken place. Gap dynamics will slowly begin to regenerate the stand. Several deer pellets in areas of heavy balsam fir understory.
4	4319 - Mixed Upland Forest	High Density Pole	50.2	104	51-80	Variable stand, lots of species. Poor site quality. Nice oak mixed throughout the stand with lots of acorns dropped last year. Heavy fir understory.
5	4115 - Y.Birch, Hemlock NH	High Density Log	7.3	80	51-80	Very steep slope. Decent hemlock. Some standing dead and down paper birch.
6	4111 - S.Maple, Hard Mast Association	High Density Log	103.9	80	111-140	Areas of decent quality small logs. Lots of wolf beech and hard maple with defect. Sweep, forks and holes common. Birch is nice. Good quality 12" logs present. Many are dead or dying. Lots of dead and down, mostly birch. Signs of BBD common. Flat Ground. West edge has lots of blowdown from strong winds along top edge of bluff. Areas of heavy beech saplings. 2-4" diameter suppressed hard maple saplings common. No clean regeneration gaps. BA = 126 ft2 from 11 plots. Hard Maple site index = 65.
7	4119 - Mixed Northern Hardwoods	High Density Log	162.1	Uneven Age	81-110	Eight BA swings ranged from 70-160 and averaged 110, and was influenced by very large, poor quality beech. Looks to be seasonally wet in south end. Historic high-grading has left a high percentage of defect in the log trees and patchy stocking. Beech Bark Disease is present. Some blowdown especially in wetter areas, and some beech snap. Area below the bluff is nicer timber with few beech and significant amount of ash.
9	4191 - Mixed Upland Deciduous with Conifer	High Density Log	3.3	Uneven Age		Dunal moraines along Lake Michigan with Red Maple, White Pine, Red Oak, and northern hardwood log component. Balsam fir understory
10	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	87.8	Uneven Age	81-110	Swamp conifer primarily white cedar & white birch. Pockets with heavy blowdown & slash on ground affected by Lake Michigan winds. Lots of white birch mortality & blowdown. H. maple saps in understory.
11	6120 - Lowland Cedar	High Density Log	10.5	112	111-140	Wet with sphagnum moss and some standing water. Has a low ridge in it, drier but still cedar.
12	4115 - Y.Birch, Hemlock NH	High Density Log	50.5	122	81-110	Decent stem quality, soundness of sawlogs is questionable. Lots of princess pine on forest floor. Nice regeneration in the understory. Fair amount of windthrown red maple, creating gaps; starting to fill in naturally.
13	4111 - S.Maple, Hard Mast Association	High Density Log	82.4	122	111-140	Better quality, good access.

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Gaylord Mgt. Unit

## 5 – Forested Stands

Compartment: 069

Inventory Method: IFMAP

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
14	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Log	274.0	112	51-80	Upland ground cover and terrain prompted an upland designation, but tree species composition seems more in line with a lowland. Blowdown openings are filled with raspberry. Bedrock and water table are probably near the surface. Birch and aspen are falling out. Lots of blowdown. Canopy is very broken. Patches of cedar over fir saplings are common.
16	4119 - Mixed Northern Hardwoods	High Density Log	28.0	122	81-110	
17	4111 - S.Maple, Hard Mast Association	High Density Log	37.6	65	111-140	Areas heavy to birch and poor quality beech. Dead or dying paper birch common. Lots of down paper birch. Other areas have decent small logs. Scattered larger diameter trees with defect common. Forked trees common. Flat. 120 ft2 from 6 plots, Hard maple site index = 60,
19	4191 - Mixed Upland Deciduous with Conifer	High Density Log	80.3	Uneven Age	51-80	Unique stand of mixed upland hardwood with conifer affected by Lake Michigan wind below bluff. Majority of stand is old growth northern hardwood with hemlock of sawlog size. The west quarter of stand had heavy windthrow with most of aspen & birch now on the ground. Balsam Fir in understory in blowdown area. Southwest corner of stand adjacent to Lake Michigan has sugar maple saplings regenerating from a previous wind event.



Stand	Cover Type	Acres	Gen Cmts:
1	710 - Sand, Soil	11.5	
8	710 - Sand, Soil	25.4	
15	710 - Sand, Soil	38.7	Beach.
18	710 - Sand, Soil	2.0	



### 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
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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
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.
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.
SCA	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous species, including many rare plants and animals, several of which are endemic or largely restricted to the Great Lakes region. Due to their isolation, islands provide good examples of many Great Lakes-associated natural communities and ecosystems, and thus have potential to provide insights for understanding the consequences of human disturbance on the increasingly fragmented ecosystems of the mainland.
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.