



**Gwinn Forest Management Unit  
Compartment Review Presentation  
Compartment 015      Entry Year: 2014  
Compartment Acreage: 1,756      County: Marquette**

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**Revision Date:** 8/20/12

**Stand Examiner:** Kevin LaBumbard

**Legal Description:** T45N R24W Sec(s) 3,10,14,22,24

**RMU (if applicable):** Dead Horse Moraines Management Area

**Management Goals:** Improve the quality and diversity of the extensive Northern Hardwoods stands through selective management while maintaining the conifer component, legacy trees and den trees for wildlife. Additional goals are to provide age-class distribution of aspen by harvesting selected stands.

**Soils and topography:** Topography ranges from gently rolling to very steep hills and ravines. Soils are predominantly loamy sands including the Kalkaska, Munising, and Keweenaw series.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** This compartment is fragmented into essentially two "blocks". The northern tier is located approx. 3 miles NE of Little Lake, MI and surrounded by private land with extremely limited access. The southern "block" lies 2 miles due east of Little Lake, MI and is bordered by additional State land as well as corporate and private lands. Primary land use is for timber production and low key recreation.

**Unique, Natural Features:** Kirtland Warbler and loon to west. Eagle, GBH rookery and osprey to sw. Potential for wood turtle in Sheen creek. Potential for RSH or goshawk in M6 stands.

**Archeological, Historical, and Cultural Features:** None identified with HAL but the compartment does contain evidence of old mine pits.

**Special Management Designations or Considerations:** Riparian corridor stands, black spruce bogs and natural hemlock and cedar cover types providing diversity.

**Watershed and Fisheries Considerations:** Compartment contains Section 3 Lake, a portion of Brown's Lake, and Grimms Lake.

**Wildlife Habitat Considerations:** Featured species includes black bear, white-tailed deer, pileated woodpecker and ruffed grouse

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of an end moraine of coarse-textured till, medium-textured glacial till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 10 and 50 feet. The Cambrian Trempealeau and Munising Formations and Precambrian Jacobsville Sandstone and Archean Granite/Gneiss subcrop below the glacial drift. These formations could be used for stone, building stone and dimension stone. The nearest gravel pit is located two miles to the southeast and there should be good potential in the compartment. Abandoned iron mines are located four miles to the northwest. Sections 3 & 10 were previously leased for metallic exploration. There is no economic oil and gas production in the UP.

**Vehicle Access:** Access to the northern unit is via Co. Rd 545 but is extremely limited due to gated private land. The southern portion of the compartment is easily accessible from several county roads, two-tracks, and the old abandoned Duluth-Superior railroad bed/snowmobile trail.

**Survey Needs:** none

**Recreational Facilities and Opportunities:** The old Duluth/Superior railroad bed serves as State designated snowmobile trail #8 running east and west. In addition, part of the compartment abuts Forsyth Twp lands near the old ski hill which now serves as the Twp shooting range.

**Fire Protection:** Most of the compartment lies in the “Gwinn Zone Dispatch” area, and has a moderate to high potential for wildfire.

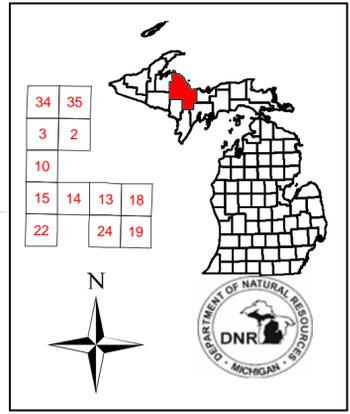
**Additional Compartment Information:**

- **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: 015  
 T45N R23W Sec. 18, 19  
 T45N R24W Sec. 2, 3, 10, 13, 14, 15, 22, 24  
 T46N R24W Sec. 34, 35  
 County: Marquette  
 Unit: Gwinn  
 YOY: 2014  
 Acres: 1,756 GIS Calculated  
 Examiner: Kevin LaBumbard  
 Map Revised: 08/29/2012  
 Map Phase: Pre-Review

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



**Legend**

- ◆ PLSS Corner
- Wood Post
- ✚ Remonumented Section Corners
- ✚ Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Pipelines
- ✕ Gate
- Snowmobile Trail
- Snowmobile Trails
- Lakes and Rivers
- State Forest Land

**Treatments**

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

**Forest Stands**

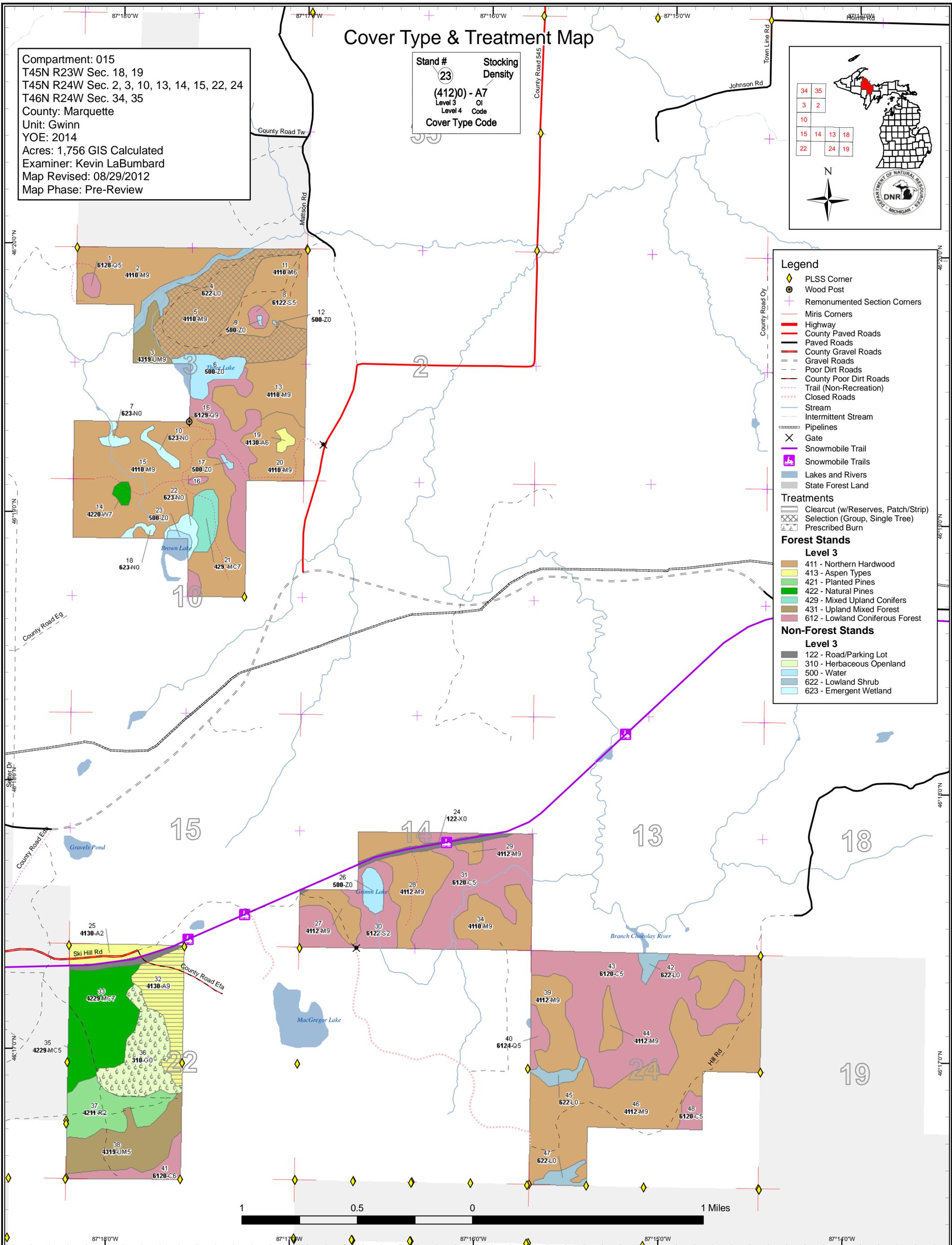
**Level 3**

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

**Non-Forest Stands**

**Level 3**

- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

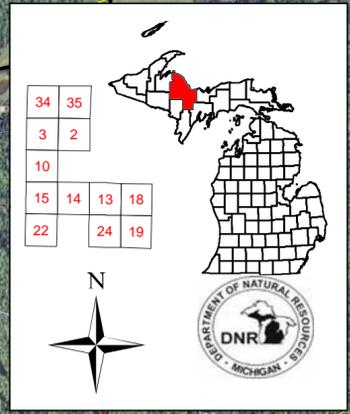


87°18'0"W 87°17'0"W 87°16'0"W 87°15'0"W 87°14'0"W

# Stand Boundary Map

Compartment: 015  
 T45N R23W Sec. 18, 19  
 T45N R24W Sec. 2, 3, 10, 13, 14, 15, 22, 24  
 T46N R24W Sec. 34, 35  
 County: Marquette  
 Unit: Gwinn  
 YOE: 2014  
 Acres: 1,756 GIS Calculated  
 Examiner: Kevin LaBumbard  
 Map Revised: 04/05/2012  
 Map Phase: Pre-Review

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



**Legend**

- ✚ Remonumented Section Corners
- ✚ Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
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- Snowmobile Trails
- Stand Boundaries

**Forest Stands**

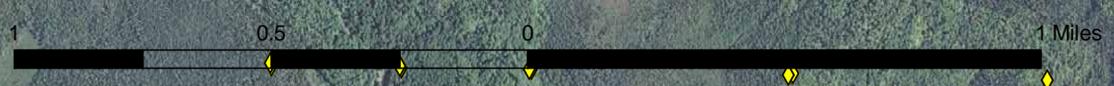
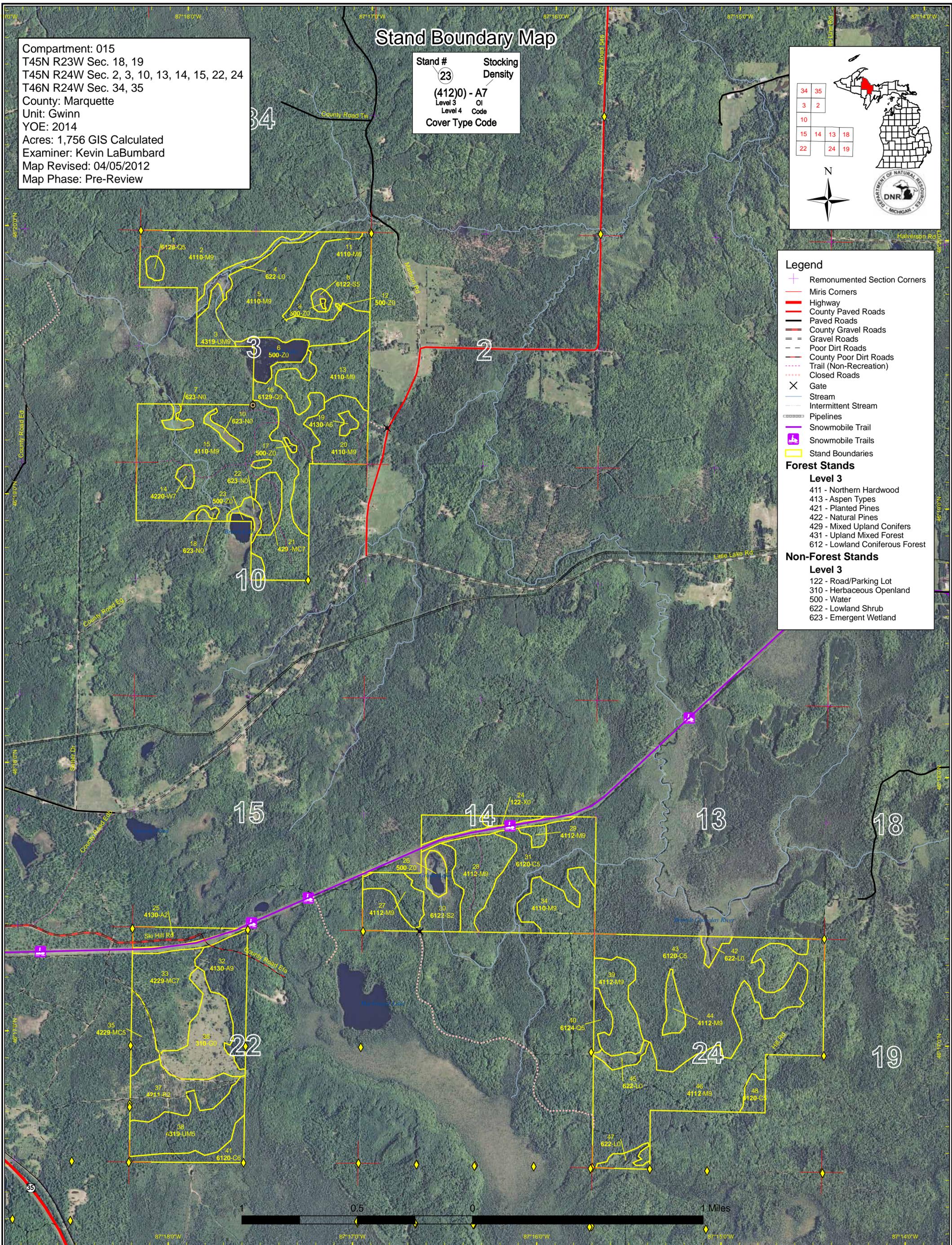
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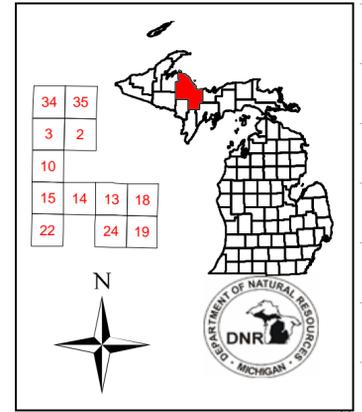
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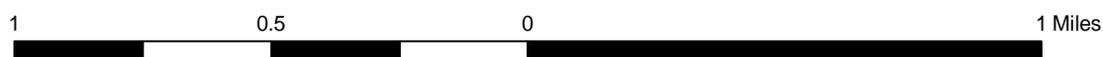
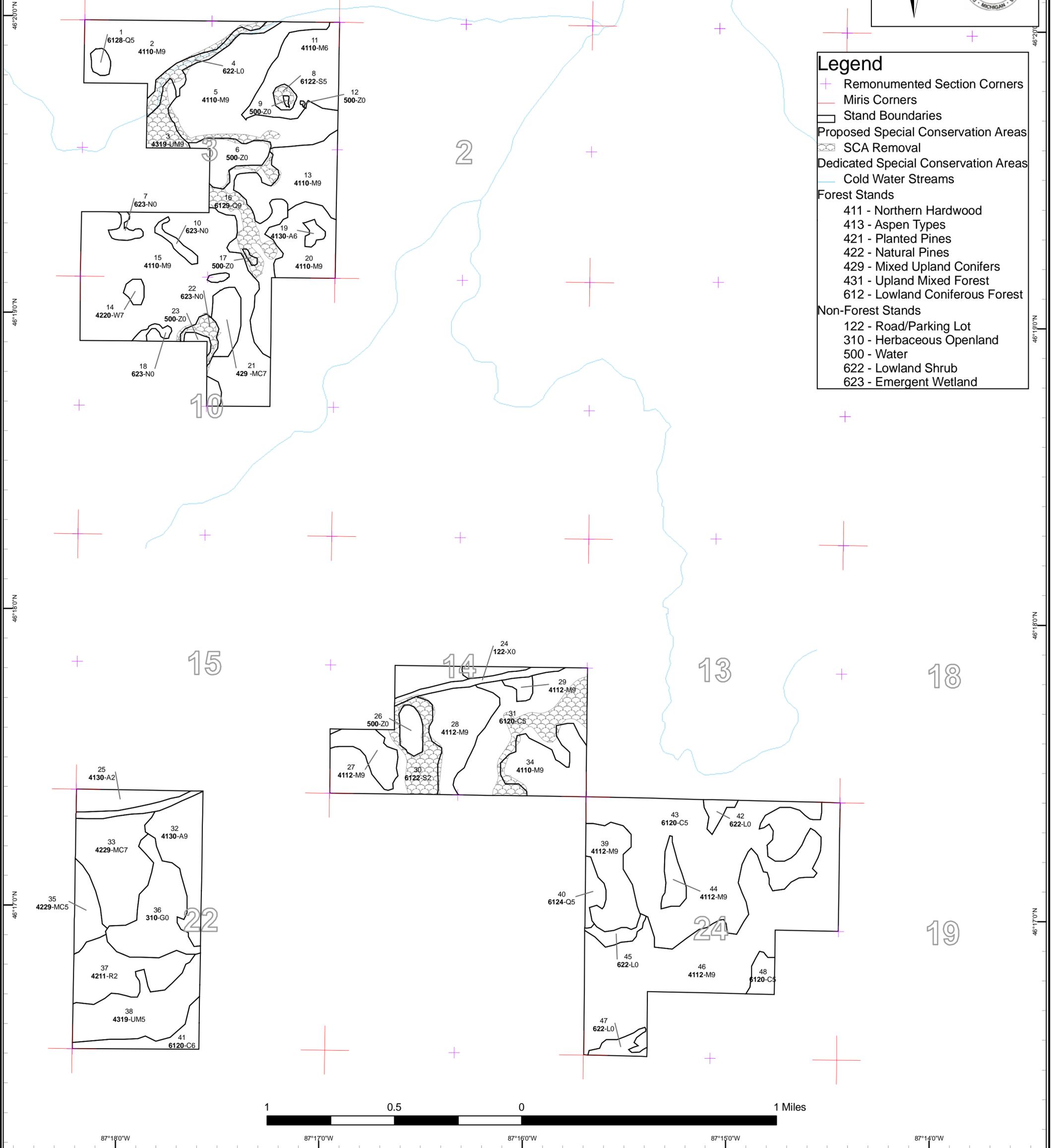
# Dedicated & Proposed Special Conservation Area Map

Compartment: 015  
 T45N R23W Sec. 18, 19  
 T45N R24W Sec. 2, 3, 10, 13, 14, 15, 22, 24  
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**Stand #**  
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**Stocking Density**  
 (412)0 - A7  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**



- ### Legend
- + Remonumented Section Corners
  - + Miris Corners
  - Stand Boundaries
  - Proposed Special Conservation Areas
  - SCA Removal
  - Dedicated Special Conservation Areas
  - Cold Water Streams
- #### Forest Stands
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87°18'0"W      87°17'0"W      87°16'0"W      87°15'0"W      87°14'0"W

**Table 1 – Total Acres by Cover Type and Age Class**

Kevin LaBumbard : Examiner



	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	0	18	0	3	0	0	0	0	42	0	0	0	0	0	64
Cedar	0	0	0	0	0	0	0	0	17	275	0	0	0	0	292
Herbaceous Openland	52	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Lowland Conifers	0	0	0	0	0	0	0	0	4	65	0	0	0	0	69
Lowland Shrub	34	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Lowland Spruce/Fir	0	0	0	0	0	0	0	4	0	48	0	0	0	0	52
Marsh	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Natural Mixed Pines	0	0	0	0	0	0	18	0	61	0	0	0	0	0	79
Northern Hardwood	0	0	0	0	0	0	0	0	0	906	0	0	0	0	906
Red Pine	0	0	46	0	0	0	0	0	0	0	0	0	0	0	46
Upland Conifers	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
Upland Mixed Forest	0	0	0	57	0	0	0	0	0	15	0	0	0	0	72
Urban	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Water	34	0	0	0	0	0	0	0	0	0	0	0	0	0	34
White Pine	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
<b>Total</b>	<b>157</b>	<b>18</b>	<b>46</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>23</b>	<b>125</b>	<b>1308</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1756</b>



## Table 2 – Proposed Treatment Summaries

**Gwinn Mgt. Unit**  
**Year of Entry 2014**

**Compartment 015**  
**Total Compartment Acres: 1756**

### Acres by Treatment Type

Commercial Harvest - 148	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 52	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
<b>Aspen</b>	42	0	0	0	0	0	42
<b>Northern Hardwood</b>	0	105	0	0	0	0	105
<b>Total</b>	42	105	0	0	0	0	148



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	32015005-Cut	105.1	4110 - Sugar Maple Association	High Density Log	98	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> This stand will be scheduled for a selection harvest with a residual ba of 80-90 to improve overall stand quality yet retain species diversity, conifer content, and wildlife attributes. Maintain 100' buffer along Sheen Creek and Section 3 Lake.</p> <p><u>Specs:</u> Select cut the stand, concentrating in the poletimber class. Retain most of the cherry, yellow birch, and basswood.</p> <p><u>Other Comments:</u> North and eastern areas around Section Three Lake and northern part south of Sheen's Creek have a heavy cherry component of small sawtimber and poles-even aged. This stand also contains 2 areas of previous cutting(??) with far fewer cherry, good sugar maple regeneration (but still less than 1" stem diameter) and larger residual diameters. Heavy snow zone and hilly terrain will make logging a challenge but operable. Access thru pvt may be denied requiring a bridge from the north.</p> <p><u>Next Steps:</u> Monitor regeneration per Work Instructions.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
32	32015032-Cut	42.4	4130 - Aspen	High Density Log	81		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Cut the aspen and white birch retaining the wp and red oak. If possible, retain a few large diameter big tooth and paper birch.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Primarily a big-tooth aspen stand with red maple and birch growing on a steep side hill. Scattered wp especially along the large opening. This stand is located on the back side of Forsyth Twp rifle range.</p> <p><u>Next Steps:</u> Monitor regeneration per Work Instructions.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
36	NF_32015036-Burn	51.8	3105 - Mixed Upland Herbaceous				Prescribed Burn	Unspecified	31022 - Warm Season Grass	Cmpt. Review Proposal
<p><u>Prescription</u> A moderate priority maintenance burn to mimic natural processes in a fire-dependant land type association. Spring or fall burn, the goal is to remove surface litter and promote warm-season grasses, forbs, cherry, and other fire-dependant plants.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Prescribed burning is a valuable management tool. The increase in soil nutrients as a result of the burn will promote new plant growth, which will benefit many wildlife species. This will also maintain an openland/shrubland stand.</p> <p><u>Next Steps:</u> A follow-up prescribed burn should be done using a 10 to 20 year interval for this stand.</p> <p><u>Proposed Start Date:</u> Unspecified</p>										

**Total Treatment  
Acreage Proposed: 199.3**

**Table 4 -- Treatments Prescribed with  
a Limiting Factor**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Error

Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Proposed  
Start Date: #Error

Limiting Factor and No  
Treatment Reason

**Total Treatment  
Acreage Proposed: 0**

Out of YOE -- Treatments  
Prescribed with No Limiting Factor

Year of Entry: 2014



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

Other  
Comments:

Next  
Steps:

Proposed  
Start Date: #Error

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**Total Treatment  
Acreage Proposed: 0**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	4.3	83		Small patch of swamp conifers with associated soft maple and birch.
2	4110 - Sugar Maple Association	High Density Log	69.8	98	81-110	Rolling terrain with access from the east through Plum Creek land. Stand treated under contract #07-04-01 in the winter of '05- '06. Numerous sugar maple seedlings less than 3' tall in the understory. Occasional red maple, YB, aspen hemlock and white spruce. Wildlife Division underplanted hemlock in 2006.
3	4319 - Mixed Upland Forest	High Density Log	14.6	98	51-80	Remote upland knob surrounded by wetlands. Large red maple, hemlock, white pine with heavy fir saplings in the understory. Type 2 old growth.
5	4110 - Sugar Maple Association	High Density Log	105.1	98	111-140	North and eastern areas around Section Three Lake, Northern part south of Sheen's Creek has a heavy cherry component of small sawtimber and poles-even aged. This stand also contains 2 areas of previous cutting(??) with far fewer cherry, good sugar maple regeneration(but still less than 1" stem diameter) and larger residual diameters. Heavy snow zone and hilly terrain will make logging a challenge but operable.
8	6122 - Black Spruce	Medium Density Pole	3.9	76		Small black spruce sinkhole surrounding water.
11	4110 - Sugar Maple Association	High Density Pole	53.7	98	51-80	This stand was treated winter of 2006 by St. John under contract # 08-04-01. Most of the aspen was removed to release the sugar maple understory. Rolling, hill terrain. Occasional large ws, yb, and hemlock. SE has fewer cherry and more beaked hazel in the shrub layer.
13	4110 - Sugar Maple Association	High Density Log	50.7	98	111-140	Mostly even-aged sugar maple, cherry and soft maple poles and small sawtimber. Stand contains small hemlock inclusions. Very hilly with steep slopes. Factor limited because of steep terrain.
14	42200 - Natural White Pine	Low Density Log	3.9	76	1-50	Knob of scattered large white pine over M3.
15	4110 - Sugar Maple Association	High Density Log	202.3	98	81-110	Select cut in winter of 2006-2007 by Premier under contract 09-04-01. M9M6. Primarily a high quality sugar maple stand with scattered large white pine, hemlock, occasional black cherry and yellow birch. A few soft maple in some transition zones. Terrain is quite hilly with steep slopes. FTP # W32-682. Underplanted with hemlock May, 2007. Planting rate was approximately 435 seedlings/acre. 78,840 containerized hemlock seedlings were planted in stands 12 and 56.
16	6129 - Mixed Coniferous Lowland Forest	High Density Log	56.0	98		H5C4F4M4 on higher ground with C4F4H4 lower. Southern end of stand contains old mine pits. Good hemlock regeneration.
19	4130 - Aspen	High Density Pole	3.4	31		Small pocket of 6"-8" aspen poles over sugar maple whips.

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## Gwinn Mgt. Unit

## 5 – Forested Stands

Compartment: 015  
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	4110 - Sugar Maple Association	High Density Log	36.9	98	81-110	Select cut in winter of 2006-2007 by Premier under contract 09-04-01. M9M6. Primarily a high quality sugar maple stand with scattered large white pine, hemlock, occasional black cherry and yellow birch. A few soft maple in some transition zones. Terrain is quite hilly with steep slopes. FTP # W32-682. Underplanted with hemlock May, 2007. Planting rate was approximately 435 seedlings/acre. 78,840 containerized hemlock seedlings were planted in stands 12 and 56.
21	429 - Mixed Upland Conifers	Low Density Log	15.3	75	1-50	
25	4130 - Aspen	Medium Density	17.7	17		A3W7R7
27	4112 - Maple, Beech, Cherry Association	High Density Log	19.4	98	81-110	Medium quality mixed hardwood stand, quite hilly. Good regen from previous harvest. Large hemlock in lowland areas.
28	4112 - Maple, Beech, Cherry Association	High Density Log	58.5	98		Medium quality mixed hardwood stand, quite hilly. Good regen from previous harvest. Large hemlock in lowland areas.
29	4112 - Maple, Beech, Cherry Association	High Density Log	4.6	98	81-110	Medium quality mixed hardwood stand, quite hilly. Good regen from previous harvest. Large hemlock in lowland areas.
30	6122 - Black Spruce	Medium Density	48.5	94		Black spruce bog with associated swamp conifers.
31	6120 - Lowland Cedar	Medium Density Pole	88.8	91		
32	4130 - Aspen	High Density Log	42.4	81		Primarily a big-tooth aspen stand with red maple and birch growing on a steep side hill. Scattered wp especially along the large opening. This stand is located on the back side of Forsyth Twp rifle range.
33	42290 - Natural Mixed Pine	Low Density Log	61.1	81	1-50	Treated in 2004 under contract # 11-04-01 by St. John. Mixed red and white pine with scattered red oak over young aspen, red pine, white pine, jack pine.
34	4110 - Sugar Maple Association	High Density Log	41.4	98	81-110	Good quality hardwood stand treated in 2006 under contract # 10-04-01. Good hardwood regeneration from the past cutting. 20,250 hemlock seedlings were planted within the Spider Nest sale boundary (#32-010-04) during May, 2006. Stands 28 and 30 from this compartment make up the sale area. The planting rate was approximately 338 seedlings/acre. Planting success was excellent, with these seedlings 2-3" tall.
35	42290 - Natural Mixed Pine	Medium Density Pole	17.8	65		Mixed red, white pine with rp,wp,jp a few red oak and small white birch.
37	42110 - Planted Red Pine	Medium Density	45.6	20		Red pine planted in 1991 (FTP C-32-442) with jack pine volunteers, scattered cherry, aspen, sugar plum.

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## Gwinn Mgt. Unit

## 5 – Forested Stands

Compartment: 015  
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4319 - Mixed Upland Forest	Medium Density Pole	57.5	32		Small aspen with fir and overstory wp. Cut in 1979. Has just transitioned to a pole stand.
39	4112 - Maple, Beech, Cherry Association	High Density Log	38.1	98	81-110	Good quality hardwood stand treated in 2006 under contract # 10-04-01. Good hardwood regeneration from the past cutting. 20,250 hemlock seedlings were planted within the Spider Nest sale boundary (#32-010-04) during May, 2006. Stands 28 and 30 from this compartment make up the sale area. The planting rate was approximately 338 seedlings/acre. Planting success was excellent, with these seedlings 2-3" tall.
40	6124 - Lowland Spruce- Fir	Medium Density Pole	8.7	91		
41	6120 - Lowland Cedar	High Density Pole	17.4	85		
43	6120 - Lowland Cedar	Medium Density Pole	177.0	91		
44	4112 - Maple, Beech, Cherry Association	High Density Log	10.4	98		
46	4112 - Maple, Beech, Cherry Association	High Density Log	215.2	98	81-110	Good quality northern hardwoods with cherry and occasional cedar and red oak sawtimber tree. Quite rolling terrain with scattered swales which drain into the Chocoley River system. Low density of Gypsy moth egg masses on stems.
48	6120 - Lowland Cedar	Medium Density Pole	8.8	91		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	6220 - Alder/willow	13.8	No	Unspecified	
6	50 - Water	20.2	No	Unspecified	
7	623 - Emergent Wetland	4.2	No	Unspecified	
9	50 - Water	0.5	No	Unspecified	
10	623 - Emergent Wetland	4.8	No	Unspecified	
12	50 - Water	0.2	No	Unspecified	
17	50 - Water	1.0	No	Unspecified	
18	623 - Emergent Wetland	2.9	No	Unspecified	
22	623 - Emergent Wetland	6.3	No	Unspecified	
23	50 - Water	2.3	No	Unspecified	
24	122 - Road/Parking Lot	18.9	N/A	Unspecified	
26	50 - Water	9.6	No	Unspecified	Grimms Lake
36	3105 - Mixed Upland Herbaceous	51.8	No	Unspecified	Cohen Field large opening. Mostly grass, sweet fern with scattered juneberry, cherry brush
42	6220 - Alder/willow	5.5	No	Unspecified	
45	6220 - Alder/willow	7.1	No	Unspecified	
47	6229 - Mixed lowland shrub	7.7	No	Unspecified	Old beaver flooding with swamp grass and tag alder.

**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.

<b>Stand</b>	<b>SCA Type</b>	<b>SCA Name</b>	<b>Acres</b>	<b>Comments</b>
multiple - see	SCA Removal	32015_SCA	117.7	No "special values" to warrant SCA status.



**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.