



# Compartment Review Presentation

Gaylord Forest Management Unit

Compartment 102

Entry Year 2015

Acreage: 2,491

County Emmet

Management Area: Emmet Moraines

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**Revision Date:** 03/11/2013

**Stand Examiner:** Shannon Harig

**Legal Description:**

T36N-R06W, Sections 4,5,8,9,16

**Identified Planning 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 topography in this compartment is mostly rolling though quite steep in some areas. Most of this compartment is comprised of Blue Lake - Leelanau Association soils.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:**

There is some residential development in the area, mostly larger parcels. This compartment gets a lot of use from hunters and mushroom pickers as well as motorized recreation on the snowmobile trail.

**Unique Natural Features:**

Potential for red-shouldered hawk, northern goshawk, and woodland vole.

**Archeological, Historical, and Cultural Features:**

There is a limited potential for archeological concerns in this compartment.

**Special Management Designations or Considerations:**

None

**Watershed and Fisheries Considerations:**

Most of this compartment is in the CLMMU. The northeast portion, however, is in the NLHMU. This portion is in the Maple River watershed, within the Cheboygan River watershed. There are no water bodies in this compartment, so Fisheries has no concerns at this time.

**Wildlife Habitat Considerations:**

This compartment consists mostly of upland hardwoods with a few smaller aspen inclusions. The hardwoods are going to be treated to provide structural diversity within the stand. A large stand of hardwoods is going to be treated for salvage of ash and beech due to Beech Bark Disease and Emerald Ash Bore. Some ash will be marked to leave for future snags and smooth barked beech will be marked to leave for potential resistance and future mast production. One stand of aspen and some small inclusions of hardwoods with a component of cherry will be clearcut to provide early successional habitat which will benefit white-tailed deer, ruffed grouse, American woodcock, and wild turkey.

**Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of coarse-textured glacial till and minor glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 800 and 1,000 feet. The Devonian Detroit River Group subgroups below the glacial drift. The nearest gravel pit is located in Section 17 and potential appears to be good. The nearest oil and gas production, the Antrim Shale gas play, is located 27 miles to the southeast. The Compartment is leased for oil and gas development for the Collingwood Formation.

**Vehicle Access:**

Good access to most of the compartment.

**Survey Needs:**

None

**Recreational Facilities and Opportunities:**

ORV Route and Snowmobile Trail.

**Fire Protection:**

Very little potential for a large wildfire.

**Additional Compartment Information:**

The following reports from the Inventory are attached:

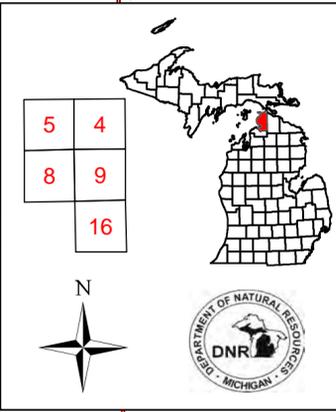
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

The following information is displayed, where pertinent, on the attached compartment maps:

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatment Map

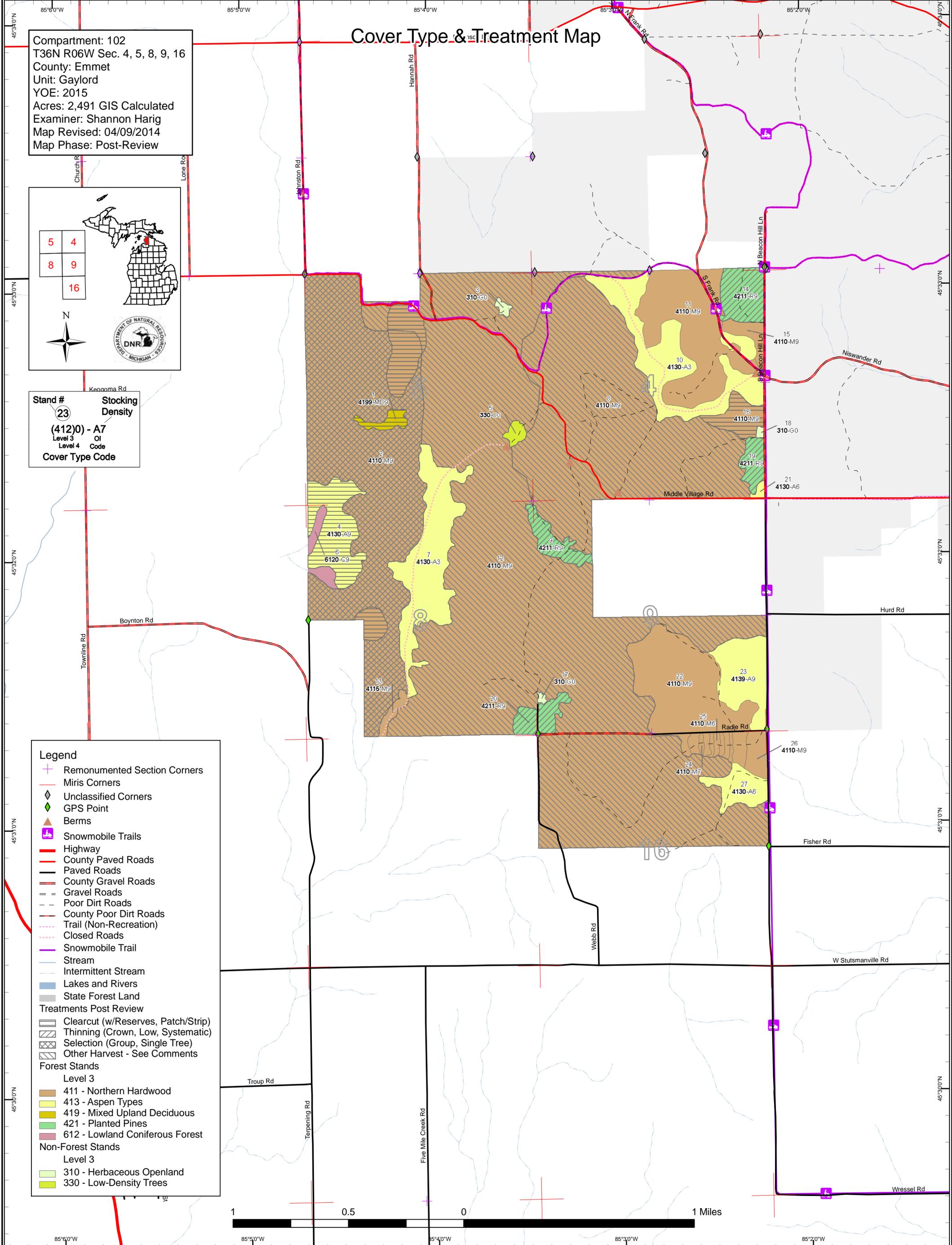
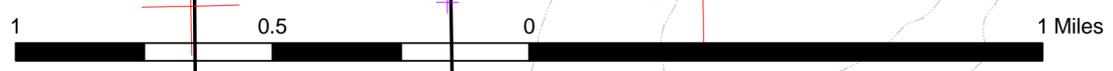
Compartment: 102  
 T36N R06W Sec. 4, 5, 8, 9, 16  
 County: Emmet  
 Unit: Gaylord  
 YOY: 2015  
 Acres: 2,491 GIS Calculated  
 Examiner: Shannon Harig  
 Map Revised: 04/09/2014  
 Map Phase: Post-Review



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

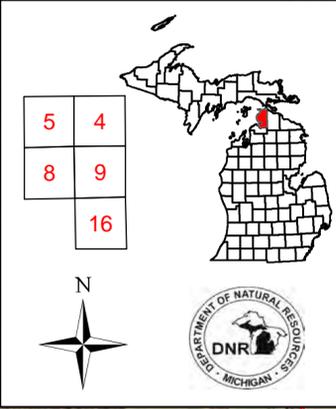
**Legend**

- ✚ Remonumented Section Corners
- Miris Corners
- ◇ Unclassified Corners
- ◆ GPS Point
- ▲ Berms
- 🚙 Snowmobile Trails
- 🛣 Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trail
- Stream
- Intermittent Stream
- 🌊 Lakes and Rivers
- 🌲 State Forest Land
- Treatments Post Review**
- ▨ Clearcut (w/Reserves, Patch/Strip)
- ▨ Thinning (Crown, Low, Systematic)
- ▨ Selection (Group, Single Tree)
- ▨ Other Harvest - See Comments
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
- 310 - Herbaceous Openland
- 330 - Low-Density Trees



# Stand Boundary Map

Compartment: 102  
 T36N R06W Sec. 4, 5, 8, 9, 16  
 County: Emmet  
 Unit: Gaylord  
 YOE: 2015  
 Acres: 2,491 GIS Calculated  
 Examiner: Shannon Harig  
 Map Revised: 03/18/2014  
 Map Phase: Post-Review

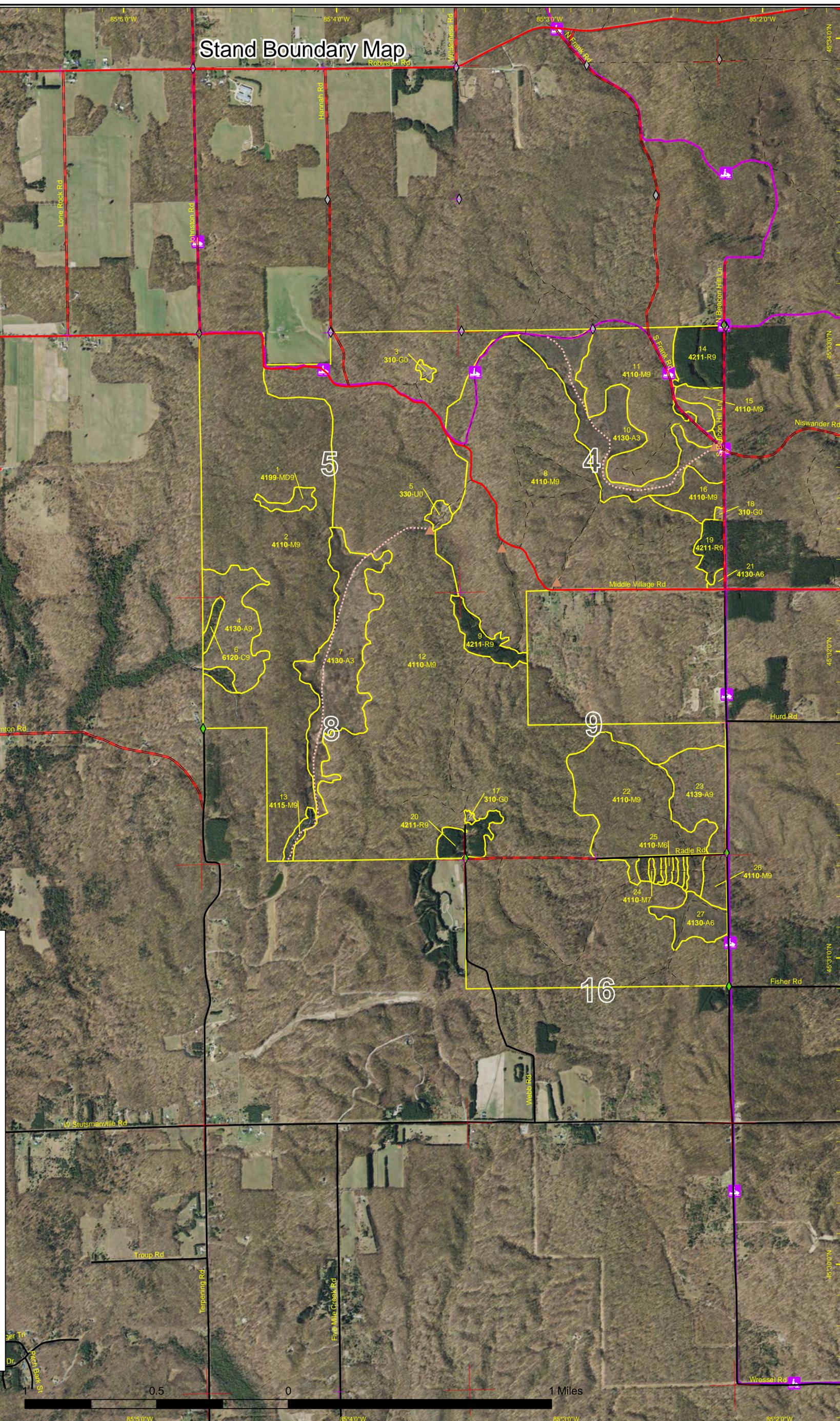


**Stand #**  
 23

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

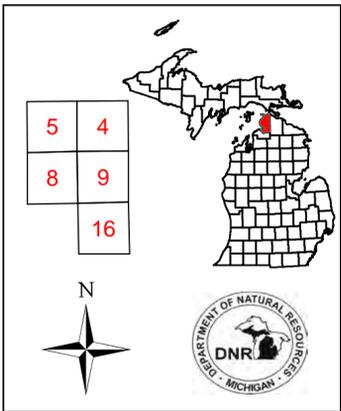
## Legend

- ✚ Remonumented Section Corners
  - Miris Corners
  - ◇ Unclassified Corners
  - ◆ GPS Point
  - ▲ Berms
  - 🚙 Snowmobile Trails
  - 🛣 Highway
  - 🛣 County Paved Roads
  - 🛣 Paved Roads
  - 🛣 County Gravel Roads
  - 🛣 Gravel Roads
  - 🛣 Poor Dirt Roads
  - 🛣 County Poor Dirt Roads
  - 🛣 Trail (Non-Recreation)
  - 🛣 Closed Roads
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  - 🌊 Stream
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- Non-Forest Stands**
- Level 3
  - 310 - Herbaceous Openland
  - 330 - Low-Density Trees



# Special Conservation Areas & Site Conditions Map

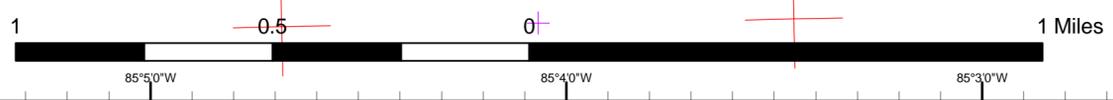
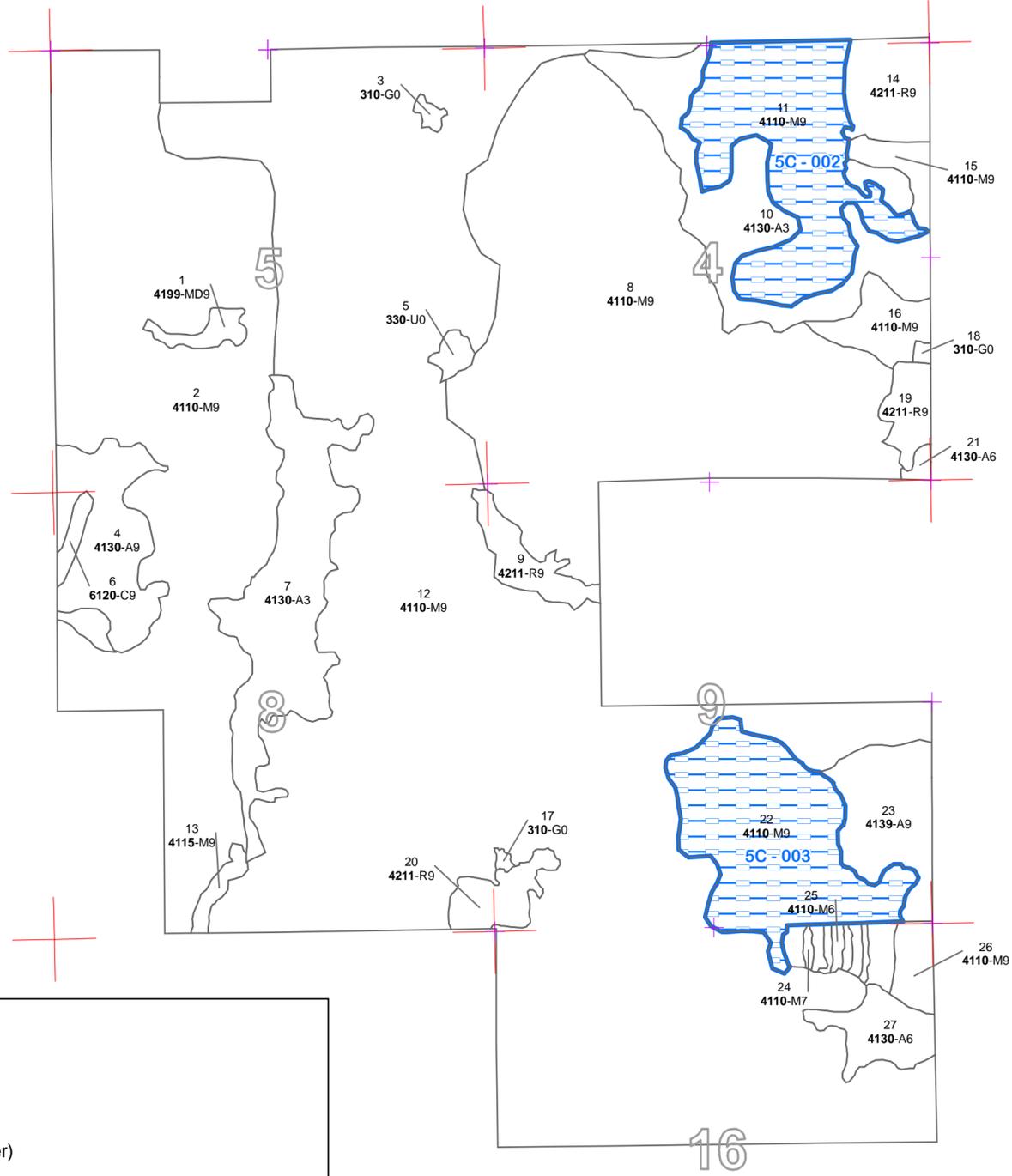
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 Map Revised: 03/18/2014  
 Map Phase: Post-Review



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

**Legend**

- Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Site Condition Type**
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Dedicated Special Conservation Areas**
- Critical Coastal Habitat (Piping Plover)
- State Heritage Routes-Scenic (MDOT Designation)





Report 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	0	176	21	0	45	0	0	0	49	0	0	0	0	0	290
Cedar	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Low-Density Trees	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7
Northern Hardwood	0	0	14	0	0	0	0	0	1013	1076	0	0	0	0	2103
Red Pine	0	0	0	0	0	73	0	0	0	0	0	0	0	0	73
<b>Total</b>	<b>9</b>	<b>176</b>	<b>34</b>	<b>0</b>	<b>45</b>	<b>73</b>	<b>0</b>	<b>0</b>	<b>1069</b>	<b>1076</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2491</b>



## Report 2 – Proposed Treatment Summaries

**Gaylord Mgt. Unit**  
**Year of Entry 2015**

**Compartment 102**  
**Total Compartment Acres: 2,491**

### Acres by Treatment Type

Commercial Harvest - 1982    Tree Planting - 0                      Other - 0  
 Habitat Cut - 0                      Opening Maintenance - 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>
<b>Aspen Types</b>	49	0	0	0	0	0	49
<b>Mixed Upland Deciduous</b>	7	0	0	0	0	0	7
<b>Northern Hardwood</b>	59	367	0	0	0	1426	1853
<b>Planted Pines</b>	0	0	0	0	73	0	73
<b>Total</b>	<b>115</b>	<b>367</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>1426</b>	<b>1982</b>



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	52102001-Cut	6.8	4199 - Other Mixed Upland Deciduous	High Density Log	88	141-170	Harvest	Clearcut	4130 - Aspen	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Clearcut with no retention due to small size of harvest.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> A fully stocked aspen/hardwood mix of regeneration will be acceptable. Regeneration survey.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
2	52102002-BC Regen	20.2	4110 - Sugar Maple Association	High Density Log	88	111-140	Harvest	Clearcut	4112 - Maple, Beech, Cherry Association	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Clearcut with no retention as there will be black cherry and beech scattered throughout the remainder of the stand. Take care to protect										
<u>Specs:</u> recreational trail.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Moderate to well stocked black cherry and other northern hardwood regeneration is acceptable. Regeneration survey.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
2	52102002- Hwd Mark	366.8	4110 - Sugar Maple Association	High Density Log	88	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Single tree harvest reducing BA to 80. Maintain species diversity. Retain den trees and any beech showing signs of resistance leaving										
<u>Specs:</u> approximately 1 to 2 beech/ash trees per acre. Look for opportunities to exclude areas with lower densities of ash and beech. Take care to										
<u>Other</u> protect recreational trail.										
<u>Comments:</u>										
<u>Next</u> Moderate to well stocked northern hardwood regeneration in canopy gaps is acceptable. Regeneration survey.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 07/25/2013										
2	52102002-PB CC	8.6	4110 - Sugar Maple Association	High Density Log	88	111-140	Harvest	Clearcut	4137 - Aspen, Birch	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Clearcut to regenerate paper birch and aspen. No retention due to small size. Take care to protect recreational trails.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> Moderate to well stocked aspen, paper birch and northern hardwood regeneration is acceptable. Regeneration survey.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 07/25/2013										
4	52102004-Cut	48.9	4130 - Aspen	High Density Log	80	111-140	Harvest	Clearcut with Reserves	4130 - Aspen	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Clearcut with reserves. Concentrate retention along the west side of the stand where moist soil may make harvest difficult.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> A well stocked stand of aspen and hardwood regeneration will be acceptable. Regeneration survey.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	<b>52102008-Salvage</b>	391.0	4110 - Sugar Maple Association	High Density Log	84	81-110	Harvest	Other - Specify in Comments	4110 - Sugar Maple Association	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Cut white ash and beech. Retain den trees and any beech showing signs of resistance leaving approximately 1 to 2 beech/ash trees per acre. Take care to protect recreational trail.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u> Regeneration survey.										
<u>Proposed Start Date:</u> 07/25/2013										
9	<b>52102009-RP Mark</b>	16.7	42110 - Planted Red Pine	High Density Log	55	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Mark to reduce BA to approximately 100 to 120.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u>										
<u>Proposed Start Date:</u> 10/01/2014										
12	<b>52102012-BC regen</b>	11.8	4110 - Sugar Maple Association	High Density Log	93	81-110	Harvest	Clearcut	4112 - Maple, Beech, Cherry Association	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Clearcut with no retention as there will be black cherry and beech scattered throughout the remainder of the stand. Take care to protect recreational trail.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u> Moderate to well stocked black cherry and other northern hardwood regeneration is acceptable. Regeneration survey.										
<u>Proposed Start Date:</u> 10/01/2014										
12	<b>52102012-Salvage</b>	1035.3	4110 - Sugar Maple Association	High Density Log	93	81-110	Harvest	Other - Specify in Comments	4110 - Sugar Maple Association	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Cut white ash and beech. Retain den trees and any beech showing signs of resistance leaving approximately 1 to 2 beech/ash trees per acre.										
<u>Specs:</u> Take care to protect recreational trail.										
<u>Other Comments:</u>										
<u>Next Steps:</u> Regeneration survey.										
<u>Proposed Start Date:</u> 07/25/2013										
14	<b>52102014-RP Mark</b>	27.7	42110 - Planted Red Pine	High Density Log	56	200+	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
<u>Prescription</u> Mark to reduce BA to approximately 100 to 120. Take care to protect recreational trail.										
<u>Specs:</u>										
<u>Other Comments:</u>										
<u>Next Steps:</u>										
<u>Proposed Start Date:</u> 10/01/2014										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	52102016-BC Regen	18.9	4110 - Sugar Maple Association	High Density Log	92	81-110	Harvest	Clearcut with Reserves	4112 - Maple, Beech, Cherry Association	Fld. Tr. Bdy. - Incomplete

Prescription Clearcut stand to regenerate black cherry and maple. Leave retention in pockets. Take care to protect recreational trail.

Specs:

Other

Comments:

Next Moderate to well stocked black cherry and maple regeneration is acceptable. Regeneration survey.

Steps:

Proposed

Start Date: 10/01/2014

19	52102019-RP Mark	12.8	42110 - Planted Red Pine	High Density Log	55	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
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Prescription Mark to reduce BA to approximately 100 to 120 BA. Take care to protect recreational trail.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

20	52102020-RP Mark	16.1	42110 - Planted Red Pine	High Density Log	55	200+	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
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Prescription Mark to reduce BA to approximately 100 to 120.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

**Total Treatment  
Acreage Proposed: 1981.5**



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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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#Type! #Type!

Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Proposed  
Start Date: #Type!

Limiting Factor

**Total Treatment**  
**Acreage Proposed: 0.0**

## Report 5 – Site Conditions

Gaylord Mgt. Unit  
Shannon Harig : Examiner

Compartment 102  
Year of Entry 2015

### Availability for Management

Availability for Management			Dominant Site Conditions		
Total Acres	Acres Available	Acres Not Available		No	5C
290	290		<b>Aspen</b>	290	
9	9		<b>Cedar</b>	9	
7	7		<b>Mixed Upland Deciduous</b>	7	
2103	2103		<b>Northern Hardwood</b>	1,898	205
73	73		<b>Red Pine</b>	73	
2,482	2,482		Total Forested Acres	2,277	205
	100%		Relative Percent		

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	103				
<b>Comments:</b>							
003	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	102				
<b>Comments:</b>							



### Report 6 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
<b>Comments</b>				



### Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

\* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

<b>Conservation Area</b>	<b>Type</b>	<b>Description</b>
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	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4199 - Other Mixed Upland Deciduous	High Density Log	6.8	88	141-170	Most of the stand looks healthy, a few BAM showing signs of decline. Cored a 64 year old BAM and 53 year old Quaking Aspen.
2	4110 - Sugar Maple Association	High Density Log	395.6	88	111-140	A lot of White Ash and Beech in the stand. Heavy scale throughout the stand and beginning to show a lot of beech mortality. No sign of EAB yet.  Paper Birch 64 yrs old
4	4130 - Aspen	High Density Log	48.9	80	111-140	Aspen looks healthy.
6	6120 - Lowland Cedar	High Density Log	8.8	106	171-200	Heavy blowdown.
7	4130 - Aspen	High Density Sapling	89.1	15		Very nice aspen and hardwood regen
8	4110 - Sugar Maple Association	High Density Log	391.0	84	81-110	Harvested in 1997. A lot of beech scale present.
9	42110 - Planted Red Pine	High Density Log	16.7	55	171-200	Heavy hardwood understory.
10	4130 - Aspen	High Density Sapling	86.7	16		Great regeneration. Black Cherry regen looks good and is keeping up with aspen.
11	4110 - Sugar Maple Association	High Density Log	102.7	85	111-140	Pocket of poor cherry in the north end of the stand.
12	4110 - Sugar Maple Association	High Density Log	1,047.1	93	81-110	Some nice 2' maple regen in the middle of the stand. A lot of raspberry and blackberry throughout the stand.
13	4115 - Y.Birch, Hemlock NH	High Density Log	5.4	91	81-110	Fairly healthy hemlock. Small stream running through the stand.
14	42110 - Planted Red Pine	High Density Log	27.7	56	200+	Good quality pine
15	4110 - Sugar Maple Association	High Density Log	10.8	89	81-110	
16	4110 - Sugar Maple Association	High Density Log	18.9	92	81-110	Cherry overstory with pole size sugar maple and red maple.
19	42110 - Planted Red Pine	High Density Log	12.8	55	171-200	Pine is healthy. Canopy is closed in.
20	42110 - Planted Red Pine	High Density Log	16.1	55	200+	Very little understory, nice pine.
21	4130 - Aspen	High Density Pole	2.3	41	141-170	Good looking aspen. A little sugar maple in the understory.

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Gaylord Mgt. Unit

## Report 8 – Forested Stands

Compartment: 102  
Year of Entry: 2015

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
<b>22</b>	4110 - Sugar Maple Association	High Density Log	102.1	89	111-140	Good quality stand. Beech is full of scale.
<b>23</b>	4139 - Aspen, Mixed Deciduous	High Density Log	42.3	47	111-140	Aspen hardwood mix. Some aspen is showing signs of decline and older maple is of poor quality. Very nice multi aged maple regen in a lot of the stand.
<b>24</b>	4110 - Sugar Maple Association	Low Density Log	4.9	94	1-50	Very heavy blackberry crop. Almost no Black Cherry regen and only a little poor quality maple regen.
<b>25</b>	4110 - Sugar Maple Association	High Density Pole	13.7	25	51-80	Very good Black Cherry regen.
<b>26</b>	4110 - Sugar Maple Association	High Density Log	11.1	89	81-110	
<b>27</b>	4130 - Aspen	High Density Pole	20.7	24	81-110	Good looking aspen regen with some nice black cherry regen scattered throughout.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	310 - Herbaceous Openland	2.1	No	Unspecified	
5	330 - Low-Density Trees	4.4	No	Unspecified	
17	310 - Herbaceous Openland	1.0	No	Unspecified	
18	310 - Herbaceous Openland	1.1	No	Unspecified	