



# Compartment Review Presentation

Gaylord Forest Management Unit

Compartment 160

Entry Year 2016

Acreage: 789

County Cheboygan

Management Area: Cheboygan Lake Plain

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**Revision Date:** 04/11/2014

**Stand Examiner:** Don Stacks

**Legal Description:**

T36N R02W Sections 5 - 8.

**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:**

Rubicon sand is found on the flat upland areas, with Lupton muck and Tawas peat existing on the lowland areas along Mullet Creek.

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

Residential areas can be found on all sides adjacent to the compartment boundary. Several family farms are located nearby.

**Unique Natural Features:**

Red-shouldered hawk, Cooper's hawk, bald eagle, loon, Woodland vole, Michigan monkey flower, Goblin moonwort, and Limestone oak fern have been recorded in or near Compartment 160. Potential exists for osprey, great blue heron rookery, calypso orchid, and ram's head orchid.

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

No Archeological, Historical, or Cultural Features known.

**Special Management Designations or Considerations:**

None.

**Watershed and Fisheries Considerations:**

This compartment contains a large portion of Mullett Creek, a tributary to Mullett Lake. Mullett Creek is a designated trout stream with a brook trout population. Given beaver activity in the area, early successional species should be discouraged near the stream. A buffer (no clear-cut) should be maintained next to the river. Proposed forest management activities are appropriate for the protection of this river.

**Wildlife Habitat Considerations:**

Treatment in this compartment will maintain age class diversity in aspen while creating early successional habitat benefiting deer, grouse, and woodcock. Oak clumps will be left for hard mast production.

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

Surface sediments consist of lacustrine (lake) sand and gravel, and minor dune sand. The glacial drift thickness varies between 100 and 400 feet. The Devonian Traverse Group, Bell Shale and Dundee Limestone subcrop below the glacial drift. The Traverse and Dundee are quarried for stone and cement products. A gravel pit is located in Section 8 and the upland areas should have good potential. The nearest oil and gas production, the Niagaran reef trend, is located 18 miles to the southeast. This area is leased for potential Collingwood Formation development.

**Vehicle Access:**

Access to most of the compartment can be gained by several county and forest trail roads.

**Survey Needs:**

None currently.

**Recreational Facilities and Opportunities:**

No designated trails exist within, or adjacent to, Compartment 160.

**Fire Protection:**

Mullet Township VFD is located 3 miles to the south of the compartment. The Indian River Field Office is located 8 miles to the south.

**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**

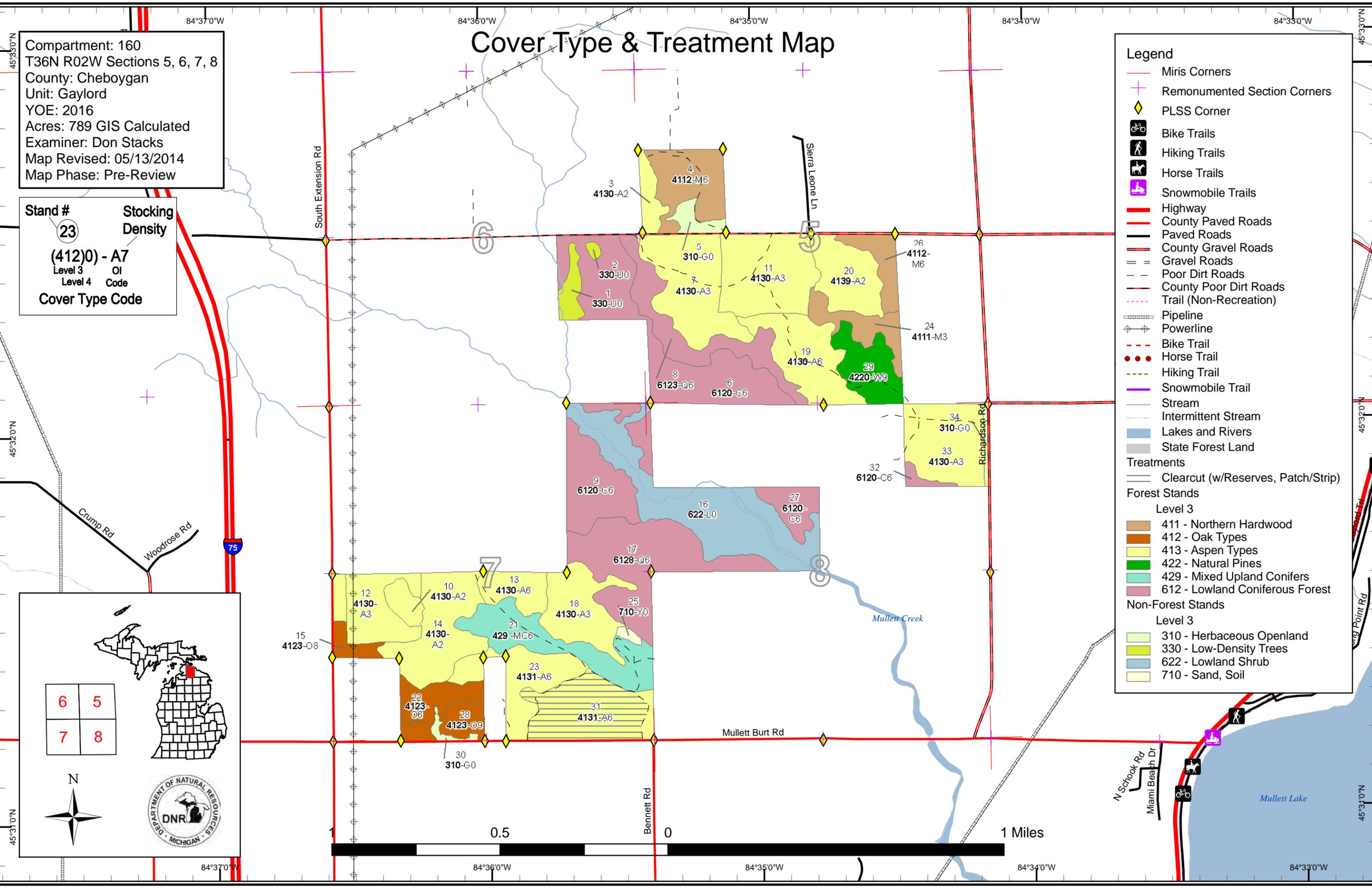
# Cover Type & Treatment Map

Compartment: 160  
 T36N R02W Sections 5, 6, 7, 8  
 County: Cheboygan  
 Unit: Gaylord  
 YOE: 2016  
 Acres: 789 GIS Calculated  
 Examiner: Don Stacks  
 Map Revised: 05/13/2014  
 Map Phase: Pre-Review

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

**Legend**

- Miris Corners
- Remonumented Section Corners
- PLSS Corner
- Bike Trails
- Hiking Trails
- Horse Trails
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Pipeline
- Powerline
- Bike Trail
- Horse Trail
- Hiking Trail
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land
- Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Forest Stands
- Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- Non-Forest Stands
- Level 3
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 710 - Sand, Soil




# Stand Boundary Map

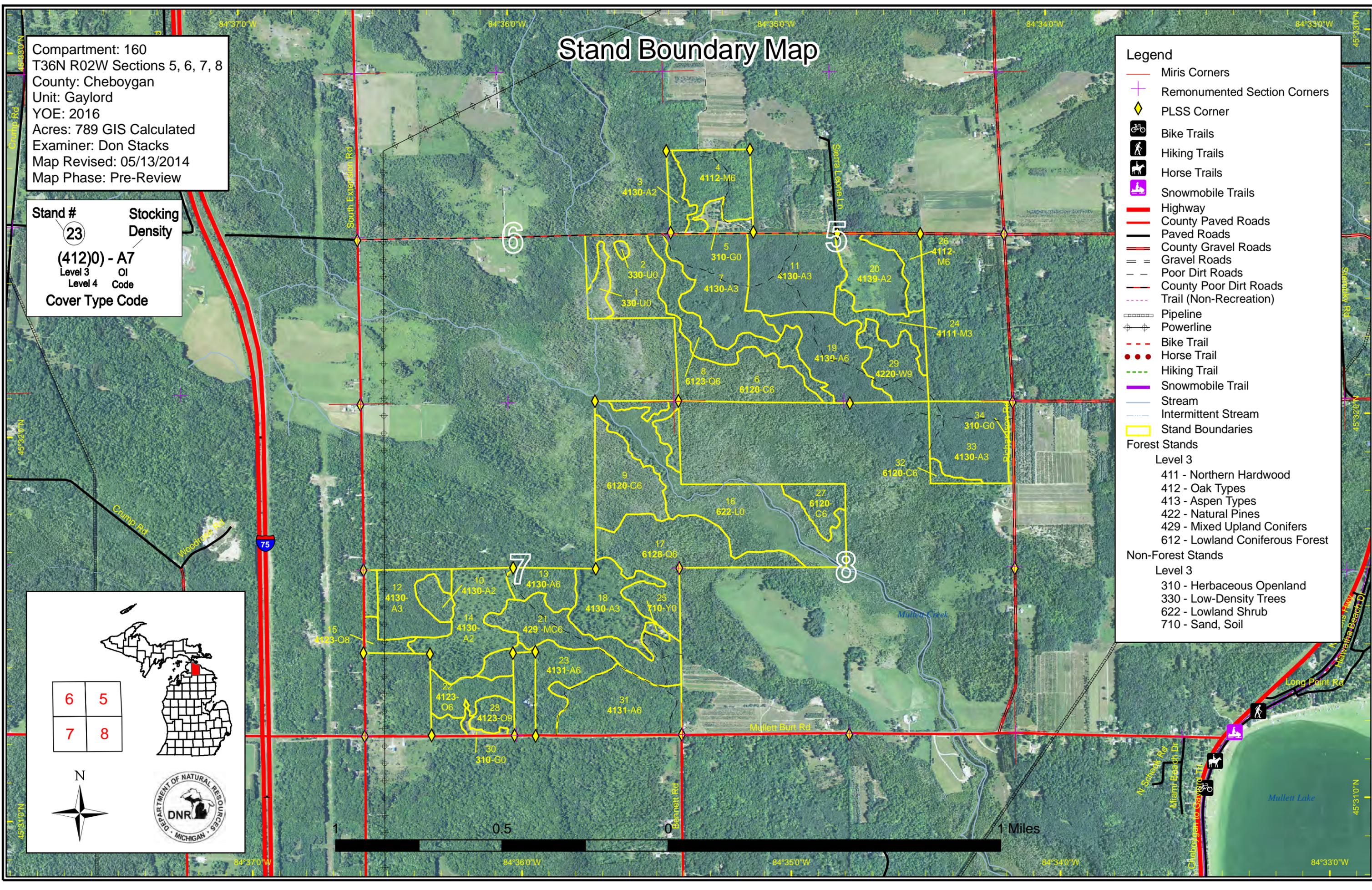
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 T36N R02W Sections 5, 6, 7, 8  
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7	8

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# Special Conservation Areas & Site Conditions Map

Compartment: 160  
 T36N R02W Sections 5, 6, 7, 8  
 County: Cheboygan  
 Unit: Gaylord  
 YOE: 2016  
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 Examiner: Don Stacks  
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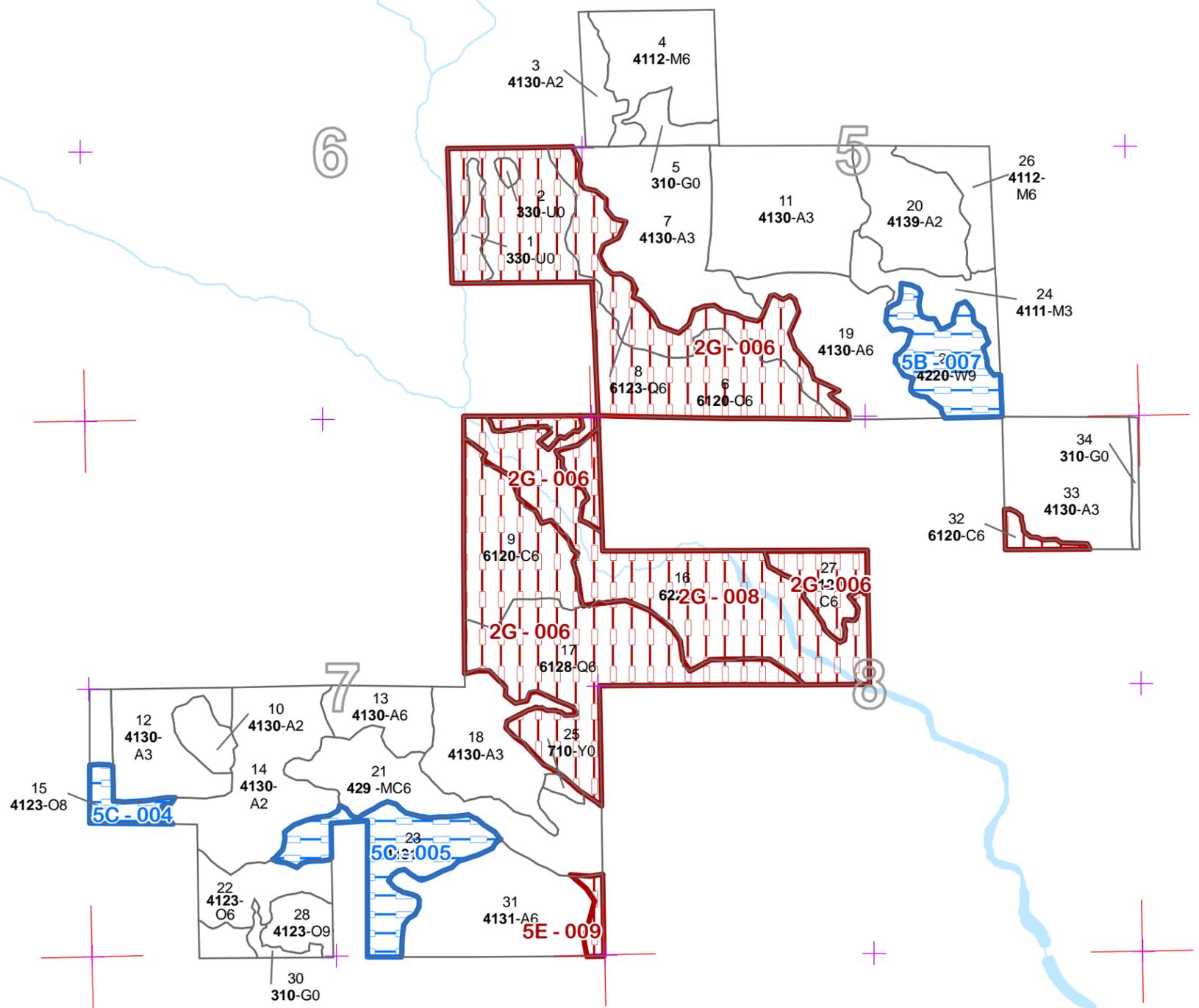
**Stand #**  
 23  
**Stocking Density**  
 (412)0 - A7  
 Level 3 OI  
 Level 4 Code  
**Cover Type Code**

**Legend**

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
  - Available w/ Constraints (Factor - Number)
  - Unavailable (Factor - Number)
- Site Condition Type
  - Available Factors W/ Constraints
    - 5B: Retention for regeneration purposes
    - 5C: Delay treatment for age/size class diversity or exceptional site quality
  - Unavailable Factors
    - 2G: Too wet (sensitive soils, does not include access issues)
    - 5E: Long Term Retention
- Designated Special Conservation Areas
  - Cold Water Streams
  - Cold Water Lakes

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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	101	42	105	32	40	0	40	0	0	0	0	0	0	0	362
Cedar	0	0	0	0	0	0	0	0	29	0	85	0	0	0	115
Herbaceous Openland	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Low-Density Trees	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Conifers	0	0	0	0	0	0	28	0	56	0	0	0	0	0	85
Lowland Shrub	69	0	0	0	0	0	0	0	0	0	0	0	0	0	69
Northern Hardwood	0	0	0	14	0	0	0	26	11	0	0	0	0	0	52
Oak	0	0	0	0	0	0	26	0	6	0	0	0	0	0	32
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Upland Conifers	0	0	0	0	35	0	0	0	0	0	0	0	0	0	35
White Pine	0	0	0	0	0	0	0	0	0	0	20	0	0	0	20
<b>Total</b>	<b>191</b>	<b>42</b>	<b>105</b>	<b>46</b>	<b>75</b>	<b>0</b>	<b>94</b>	<b>26</b>	<b>102</b>	<b>0</b>	<b>105</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>789</b>



## Report 2 – Proposed Treatment Summaries

**Gaylord Mgt. Unit**  
**Year of Entry 2016**

**Compartment 160**  
**Total Compartment Acres: 789**

### Acres by Treatment Type

Commercial Harvest - 37	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>	37	0	0	0	0	0	37
<b>Total</b>	37	0	0	0	0	0	37

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	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31	52160031- CCutw/Res	37.3	4131 - Aspen, Oak	High Density Pole	62	81-110	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription: Cut everything two inches and greater at DBH, except hemlock and white pine. Also, mark to cut a few red oak in areas where stocking levels allow, to encourage some red oak regen. Also, try to protect any oak regen. Leave a retention area unharvested between private residence and two-track road in the southeast corner of the stand.

Other Comments: Stand is a mix of mostly BTA poletimber, red oak sawtimber, and beech poletimber, with lesser amounts of red maple and sugar maple poletimber. A few areas of dense beech, sugar maple, and red oak regen are present where the BA is lower and the canopy is more open. The age of the red oak in the stand is about 90. Stand is adjacent to private residences and a well-traveled county road.

Next Steps: Regen survey. Post-harvest regen consisting of a mix of bigtooth aspen, red oak, and northern hardwood will be acceptable. Stem densities will most likely be in the medium range due to the slightly lower BA that is presently found within the stand.

Proposed Start Date: 10/01/2015

**Total Treatment  
Acreage Proposed: 37.3**



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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  
Don Stacks : Examiner

Compartment 160  
Year of Entry 2016

### Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5E	5C	5B	2G
	Available	Not Available						
361	358	3	<b>Aspen</b>	331	3	27		
114		114	<b>Cedar</b>					114
84		84	<b>Lowland Conifers</b>					84
52	52		<b>Northern Hardwood</b>	52				
32	32		<b>Oak</b>	26		6		
35	35		<b>Upland Conifers</b>	35				
20	20		<b>White Pine</b>				20	
697	496	201	Total Forested Acres	443	3	33	20	198
	71%	29%	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
004	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	6				
<b>Comments:</b>							
005	Available	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	27				
<b>Comments:</b>							
006	Not Available	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	207	3H: Deer Wintering Areas			
<b>Comments:</b>							

# Report 5 – Site Conditions

Gaylord Mgt. Unit  
Don Stacks : Examiner

Compartment 160  
Year of Entry 2016

007	Available	5B: Maintain for regeneration purposes	20	
Comments:				
008	Not Available	2G: Too wet (sensitive soils, does not include access issues)	70	3J: Water quality / BMPs (stream, river, or lake)
Comments:				
009	Not Available	5E: Long Term Retention	3	
Comments:				



### 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 – 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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.



Stand	Gaylord Mgt. Unit		Report 8 – Forested Stands			Compartment: 160 Year of Entry: 2016
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
3	4130 - Aspen	Medium Density	7.8	6		Regenerating big-toothed aspen with lesser amounts of red maple, paper birch, and balsam fir saps from 2007 final harvest. A few scattered white pine, hemlock, and red oak sawlog/poletimber trees were left uncut during the last harvest. Scattered clumps of white pine saps are also present.
4	4112 - Maple, Beech, Cherry Association	High Density Pole	26.4	70	51-80	Mixed hardwood, mostly poletimber, with sparse scattered red oak, big-toothed aspen, hemlock, and white pine.
6	6120 - Lowland Cedar	High Density Pole	70.9	100	141-170	Stand consists of mostly cedar poletimber, but there is a fair amount of cedar sawtimber present also. Lesser amounts of scattered balsam fir and black spruce poletimber, and overmature bigtooth aspen sawtimber. Poorly drained soil, standing water present.
7	4130 - Aspen	High Density Sapling	42.4	17		Fairly dense mixed aspen regen from 1996 final harvest. Red maple saps and lesser amounts of balsam fir saps also present. Scattered white pine sawtimber/poletimber was left uncut during the last harvest. Adjacent to seasonal county road and cedar swamp.
8	6123 - Lowland Fir	High Density Pole	28.5	60	81-110	Stand consists of a long, narrow strip of mixed lowland species lying between dense cedar stand to the west and upland aspen to the east.
9	6120 - Lowland Cedar	High Density Pole	29.2	80	111-140	Cedar swamp with lesser amounts of balsam fir, black spruce, and tamarack present.
10	4130 - Aspen	Medium Density	6.8	26		Aspen regen from 1987 final harvest. Stand is starting to transition from saps to small poletimber. Stocking density in this stand is not as high as stand adjacent to the west.
11	4130 - Aspen	High Density Sapling	41.6	26		Mixed aspen/hardwood regen from 1987 final harvest. Sparse, scattered balsam fir saps also present.
12	4130 - Aspen	High Density Sapling	22.5	26		Well-stocked stand of aspen regen from 1987 final harvest. In transition from saps to poletimber.
13	4130 - Aspen	High Density Pole	13.2	40	51-80	Big-toothed aspen poletimber with lesser amounts of scattered red maple and red oak poletimber. Sparse scattered white pine and balsam fir in understory.
14	4130 - Aspen	Medium Density	41.6	6		Medium stocked aspen regen from 2007 final harvest. Sparse overstory of red oak and white pine also present.
15	4123 - Red Oak	Medium Density Log	5.8	80	51-80	Small stand of residual red oak sawtimber/poletimber from aspen final harvest in 2007. Adjacent to county road and residences. Sparse subcanopy of aspen, white pine, and red maple.
17	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	56.2	80	111-140	Mixed swamp conifers with sparse, overmature aspen component. Adjacent to Mullet Creek floodplain and private ownership.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4130 - Aspen	High Density Sapling	27.9	6		Well-stocked stand of big-toothed aspen regen from 2007 final harvest. Sparse overstory of red oak and white pine sawtimber/poletimber. Adjacent to cedar swamp.
19	4130 - Aspen	High Density Pole	32.3	38	51-80	Big-toothed aspen poletimber/saps from 1975 final harvest. Lesser amounts of red maple, beech, sugar maple saps/poles. Sparse, scattered balsam fir and white pine saps/poles present also.
20	4139 - Aspen, Mixed Deciduous	Medium Density	24.2	6		Regenerating mixed aspen and mixed hardwood saps from 2007 final harvest. A few scattered white pine, hemlock, and red oak sawlogs/poletimber trees were left uncut during this harvest. Sparse balsam fir and white pine saps are also present.
21	429 - Mixed Upland Conifers	High Density Pole	34.9	48	51-80	Stand consists of a long, narrow stand with a mix of white pine, red pine, big-toothed aspen, and red oak. A mix of various size classes make up the white pine, red pine, and red oak. The aspen is mostly in the poletimber size. A dense understory of white pine and hemlock is starting to develop.
22	4123 - Red Oak	High Density Pole	14.2	65	51-80	Stand consists of mostly red oak poletimber/sawtimber with lesser amounts of BTA and beech poletimber. Sparse scattered white pine sawlogs are also present.
23	4131 - Aspen, Oak	High Density Pole	27.2	48	51-80	Stand consists of a mix of mostly BTA poletimber and red oak poletimber/sawtimber. Lesser amounts of mixed northern hardwood and quaking aspen poletimber are also present. Sparse, scattered older BTA sawtimber can also be found in this stand. Adjacent to private residence and county road. Scattered white pine salogs and a small group of red pine trees are also present.
24	4111 - S.Maple, Hard Mast Association	High Density Sapling	14.2	30		Encroaching hardwood saps and small poletimber into an old grass opening. Scattered balsam fir poletimber and white pine sawtimber also present.
26	4112 - Maple, Beech, Cherry Association	High Density Pole	11.3	85	51-80	Small stand of northern hardwood, adjacent to private residence and county road. Consists mostly of sugar maple poletimber and beech sawtimber. Lesser amounts of red maple present also.
27	6120 - Lowland Cedar	High Density Pole	11.6	100	141-170	Lowland cedar, with lesser amounts of balsam fir and black spruce. Mostly poletimber.
28	4123 - Red Oak	High Density Log	11.5	65	51-80	Lesser stocked red oak sawtimber stand with a sparse aspen poletimber component. A few scattered white pine sawlog trees are present also. Adjacent to county road and private ownership.
29	42200 - Natural White Pine	High Density Log	19.9	100	51-80	Small stand of mostly white pine sawtimber/boltwood, and lesser amounts of poletimber. Fairly dense understory of hardwood, with lesser amounts of aspen regen present also.

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Gaylord Mgt. Unit

## Report 8 – Forested Stands

Compartment: 160  
Year of Entry: 2016

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4131 - Aspen, Oak	High Density Pole	40.2	62	81-110	Stand is a mix of mostly BTA poletimber, red oak sawtimber, and beech poletimber, with lesser amounts of red maple and sugar maple poletimber. A few areas of dense beech, sugar maple, and red oak regen are present where the BA is lower and the canopy is more open. The age of the red oak in the stand is about 90.
32	6120 - Lowland Cedar	High Density Pole	2.8	100	141-170	North edge of cedar swamp. Poorly drained soil, standing water present.
33	4130 - Aspen	High Density Sapling	34.4	27		Mixed aspen/hardwood regen from 1986 final harvest. Stand in transition from saps to poletimber.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	3303 - Mixed Low Density Trees	6.7	No	Unspecified	Significant cedar windthrow from about 10 - 12 years ago. Sparse, scattered saplings consisting of paper birch, balsam fir, black spruce, and cedar. Very wet site.
2	3303 - Mixed Low Density Trees	1.1	No	Unspecified	Small cedar windthrow stand consisting of sparse scattered saps of paper birch, balsam fir, black ash, and cedar.
5	3102 - Grass	6.0	No	Unspecified	Grass stand with encroaching hardwood saps and scattered, sparse shrubs.
16	6229 - Mixed lowland shrub	69.5	No	Unspecified	Floodplain of Mullet Creek consisting of mixed lowland shrubs.
25	710 - Sand, Soil	1.4	No	Unspecified	Sand with a few encroaching aspen/hardwood trees.
30	3102 - Grass	2.3	No	Unspecified	Small grass opening adjacent to county road. Was used as a landing area for the timber harvest in 2007. Also used to stockpile topsoil by Cheboygan County Road Commission.
34	3102 - Grass	2.3	No	Unspecified	Grass strip between aspen regen and county road. Overhead powerline.