



COMPARTMENT REVIEW PRESENTATION

GAYLORD FOREST MANAGEMENT UNIT

COMPARTMENT: 154

ENTRY YEAR: 2012

ACREAGE: 2,345

COUNTY: Emmet

Revision Date: 04/06/2010

Stand Examiner: Shannon Harig

Legal Description: T34N R03W Sec. 22-27, 36

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 topography in this compartment consists of moderate to steep slopes. Soils are well drained with the exception of the flood plains along the Sturgeon River. Soils are mostly Rubicon and Kalkaska Sands and Blue Lake Loamy Sand.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State ownership is fairly contiguous. Private ownership is mostly larger parcels with few residences. This area is primarily used for various recreational pursuits.

Unique, Natural Features:

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations: This compartment contains portions of Berry Creek (a tributary to Pickerel Lake), and the Sturgeon River, both of which are in the Cheboygan River watershed. The standard 100-foot no clear-cut buffer should be maintained adjacent to Berry Creek in Stand 34. In Stand 4, there should be no cutting within 25 feet of the river. Other treatments prescribed for this compartment are selection cuts, and are appropriate for protection of these rivers.

Wildlife Habitat Considerations: This compartment consists mainly of upland hardwoods, aspen, red pine and white pine with some lowland area along the Sturgeon River. This lowland area provides habitat for various furbearers and amphibians. In the upland hardwoods, stands 5, 18, 21, 38 are going to be treated which will provide to structural diversity to these stands. In addition, oak is going to be left in stand 48 for hard mast production. Stand 34 is going to be final harvested and allowed to convert to early successional habitat. This compartment contains a wide range of wildlife, including white-tailed deer, grouse, woodcock, wild turkey, and the occasional elk.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact outwash sand and gravel. The glacial drift thickness varies between 200 and 600 feet. The Devonian Antrim Shale and Traverse Limestone subcrop below the glacial drift. The Antrim is quarried for cement products and the Traverse for limestone, elsewhere in the state. Gravel pits are located on the uplands in the compartment and the compartment has good gravel potential. The nearest oil and gas production, the Antrim Shale gas play, is located 9 miles to the south in Otsego County. There is limited oil and gas potential for the Antrim Shale in the area, but most of the Compartment is leased for development.

Vehicle Access: Good access to most of the compartment.

Survey Needs: None

Recreational Facilities and Opportunities: There is a State Forest Campground, a boating access site and a multiple use recreational trail in this compartment as well as snowmobile and motorcycle trails.

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**

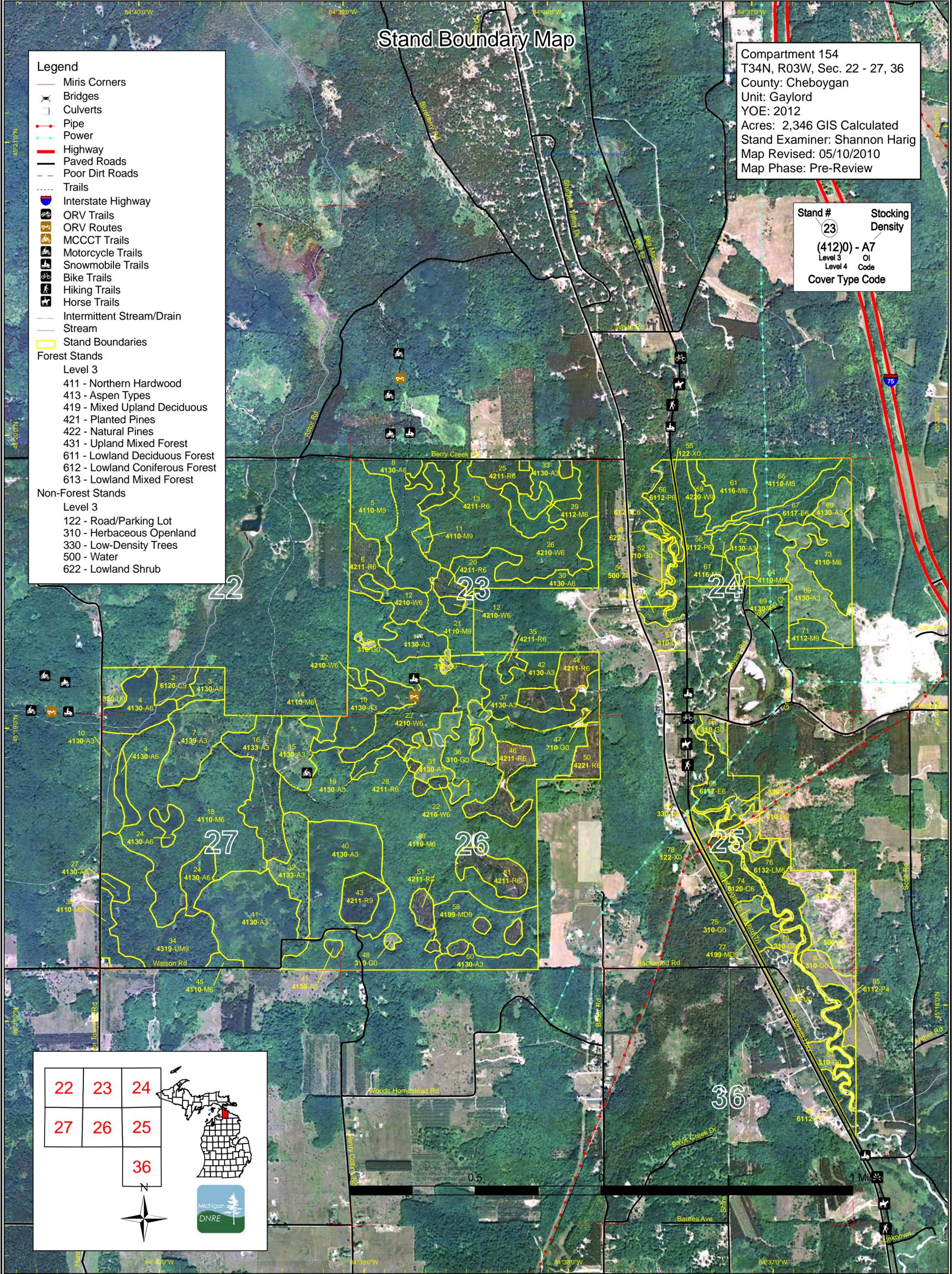
- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential and current SCA's**

Stand Boundary Map

Compartment 154
 T34N, R03W, Sec. 22 - 27, 36
 County: Cheboygan
 Unit: Gaylord
 YOE: 2012
 Acres: 2,346 GIS Calculated
 Stand Examiner: Shannon Harig
 Map Revised: 05/10/2010
 Map Phase: Pre-Review

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

- Legend**
- Miris Corners
 - Bridges
 - Culverts
 - Pipe
 - Power
 - Highway
 - Paved Roads
 - Poor Dirt Roads
 - Trails
 - Interstate Highway
 - ORV Trails
 - ORV Routes
 - MCCCT Trails
 - Motorcycle Trails
 - Snowmobile Trails
 - Bike Trails
 - Hiking Trails
 - Horse Trails
 - Intermittent Stream/Drain
 - Stream
 - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub



22	23	24
27	26	25
	36	

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Dedicated & Proposed Special Conservation Area Map

Compartment 154
 T34N, R03W, Sec. 22 - 27, 36
 County: Cheboygan
 Unit: Gaylord
 YOE: 2012
 Acres: 2,346 GIS Calculated
 Stand Examiner: Shannon Harig
 Map Revised: 05/10/2010
 Map Phase: Pre-Review

- Legend**
- Miris Corners
 - Stand Boundaries
 - Dedicated Special Conservation Areas
 - Cold Water Streams
 - ⚓ Boat Access Sites
 - ⚠ Campgrounds
 - Proposed Special Conservation Areas
 - ▨ SCA - Special Conservation Area
 - ▨ SCA Removal
 - Forest Stands**
 - Level 3
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
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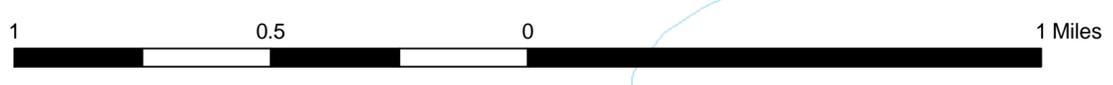
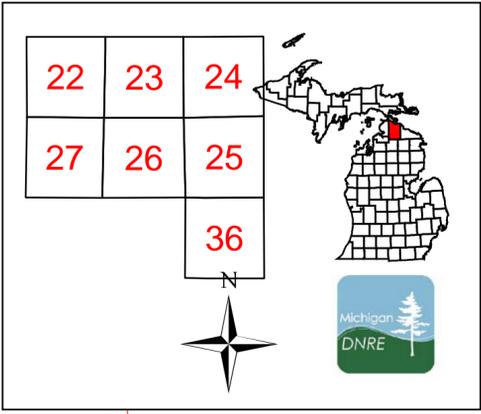
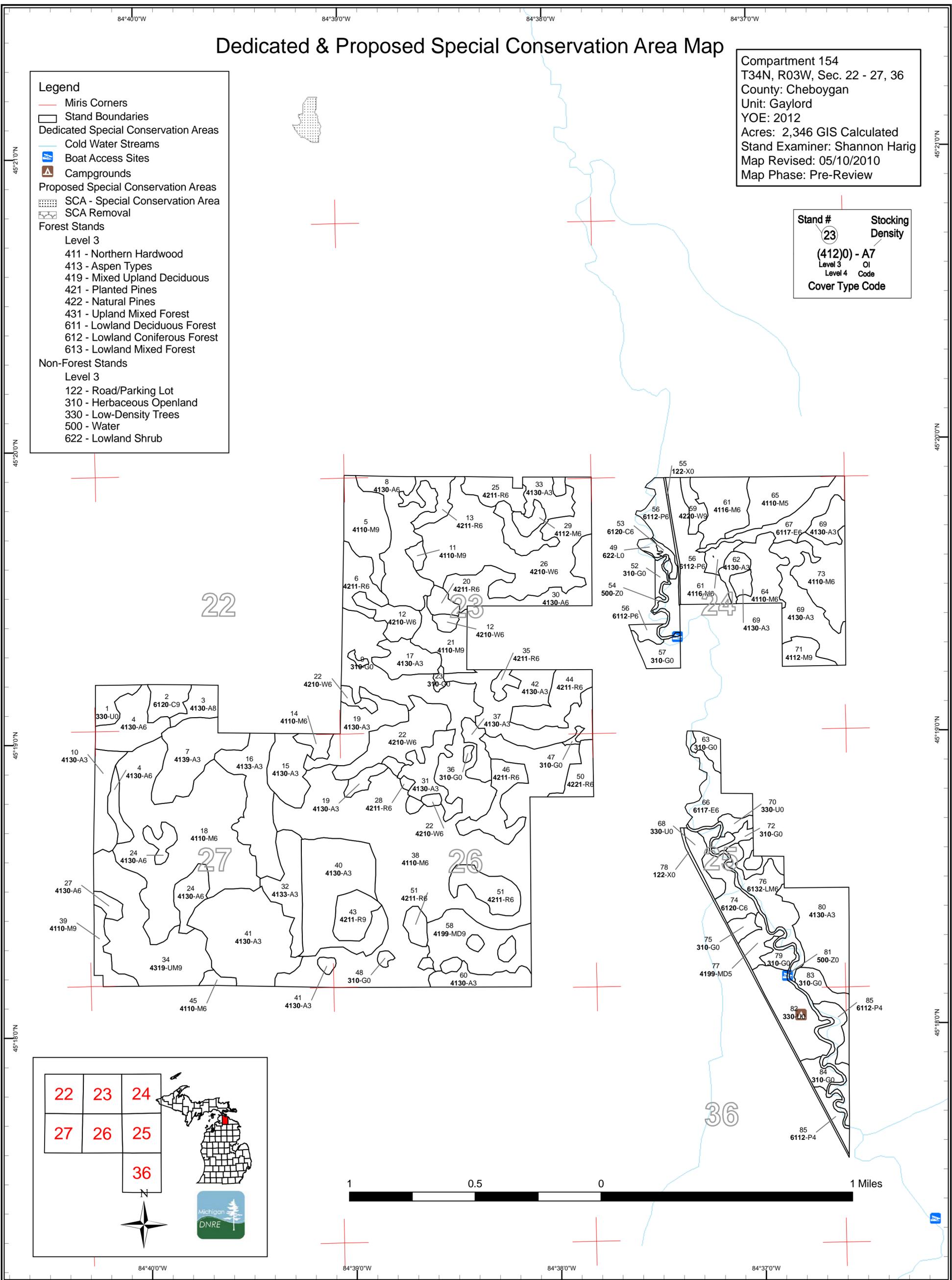


Table 1 – Total Acres by Cover Type and Age Class
(Level 3 Cover Type)



	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
Aspen Types	0	169	164	315	111	0	0	0	11	0	0	0	0	0	0	771
Herbaceous Openland	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Low-Density Trees	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
Lowland Coniferous Forest	0	0	0	0	0	0	0	0	0	0	0	3	13	18	0	34
Lowland Deciduous Forest	0	0	0	0	0	61	22	0	25	23	0	0	0	0	0	130
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	32
Lowland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Mixed Upland Deciduous	0	0	0	0	0	10	0	0	43	0	0	0	0	0	0	53
Natural Pines	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	20
Northern Hardwood	0	0	0	0	0	0	0	420	294	23	0	0	0	0	0	737
Planted Pines	0	0	0	0	0	322	0	0	17	0	0	0	0	0	0	339
Road/Parking Lot	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Upland Mixed Forest	0	0	0	0	0	0	0	0	76	0	0	0	0	0	0	76
Water	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	154	169	164	315	111	413	22	420	466	46	0	35	13	18	0	2346



Table 2 – Proposed Treatment Summaries

Gaylord Mgt. Unit
Year of Entry 2012

Compartment 154
Total Compartment Acres: 2346

Acres by Treatment Type

Commercial Harvest - 426	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	320	0	0	0	0	0	320
Red Pine	0	0	0	0	30	0	0	30
Upland Mixed Forest	76	0	0	0	0	0	0	76
Total	76	320	0	0	30	0	0	426



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	52154005-HWD-Mark	32.2	4110 - Sugar Maple Association	High Density Log	64	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Reduce BA to 80. Create 1 regen gap per acre. Leave under-represented species.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regen survey in 4 years.									
13	52154013-RP-Mark	12.9	42110 - Planted Red Pine	High Density Pole	42	Harvest	Crown Thinning	Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Mark stand to 110 - 120 BA.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u>									
18	52154018-HWD-Mark	98.6	4110 - Sugar Maple Association	High Density Pole	79	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Reduce BA to 80. Create 1 regen gap per acre. Leave under-represented species.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u>									
21	52154021-HWD-Mark	21.5	4110 - Sugar Maple Association	High Density Log	78	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Reduce BA to 80. Create 1 regen gap per acre. Leave under-represented species.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u> Regen survey in 4 years.									
25	52154025-RP-Mark	17.5	42110 - Planted Red Pine	High Density Pole	42	Harvest	Crown Thinning	Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Mark to 110-120 BA.									
<u>Specs:</u>									
<u>Other Comments:</u>									
<u>Next Steps:</u>									
34	52154034-RP-Clearcut	75.6	4319 - Mixed Upland Forest	High Density Log	76	Harvest	Clearcut	Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription</u> Clearcut and let stand convert to aspen/mixed hardwood. Mark approximately 10 BA of red and white pine to remain as residual super-canopy.									
<u>Specs:</u>									
<u>Other Comments:</u> This stand was prescribed at the 2002 Comp Review to be clearcut and re-planted to red pine. It was given a limiting factor pending the outcome of the red pine planning efforts that were beginning at that time. The limiting factor was removed in 2009 and this stand has been placed on the 2010 plan of work.									
<u>Next Steps:</u> Regen survey in 4 years.									

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38 52154038-HWD-Mark	82.8	4110 - Sugar Maple Association	High Density Pole	67	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal

Prescription Reduce BA to 80. Create 1 regen gap per acre. Leave under-represented species.

Specs:

Other

Comments:

Next Regen survey in 4 years.

Steps:

38 52154038-South_HWD-Mark	53.0	4110 - Sugar Maple Association	High Density Pole	67	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
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Prescription Reduce BA to 80. Create 1 regen gap per acre. Leave under-represented species. Do not cut oak.

Specs:

Other

Comments:

Next Regen survey in 4 years.

Steps:

73 52154073-HWD-Mark	32.1	4110 - Sugar Maple Association	High Density Pole	70	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
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Prescription Reduce BA to 80. Create 1 regen gap per acre. Leave under-represented species.

Specs:

Other

Comments:

Next Regen survey in 4 years.

Steps:

**Total Treatment
Acreage Proposed: 426.2**

Table 4 -- Treatments Prescribed with a 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 Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

Stand	Gaylord Mgt. Unit		5 – Forested Stands			Compartment: 154
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012
						General Comments:
2	6120 - Lowland Cedar	High Density Log	12.5	117	200+	Looks healthy. A lot of CWD.
3	4130 - Aspen	Medium Density Log	11.5	75	51-80	Aspen and cherry filling in openings.
4	4130 - Aspen	High Density Pole	35.0	34	51-80	
5	4110 - Sugar Maple Association	High Density Log	32.2	64	111-140	South part of stand is higher quality & better stocked. (Prism swings 1 - 90, 2 - 160, 3 - 160, 4 - 130, 5 - 130)
6	42110 - Planted Red Pine	High Density Pole	18.0	42	111-140	Good quality stems. Row thinned last entry.
7	4139 - Aspen, Mixed Deciduous	High Density Sapling	42.3	17		Some large 12"+ white pine in stand.
8	4130 - Aspen	High Density Pole	49.7	33	51-80	Nice, well stocked aspen and maple regen.
10	4130 - Aspen	High Density Sapling	19.5	17		Looks good.
11	4110 - Sugar Maple Association	High Density Log	3.5	77	51-80	Looks good.
12	42100 - Planted White Pine	High Density Pole	18.6	42	141-170	Mostly decent quality.
13	42110 - Planted Red Pine	High Density Pole	12.9	42	141-170	Looks good.
14	4110 - Sugar Maple Association	High Density Pole	6.2	83	81-110	Good quality stems.
15	4130 - Aspen	High Density Sapling	24.2	17		Regen looks good.
16	4133 - Aspen, Mixed Pine	High Density Sapling	46.3	26	51-80	
17	4130 - Aspen	High Density Sapling	18.1	27	51-80	Good regen, well stocked.



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Gaylord Mgt. Unit

5 – Forested Stands

Compartment: 154

Inventory Method: IFMAP

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4110 - Sugar Maple Association	High Density Pole	149.6	79	111-140	100 small diameter good stems 110 see above 160 multi-stem more basswood 130 decent quality 130 larger dbh bass decent quality maple 120 good quality stems 170 lesser quality 140 decent qual a couple small clones of aspen 160 decent 110 smaller dbh lesser qual 120 smaller diams 60 a lot of 6-8 inch stems a couple acres 90 fair qual 70 small 90 60
19	4130 - Aspen	High Density Sapling	37.1	27	51-80	
20	42110 - Planted Red Pine	High Density Pole	6.5	42	141-170	Looks good, probably ready to thin next entry.
21	4110 - Sugar Maple Association	High Density Log	21.5	78	111-140	Hilly, decent quality.
22	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	42.8	42	111-140	
24	4130 - Aspen	High Density Pole	21.2	34	81-110	Nice regen.
25	42110 - Planted Red Pine	High Density Pole	17.5	42	171-200	Looks good.
26	42100 - Planted White Pine	High Density Pole	110.1	42	111-140	
27	4130 - Aspen	High Density Pole	5.2	34	1-50	
28	42110 - Planted Red Pine	High Density Pole	5.8	42	111-140	
29	4112 - Maple, Beech, Cherry Association	High Density Pole	6.4	88	81-110	A lot of multi-stem maple.
30	4130 - Aspen	High Density Pole	37.8	27	51-80	Nice regen.
31	4130 - Aspen	High Density Sapling	21.5	7		
32	4133 - Aspen, Mixed Pine	High Density Sapling	26.8	7		
33	4130 - Aspen	High Density Sapling	27.6	27	1-50	Nice looking regen, healthy.

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Gaylord Mgt. Unit

5 – Forested Stands

Compartment: 154

Inventory Method: IFMAP

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
34	4319 - Mixed Upland Forest	High Density Log	75.6	76	111-140	Large Red Pine. Jack Pine is dying. A lot of the hardwood is multi-stem and poor form.
35	42110 - Planted Red Pine	High Density Pole	4.9	42	111-140	
37	4130 - Aspen	High Density Sapling	10.4	7		Looks good.
38	4110 - Sugar Maple Association	High Density Pole	371.1	67	111-140	Hilly, steep in some areas, variable stocking and quality. There are areas scattered throughout this stand that would benefit from a thinning.
39	4110 - Sugar Maple Association	High Density Log	13.0	67	81-110	
40	4130 - Aspen	High Density Sapling	68.9	26	1-50	
41	4130 - Aspen	High Density Sapling	78.4	17	1-50	
42	4130 - Aspen	High Density Sapling	55.7	27	51-80	Good looking regen. Steep in places.
43	42110 - Planted Red Pine	High Density Log	17.1	70	111-140	
44	42110 - Planted Red Pine	High Density Pole	24.7	42	171-200	The BA is high but trees still have some room to grow. Harvest next entry.
45	4110 - Sugar Maple Association	High Density Pole	3.8	61	81-110	Decent quality.
46	42110 - Planted Red Pine	High Density Pole	22.7	42	111-140	Pine looks good.
50	42210 - Natural Red Pine	High Density Pole	12.7	42	141-170	Looks good. May be ready for harvest next entry.
51	42110 - Planted Red Pine	High Density Pole	37.2	42	1-50	Row thinned last entry. Looks good.
53	6120 - Lowland Cedar	High Density Pole	2.7	106	171-200	
56	6112 - Lowland Aspen	High Density Pole	60.8	49	51-80	Wet, some blowdown. Decent black ash regen.
58	4199 - Other Mixed Upland Deciduous	High Density Log	43.1	70	51-80	Steep. Good looking oak.
59	42200 - Natural White Pine	High Density Log	7.5	41	111-140	Natural, un-even aged pine up to 30" DBH. Looks healthy.

Stand	Gaylord Mgt. Unit		5 – Forested Stands			Compartment: 154	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Inventory Method: IFMAP	
60	4130 - Aspen	High Density Sapling	16.1	27	1-50		
61	4116 - Mixed N. Hardwood - Aspen	High Density Pole	35.6	79	51-80		Red maple looks good, very steep N/S slope through center of the stand. Some of the aspen is starting to decline.
62	4130 - Aspen	High Density Sapling	7.4	24	1-50		Looks good.
64	4110 - Sugar Maple Association	High Density Pole	21.9	70	1-50		Good quality, very steep, no/limited access.
65	4110 - Sugar Maple Association	Medium Density Pole	29.8	71	111-140		1- 130 2-140 3-130 4-120 5-70 Very steep, no access. Decent quality hardwood.
66	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	24.7	70	1-50		Looks healthy. Sturgeon River floodplain.
67	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	22.6	80	51-80		Wet, drainage.
69	4130 - Aspen	High Density Sapling	54.3	6			Very good regen. Steep.
71	4112 - Maple, Beech, Cherry Association	High Density Log	10.7	80	81-110		Poor quality, steep
73	4110 - Sugar Maple Association	High Density Pole	32.1	70	111-140		1- 110 2-150 1- 110 4-120 5-120 6-130 Good quality stand. South 2/3 is flat, north 1/3 is hilly. I think we can get access through county gravel pit.
74	6120 - Lowland Cedar	High Density Pole	18.3	123	141-170		A few large white pine present. Some windthrow.
76	6132 - Mixed Lowland Forest with Cedar	High Density Pole	32.4	104	81-110		Looks healthy, little blowdown.
77	4199 - Other Mixed Upland Deciduous	Medium Density Pole	9.9	44	51-80		
80	4130 - Aspen	High Density Sapling	55.8	5			Looks good. Well stocked.
85	6112 - Lowland Aspen	Low Density Pole	21.9	55	1-50		Wet.





Stand	Cover Type	Acres	Gen Cmts:
1	330 - Low-Density Trees	10.7	Scattered cherry, aspen and large maple.
9	310 - Herbaceous Openland	1.4	
23	310 - Herbaceous Openland	2.0	
36	310 - Herbaceous Openland	1.3	Some scrubby cherry.
47	310 - Herbaceous Openland	1.3	
48	310 - Herbaceous Openland	1.9	
49	622 - Lowland Shrub	2.6	
52	310 - Herbaceous Openland	3.3	
54	50 - Water	4.0	Sturgeon River
55	122 - Road/Parking Lot	2.3	RR Grade / Snowmobile Trail
57	310 - Herbaceous Openland	11.7	Rondo Access Site
63	310 - Herbaceous Openland	6.8	Pockets of BA M and Balsam fir.
68	3302 - Low Density Conifer Trees	8.7	Some stunted White Pine and scattered cherry brush.
70	330 - Low-Density Trees	4.6	Pockets of Red Pine and aspen.
72	310 - Herbaceous Openland	3.5	Pipeline ROW.
75	310 - Herbaceous Openland	5.2	Scattered small White Pine and a small clone of Quaking Aspen.
78	122 - Road/Parking Lot	6.8	Rail Trail
79	310 - Herbaceous Openland	6.3	



Stand	Cover Type	Acres	Gen Cmts:
81	50 - Water	14.3	Sturgeon River
82	330 - Low-Density Trees	33.1	Haakwood SFC
83	310 - Herbaceous Openland	15.1	
84	310 - Herbaceous Openland	7.2	Some apple trees present and a few other scattered deciduous trees.



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



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.
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.