COMPARTMENT REVIEW PRESENTATION

GAYLORD FOREST MANAGEMENT UNIT

COMPARTMENT: 36

ENTRY YEAR: 2014
ACREAGE: 2,520
COUNTY: Otsego

Revision Date: 04/11/2012

Stand Examiner: Ric Barta

Legal Description: T33N R04W Sec. 5-8, 17 & 18

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: Primary soil types are Leelanau-Emmet or Kalkaska-Leelanau with pockets of Mancelona Sand and organic soils along the Springbrook. The major cover type is Northern Hardwood. The west half of the compartment is hilly with 18-30% slopes. The North Branch of the Springbrook flows through the center of the east half resulting in more gentle slopes along the flood plain.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Land to the east and west of the compartment is primarily state owned forest. The half section of private ownership in the center of the compartment is mostly pastureland. Large areas of conifer swamps and steep slopes have prevented the development of land around this compartment.

Unique, Natural Features: The MNFI notes: RSH nesting records to N and E of compartment with potential throughout compartment in M and A types. RSH records to the east of 17 and to the north of section 6. Potential for wood turtle and Blanding's turtle associated with Spring Brook and N types. Potential for goshawk in hardwoods. Potential for rare plants of rich mesic forests: Carex assiniboinensis, showy orchis, Ginseng, Goblin Fern. Potential for calypso bulbosa, round leaved orchid, Michigan Monkey Flower, limestone oak fern and Cypripedium arietinum in cedar and q types.

Archeological, Historical, and Cultural Features: Old railroad grades can be found in several locations.

Special Management Designations or Considerations: This compartment is part of the Chandler Hills Management Area.

Watershed and Fisheries Considerations: The North Branch of Spring Brook is located within this compartment. Spring Brook is a designated trout stream that boats a high quality brook trout fishery. The trout population in Spring Brook is supported by natural reproduction and it is not stocked. To keep this stream in good condition it is critical that the appropriate BMP's and buffers are strictly adhered to. Intermittent streams and wetland areas should also be protected.

Wildlife Habitat Considerations: This compartment consists of an upland area consisting of a northern hardwoods and aspen and a large wetland complex that runs through the center of the compartment. This wetland is used by numerous furbearers, white-tailed deer, and a variety of amphibian and songbird species. There will be a few aspen treatments within this compartment to maintain age class diversity. This early successional habitat benefits white-tailed deer, wild turkey, grouse, woodcock, and various songbirds. The hardwoods in this compartment have all been treated in the past twenty years and have a lot of structural diversity.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of coarse-textured glacial till (uplands) and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 100 and 400 feet. Beneath the glacial drift is the Antrim Shale that is quarried for cement products elsewhere in the State. One gravel pit is located on the moraine deposits to the north and upland areas appear to have potential. Oil and gas potential in the area is primarily for the Collingwood and Utica Formations. The Antrim Shale gas play is located eight miles to the south and the upper limit of the Antrim Shale subcrops in this area. All of the State land in the area is currently leased for oil and gas development.

Vehicle Access: Access is good in the upland areas. No roads are being proposed for closure.

Survey Needs: Some work may be needed is Sections 6 & 8.

Recreational Facilities and Opportunities: There is a motorcycle trail in Sections 6-18. A snowmobile trail passes through Sections 8, 17 & 18.

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

Compartment: 036
T33N R04W Sec. 5-8, 17, 18
County: Charlevoix
Unit: Gaylord
YOE: 2014
Acres: 2,520 GIS Calculated
Examiner: Ric Barta
Map Revised: 05/16/2012
Map Phase: Pre-Review

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

6 5
7 8
18 17

N

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84°52'0"W 84°51'0"W 84°50'0"W 84°49'0"W 84°48'0"W
45°18'0"N 45°17'0"N 45°16'0"N 45°15'0"N

Gokee Rd
Stradling Rd
Lintlong Rd
Taylor Rd
Maxwell Rd
Harmon Rd
Lewson Rd
North Country Trail
E Bear River Rd
Bear River Rd
Johnson Rd
Gillett Rd
Tomahawk Motorcycle Trail B Loop
Cobb Rd
County Line Rd
Snowmobile Spur
Springvale Rd
W Peters Rd
Chandler Hill Rd
E Howard Rd
N Springbrook Rd
Hillview Rd
Spring Dr
Brook Dr
Aspenview Trl
Townhouse Trl

1 4211-R9
2 4110-M9
3 4110-M9
4 4130-A6
5 4110-M9
6 4211-R9
7 4134-A6
8 310-G0
9 629-L0
10 6120-C5
11 6117-E6
12 6120-C6
13 623-N0
14 4311-UM6
15 6124-Q1
16 4130-A6
17 4130-A6
18 6117-E5
19 623-N0
20 4139-A6
21 500-Z0
22 4130-A6
23 310-G0
24 310-G0
25 4130-A3
26 6120-C6
27 4110-M9
28 622-L0
29 4110-M9
30 4134-A9
31 4139-A6
32 310-G0
33 629-L0
34 4130-A6
35 4211-R9
36 629-L0
37 310-G0
38 4130-A6
39 4110-M9
40 4130-A6
41 310-G0
42 6117-E6
43 4110-M9
44 310-G0
45 622-L0
46 4130-A6
47 4210-W3
48 310-G0
49 310-G0
50 6124-Q6
51 4110-M9

1 0.5 0 1 Miles

Legend

- Miris Corners
- Remonumented Section Corners
- Corners
- Pipe
- Power
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Ski Trail
- Hiking Trail
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Snowmobile Trail
- MCCCT Trail
- Stream
- Intermittent Stream
- Lakes and Rivers

Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland
- State Forest Land

Stand Boundary Map

Compartment: 036
T33N R04W Sec. 5-8, 17, 18
County: Charlevoix
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YOE: 2014
Acres: 2,520 GIS Calculated
Examiner: Ric Barta
Map Revised: 05/16/2012
Map Phase: Pre-Review

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

6	5
7	8
18	17

N

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Legend

- Miris Corners
- Remonumented Section Corners
- Corners
- Pipe
- Power
- Highway
- County Paved Roads
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- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
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- ORV Route
- Snowmobile Trail
- MCCCT Trail
- Stand Boundaries

Forest Stands
Level 3
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Non-Forest Stands
Level 3
310 - Herbaceous Openland
500 - Water
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1 4211-R9 · 2 4110-M9 · 3 4110-M9 · 4 4130-A6 · 5 4110-M9 · 6 4211-R9 · 7 4134-A6 · 8 310-G0 · 9 629-L0 · 10 6120-C5 · 11 6117-E6 · 12 6120-C6 · 13 623-N0 · 14 4311-UM6 · 15 6124-Q1 · 16 4130-A6 · 17 4130-A6 · 18 6117-E5 · 19 623-N0 · 20 4139-A6 · 21 500-Z0 · 22 4130-A6 · 23 310-G0 · 24 310-G0 · 25 4130-A3 · 26 6120-C6 · 27 4110-M9 · 28 622-L0 · 29 4110-M9 · 30 4134-A9 · 31 4139-A6 · 32 310-G0 · 33 629-L0 · 34 4130-A6 · 35 4211-R9 · 36 629-L0 · 37 310-G0 · 38 4130-A6 · 39 4110-M9 · 40 4130-A6 · 41 310-G0 · 42 6117-E6 · 43 4110-M9 · 44 310-G0 · 45 622-L0 · 46 4130-A6 · 47 4210-W3 · 48 310-G0 · 49 310-G0 · 50 6124-Q6 · 51 4110-M9

Bear River Rd · E Bear River Rd · Taylor Rd · Harmon Rd · Welsh Rd · Maxwell Rd · Stradling Rd · Lintlong Rd · Johnson Rd · Gillett Rd · Tomahawk Motorcycle Trail B Loop · Cobb Rd · Snowmobile Spur · Springvale Rd · W Peters Rd · Hillview Rd · Spring Dr · Brook Dr · Aspenview Trl · Townhouse TH · Ravine Rd · Harmon Rd · Kalkaska to Tomahawk MCCCT · E Howard Rd · Charlevoix Hill Rd · North County Trail

6 · 5 · 7 · 8 · 18 · 17

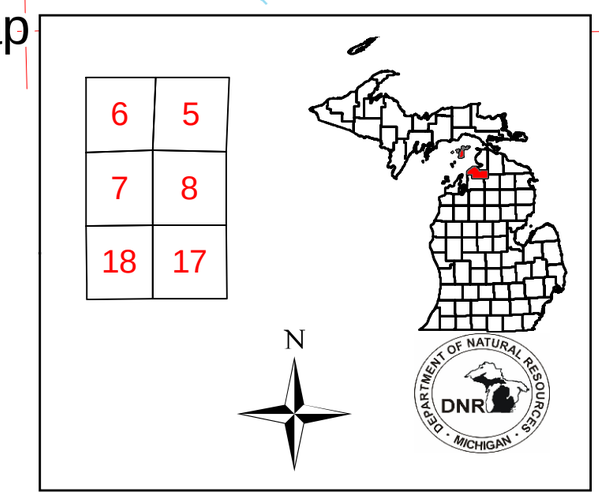
1 0.5 0 1 Miles

84°52'0"W · 84°51'0"W · 84°50'0"W · 84°49'0"W · 84°48'0"W · 45°18'0"N · 45°17'0"N · 45°16'0"N · 45°15'0"N · 45°18'0"N · 45°17'0"N · 45°16'0"N

Dedicated & Proposed Special Conservation Area Map

Compartment: 036
T33N R04W Sec. 5-8, 17, 18
County: Charlevoix
Unit: Gaylord
YOE: 2014
Acres: 2,520 GIS Calculated
Examiner: Ric Barta
Map Revised: 05/16/2012
Map Phase: Pre-Review

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



10 **6120**-C5
3 **4110**-M9
1 **4211**-R9
5 **4110**-M9
13 **623**-N0
23 **310**-G0
4 **4130**-A6
9 **629**-L0
15 **6124**-Q1
2 **4110**-M9
12 **6120**-C6
6 **4211**-R9
22 **4130**-A6
8 **310**-G0
7 **4134**-A6
11 **6117**-E6
24 **310**-G0
19 **623**-N0
27 **4110**-M9
26 **6120**-C6
14 **4311**-UM6
16 **4130**-A6
18 **6117**-E5
21 **500**-Z0
32 **310**-G0
17 **4130**-A6
29 **4110**-M9
20 **4139**-A6
33 **629**-L0
28 **622**-L0
34 **4130**-A6
39 **4110**-M9
25 **4130**-A3
30 **4134**-A9
36 **629**-L0
37 **310**-G0
31 **4139**-A6
43 **4110**-M9
42 **6117**-E6
44 **310**-G0
46 **4130**-A6
38 **4130**-A6
35 **4211**-R9
40 **4130**-A6
45 **622**-L0
41 **310**-G0
47 **4210**-W3
49 **310**-G0
50 **6124**-Q6
51 **4110**-M9
48 **310**-G0

6 5 7 8 18 17

Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries

Dedicated Special Conservation Areas

- Cold Water Streams

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
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84°52'0"W 84°51'0"W 84°50'0"W 84°49'0"W 84°48'0"W
45°18'0"N 45°17'0"N 45°16'0"N 45°15'0"N 45°14'0"N

1 0.5 0 1 Miles

Table 1 – Total Acres by Cover Type and Age Class

Gaylord Mgt. Unit **Compartment 036 Year of Entry 2014**

Richard Barta : Examiner

Age Class

	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	Total
Aspen	0	6	177	44	13	209	0	0	0	0	0	0	0	0	**448**
Cedar	0	0	0	0	0	0	0	0	342	91	0	6	0	0	**438**
Herbaceous Openland	63	0	0	0	0	0	0	0	0	0	0	0	0	0	**63**
Lowland Conifers	60	0	0	0	0	0	0	0	6	0	0	0	0	0	**65**
Lowland Deciduous	0	0	73	0	0	0	0	0	31	0	0	0	0	0	**104**
Lowland Shrub	68	0	0	0	0	0	0	0	0	0	0	0	0	0	**68**
Marsh	47	0	0	0	0	0	0	0	0	0	0	0	0	0	**47**
Northern Hardwood	0	0	0	0	0	0	131	862	123	22	0	0	0	0	**1138**
Red Pine	0	0	0	0	51	0	0	43	0	0	0	0	0	0	**94**
Upland Mixed Forest	0	0	0	0	0	0	0	34	0	0	0	0	0	0	**34**
Water	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	11	**11**
Total	**245**	**6**	**250**	**44**	**64**	**209**	**131**	**940**	**501**	**113**	**0**	**6**	**0**	**11**	**2520**

Table 2 – Proposed Treatment Summaries

Gaylord Mgt. Unit
Year of Entry 2014

Compartment 036
Total Compartment Acres: 2520

Acres by Treatment Type

Commercial Harvest - 244	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
Aspen	154	0	0	0	0	0	**154**
Northern Hardwood	0	0	0	0	12	0	**12**
Red Pine	43	0	0	0	0	0	**43**
Upland Mixed Forest	34	0	0	0	0	0	**34**
Total	**232**	**0**	**0**	**0**	**12**	**0**	**244**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	52036003-Cut	6.4	4110 - Sugar Maple Association	High Density Log	63	111-140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Conventional tsi marking down to 80-90 BA. Seek opportunities to promote species diversity.

Other Comments: Protect the motocross trail.

Next Steps:

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	52036005-Cut	6.1	4110 - Sugar Maple Association	High Density Log	72	111-140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Conventional tsi marking down to 80-90 BA. Try to promote species diversity.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	52036006-Cut	43.4	42110 - Planted Red Pine	High Density Log	75	51-80	Harvest	Clearcut with Reserves	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Cut all red pine over 10 inches dbh and all balsam fir. Try to protect the existing hardwood regeneration. Place a retention island so as to buffer the road in conjunction with the inclusive A6 stand.

Other Comments:

Next Steps: Monitor regeneration which is expected to be a mixed bag as the terrain is somewhat transitional to wetland. Regen may include aspen, fir, and pine but we are hoping to see the heaviest weighting in northern hardwood species.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	52036014-Cut	34.5	4311 - Pine, Aspen Mix	High Density Pole	75	81-110	Harvest	Clearcut with Reserves	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Cut all red pine over 10 inches dbh and all balsam fir. Protect any existing hardwood regeneration. Place a retention island so as to buffer the road.

Other Comments:

Next Steps: Monitor regeneration which is expected to be a mixed bag as the terrain is somewhat transitional to wetland. Regen may include aspen, fir, and pine but we are hoping to see the heaviest weighting in northern hardwood species.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	52036030-Cut	14.4	4134 - Aspen, Spruce/Fir	High Density Log	55	51-80	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Standard clearcut specs. Place retention to protect the white pine relics in the north central part of the stand.

Other Comments:

Next Steps: Monitor regeneration.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
34	52036034-Cut	100.2	4130 - Aspen	High Density Pole	51	81-110	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Standard clearcut specs. Retention should be one island in the north unit and two in the south, placed to buffer any surface water.

Other Comments: This stand has a number of small streams flowing from the upland westward into the wetlands. These will need to be protected during operations. In at least one case, a culvert may need to be placed if corduroying is not adequate to protect it.

Next Steps: Monitor regeneration. Having some fir mixed in with the aspen is acceptable.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	52036038-Cut	12.9	4130 - Aspen	High Density Pole	46	81-110	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Standard clearcut specs. Place retention to protect the patch of walnuts.

Other Comments: The small open area and patch of walnut trees may constitute an old homestead site. If so, protect it.

Next Steps: Monitor regeneration.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	52036040-Cut	26.5	4130 - Aspen	High Density Pole	51	111-140	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Standard clearcut specs. Place retention at the south end of the stand so as to buffer the road and the private property line, as well as protect younger aspen.

Other Comments:

Next Steps: Monitor regeneration.

Proposed Start Date: 10/01/2013

Total Treatment Acreage Proposed: 244.3

Table 4 -- Treatments Prescribed with a Limiting Factor

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

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated before 10:00 AM

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2014

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

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date: #Error

Total Treatment Acreage Proposed: **0**

Data updated before 10:00 AM

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	High Density Log	24.5	49	111-140	
2	4110 - Sugar Maple Association	High Density Log	124.9	68	81-110	BAs ranged from 60 to 130, averaging 93. Only one of nine swings exceeded 110.
3	4110 - Sugar Maple Association	High Density Log	6.4	63	111-140	Average BA is 118. Four of six swings exceeded 110.
4	4130 - Aspen	High Density Pole	35.9	38	111-140	Various species of hardwood of all sizes are scattered throughout. Central area appears to have a high enough water table so that there is some mortality as well as fir in the canopy.
5	4110 - Sugar Maple Association	High Density Log	6.1	72	111-140	Average BA is 123.
6	42110 - Planted Red Pine	High Density Log	43.4	75	51-80	
7	4134 - Aspen, Spruce/Fir	High Density Pole	1.0	28	1-50	Old landing for the surrounding plantation?
10	6120 - Lowland Cedar	Medium Density Pole	6.2	110	81-110	Some mortality on south side. There is a small stream in the west finger.
11	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	40.0	22	81-110	Species composition and stocking are very variable.
12	6120 - Lowland Cedar	High Density Pole	90.5	97	200+	
14	4311 - Pine, Aspen Mix	High Density Pole	34.5	75	81-110	Old red pine plantation that can be liquidated. BA's ranged from 40 to 150, but averaged 100. Red pine logs were not perfectly uniform in distribution. Much of the deciduous stock is still submerchantable. With reasonable care, damage to a lot of this regeneration should be avoidable while the logs are harvested.
15	6124 - Lowland Spruce-Fir	Low Density Sapling	59.5	9		This is an area of dead pole timber, mostly cedar and tamarack, which is regenerating to a mix of lowland conifers. Beaver activity is the presumed cause of mortality.
16	4130 - Aspen	High Density Pole	15.8	28	111-140	
17	4130 - Aspen	High Density Pole	8.3	38	111-140	Looks healthy but is small diameter for aspen nearly 40 years old. Water table may be high.
18	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	33.0	22	51-80	Some blowdown.
20	4139 - Aspen, Mixed Deciduous	High Density Pole	57.4	27	1-50	Aspen poles with a variety of hardwood species trying to catch up.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4130 - Aspen	High Density Pole	54.6	29	81-110	Heavy to hardwood in places.
25	4130 - Aspen	High Density Sapling	5.6	12		Fairly steep south facing slope.
26	6120 - Lowland Cedar	High Density Pole	341.7	89	111-140	BAs ranged from 70 to 210 and averaged 140. Standing water in places, multiple streams, beaver activity all making operability pretty questionable. Lots of deer sign and hunting activity even in midwinter.
27	4110 - Sugar Maple Association	High Density Log	99.5	87	81-110	Age was actually determined on a basswood.
29	4110 - Sugar Maple Association	High Density Log	822.2	77	81-110	BA's ranged from 70 to 130. Of 18 swings, only 3 exceeded 110. Average is 94. Entire stand has been cut (TSI) in the last 10 or 20 years. It is transitioning into logl. Emerald ash borer is present.
30	4134 - Aspen, Spruce/Fir	High Density Log	14.4	55	51-80	Some semi-open areas. Heavy to aspen/fir in the north end, and more to hardwood in the center. A good place to set up a retention island would be around the 3 white pine relics in the north central part of the stand along with the adjacent hardwood patch which will probably regen to aspen poorly anyway.
31	4139 - Aspen, Mixed Deciduous	High Density Pole	41.9	22	1-50	
34	4130 - Aspen	High Density Pole	168.1	51	81-110	Average BA is 98. Seems small for its age on this ground; high water table? Scattered patches of fir and hardwood. Several streams flowing through this stand from east to west.
35	42110 - Planted Red Pine	High Density Log	26.4	49	111-140	
38	4130 - Aspen	High Density Pole	12.9	46	81-110	Protect walnut scattered around semi-open area; check for evidence of old homestead.
39	4110 - Sugar Maple Association	High Density Log	23.1	85	81-110	
40	4130 - Aspen	High Density Pole	26.5	51	111-140	Marginally wet; rutting may be a concern. Some blowdown. May want to use retention to buffer the road.
42	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	30.8	85	51-80	Wet. This stand has some old, scattered logs of spruce and balsam poplar, but most of the merchantable trees are actually immature poles of various species that are regenerating areas of blowdown. The canopy is broken in areas of blowdown and stocking can be patchy. Doghair fir exists in places.
43	4110 - Sugar Maple Association	High Density Log	34.0	79	81-110	A log stand, but just barely. Emerald ash borer is present.
46	4130 - Aspen	High Density Pole	5.9	22	1-50	The very SE corner is more of a hardwood pole stand.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	42100 - Planted White Pine	High Density Sapling	11.4	Uneven Age		Scattered cherry and maple overtopping a white pine plantation. Pine is now over 10' on occasion.
50	6124 - Lowland Spruce-Fir	High Density Pole	5.8	82	81-110	Wet. Some open areas with tag alder and other lowland brush.
51	4110 - Sugar Maple Association	High Density Log	22.4	91	81-110	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
8	3105 - Mixed Upland Herbaceous	1.9	No	Unspecified	Farmed up until a few years ago when a survey revealed that the state owned this end of the field.
9	629 - Mixed non-forested wetland	26.7	Yes	Lowland Mixed Forest	
13	6230 - Cattail	9.3	No	Unspecified	
19	6230 - Cattail	38.1	No	Unspecified	
21	50 - Water	7.3	No	Unspecified	
23	3105 - Mixed Upland Herbaceous	1.6	No	Unspecified	
24	3105 - Mixed Upland Herbaceous	10.1	No	Unspecified	
28	6229 - Mixed lowland shrub	2.9	N\A	Unspecified	
32	3105 - Mixed Upland Herbaceous	11.8	No	Unspecified	
33	629 - Mixed non-forested wetland	6.2	No	Unspecified	Old beaver flooding that still holds some open water.
36	629 - Mixed non-forested wetland	4.1	No	Unspecified	
37	3105 - Mixed Upland Herbaceous	11.5	No	Unspecified	Used as pastureland until relatively recently.
41	3105 - Mixed Upland Herbaceous	10.6	No	Unspecified	
44	3105 - Mixed Upland Herbaceous	2.0	No	Unspecified	
45	6229 - Mixed lowland shrub	28.3	No	Unspecified	
48	3105 - Mixed Upland Herbaceous	2.6	No	Unspecified	
49	3105 - Mixed Upland Herbaceous	10.7	No	Unspecified	

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.

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.