



**Gladwin Forest Management Unit  
Compartment Review Presentation  
Compartment #84      Entry Year: 2014  
Compartment Acreage: 1622      County: Gladwin**

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**Revision Date:** February 2012

**Stand Examiner:** Steven Nyhoff

**Legal Description:** T17N R2E Sections 19, 30, and 31  
T17N R1E Section 36

**Identified Planning Goals ('Management Area' or 'RMU', if applicable):** Gladwin Lake Plain

**Management Goals:** The compartment has numerous drainages that flow south into the Kawkawlin River Flooding. These drainages see frequent beaver activity so the amount of open water versus marsh varies significantly between Year of Entry (YOE). In addition, the compartment is heavy to swamp hardwoods and wetter types. The aspen within the compartment has been heavily managed over the last 40+ years.

The treatment in the past two YOE have had mixed results in the regeneration. Some of the harvests done in 1998 were believed to have failed to regenerate. However, they are now forested. They are showing signs of heavy deer browse. However, there are a significant number of stems above browse line. The stands cut last YOE are showing similar mixed results because of deer browse. Therefore, though regeneration from last YOE is poor in the stands it may just take more time to get it above deer browse.

Continue to manage the compartment for the species diversity that is present. Expect regeneration to come in more slowly than otherwise expected because of deer browse. Some of the aspen is to be cut early to help bring the aspen acres closer to regulation. In addition, where possible expand harvest into lowland type to pre-salvage ash.

**Soil and Topography:** The soils in the compartment are made up of mainly somewhat poorly drained Iosco Series, and poorly drained Hettinger Series soils. Overall the compartment has a high water table. The land is mainly flat with a few dry ridges.

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

The state land is in one block of state ownership. There are several private holdings along the edges of the compartment. The private ownerships are found in the W ½ of the NW ¼, S ½ of the NE ¼ of section 30, and the SE ¼ of section 32.

It is mainly used for hunting. There are a few cabins on some of the private land but overall most do not have structures.

**Unique, Natural Features:** Currently there is one active beaver flooding and numerous ones that are now beaver meadows. There is one known bald eagle's nest in section 31. There are records of slough grass and *Carex lupuliniformis* to the east of the compartment.

**Archeological, Historical, and Cultural Features:** No known sites are in the compartment.

**Special Management Designations or Considerations:** None

**Watershed and Fisheries Considerations:** This area is dominated by warm water drainages flowing into the Kawkawlin Flooding. There are no real fisheries concerns.

**Wildlife Habitat Considerations:** This compartment is centrally located within Gladwin County. Both upland and lowland systems are present, making it suitable for a number of wildlife species. This area is heavily utilized by out-of-County grouse and woodcock hunters and remains a very popular location for archers and firearm deer hunters. The majority of stands are lowland cover types. Furbearers including beaver, mink, muskrat, black bear, bobcat, and coyote use the lowlands as corridors as well as year-round habitat. Game species likely to be present in this compartment include black bear, bobcat, raccoon, coyote, wood duck, wild turkey, ruffed grouse and white-tailed deer. Many bird species stand to benefit from the juxtaposition of lowland and upland habitats present in the compartment. These species include gray catbird, redbellied vireo, white-breasted nuthatch, tufted titmouse, black-capped chickadees, eastern kingbirds and northern flicker. The compartment is easily accessible to hunters via Deer Road and Estey Road.

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

Surface sediments consist of Lacustrine (lake) sand and gravel and an end moraine of fine-textured glacial till. Glacial drift thickness varies between 200 and 400 feet. Beneath the Glacial Drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw Formation is used for clay/shale in other areas of the State. This area is predominantly sand, and gravel potential in the compartment is considered limited. Bentley Field is located in Section 19. Discovered in 1937, it has produced more than 3.4 Million BO primarily from the Richfield and is in secondary recovery operations in the Dundee. A few old oil and gas leases are associated with the field.

**Vehicle Access:** Currently the compartment has an extensive road system that is more than what is needed to access the compartment. The road system is being looked at to plan reasonable access for the compartment.

**Survey Needs:** The compartment is in need of having the boundaries established. Currently there are only a few corners, most of which are remonumented corners along Estey and Deer Roads.

**Recreational Facilities and Opportunities:**

The Midland to Mackinaw Hiking Trail is in the compartment. This trail goes along the east side of the compartment.

There are no ORV trails in the area but there is a fair amount of Illegal ORV use. The amount of illegal use is less here than in some of the other compartments in the Gladwin Management Unit but it is still a concern.

The main recreational use revolves around dispersed use mainly hunting, berry picking and the like. There are a fair number of dispersed camping sites in the compartment, which are mainly used by hunters.

**Fire Protection:**

With the capping of wells in the area and the removal of the pipelines some of the fire protection problems in this compartment will be lessened. Also, the compartment has good access and with the increase in beaver activity there are currently a lot of natural and man made fuel breaks in the compartment. Fire protection will not be a major problem in the compartment in the near future.

**Additional Compartment Information:** The main problems in the area are hunters pushing trails deeper into state land and trash dumping. The trash problem is along all the roads in the compartment. Also, some of the trails have been improved by private individuals to gain better access to private land, as well as to state land. These improvements have been done without a permit or permission from the state.

Deer have been a problem in past harvest delaying the establishment of regeneration because of browsing activity.

**Table 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	19	188	0	291	17	0	25	0	7	0	0	0	0	547
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Low-Density Trees	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lowland Aspen/Balsam Poplar	22	21	65	0	0	0	0	12	0	7	0	0	0	0	127
Lowland Deciduous	0	13	15	0	9	0	0	0	0	137	0	0	0	397	570
Lowland Shrub	300	0	0	0	0	0	0	0	0	0	0	0	0	0	300
Marsh	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Mixed Upland Deciduous	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
Paper Birch	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
Upland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Water	43	0	0	0	0	0	0	0	0	0	0	0	0	0	43
<b>Total</b>	<b>381</b>	<b>64</b>	<b>268</b>	<b>0</b>	<b>300</b>	<b>17</b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>397</b>	<b>1622</b>



## Table 2 – Proposed Treatment Summaries

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

**Compartment 084**  
**Total Compartment Acres: 1622**

### Acres by Treatment Type

Commercial Harvest - 238	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
<b>Aspen</b>		110	0	0	0	0	0	110
<b>Lowland Deciduous</b>		0	129	0	0	0	0	129
<b>Total</b>		110	129	0	0	0	0	238



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	73084004-Cut	17.2	4130 - Aspen	High Density Log	50	81-110	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Harvest as a clear cut with reserves, mark some of the larger oak and for mast and sturctral diversity. Also leave all white pines and hemlock to										
<u>Specs:</u> maintain some of the species diversity. The stand should be harvested during the dormancy peiord to maximize aspen regeneration.										
<u>Other</u> Access trail will need some work and will need to be maintained in driveable conditions.										
<u>Comments:</u>										
<u>Next</u> The stand is expected to regenerate naturally to a mixture of aspen, maple and oak.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
7	73084007-Cut	70.6	6113 - Lowland Maple	High Density Log	91	81-110	Harvest	Single Tree Selection	6113 - Lowland Maple	Cmpt. Review Proposal
<u>Prescription</u> Harvest the stand by single tree selection bringing the BA average to around 70 Sq Ft. When marking the stand favor the removal of aspen,										
<u>Specs:</u> birch, and ash. Do not eliminate any one species for the stand. Also mark the stand to make it loggable.										
<u>Other</u> There are pockets in the stand that are wet. Therefore harvest the stand during dry or frozen condition.										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u> The stand is expected to regenerate naturally to a mixture of species.										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
17	73084017-Cut	25.1	6113 - Lowland Maple	High Density Log	79	81-110	Harvest	Single Tree Selection	6113 - Lowland Maple	Cmpt. Review Proposal
<u>Prescription</u> Harvest the stand by single tree selection bringing the BA average to around 70 Sq Ft. When marking the stand favor the removal of aspen,										
<u>Specs:</u> birch, and ash. Do not eliminate any one species for the stand. Also mark the stand to make it loggable.										
<u>Other</u> There are pockets in the stand that are wet. Therefore harvest the stand during dry or frozen condition. In addition, the Midland to Mackinac										
<u>Comments:</u> Hiking Trail goes through the treatment area and needs to be protected during the harvest.										
<u>Next</u>										
<u>Steps:</u> The stand is expected to regenerate naturally to a mixture of species.										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
24	73084024-Cut	67.1	4130 - Aspen	High Density Pole	43	81-110	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Harvest the treatment area to 2" DBH leaving pocket of trees for retention. In addition leave all conifers.The retention should be around 3%.										
<u>Specs:</u>										
<u>Other</u> The harvest is proposed to break up the age class distribution in the compartment. Portions of the stand are wet so rutting could be an issue so										
<u>Comments:</u> harvest during dry or frozen condition. The road will need to be upgraded along the north edge of the stand to get the logger into the area, The road that inter the east side is to remain closed.										
<u>Next</u>										
<u>Steps:</u> The stand is expected to regenrate to aspen.										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
30	73084030-Cut	25.2	4130 - Aspen	High Density Log	71	51-80	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Harvest the treatment area to 2" DBH. Mark retention by marking individual trees or in pockets not to exceed 5%.										
<u>Specs:</u>										
<u>Other</u> Portions of the stand are wet so rutting could be an issue so harvest during dry or frozen condition. It would also be best if this occurred during										
<u>Comments:</u> the dormancy peiord to maximize the aspen regeneration.										
<u>Next</u>										
<u>Steps:</u> The stand is expected to regenerate to a mixture of aspen and maple.										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
52 73084052-Cut	32.9	6119 - Mixed Lowland Deciduous Forest	High Density Log	71	51-80	Harvest	Single Tree Selection	6113 - Lowland Maple	Cmpt. Review Proposal

Prescription Harvest the stand by single tree selection bringing the BA average to around 60 Sq Ft. When marking the stand favor the removal of aspen, birch, and ash. Do not eliminate any one species for the stand. The BA on the upland portions of the stand may be brought down below 60 but the lowland areas should be kept above 70. Also mark the stand to make it loggable.

Other Comments: There are pockets in the stand that are wet. Therefore harvest the stand during dry or frozen condition. In addition, the Midland to Mackinac Hiking Trail goes through the treatment area and needs to be protected during the harvest.

Next Steps: The stand is expected to regenerate naturally to a mixture of species.

Proposed Start Date: 10/01/2013

**Total Treatment  
Acreage Proposed: 238.1**

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



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

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

**Total Treatment Acreage Proposed: 0**

**Out of YOE -- Treatments  
Prescribed with No Limiting Factor**

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>73010274-Cut</b>	26.5	42260 - Natural Pine, Mixed Deciduous	High Density Log	105		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription: The stand is to be harvested as a 2" spec final harvest. The retention should be focused along the snowmobile trail.

Specs:

Other

Comments:

Next Steps: After the harvest replant the stand to red pine, expand the unplanted area around the Leota Weather Station.

Proposed

Start Date: 10/01/2009

<b>73010290-Cut</b>	17.1	42110 - Planted Red Pine	High Density Pole	56		Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription: The stand needs to be thinned by a systematic thinning individual tree marking taking the residual BA down to 110.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2009

<b>73010295-Cut</b>	28.0	4122 - Oak, Pine	High Density Pole	83		Harvest	Clearcut with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
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Prescription: The stand should be harvested as a 2" spec final harvest. The harvest should retain all red and white pine as well as marked oak for retention.

Specs: This retention should be focused along the snowmobile trail.

Other

Comments:

Next

Steps: After the stand is harvested interplant with red pine.

Proposed

Start Date: 10/01/2009

<b>73010296-Cut</b>	39.4	42260 - Natural Pine, Mixed Deciduous	High Density Pole	68		Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription: The stand is to be harvested as a 2" spec final harvest. The retention should be a mixture of individually mark oak and pine. The retention

Specs: should be concentrated along the snowmobile trail.

Other

Comments:

Next

Steps: After the stand is harvested plant to red pine.

Proposed

Start Date: 10/01/2009

**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
73010299-Cut	15.5	4122 - Oak, Pine	High Density Log	105		Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription: The stand is to be harvested to 2" DBH but do not cut any red or white pine. Focus any addition retention to the area along the snowmobile trail.  
Specs:

Other Comments:

Next Steps: After harvest interplant red pine this will lead to a mixed oak/pine stand.

Proposed Start Date: 10/01/2009

73010308-Cut	21.7	42211 - Natural Red Pine, Mixed Deciduous	High Density Pole	73		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription: The stand is to be final harvested to 2" DBH. The retention should be placed along the Township property for visual consideration. In addition the boundary should be marked along the top of the bluff that overlooks the Muskegon River Food plain  
Specs:

Other Comments:

Next Steps: After harvest replant the stand to red pine.

Proposed Start Date: 10/01/2009

73010310-Cut	6.8	42211 - Natural Red Pine, Mixed Deciduous	High Density Pole	73		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription: Harvest the stand as a 2" spec final harvest. The retention should be placed to address visual concerns.  
Specs:

Other Comments:

Next Steps: After the harvest plant the stand to red pine.

Proposed Start Date: 10/01/2009

73010312-Cut	34.7	42110 - Planted Red Pine	High Density Log	73		Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription: The stand is to be harvested as a thinning taking the BA down to around 120 sq ft. Concentrated the removal on damaged trees and leave the scattered live and dead oak. Focus the retention along the snowmobile trail.  
Specs:

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2009

**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
<b>73010314-Cut</b>	9.2	42140 - Planted Mixed Pine	High Density Pole	73		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: The stand should be final harvest the stand to 2" DBH. The stand should have red pine and oak marked to met retention or leave the SE corner of the stand for retention.

Other Comments:

Next Steps: After the stand is harvested replant the stand to red pine.

Proposed Start Date: 10/01/2009

<b>73010323-Cut</b>	160.2	42220 - Natural Jack Pine	High Density Pole	63		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
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Prescription Specs: This stand is in an established KW Block. Harvest the stand as a 2" clearcut. The retention should be left in strip going from the southwest to northeast and should be approximately 33' wide. These strips are being left to simulate fire skips.

Other Comments:

Next Steps: After the harvest trench and replant to jack pine.

Proposed Start Date: 10/01/2009

<b>73010324-Cut</b>	34.3	42220 - Natural Jack Pine	High Density Pole	59		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
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Prescription Specs: This stand is in an established KW Block. Harvest the stand as a 2" DBH final harvest. The retention in the stand should be left in strip going from the southwest to northeast going through the entire block. These strips should be approximately 33' wide.

Other Comments:

Next Steps: After the harvest trench and plant jack pine.

Proposed Start Date: 10/01/2009

<b>73010325-Cut</b>	86.7	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	59		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
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Prescription Specs: This stand is in an established KW Block. Harvest the stand as a 2" DBH final harvest. The retention in the stand should be left in strip going from the southwest to northeast going through the entire block. These strips should be approximately 33' wide.

Other Comments:

Next Steps: After the harvest trench and plant jack pine

Proposed Start Date: 10/01/2009

**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
<b>73010334-Cut</b>	7.3	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	72		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> The stand is to be harvested as a 2" Spec final harvest.  <u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> After the harvest replant the stand to jack pine.  <u>Proposed Start Date:</u> 10/01/2006</p>									
<b>73010336-Cut</b>	32.5	4122 - Oak, Pine	High Density Log	94		Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Harvest the stand as a 2" spec, except for oak which is to be cut to 4" DBH and white pine to be cut to 6" DBH. In addition mark some trees for retention  <u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> The stand is expected to regenerate to a mixture of aspen, oak, maple, and jack pine.  <u>Proposed Start Date:</u> 10/01/2006</p>									
<b>73010338-Cut</b>	86.7	42290 - Natural Mixed Pine	High Density Pole	74		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> This stand is in an established KW Block. Harvest the stand as a 2" DBH final harvest. The retention in the stand should be left in strip going from the southwest to northeast going through the entire block. These strips should be approximately 33' wide.  <u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> After the harvest trench and plant jack pine for KW.  <u>Proposed Start Date:</u> 10/01/2009</p>									
<b>73010344-Cut</b>	22.8	4125 - Black, N. Pin Oak	High Density Pole	96		Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Harvest the stand as a 2" spec final harvest, except the oak which is to be cut to 4" DBH. In addition, do not harvest any white and red pine.  <u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> The stand is expected to regenerate to a mixture of oak and aspen.  <u>Proposed Start Date:</u> 10/01/2006</p>									

**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
73010420-Cut	1.5	42220 - Natural Jack Pine	High Density Pole	66		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal - Incomplete

Prescription The stand should be harvested as a 2" spec final harvest. The retention should be kept in a small patch.

Specs:

Other

Comments:

Next The stand is to be replanted to jack pine after it is harvested.

Steps:

Proposed

Start Date: 10/01/2012

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**Total Treatment  
Acreage Proposed: 630.9**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6115 - Lowland Ash	High Density Pole	18.7	Uneven Age	51-80	The stand is very wet with a lot of standing water. This is especially evident in the north end. EAB is present in the stand. It is infesting the black ash to a greater degree than the green ash.
4	4130 - Aspen	High Density Log	17.2	50	81-110	The stand is an upland ridge. The aspen is overmature and there is good advanced regeneration of oak and maple.
5	6113 - Lowland Maple	High Density Log	13.5	Uneven Age	81-110	The terrain is hummocky and wet. There are pockets of standing water. The stand has traces of white pine and black ash.
6	4130 - Aspen	High Density Pole	31.3	26	51-80	This stand was final harvested in 1986. The aspen is doing well. The birch in the stand is found in pockets on wetter ground. The terrain is undulating with some inclusions of lowlands.
7	6113 - Lowland Maple	High Density Log	70.6	Uneven Age	81-110	The terrain is hummocky but it is operable for the most part. The south end of the stand seems dryer than the north end.
8	6113 - Lowland Maple	High Density Log	39.2	Uneven Age	111-140	The terrain is hummocky. There is a trace of yellow birch, basswood, gray birch, and elm. The stand is too wet to harvest.
9	6113 - Lowland Maple	High Density Log	26.1	Uneven Age	111-140	The stand has a pocket of hemlock and inclusions of lowlands. The lowland pockets are mainly cattails and marsh grass.
12	4130 - Aspen	High Density Sapling	8.0	14		This was a 2" spec final harvest. It was harvested in 1997. Regeneration is good being around 100% crown closure. There are pockets of lowlands. However much of the stand is uplands.
13	6113 - Lowland Maple	High Density Log	131.6	91	51-80	The stand is undulating to hummocky. It is a matrix of uplands and lowlands with the lowlands being about 75%. This stand was marked making 1 regeneration opening per acre where the soils were operable. Skid trails were also marked between the openings on the driest ground available. Some scattered upland aspen ridges were heavily marked to make patch clear cuts. The regeneration openings range from 0.05 to 0.2 acres and some of the patch clear cuts were around 1 acre. The harvest was completed in November 2007. It removed about 18 sq ft, retaining around 65 sq ft. The regeneration in the gaps was poor overall. The regeneration gaps that had an aspen component are regenerated fair. However, many regeneration gaps are filling in with raspberry and blackberry.
14	6119 - Mixed Lowland Deciduous Forest	Medium Density	9.3	43		This stand was cut in 1968 as part of the DRIP program. The stand was part of an old beaver flooding. The current overstory trees are the ones that didn't die off when the stand was flooded. The beaver chews around the edges of the stand are old.
16	4130 - Aspen	High Density Pole	40.5	43	81-110	This stand was cut in 1968 as part of the DRIP program. The terrain is undulating. The site index appears to be high for the tree form is good. Many of the trees are 6 sticks tall.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	6113 - Lowland Maple	High Density Log	30.9	Uneven Age	81-110	The terrain is hummocky to undulating. It is a matrix of uplands and lowlands with the lowlands being the majority. There are portions of the stand that are operable. The Midland to Mackinaw trail goes through the stand.
19	6113 - Lowland Maple	High Density Pole	14.8	Uneven Age	81-110	The stand is very wet with a lot of standing water. The stand has a component of cottonwood and ash. The ash in it does not have sign of EAB yet. There is not much ground cover. The standing water is usually present until late June or early July.
20	6112 - Lowland Aspen	Medium Density	20.9	14		The terrain is hummocky. There is cedar at the north end of the stand. There are a lot of wet openings that are heavy to tag alder and willow. There is a dry ridge that runs east to west through the central portion of the stand. This stand was harvested as a 2" DBH final harvest in 1997. The regeneration is not very uniform.
21	6112 - Lowland Aspen	Low Density Sapling	22.0	3		This was a 4" spec final harvest. The record of inspection said that the damage to the residual was high but within the acceptable limits. There were trees left along the M to M trail. The harvest was completed in January 2008. The soils appear to be wetter now; then they were when it was set up. The regeneration is patchy. There are dryer areas in the stand that are fully stocked. There are also areas that are low and wet that are mainly cattails and marsh grass.
23	4137 - Aspen, Birch	High Density Pole	117.2	43	1-50	The terrain is hummocky. The stand is a matrix of uplands and lowlands with the uplands being the majority. It is currently self thinning, so there is a significant amount of down woody material. This stand was cut in 1968 as part of the DRIP program.
24	4130 - Aspen	High Density Pole	133.0	43	81-110	This stand was cut in 1968 as part of the DRIP program. It is a matrix of uplands and lowlands with the lowlands being about 30%. Terrain is hummocky. There are inclusions of low wet ground that are heavy to swamp white oak and red maple.
27	6112 - Lowland Aspen	High Density Pole	11.9	78	51-80	The stand is variable in density. In the past it looks to have had two small short term beaver flooding. In those areas the ground cover is marsh grass with some scattered trees. The terrain is hummocky and it is in a depression
28	6119 - Mixed Lowland Deciduous Forest	High Density Log	22.4	Uneven Age	81-110	The stand is mainly lowlands, but there are inclusions of uplands. Birch is heaviest at the north end but it is declining. Much of the stand is hummocky and wet.
30	4130 - Aspen	High Density Log	25.2	71	51-80	The stand is made up of a series of dry ridges. Some of the areas are sparsely treed while other areas are dense. The birch and aspen is declining. The terrain is undulating.
32	6113 - Lowland Maple	High Density Log	22.9	Uneven Age	81-110	The stand is mainly lowlands. However there are areas of uplands. The birch in the stand is declining. There are traces of swamp white oak and cedar



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	4130 - Aspen	High Density Pole	70.4	25	51-80	This stand was final harvested in 1986. The terrain is undulating with some hummocky areas. The stand has inclusions of lowlands.
39	4193 - Birch, Aspen	Medium Density Pole	8.4	72	51-80	The stand is on a ridge that was not harvested when the stand to the west was. It has a high percentage of birch and aspen. Both are declining. Access to the stand is limited. The terrain is rolling with the lower areas being hummocky. The red maple is filling in from the sides. Let the stand progress naturally. The volume, acreage, tree quality and trees soundness are to low to counter the expense of building the access to the stand.
40	6119 - Mixed Lowland Deciduous Forest	Medium Density	15.2	26	1-50	This stand is a matrix of uplands and lowlands. The lowlands are the majority. The uplands are on slight ridges. The ridges are the areas that have the highest percentage of aspen and birch. However, most of the stand is red maple with some green ash.
41	6112 - Lowland Aspen	Medium Density Pole	7.1	91	51-80	The terrain is hummocky. The aspen is declining throughout the stand. There is a lots of tag alder and raspberry in the understory.
42	6113 - Lowland Maple	Medium Density Pole	24.8	Uneven Age	51-80	The stand was harvested by a species removal of aspen and birch. This left it with a variable residual. The current crown closure ranges from 50 to 100%. The aspen in the stand was mainly on the uplands. The residual BA from the harvest was around 40 sq ft; however it ranges from 20 to 70 sq ft. The harvest was completed in December 2007. The terrain is hummocky. The soils are wetter in the western portion of the stand. The aspen has regenerated in pockets in the eastern 1/3 of the stand. There are also pockets of other types of regeneration scattered in the stand.
43	4130 - Aspen	Medium Density Pole	6.6	91	1-50	The stand is a sparse ridge. The ground cover is mainly bracken fern and grass. There are pockets low wet ground.
44	6113 - Lowland Maple	High Density Sapling	4.9	91	1-50	There is a lot of standing water. The terrain is hummocky. The site looks to have a poor Site Index. It is dryer along Deer Road and that the portion of the stand that contains most of the aspen.
45	4130 - Aspen	Medium Density	11.3	13		This stand was harvested to 2" DBH in 1998. The regeneration is a mixture of red maple and aspen with some oak. The density is variable. It averages between 50% and 75% crown closure. It is also a matrix of uplands and lowlands. The uplands make up about 55%. The regeneration is in pockets and it is heaviest in the western 1/2 of the stand. The terrain is hummocky.
47	6112 - Lowland Aspen	Medium Density Pole	30.1	25	51-80	The stand was harvested in 1985. The terrain is hummocky and it is a matrix of uplands and lowlands with the lowlands being 80%. The soils are dryer along Deer Road and along stand 46.
48	4130 - Aspen	High Density Pole	31.2	24	51-80	The terrain in the stand is hummocky and it is a mixture of uplands and lowlands. The uplands are the majority of the stand. There are inclusions of lowland shrubs and areas of trees over marsh grass.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	6113 - Lowland Maple	High Density Log	25.7	Uneven Age		This stand was marked making 1 regeneration opening per acre where the soils were operable. Skid trails were also marked between the openings on the driest ground available. The regeneration openings ranged from 0.03 to 0.12 acres. The harvest was completed in November 2007. It removed around 18 sq ft and retained around 65 sq ft. The terrain is hummocky. There are some areas of standing water. The birch and aspen have a low percentage of soundness. Most of the regeneration holes did not regenerate. There is evidence of heavy deer browse.
52	6119 - Mixed Lowland Deciduous Forest	High Density Log	46.0	Uneven Age	51-80	The stand is a matrix of uplands and lowlands with the lowlands being the majority. The terrain is hummocky to undulating
53	4199 - Other Mixed Upland Deciduous	Low Density Sapling	10.7	15		This was a 2" spec final harvest in 1996. It has not regenerated well. The regeneration is a mixture of oak, red maple and aspen. The stand was rutted during the harvest. This has impacted the vigor of the regeneration. There are areas of open ground, and areas that are dense. It is a matrix of uplands and lowlands, with the upland being the majority. The terrain is undulating and has significant elevation changes. The east side has the majority of the lowlands. Also in the stand there is a vernal pond that is surrounded by ash. The lowlands are filling in with swamp white oak, red maple and ash. The uplands are sparsely treed and contains most of the hybrid red oaks.
54	6119 - Mixed Lowland Deciduous Forest	High Density Log	41.1	Uneven Age	81-110	The terrain is hummocky. The soils are dryer along the east and west sides of the stand and it is fairly wet through the center. Green ash and cottonwood are mainly in the central portion. Aspen and birch are more common along the east and west edges. The aspen and birch are overmature. They would not be expected to regenerate if they were harvested. Let these species die off and convert the stand to mixed lowland deciduous.
55	6119 - Mixed Lowland Deciduous Forest	Low Density Sapling	12.6	15		This stand was harvested in 1996 as a 2" spec final harvest. The stand did not regenerate well. The soils were heavily rutted during the harvest. The swamp white oaks are being heavily browsed by deer. At the current time some of the regeneration is now getting ahead of them. There are areas in the stand that have no trees and are just marsh grass and shrubs. The terrain is hummocky.
56	4130 - Aspen	High Density Sapling	54.6	23		The stand was harvested in 1988. It is on a ridge that grades from aspen to red maple. The middle arm has a significant component of birch. The northern portion has inclusions of lowlands. There ridges have upland openings as well.
58	6112 - Lowland Aspen	Medium Density	34.7	23		The stand was harvested in 1988. It is in the depressions between upland ridges. They have a high percentage of tag alder in the understory. The trees species have a greater density along the west side of the stand.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6239 - Mixed Emergent Wetland	2.0	No	Low (NonForested)	The stand is in a depression and is mainly cattails and marsh grass. There are some birch trees along the edges.
3	3205 - Mixed Upland Shrub	1.1	No	Low (NonForested)	The stand appears to have been planted with shrubs.
10	50 - Water	3.7	No	Low (NonForested)	This stand is a remnant of an old beaver flooding.
11	629 - Mixed non-forested wetland	12.8	No	Low (NonForested)	This stand looks like it was part of an old beaver flooding. Currently the water is down. The ground cover is mainly cattails and marsh grass. There are still some overstory snags present in the stand.
15	629 - Mixed non-forested wetland	24.9	No	Low (NonForested)	This is an old beaver flooding. It is now filling in along the perimeter with lowland hardwoods and shrubs.
18	3301 - Low Density Deciduous Tree	1.8	No	Low (NonForested)	This is an old oil tank battery location. It was abandoned and moved to the state land to the east of Deer Road. It is starting to fill in with aspen and birch. In addition it appears that some red pine was planted on the site.
22	629 - Mixed non-forested wetland	14.8	No	Unspecified	This is an old beaver flooding that is still mainly marsh grass and cattails. There are some lowland shrubs and some mixed lowland deciduous trees present. They are now filling in around the perimeter. However the stand is still very open.
25	3105 - Mixed Upland Herbaceous	2.1	No	Low (NonForested)	The stand was an old shooting range. It is now grassy but it is filling in with upland brush and birch.
26	6229 - Mixed lowland shrub	5.3	No	Low (NonForested)	This stand is an old beaver flooding. It is now filling in with tag alder.
29	6239 - Mixed Emergent Wetland	7.0	No	Low (NonForested)	The stand is a series of interconnected wetlands. The cover type goes from marsh grass to low density trees.
31	629 - Mixed non-forested wetland	11.8	No	Low (NonForested)	This stand is a mixture of water, marsh grass, cattails, lowland brush, and scattered ash.
33	50 - Water	24.8	No	Low (NonForested)	This is an active beaver flooding .
34	629 - Mixed non-forested wetland	4.1	No	Low (NonForested)	The stand is a mix non-forested wetlands that goes from marsh grass to lowland shrubs to low density tree. The ground cover is marsh grass.
35	629 - Mixed non-forested wetland	5.2	No	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
36	629 - Mixed non-forested wetland	41.8	No	Unspecified	This appears to be an old beaver flooding. It is still retaining some water. However the water level looks significantly lower than it has been in the past. It is converting to lowland shrubs with some scattered lowland hardwoods. There are still pockets of cattails and marsh grass. In addition, there are small islands of mixed lowland deciduous.
38	629 - Mixed non-forested wetland	13.4	No	Unspecified	This is a low wet depression that has shrubs around the perimeter. However most of the stand is marsh grass and cattails with some pockets of open water.
46	629 - Mixed non-forested wetland	12.7	No	Unspecified	This is a low wet depression of marsh grass and cattails. Lowland shrubs are present around the perimeter with some scattered lowland trees.
49	629 - Mixed non-forested wetland	6.4	No	Unspecified	This stand is a series of interconnected wetlands. They are mainly marsh grass. Lowland shrubs are present along the perimeter as well as some scattered swamp hardwoods.
51	629 - Mixed non-forested wetland	96.7	No	Unspecified	This was once a large beaver flooding that is now drained. There are many small islands and ridges of trees going into the stand. On one of these islands of trees there is an eagle's nest. These trees do not have a crown closure greater than 15%. The ground cover between the islands is mainly marsh grass and cattails.
57	6229 - Mixed lowland shrub	7.3	No	Unspecified	The stand is low and wet and is mainly tag alder over marsh grass. There are some red maple, green ash, paper birch, and swamp white oak present in the stand but they make up less than 15% of the crown closure.
59	629 - Mixed non-forested wetland	23.8	No	Unspecified	The stand is low and wet with a high percentage of shrubs. These are intermixed with cattails and marsh grass. There are scattered trees in the stand but they have less than 15% crown closure.
60	629 - Mixed non-forested wetland	5.0	No	Unspecified	This stand is mainly marsh grass. Lowland shrubs are present along the perimeter as well as some scattered swamp hardwoods.
61	6229 - Mixed lowland shrub	11.6	No	Unspecified	The stand is low and wet and is mainly tag alder over marsh grass. There are some red maple, green ash, paper birch, and swamp white oak present in the stand but they make up less than 15% of the crown closure.
62	629 - Mixed non-forested wetland	2.7	No	Unspecified	This is a low wet drainage. It is heavy to tag alder and red osier dogwood over marsh grass and cattails. There are some widely scattered paper birch in the stand.
63	50 - Water	14.7	No	Unspecified	Beaver Flooding



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
64	3301 - Low Density Deciduous Tree	1.7	No	Unspecified	This stand was harvested in 2006 with the stand to the south in compartment 91. The regeneration is poor mainly due to deer browse. There are some areas of lowlands in the stand but they make up less than 35% of the area. The ground cover goes from blackberry/bracken fern to tag alder/marsh grass.



**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

<b>Conservation Area</b>	<b>Type</b>	<b>Description</b>
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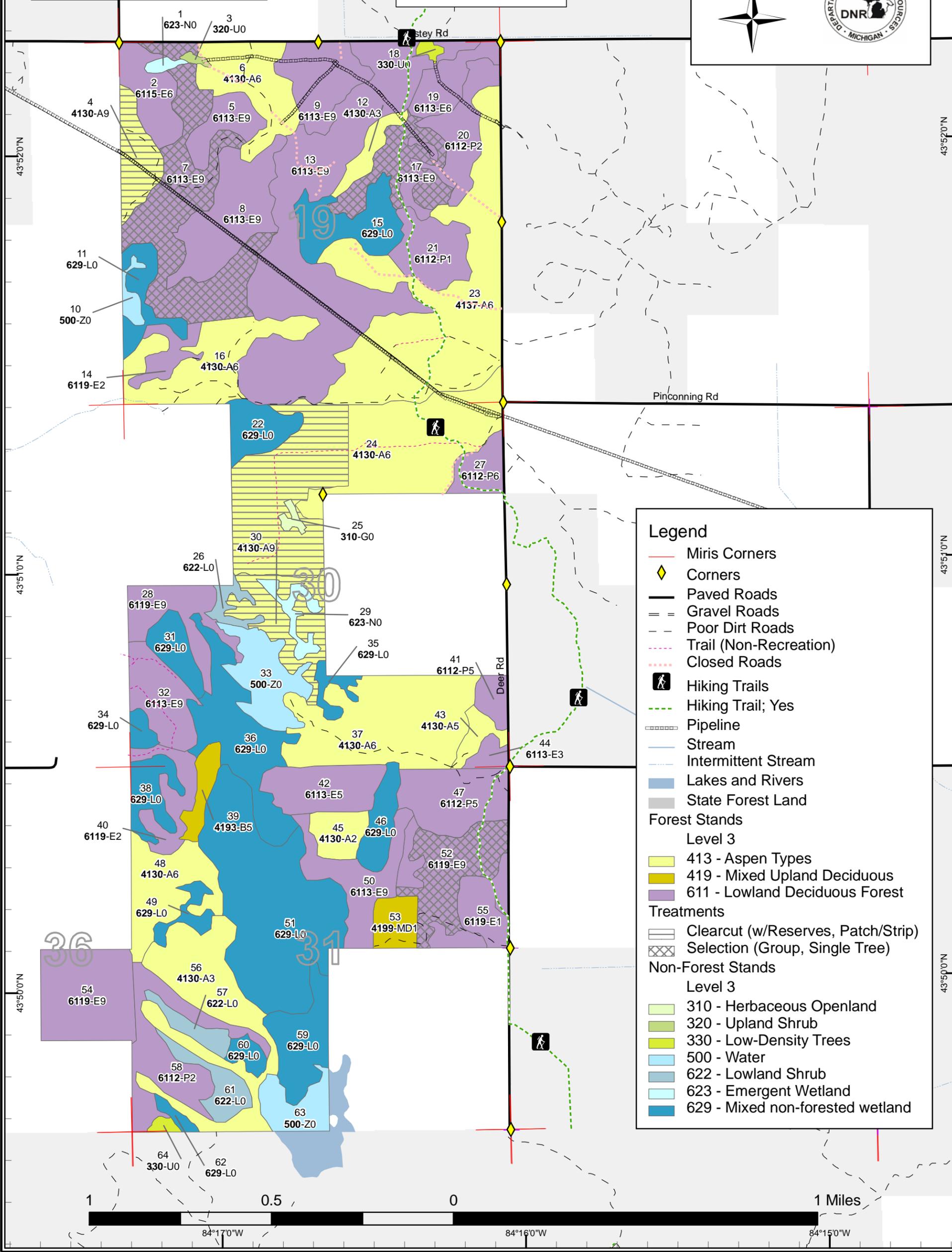
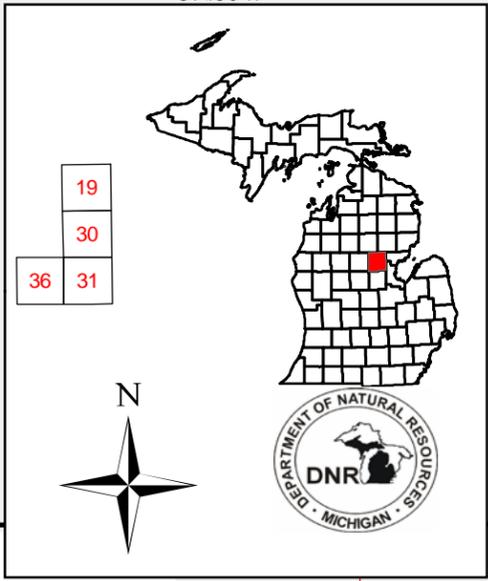
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Compartment: 084  
 T17N R01E Sec. 36  
 T17N R02E Sec. 19, 30, 31  
 County: Gladwin  
 Unit: Gladwin  
 YOY: 2014  
 Acres: 1,622 GIS Calculated  
 Examiner: Steve Nyhoff  
 Map Revised: 6/22/2012  
 Map Phase: Pre-Review

# Cover Type & Treatment Map

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



**Legend**

- Miris Corners
- Corners
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Hiking Trails
- Hiking Trail; Yes
- Pipeline
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

**Forest Stands**

Level 3

- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 611 - Lowland Deciduous Forest

**Treatments**

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

**Non-Forest Stands**

Level 3

- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

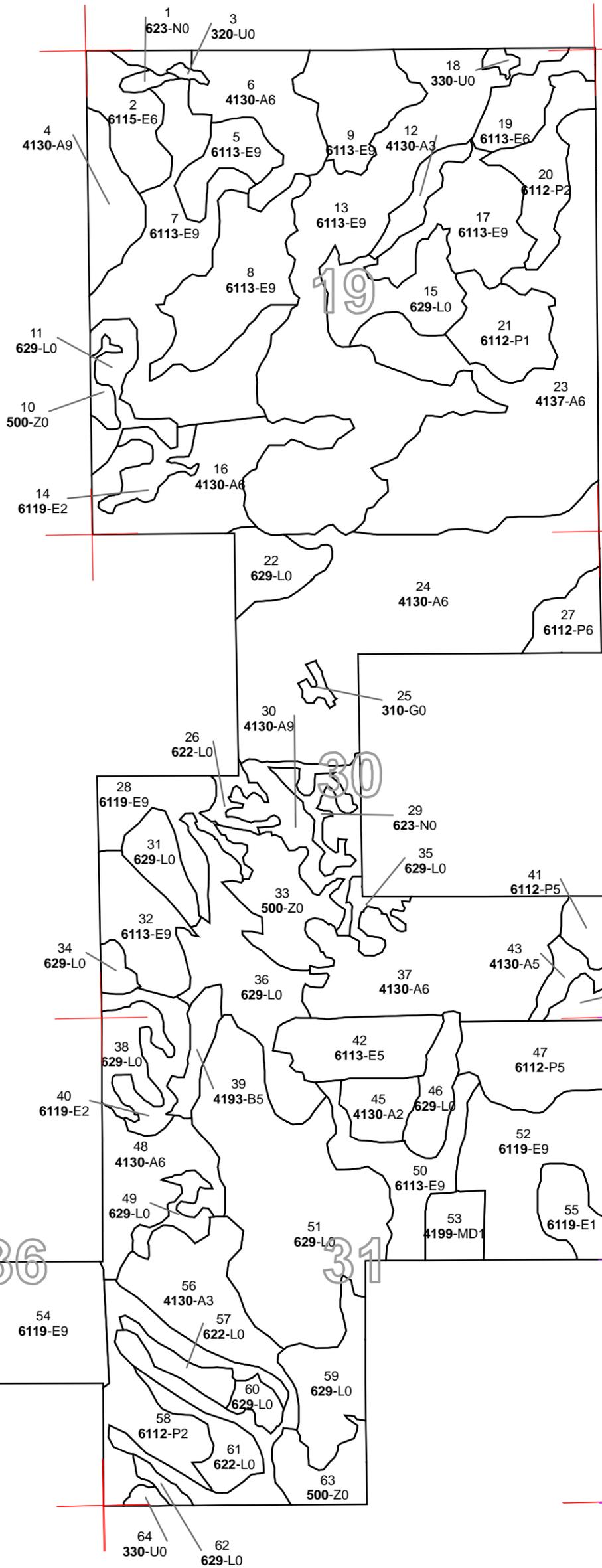
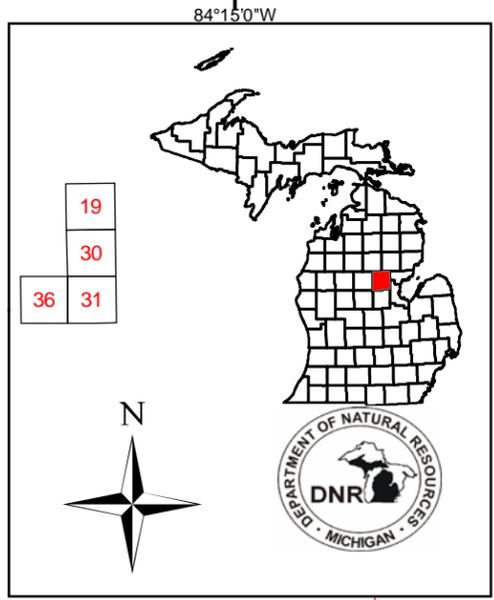




Compartment: 084  
 T17N R01E Sec. 36  
 T17N R02E Sec. 19, 30, 31  
 County: Gladwin  
 Unit: Gladwin  
 YOY: 2014  
 Acres: 1,622 GIS Calculated  
 Examiner: Steve Nyhoff  
 Map Revised: 6/22/2012  
 Map Phase: Pre-Review

# Dedicated & Proposed Special Conservation Area Map

**Stand #**      **Stocking Density**  
 23  
**(4120) - A7**  
 Level 3      OI  
 Level 4      Code  
**Cover Type Code**



- Legend**
- ✚ Remonumented Section Corners
  - Miris Corners
  - ▭ Stand Boundaries
- Forest Stands**
- Level 3
- 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 611 - Lowland Deciduous Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland
  - 629 - Mixed non-forested wetland

