



## COMPARTMENT REVIEW PRESENTATION

### *GAYLORD FOREST MANAGEMENT UNIT*

#### COMPARTMENT: 63

**ENTRY YEAR: 2013**

**ACREAGE: 3,812**

**COUNTY: Antrim**

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**Revision Date:** 05/18/2011

**Stand Examiner:** Kimberly Lentz

**Legal Description:** T29N R05W Sec. 21,22,27,28,33, & 34

**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 soil type is Kalkaska Sand. The terrain is relatively flat terrain with sink holes.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The entire compartment is state ownership encompassing six full sections. There are also large state acreages surrounding compartment except to the north. There is extensive gas well development in this compartment.

**Unique, Natural Features:** Red-shouldered hawk and goshawk just E and W of compartment.

**Archeological, Historical, and Cultural Features:** None known.

**Special Management Designations or Considerations:** This compartment is part of the Grayling Outwash Management Area Plan.

**Watershed and Fisheries Considerations:** This compartment contains portions of Hawk Lake and Sand Lake. Buffers between both of these lakes and the adjacent aspen clear cuts are appropriate and should allow for retention of riparian vegetation and discourage beaver activity. As always, the appropriate Best Management Practices should be applied when working in the proximity of surface water.

**Wildlife Habitat Considerations:** The majority of this compartment is upland with an inclusion of a small portion of Sand Lake on the west side of the compartment. The upland area consists mainly of aspen, red pine, and upland brush. Stands 4, 15, 22, 28, 35, 46, 65, 70, 98, and 125 are aspen stands that are going to be treated to provide a matrix of early successional habitat in conjunction with the upland brush areas that are used by white-tailed deer, wild turkey, grouse, and woodcock and various song birds. Stand 49 is also going to be burned to maintain it in the upland brush condition.

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

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Coldwater Shale. The Coldwater does not have an economic use. Gravel pits are not located in the area, and gravel potential appears to be limited. Most of the State land in the compartment has been leased for oil and gas development. The Antrim Shale has been developed on most of the State land and Guelph (Niagaran) reefs to the south. Additional development of the Antrim Shale is possible, but Guelph reef potential is limited.

**Vehicle Access:** Access is good throughout the compartment. North Crooked Lake Road off Mancelona Road is a county gravel road which is maintained year round. Extensive pipeline roads are maintained by the gas companies to access gas wells and facilities.

**Survey Needs:** None needed at this time.

**Recreational Facilities and Opportunities:** This compartment has a section of the North Country Hiking Trail which leads to Sand Lake. A portion of the Kalkaska ORV trail runs through sections 21 & 22. There is also a heavily used snowmobile trail system.

**Fire Protection:** No foreseen problems

**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 063  
 T29N, R05W, Sec. 21, 22, 27, 28, 33, 34  
 County: Antrim  
 Unit: Gaylord  
 YO: 2013  
 Acres: 3,812 GIS Calculated  
 Stand Examiner: Kim Lentz  
 Map Revised: 5/26/2011  
 Map Phase: Pre-Review

21	22
28	27
33	34

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

**Legend**

- Miris Corners
- Survey Corners
- Remonumented Section Corners
- Pipelines
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Hiking Trail
- Ski Trail
- Snowmobile Trail
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- MCCCT Trail
- Lakes and Rivers

**Planned Regeneration**

- Natural
- Planted

**Treatments**

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Planting (tree species)
- Prescribed Burn

**Forest Stands**

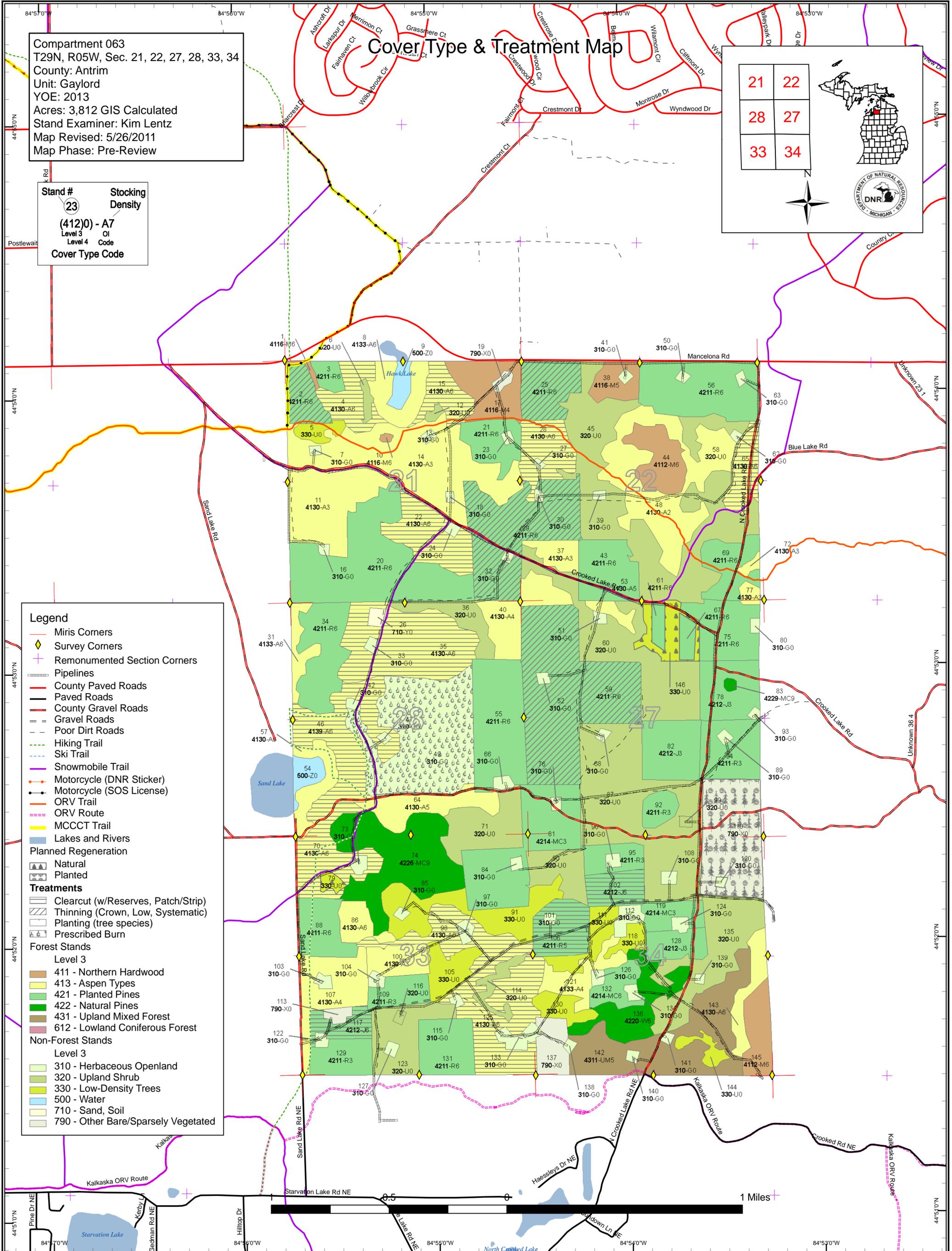
**Level 3**

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

**Non-Forest Stands**

**Level 3**

- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 710 - Sand, Soil
- 790 - Other Bare/Sparsely Vegetated



1 Miles

# Stand Boundary Map

Compartment 063  
 T29N, R05W, Sec. 21, 22, 27, 28, 33, 34  
 County: Antrim  
 Unit: Gaylord  
 YOE: 2013  
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**Stand #**  
 23  
**Stocking Density**  
 (412)0 - A7  
 Level 3 OI  
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**Cover Type Code**

## Legend

- Miris Corners
- Remonumented Section Corners
- ◆ Survey Corners
- Pipelines
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- MCCCT Trail
- Snowmobile Trail
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Hiking Trail
- Ski Trail
- Bike Trail
- Horse Trail
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

## Forest Stands

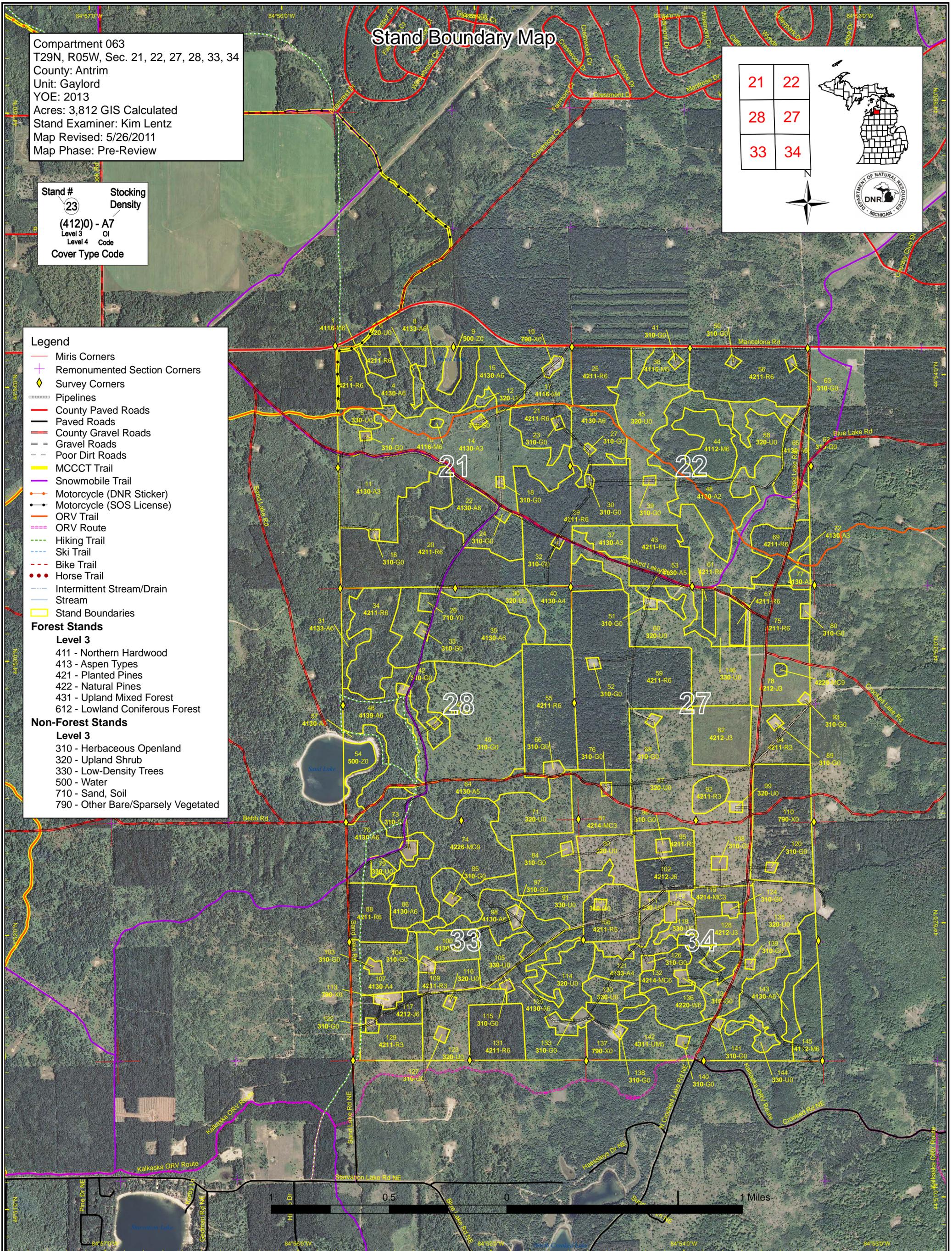
### Level 3

- 411 - Northern Hardwood
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## Non-Forest Stands

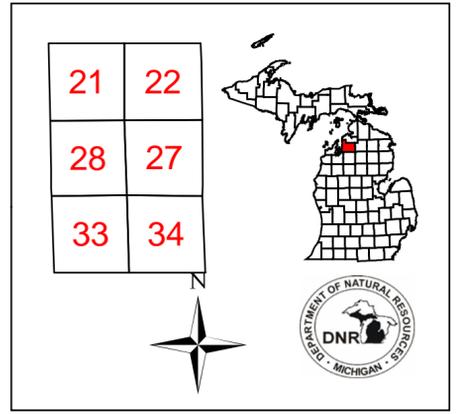
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- 310 - Herbaceous Openland
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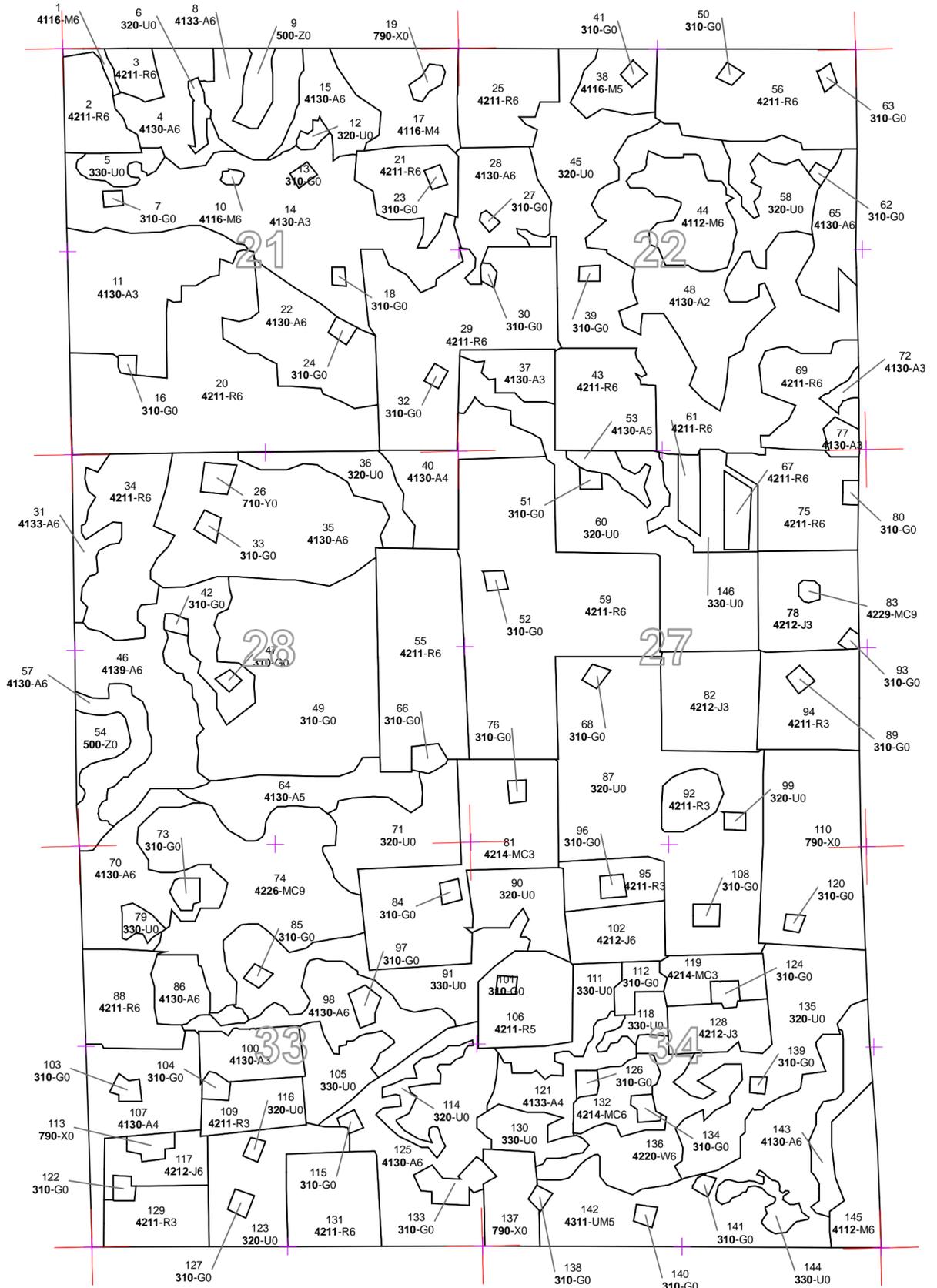
Compartment 063  
 T29N, R05W, Sec. 21, 22, 27, 28, 33, 34  
 County: Antrim  
 Unit: Gaylord  
 YOE: 2013  
 Acres: 3,812 GIS Calculated  
 Stand Examiner: Kim Lentz  
 Map Revised: 5/26/2011  
 Map Phase: Pre-Review

# Dedicated & Proposed Special Conservation Area Map



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

- Legend**
- Miris Corners
  - + Remonumented Section Corners
  - Stand Boundaries
  - ▭ Dedicated Special Conservation Areas
  - ⊡ Boat Access Sites
  - Cold Water Lakes
  - Forest Stands**
  - Level 3
  - 411 - Northern Hardwood
  - 413 - Aspen Types
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 431 - Upland Mixed Forest
  - 612 - Lowland Coniferous Forest
  - Non-Forest Stands**
  - Level 3
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
  - 500 - Water
  - 710 - Sand, Soil
  - 790 - Other Bare/Sparsely Vegetated



**Table 1 – Total Acres by Cover Type and Age Class**

Kimberly Lentz : Examiner



	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 +		Uneren Age
Aspen	0	171	66	100	60	112	153	329	0	0	0	0	0	0	72	1063
Bare/Sparsely Vegetated	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105
Herbaceous Openland	223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223
Jack Pine	0	117	0	0	0	0	0	39	0	0	0	0	0	0	0	156
Low-Density Trees	139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	94	0	0	0	0	0	94
Northern Hardwood	0	0	0	0	0	0	0	18	67	32	0	0	0	0	0	116
Planted Mixed Pines	0	0	102	0	0	0	0	18	0	0	0	0	0	0	0	119
Red Pine	0	0	111	122	0	27	543	197	0	0	0	0	0	0	0	1000
Sand, Soil	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	98	0	0	0	0	0	98
Upland Shrub	633	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633
Water	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	41
<b>Total</b>	<b>1123</b>	<b>288</b>	<b>279</b>	<b>222</b>	<b>60</b>	<b>139</b>	<b>696</b>	<b>601</b>	<b>67</b>	<b>224</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>113</b>	<b>3812</b>



## Table 2 – Proposed Treatment Summaries

**Gaylord Mgt. Unit**  
**Year of Entry 2013**

**Compartment 063**  
**Total Compartment Acres: 3812**

### Acres by Treatment Type

Commercial Harvest - 864	Site Prep - 0	Tree Planting - 143	Prescribed Burn - 131	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>	481	0	0	0	0	0	481
<b>Jack Pine</b>	39	0	0	0	0	0	39
<b>Red Pine</b>	32	0	0	0	312	0	344
<b>Total</b>	<b>552</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>312</b>	<b>0</b>	<b>864</b>



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	52063002-Cut	21.6	42110 - Planted Red Pine	High Density Pole	50	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Thin by marking out co-dominants favoring dominant crop trees to be left. Mark trees to cut within the rows. Targeted residual BA = 130 sq.ft./acre. Average total BA = 188 sq.ft./acre.</p> <p><u>Other Comments:</u> Protect north country hiking trail to west of this stand, and MCCCT trail to north of this stand.</p> <p><u>Next Steps:</u> No additional follow-up needed until next inventory cycle.</p>									
4	52063004-Cut	28.0	4130 - Aspen	High Density Pole	60	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> Final harvest aspen with the exception of creating a retention area south to southwest of stand 6 which is a low depression non-forest pothole. The retention area can be approximately 3 acres of hardwood on the hillside to the south of stand 6.</p> <p><u>Other Comments:</u> Stand is primarily quaking &amp; big tooth aspen with some hardwood species intermixed. Noted defect and some mortality in aspen (mature).</p> <p><u>Next Steps:</u> Monitor success of regeneration the next treatment period. Acceptable regeneration mix of aspen and hardwood species.</p>									
15	52063015-Cut	23.6	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> Final harvest aspen, leave white pine uncut which is primarily adjacent to east shore of Hawk Lake.</p> <p><u>Other Comments:</u> Protect ORV trail during logging operations.</p> <p><u>Next Steps:</u> Monitor the success of regeneration which will be a combination of aspen and mixed hardwood.</p>									
22	52063022-Cut	45.0	4130 - Aspen	High Density Pole	65	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> Final harvest aspen, red maple, and black cherry. Leave oak uncut. Apply retention guidelines with 3% left as an uncut island.</p> <p><u>Other Comments:</u> This stand consists of aspen, red maple, and black cherry.</p> <p><u>Next Steps:</u> Monitor the success of regeneration which should be both aspen and mixed hardwood.</p>									
25	52063025-Cut	35.7	42110 - Planted Red Pine	High Density Pole	55	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Thin red pine by marking co-dominants within the rows to release crop trees. (Marking from below) O.k. to leave minor component of hardwood unless it is in the way for logging operation. Reduce basal area = 130 sq.ft./acre. Average total BA = 186 sq.ft./per acre.</p> <p><u>Other Comments:</u> Consider marking with leaf off due to red maple in understory.</p> <p><u>Next Steps:</u> Re-visit stand during next scheduled inventory.</p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28	52063028-Cut	34.1	4130 - Aspen	High Density Pole	58	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with retention maintained at 10% of stand acreage. Protect ORV trail that runs through stand.</p> <p><u>Specs:</u></p> <p><u>Other</u> Consider combining with adjacent aspen stands to be treated. Adjacent red pine to the south will require a shortwood operation.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor the success of regeneration which will be primarily aspen with some mixed hardwood.</p> <p><u>Steps:</u></p>									
29	52063029-Cut	98.8	42110 - Planted Red Pine	High Density Pole	54	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Stand will benefit from a marked thinning. Mark from below to favor dominant, crop trees. Reduce basal area to 130 sq.ft./acre. No tree length skidding.</p> <p><u>Specs:</u></p> <p><u>Other</u> Very nice stand of red pine which has been row thinned once in 1997. 6 pulp stick average with a total of 65' height. 9-10" dbh currently. Some narrow skid rows. Average total BA = 180. sq.ft./acre. Stand does not qualify for any type of final harvest. A second thinning is the silvicultural prescription.</p> <p><u>Comments:</u></p> <p><u>Next</u> Re-visit stand during next scheduled inventory.</p> <p><u>Steps:</u></p>									
35	52063035-Cut	93.1	4130 - Aspen	High Density Pole	62	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest following retention guidelines. Do not cut scattered red pine that were planted in adjacent stand to the west.</p> <p><u>Specs:</u></p> <p><u>Other</u> Mature aspen with some defect and mortality noted. Protect gas wells during harvest operation.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor the success of regeneration which will be aspen and mixed hardwood.</p> <p><u>Steps:</u></p>									
46	52063046-Cut	75.1	4139 - Aspen, Mixed Deciduous	High Density Pole	62	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest aspen with a 3 chain buffer around Sand Lake created for adjacent stand 57. Do not cut white pine. Create at least two retention areas with a northern hardwood component. One retention should be located on the north side of Sand lake, and immediately next to the North Country Hike Trail Spur that is located on the west boundary of Compartment. A second retention can also be created by the hike trail that is located to the southeast of Sand Lake.</p> <p><u>Specs:</u></p> <p><u>Other</u> Well stocked aspen with red maple, black cherry, white birch, and white pine.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor the regeneration success which should be aspen and mixed hardwood.</p> <p><u>Steps:</u></p>									
59	52063059-Cut	155.7	42110 - Planted Red Pine	High Density Pole	61	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Mark red pine to favor crop trees, and thin from below removing co-dominants, and some defective dominants. Reduce BA from 180 sq.ft. per acre to an average of 130 sq.ft./per acre.</p> <p><u>Specs:</u></p> <p><u>Other</u> Very nice red pine stand which has been row thinned once in 1995. Average of 6 pulp sticks per tree. 65' total height of dominant pine. Stand is high quality and does not qualify for any type of early final harvest. A second marked thinning is silvicultural recommendation.</p> <p><u>Comments:</u></p> <p><u>Next</u> Stand will be re-visited during next inventory time period.</p> <p><u>Steps:</u></p>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	52063065-Cut	24.2	4130 - Aspen	High Density Pole	65	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest with no retention. A small upland brush inclusion along North Crooked Lake is included in harvest boundaries to be utilized for a landing. NOTE: THIS STAND WILL HAVE A DELAYED TREATMENT FOR 2017 YOY TO BE TREATED WITH ADJACENT ASPEN IN COMP. 64.</p> <p><u>Specs:</u></p> <p><u>Other</u> Follow standard specs to protect snowmobile trail. Do not harvest stand during active snowmobile season since this trail is heavily used.</p> <p><u>Comments:</u> To be cut with the adjacent stand to the east in FY2017.</p> <p><u>Next Steps:</u> Monitor regeneration success which will be aspen primarily.</p>									
70	52063070-Cut	43.7	4130 - Aspen	High Density Pole	49	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest aspen, red maple, black cherry, and white pine. Follow retention guidelines. Protect hiking and snowmobile trails with standard contract specifications.</p> <p><u>Specs:</u></p> <p><u>Other</u> An upland brush - stand 79 can be utilized for a landing if needed during the harvest operation.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Monitor the regeneration success which will be aspen and mixed hardwood.</p>									
98	52063098-Cut	36.7	4130 - Aspen	High Density Pole	62	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest aspen. Leave white pine uncut. Follow retention guidelines.</p> <p><u>Specs:</u></p> <p><u>Other</u> Aspen mature with some conks on logs. Connected the mature aspen on west boundary with main stand by including a narrow strip of younger aspen in the final harvest.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Monitor the regeneration success of aspen and mixed hardwood.</p>									
102	52063102-Cut	22.3	42120 - Planted Jack Pine	High Density Pole	60	Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest jack pine with no retention. Proposed planting red pine. (Descision pending on what to plant after harvest.)</p> <p><u>Specs:</u></p> <p><u>Other</u> Red pine in area has site index = 60 Jack pine site index = 50.</p> <p><u>Comments:</u> There is also recently established red pine plantations in same forty acres.,</p> <p><u>Next Steps:</u> Create an FTP for planting once final harvest is completed.</p>									
106	52063106-Cut	32.1	42110 - Planted Red Pine	Medium Density Pole	54	Harvest	Clearcut with Reserves	3205 - Mixed Upland Shrub	Cmpt. Review Proposal
<p><u>Prescription</u> This red pine is part of an open contract to final harvest the timber as part of the red pine project. A few retention islands were created. Note: Stand is not cut yet.</p> <p><u>Specs:</u></p> <p><u>Other</u> Part of red pine project. Negotiated no planting even though O.I. Management Objective was red pine.</p> <p><u>Comments:</u></p> <p><u>Next Steps:</u> Complete timber sale contract and prepare TCR.</p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
117	52063117-Cut	17.2	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	61	Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Mature jack pine - final harvest and re-plant to red pine and oak. No retention needed.									
<u>Specs:</u>									
<u>Other</u> Optional: Site is well suited for red pine re-planting, and the south half of the forty was previously planted with red pine.									
<u>Comments:</u>									
<u>Next</u> Prepare a FTP for planting once the harvesting is completed.									
<u>Steps:</u>									
125	52063125-Cut	77.4	4130 - Aspen	High Density Pole	58	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest. Leave scattered white and red pine uncut. Follow retention guidelines.									
<u>Specs:</u>									
<u>Other</u> Variable density with moderately to well stocked mature aspen and some small upland brush inclusions.									
<u>Comments:</u>									
<u>Next</u> Monitor regeneration success.									
<u>Steps:</u>									
110	NF_52063110- Plant	78.3	Non-Forested		0	Tree Planting	Hand Plant	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Hand planting already scheduled for spring, 2011.									
<u>Specs:</u>									
<u>Other</u> Site is currently trenched.									
<u>Comments:</u>									
<u>Next</u> Monitor success of planting.									
<u>Steps:</u>									
49	NF_52063049- Burn	130.9	Non-Forested		0	Prescribed Burn	Unspecified	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal
<u>Prescription</u> Prescribe burn was scheduled and completed in May, 2011.									
<u>Specs:</u>									
<u>Other</u> Previous burn effectively caused mortality in small diameter aspen, red maple and black cherry. Pole size trees were scorched, but not									
<u>Comments:</u> completely dead. Some aspen has re-sprouted with new A3.									
<u>Next</u> Monitor success of burn.									
<u>Steps:</u>									

**Total Treatment  
Acreage Proposed: 1073.4**

**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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#Error

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

**Total Treatment Acreage Proposed: 0**

Out of YOE -- Treatments  
Prescribed with No Limiting Factor

Year of Entry: 2013



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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  
Comments:

Next  
Steps:

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**Total Treatment  
Acreage Proposed: 0**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4116 - Mixed N. Hardwood - Aspen	High Density Pole	2.4	75	81-110	Narrow stand with northern hardwood species and some mixed aspen. Orv recreational trail runs along north boundary which is also adjacent to Mancelona Road.
2	42110 - Planted Red Pine	High Density Pole	21.6	50	171-200	Red pine plantation thinned in 1993. Dense, tall red pine with average of 6 sticks per tree. Average total BA = 188 sq.ft./ac.
3	42110 - Planted Red Pine	High Density Pole	8.8	50	111-140	Red pine plantation on a steep hill. Very difficult to operate on for logging.
4	4130 - Aspen	High Density Pole	28.0	60	81-110	Mature aspen intermixed with clump grown low quality maple, both red & sugar maple. Some aspen mortality occurring, and defect in sawtimber.
8	4133 - Aspen, Mixed Pine	High Density Pole	26.6	65	81-110	Mixed stand of Large tooth aspen and northern hardwood pulp developing. The north & east hillside is primarily white pine sawtimber mixed in also. Steep slopes on all sides of Hawk Lake making this stand more important as a buffer.
10	4116 - Mixed N. Hardwood - Aspen	High Density Pole	1.1	75	81-110	Small island of northern hardwood left for retention when surrounding aspen was final harvested in 2007.
11	4130 - Aspen	High Density Sapling	66.2	17		Dense aspen regeneration from a stand cut in 1994.
14	4130 - Aspen	High Density Sapling	128.6	4		Aspen stand was final harvested in January, 2007. Well stocked aspen regeneration of healthy quality.
15	4130 - Aspen	High Density Pole	23.6	45	111-140	Well established aspen 6-8" dbh. Minor component of sugar maple and red maple intermixed, yet stump sprout origin. Vigorous, good quality stand of Big Tooth Aspen.
17	4116 - Mixed N. Hardwood - Aspen	Low Density Pole	36.8	78	1-50	Low to moderately stocked hardwood -aspen stand. Open grown, limby quality.
20	42110 - Planted Red Pine	High Density Pole	126.1	53	111-140	Red pine plantation of good quality. Completed a marked thinning in 2006.
21	42110 - Planted Red Pine	High Density Pole	27.0	49	141-170	Red pine plantation thinned in 2006. Crowns need time to fill in from thinning.
22	4130 - Aspen	High Density Pole	45.0	65	51-80	Mature aspen stand held for age class distribution last decade.
25	42110 - Planted Red Pine	High Density Pole	35.7	55	171-200	Well stocked red pine plantation. Third row thinned in 1996. Minor component of red maple left in stand. Very nice 6-7 pulp stick r.pine. Sawlog component developing 12"-14" dbh. Red pine SI = 70. Dominant height is 75' tall at 55 yrs. old.
28	4130 - Aspen	High Density Pole	34.1	58	51-80	Mature aspen stand with intermixed red maple.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
29	42110 - Planted Red Pine	High Density Pole	98.8	54	171-200	Dense red pine plantation. Third row thinning completed in 1997. Some narrow skid rows 8-9' wide. Understory varies from light to heavy with red maple/ beech.
31	4133 - Aspen, Mixed Pine	High Density Pole	13.7	Uneven Age	81-110	Aspen mixed in with adjacent planted red pine. Aspen stand immediately to the west in adjacent compartment is being final harvested. North Country hiking trail is located along the west boundary of this stand. Some age & dbh variation in Aspen, some white pine in understorey.
34	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	48.4	23	1-50	Red pine plantation established in 1982, then due to poor survival 40%-90% in patches, the stand was re-planted in 1988 with more red pine. Current: Stand is just starting to develop into 1 stick pine, 25' tall. Some quaking aspen and black cherry intermixed.
35	4130 - Aspen	High Density Pole	93.1	62	81-110	Mature aspen stand. Needs to be treated. Some defect, mortality noted in aspen. Component of red maple & black cherry in stand.
37	4130 - Aspen	High Density Sapling	14.3	4		Young aspen regeneration well stocked as a result of a final harvest in 2007. Note: Small inclusion of leave trees marked along Angle Road.
38	4116 - Mixed N. Hardwood - Aspen	Medium Density Pole	17.7	65	1-50	Lowly stocked hardwood with clump grown red maple and aspen.
40	4130 - Aspen	Low Density Pole	37.1	Uneven Age	1-50	Lowly stocked aspen poles with variable density of saps & poles.
43	42110 - Planted Red Pine	High Density Pole	39.4	54	141-170	Red pine plantation densely stocked. Site index = 64. Average BA = 153 sq.ft./acre. Very little maple in understorey. Some of the rows are narrow. Row thinning completed on this stand in Nov, 2005.
44	4112 - Maple, Beech, Cherry Association	High Density Pole	31.7	80	81-110	Smaller diameter mixed northern hardwood stand with red & sugar maple. Density currently is o.k. & does not need thinning.
46	4139 - Aspen, Mixed Deciduous	High Density Pole	75.1	62	81-110	Well stocked mature aspen stand with intermixed red maple, white birch, and minor component of white pine especially around perimeter of Sand Lake. Noted more hardwood with red & sugar maple on north side of Sand Lake. North Country Hike Trail also runs through this stand with a spur trail leading to the lake and then southeast.
48	4130 - Aspen	Medium Density	100.0	27		Aspen sapling stand with a mix of big tooth & quaking aspen, moderately stocked. Currently a non-merchantable stand soon to develop into 1-2 stick trees.
53	4130 - Aspen	Medium Density Pole	7.3	52	1-50	Moderately stocked quaking aspen of variable size and density.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
55	42110 - Planted Red Pine	High Density Pole	73.4	23		Young Red pine plantation developing into 1-2 pulpwood. Original plantation established in 1982, then re-planted in 1988 along with red pine stand in northwest corner of section 28. Red pine = 5"-8" dbh ave. = 6".
56	42110 - Planted Red Pine	High Density Pole	70.9	55	111-140	Red pine plantation. Thinning completed in 2006. Third row thinned and also cut out clones of aspen.
57	4130 - Aspen	High Density Pole	21.6	Uneven Age	51-80	Aspen stand on hillside around the perimeter of Sand Lake. Red maple, white birch, & white pine intermixed. Multiple efforts have been made to block ORV use and vehicular traffic down to the Lake. An inclusion of younger aspen, 35 yrs. old in the northeast corner of this stand just west of an old barricaded trail rd. On southwest corner of stand there is a boulder barcade to prohibit vehicles from driving to the lake. A small quantity of red pine have also been planted to protect during adjacent harvest.
59	42110 - Planted Red Pine	High Density Pole	155.7	61	171-200	Red pine plantation thinned in 1996 with jack pine removed. Stand would benefit from a marked thinning. Site index = 60.
61	42110 - Planted Red Pine	High Density Pole	6.5	50	171-200	Red pine plantation never been thinned. Main stand is 160 - 210 BA/AC. Edges of stand are less. Stand would benefit from a thinning.
64	4130 - Aspen	Medium Density Pole	34.2	52	1-50	Low to medium stocking of quaking aspen, black cherry, & scattered conifer with white & jack pine.
65	4130 - Aspen	High Density Pole	24.2	65	51-80	Mature aspen stand predominantly quaking aspen. Most of sawlog size trees are defective with conks. Stand is located on both sides of North Crooked Lake Rd. A small upland brush inclusion with aspen is part of stand. Snowmobile trail runs through stand. Aspen held in past for Age class distribution.
67	42110 - Planted Red Pine	High Density Pole	7.4	50	141-170	Red pine plantation of variable density, never been thinned. Stand would benefit from a first time row thinning. Minor component of Big tooth aspen, red maple, jack pine, & white pine. (Less than 2% of each of these species)
69	42110 - Planted Red Pine	High Density Pole	29.7	50	111-140	Red pine plantation with third row thin completed in 2006. Aspen removed from cut rows only.
70	4130 - Aspen	High Density Pole	43.7	49	51-80	Mature aspen intermixed with red maple, black cherry, & white pine. Stand would benefit from final harvest. One small upland brush type inside stand mapped out separately. Aspen site index = 55
72	4130 - Aspen	High Density Sapling	2.9	5		Dense aspen regeneration from harvest June, 2006. One other small clone/stand cut between stands 48 & 49. Very successful regeneration up to 12' height.
74	42260 - Natural Pine, Mixed Deciduous	High Density Log	93.8	85	81-110	Natural white pine stand with intermixed defective aspen, some red maple & black cherry.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	42110 - Planted Red Pine	High Density Pole	41.4	61	111-140	Red pine stand was third row thinned in 1997, and marked for a thinning and completed in 2006. Pine looks healthy and needs time to occupy canopy thinning efforts.
77	4130 - Aspen	High Density Sapling	4.6	5		Dense aspen regeneration from 2006 final harvest. Healthy 12' height aspen.
78	42120 - Planted Jack Pine	High Density Sapling	57.4	6		History: Was a dense jack pine plantation, harvested and replanted with 3-0 White Pine stock. Natural j.pine regen. well established from seed source. Jack pine = 5'-8' in height. White Pine = 12" height. White pine is in competition with j. pine, but not to give up on it developing under the shade.
81	42140 - Planted Mixed Pine	High Density Sapling	84.0	15		This stand had the jack pine cut in 1994, then red pine planted with 3-0 stock in 1996. In addition to red pine there is natural jack pine 10' - 14' height, scattered cherry, and aspen clones 15' - 20' height.
82	42120 - Planted Jack Pine	High Density Sapling	39.5	6		History: Previous stand was a dense jack pine plantation, harvested & re-planted in 2005 with white pine. The logging process created lots of natural regen. jack pine from seed source. Furrow hand planted the 3-0 white pine planting stock.
83	6127 - Lowland Pine	High Density Log	1.6	110		Natural white & red pine with intermixed quaking aspen & black cherry. Island created during the last cutting effort of this forty acres. Previously noted a small, wetland component with leatherleaf. Some of the red pine died after the adjacent cut was done.
86	4130 - Aspen	High Density Pole	16.0	33	81-110	Young aspen stand - Well stocked, healthy, vigorous enough to hold one decade. White pine, red maple, and a few red pine left from previous harvest.
88	42110 - Planted Red Pine	High Density Pole	30.8	53	141-170	Red pine plantation thinned in 2004. Removed aspen & marked out pine. Nice quality red pine, 6 pulp sticks per tree. SI = 62+ North Country Hike Trail runs through stand.
92	42110 - Planted Red Pine	High Density Sapling	12.2	15		An island of red pine planted in 1996.
94	42110 - Planted Red Pine	High Density Sapling	38.7	15		Red pine plantation established in 1996. Mixed in with nature regenerating jack pine & some overtopping cherry 4"-8" dbh. R.pine= 8'-15' tall & jack pine = 8'-10' tall.
95	42110 - Planted Red Pine	High Density Sapling	17.0	15		Red pine planted in 1996, now a 15 yr. old plantation. jack pine regenerated naturally after timber harvest creating a mixed stand. Red pine= 5'-10' tall Jack pine= 10'-15' tall Cherry= 8'-15' tall.
98	4130 - Aspen	High Density Pole	36.7	62	81-110	Mature aspen with conks on sawtimber. This stand will not hold well. Connected the clones of mature aspen and delineated from the younger aspen to the north. Minor white pine component intermixed from adjacent stand. Aspen site index = 64



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
100	4130 - Aspen	High Density Sapling	20.5	7		This stand was cut in 2004. Stand regenerated back to aspen & some natural jack pine.
102	42120 - Planted Jack Pine	High Density Pole	22.3	60	111-140	Jack pine was held in past due to extensive cutting of pine in area & to gain some volume. Jack pine still healthy. Site Index for Jack pine is 50.
106	42110 - Planted Red Pine	Medium Density Pole	32.1	54	1-50	Red pine stand currently sold under a red pine project harvest contract. Stand is not cut yet, but will be soon. Wildlife requested stand be allowed to become an upland brush type and not re-plant with red pine.
107	4130 - Aspen	Low Density Pole	44.5	45	1-50	Low density aspen, black cherry, and red maple.
109	42110 - Planted Red Pine	High Density Sapling	19.2	15		Red pine plantation established in 1996 with 3-0 stock. Previous stand was jack pine, so seed source created natural jack pine regen. also. Red pine = 8'-15' jack pine 10' - 15', cherry 15' - 20', aspen 15' - 20'.
117	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	17.2	61	51-80	Mature jack pine with an average of 4 pulp sticks per tree. This stand surrounds a gas well facility which should not be a problem for harvesting. There is ample open ground around facility. Jack pine site index = 50.
119	42140 - Planted Mixed Pine	High Density Sapling	17.5	15		Red pine plantation with natural jack pine regeneration. Established plantation in 1996. Red pine 5' -8' tall, 1" - 2" dbh, and Jack pine 10'- 14' tall, 3" dbh.
121	4133 - Aspen, Mixed Pine	Low Density Pole	24.2	35	1-50	Low density aspen and white pine with approx. 30% crown cover. Some scattered black cherry. Stand was previously prescribed for a white pine underplanting.
125	4130 - Aspen	High Density Pole	77.4	58	81-110	Mature aspen stand of higher density than adjacent upland brush, A4 stands. An inclusion of upland brush in stand mapped out separately. Minor component of white pine. Unique old growth white pine to the east with large diameters of 30"-34" dbh.
128	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	19.9	7		Planted white in 2004, seven yrs. old. Also, due to jack pine final harvest, there is a dense natural regeneration mixed in of jack pine from seed source. White pine is small, 6"-12" planted in furrows.
129	42110 - Planted Red Pine	High Density Sapling	24.1	14		Red pine plantation established in 1997 with 3-0 red pine. Previously a jack pine stand with residual seed which created natural j.pine regen. 10' - 15' height.
131	42110 - Planted Red Pine	High Density Pole	35.1	54	111-140	Red pine plantation with first row thinning completed in 2004. Aspen, cherry left in uncut rows in order to maintain a higher residual BA. Crowns have not had time to fill in yet. 4-5 stick red pine.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
132	42140 - Planted Mixed Pine	High Density Pole	17.6	61	111-140	Mixed pine consisting of jack pine, red pine, white pine. Appears more like a natural stand with indistinct rows. Minor mortality in jack pine, but it released red pine. Red pine is of good quality especially on north side of gas well. 5 stick, 9"- 12" dbh.
136	42200 - Natural White Pine	High Density Pole	41.1	Uneven Age	111-140	Old growth white pine stand with diameters ranging from 30" - 34" dbh left during the last logging era in the late 1800's. The understory of white pine is very dense, straight white pine regeneration 2" - 6" dbh. The northeast portion of this stand is predominantly white pine poles & saps with the old giants diminished. Some lightning damage in old trees.
142	4311 - Pine, Aspen Mix	Medium Density Pole	98.4	89	1-50	Featured stand is white pine with quaking aspen. More open grown quality. Note: Inclusion of older clone of aspen on east end mixed with white pine. Also, small inclusion of young A3. Lots of white pine stumps from previous landscape of white pine sawtimber.
143	4130 - Aspen	High Density Pole	20.1	38	81-110	Young aspen polestand 6"-7" dbh. Healthy enough to hold one more decade.
145	4112 - Maple, Beech, Cherry Association	High Density Pole	26.6	70	51-80	Mixed northern hardwoods with clump grown red maple. Density does not require any silvicultural treatment.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	3303 - Mixed Low Density Trees	8.6	No	Unspecified	
6	3205 - Mixed Upland Shrub	3.9	No	Unspecified	
7	3102 - Grass	1.2	Yes	Unspecified	
9	50 - Water	8.7	No	Unspecified	
12	3205 - Mixed Upland Shrub	2.3	No	Unspecified	
13	3102 - Grass	1.5	Yes	Unspecified	
16	3102 - Grass	1.3	Yes	Unspecified	
18	3102 - Grass	1.0	Yes	Unspecified	
19	790 - Other Bare/Sparsely Vegetate	3.0	Yes	Unspecified	
23	3102 - Grass	1.4	Yes	Unspecified	
24	3102 - Grass	1.8	Yes	Unspecified	
26	710 - Sand, Soil	3.6	Yes	High (NonForested)	
27	3102 - Grass	1.0	Yes	Unspecified	
30	3102 - Grass	1.2	Yes	Unspecified	
32	3102 - Grass	1.3	Yes	Unspecified	
33	3102 - Grass	2.1	Yes	Unspecified	
36	3205 - Mixed Upland Shrub	21.4	No	Unspecified	
39	3102 - Grass	1.3	Yes	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
41	3102 - Grass	1.5	Yes	Unspecified	
42	3102 - Grass	1.7	N/A	Unspecified	
45	320 - Upland Shrub	159.2	N/A	Unspecified	
47	3102 - Grass	1.2	N/A	Unspecified	
49	3105 - Mixed Upland Herbaceous	130.9	Yes	High (NonForested)	Prescribed burn scheduled for spring season, 2011.
50	3102 - Grass	1.3	Yes	Unspecified	
51	3102 - Grass	1.6	Yes	Unspecified	
52	3102 - Grass	1.6	Yes	Unspecified	
54	50 - Water	10.6	No	Unspecified	
58	3205 - Mixed Upland Shrub	13.4	No	Unspecified	
60	3205 - Mixed Upland Shrub	90.8	No	Unspecified	Non-forested, upland shrub.
62	3102 - Grass	1.1	Yes	Unspecified	
63	3102 - Grass	1.3	Yes	Unspecified	
66	3102 - Grass	3.4	Yes	Unspecified	
68	3102 - Grass	1.5	Yes	Unspecified	
71	3205 - Mixed Upland Shrub	41.4	No	Unspecified	
73	3102 - Grass	3.2	Yes	Unspecified	
76	3102 - Grass	1.5	Yes	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
79	3301 - Low Density Deciduous Tree	4.3	Natural Regen	Medium (NonForested)	Final harvest trees in this stand during cutting of adjacent aspen stand.
80	3102 - Grass	1.6	Yes	Unspecified	
84	3102 - Grass	1.7	Yes	Unspecified	
85	3102 - Grass	1.5	Yes	Unspecified	
87	3205 - Mixed Upland Shrub	149.0	No	Unspecified	Consider planting red pine on 64 acres of the most easterly portion of this stand. Leave the existing gas wells, pipelines , and island of red pine out of the new plantation.
89	3102 - Grass	1.6	Yes	Unspecified	
90	3205 - Mixed Upland Shrub	26.3	No	Unspecified	
91	3303 - Mixed Low Density Trees	54.2	No	Unspecified	
93	3102 - Grass	1.2	Yes	Unspecified	
96	3102 - Grass	2.2	Yes	Unspecified	
97	3102 - Grass	3.4	Yes	Unspecified	
99	3205 - Mixed Upland Shrub	1.5	No	Unspecified	
101	3102 - Grass	1.4	Yes	Unspecified	
103	3102 - Grass	2.4	Yes	Unspecified	
104	3102 - Grass	2.6	Yes	Unspecified	
105	3303 - Mixed Low Density Trees	22.0	N/A	Unspecified	
108	3102 - Grass	2.4	Yes	Unspecified	
110	790 - Other Bare/Sparsely Vegetate	78.3	Planted	Red Pine	Site is trenched and will be re-planted to red pine in 2011.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
111	3303 - Mixed Low Density Trees	19.3	No	Unspecified	Stand still holds potential for a white pine underplanting.
112	3102 - Grass	7.1	Yes	Unspecified	
113	790 - Other Bare/Sparsely Vegetate	4.1	Yes	Unspecified	
114	3205 - Mixed Upland Shrub	10.9	No	Unspecified	
115	3102 - Grass	1.4	N/A	Unspecified	
116	3205 - Mixed Upland Shrub	1.3	No	Unspecified	
118	3303 - Mixed Low Density Trees	8.2	No	Unspecified	
120	3102 - Grass	1.2	Yes	Unspecified	
122	3102 - Grass	2.0	Yes	Unspecified	
123	3205 - Mixed Upland Shrub	40.3	No	Unspecified	
124	3102 - Grass	2.8	Yes	Unspecified	
126	3105 - Mixed Upland Herbaceous	2.3	Yes	Unspecified	
127	3102 - Grass	1.9	Yes	Unspecified	
130	3303 - Mixed Low Density Trees	14.4	No	Unspecified	Stand still has potential for a white pine underplanting.
133	3102 - Grass	8.2	N/A	Unspecified	
134	3102 - Grass	2.4	Yes	Unspecified	
135	320 - Upland Shrub	70.7	N/A	Unspecified	
137	790 - Other Bare/Sparsely Vegetate	19.7	No	Unspecified	Previous Management objective: Red Pine



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
138	3102 - Grass	1.4	Yes	Unspecified	
139	3102 - Grass	1.1	Yes	Unspecified	
140	3102 - Grass	1.6	Yes	Unspecified	
141	3102 - Grass	1.3	Yes	Unspecified	
144	3303 - Mixed Low Density Trees	7.8	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
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