



Compartment Review Presentation

Gaylord Forest Management Unit

Compartment 10

Entry Year 2015

Acreage: 2,835

County Otsego

Management Area: Kirtland's Warbler

Revision Date: 04/10/2013

Stand Examiner: Kim Lentz

Legal Description:

T29N, R01W, Sec. 32,33,34,35, & 36

Identified Planning Goals:

To provide for the protection, integrated management and responsible use of a healthy, productive, and undiminished forest resource base for the social, recreational, environmental, and economic benefit of the State of Michigan.

Soil and topography:

Soils are primarily Grayling and Roselawn Sands. In lowland areas the soils are Rifle Peat and Carbondale Muck. Topography is generally level with the exception of the area along Big Creek. There are steep banks on both sides of the creek most of the way through the compartment.

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

This compartment is primarily surrounded by state land with the exception of the northeast corners of Sections 34, 35, & 36, which has private properties in the section, as well as around it. Gas development has impacted this compartment with extensive gas wells, one facility, and connecting buried gas pipelines throughout.

Unique Natural Features:

Big Creek is part of the natural river system of the AuSable River.

Archeological, Historical, and Cultural Features:

There are no archeological concerns within this compartment.

Special Management Designations or Considerations:

This compartment is part of the Kirtland Warbler Management Area Plan.

Watershed and Fisheries Considerations:

West Branch of Big Creek and its tributaries are located in this compartment which is a designated natural river part of the Ausable River system. The majority of this compartment is within the West Branch Big Creek watershed, with the western portion also in the North Branch AuSable River watershed. Prescribed management actions are appropriate for the protection of this water body.

Wildlife Habitat Considerations:

This compartment consists mostly of upland areas except in the middle which has wetlands associated with Big Creek and its tributaries. The lowland area is used by a variety of species including waterfowl, amphibians, and various furbearers and songbirds. The upland areas contains mainly a jack pine/oak/aspens complex that lies within the Kirtland's Warbler management area. Stands 13, 15, and 17 are going to be clearcut and replanted with jack pine in accordance with the Kirtland's Warbler management plan. This provides early successional habitat for the Kirtland's Warbler along with white-tailed deer, wild turkey, black bear and various oak/pine barren species. Stands 16, part of 33, and 66 are going to be clear cut to regenerate early successional aspen that is utilized by grouse and woodcock. Some mature oak will left in these stands to provide mast.

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. The Mississippian Coldwater Shale subcrops below the glacial drift and does not have an economic use. The nearest gravel pit is located three miles to the south and potential is uncertain. The compartment appears to be completely developed for Antrim Shale gas production and is on the southern edge of the Niagaran reef trend.

Vehicle Access:

This compartment has good access with a network of gas pipeline dirt roads with Big Creek being the best gravel county maintained road. County Road 612 located off of Meridian Line Road is a paved road in Section 36. An extensive road

closure project utilizing guardrail was installed in Section 35 through a cooperative project with Huron Pines RC&D to block passage of vehicles across Big Creek. This road closure located on the consumers' powerline has been successful.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

Shupac snowmobile trail traverses through Section 32. There is also a Midland to Mackinaw Horse Trail which is designated from County Road 612 running through Sections 35 & 36.

Fire Protection:

The Big Creek Fire burned through much of Sections 35 & 36 in 1981. There was also a more recent fire in the center of Section 36 in 2012.

Additional Compartment Information:

The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

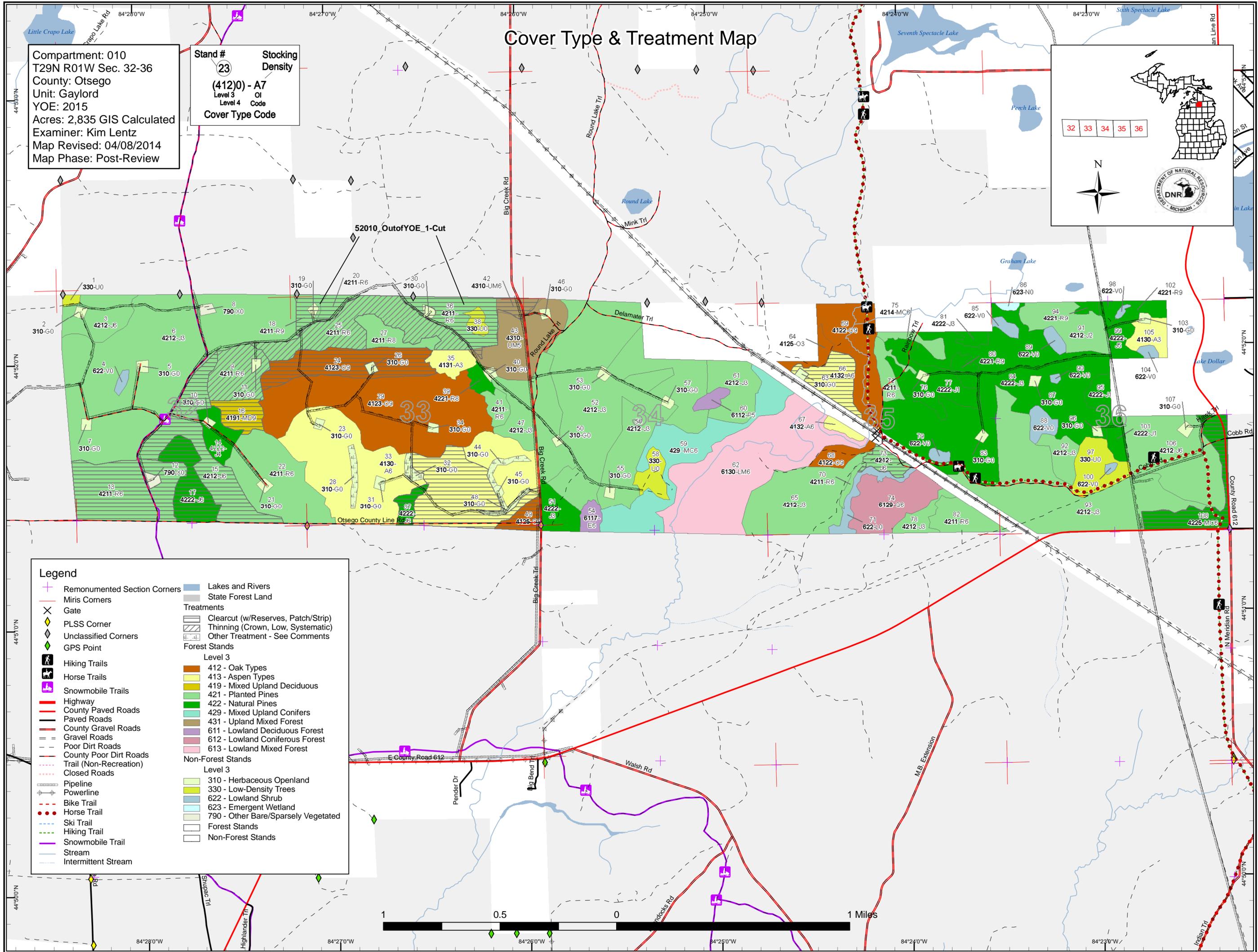
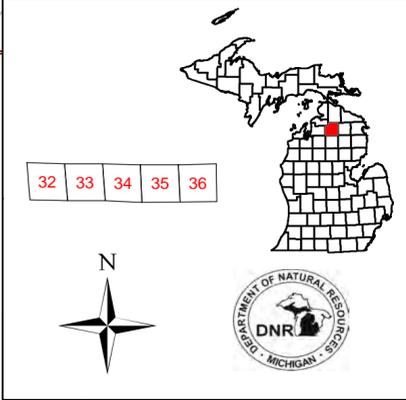
The following information is displayed, where pertinent, on the attached compartment maps:

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatment Map

Compartment: 010
 T29N R01W Sec. 32-36
 County: Otsego
 Unit: Gaylord
 YOE: 2015
 Acres: 2,835 GIS Calculated
 Examiner: Kim Lentz
 Map Revised: 04/08/2014
 Map Phase: Post-Review

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



Legend

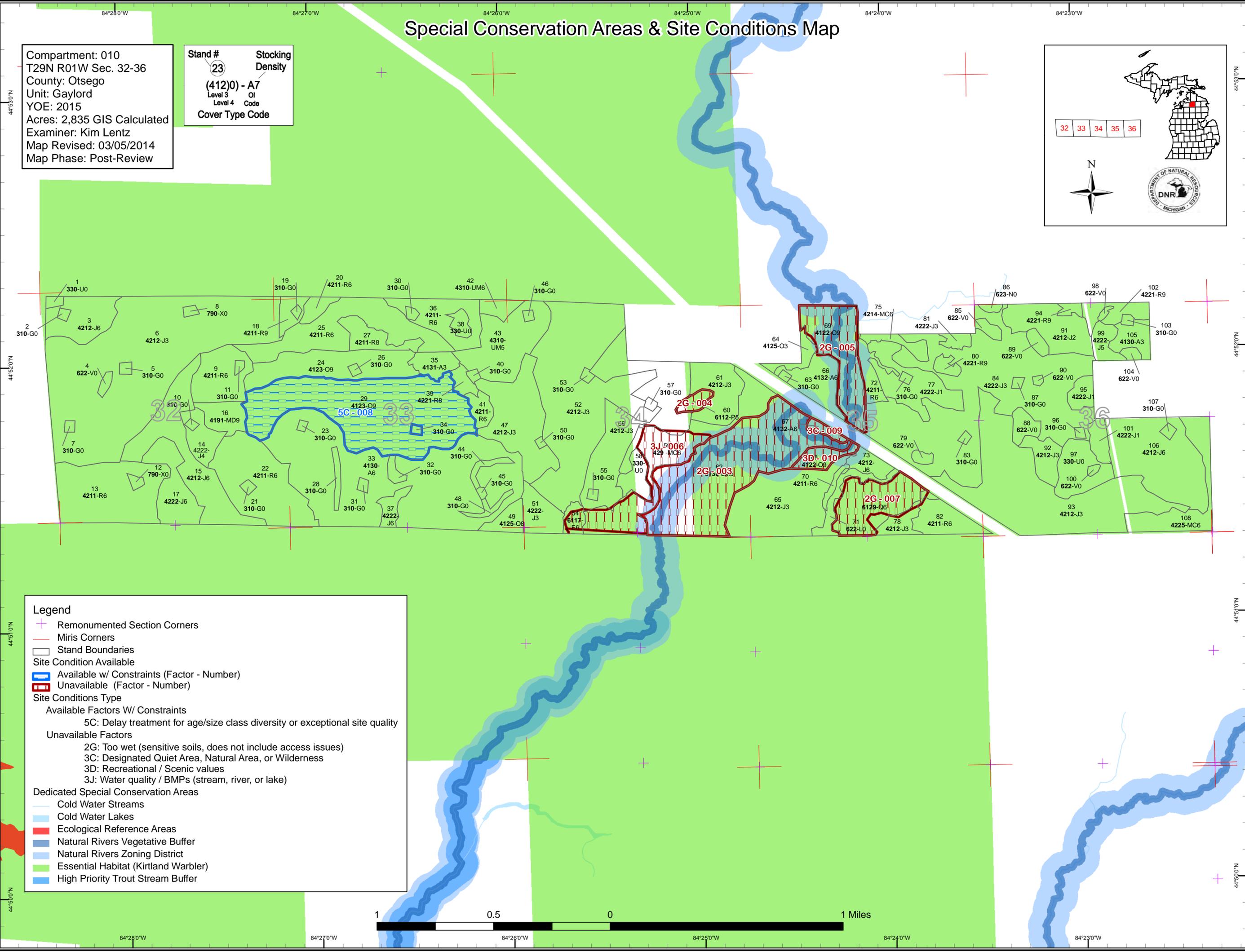
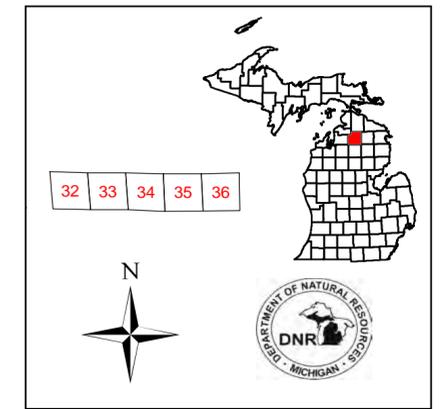
| | |
|---|--------------------------|
| + | ■ |
| × | ■ |
| X | |
| ◆ | Treatments |
| ◆ | ▨ |
| ◆ | ▨ |
| ◆ | ▨ |
| ◆ | Forest Stands |
| ◆ | Level 3 |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | Non-Forest Stands |
| — | Level 3 |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| — | ■ |
| | ■ |



Special Conservation Areas & Site Conditions Map

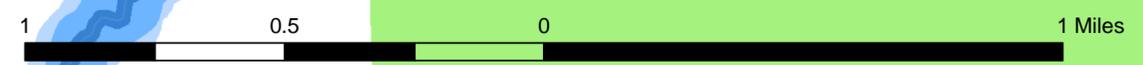
Compartment: 010
 T29N R01W Sec. 32-36
 County: Otsego
 Unit: Gaylord
 YOE: 2015
 Acres: 2,835 GIS Calculated
 Examiner: Kim Lentz
 Map Revised: 03/05/2014
 Map Phase: Post-Review

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



Legend

- ✚ Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Site Condition Available
- ▨ Available w/ Constraints (Factor - Number)
- ▨ Unavailable (Factor - Number)
- Site Conditions Type
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
- 2G: Too wet (sensitive soils, does not include access issues)
- 3C: Designated Quiet Area, Natural Area, or Wilderness
- 3D: Recreational / Scenic values
- 3J: Water quality / BMPs (stream, river, or lake)
- Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- Ecological Reference Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Essential Habitat (Kirtland Warbler)
- High Priority Trout Stream Buffer



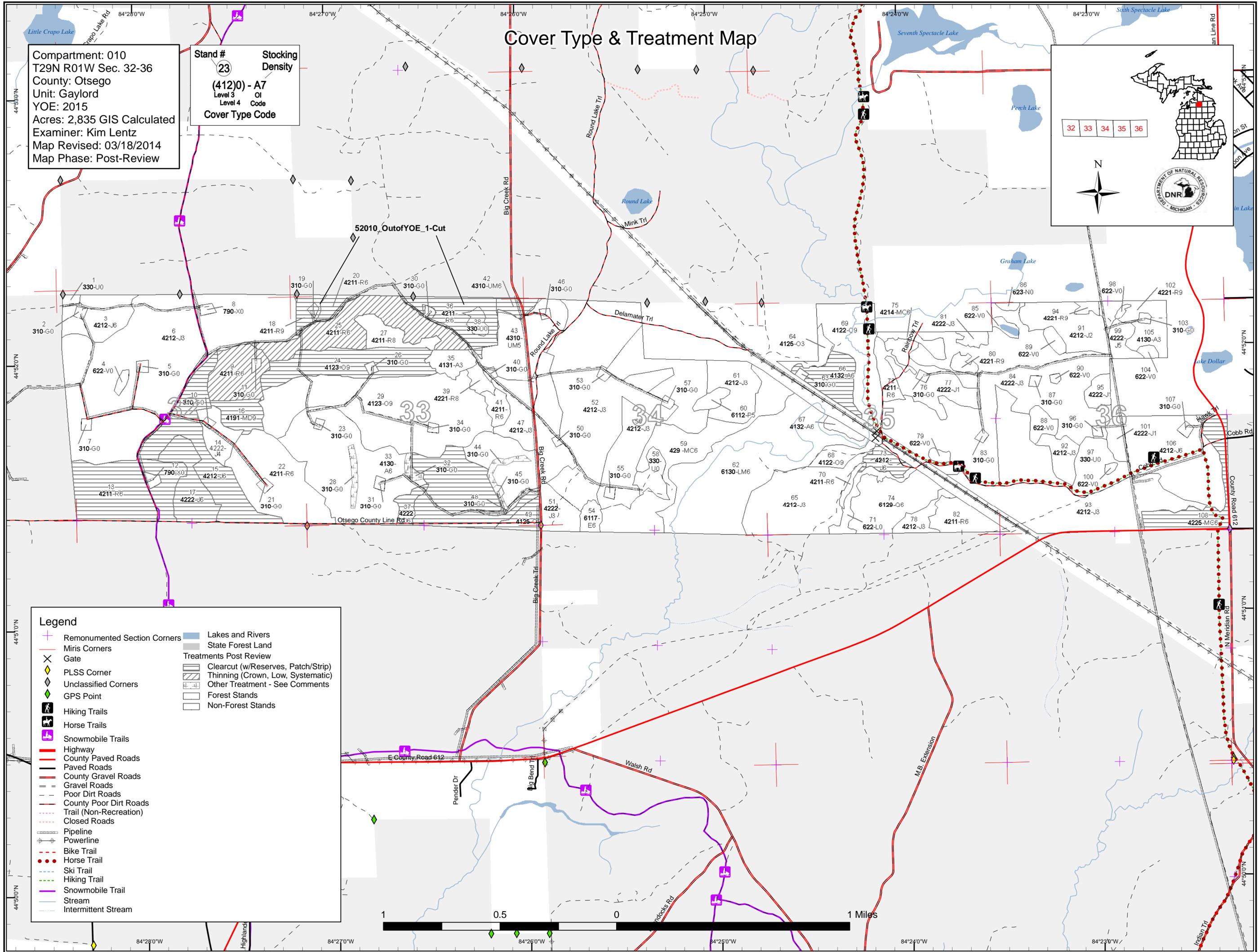
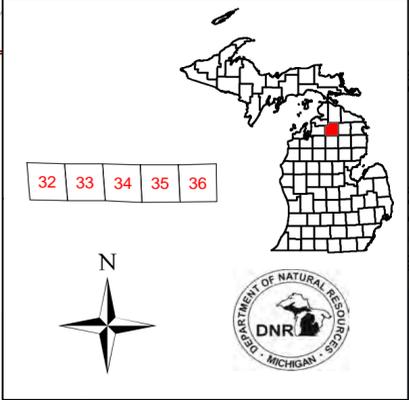
84°28'0"W 84°27'0"W 84°26'0"W 84°25'0"W 84°24'0"W 84°23'0"W

44°53'0"N 44°52'0"N 44°51'0"N 44°50'0"N

Cover Type & Treatment Map

Compartment: 010
 T29N R01W Sec. 32-36
 County: Otsego
 Unit: Gaylord
 YOE: 2015
 Acres: 2,835 GIS Calculated
 Examiner: Kim Lentz
 Map Revised: 03/18/2014
 Map Phase: Post-Review

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



Legend

| | | | |
|--|-------------------------------|--|------------------------------------|
| | Re monumented Section Corners | | Lakes and Rivers |
| | Miris Corners | | State Forest Land |
| | Gate | | Treatments Post Review |
| | PLSS Corner | | Clearcut (w/Reserves, Patch/Strip) |
| | Unclassified Corners | | Thinning (Crown, Low, Systematic) |
| | GPS Point | | Other Treatment - See Comments |
| | Hiking Trails | | Forest Stands |
| | Horse Trails | | Non-Forest Stands |
| | Snowmobile Trails | | |
| | Highway | | |
| | County Paved Roads | | |
| | Paved Roads | | |
| | County Gravel Roads | | |
| | Gravel Roads | | |
| | Poor Dirt Roads | | |
| | County Poor Dirt Roads | | |
| | Trail (Non-Recreation) | | |
| | Closed Roads | | |
| | Pipeline | | |
| | Powerline | | |
| | Bike Trail | | |
| | Horse Trail | | |
| | Ski Trail | | |
| | Hiking Trail | | |
| | Snowmobile Trail | | |
| | Stream | | |
| | Intermittent Stream | | |





| | 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 | 0 | 12 | 13 | 209 | 0 | 0 | 5 | 24 | 0 | 0 | 0 | 0 | 0 | 262 |
| Bare/Sparsely Vegetated | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Bog | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| Herbaceous Openland | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| Jack Pine | 406 | 422 | 48 | 377 | 15 | 48 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 1392 |
| Low-Density Trees | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| Lowland Aspen/Balsam Poplar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Lowland Conifers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 45 |
| Lowland Deciduous | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Lowland Mixed Forest | 0 | 0 | 0 | 0 | 0 | 0 | 142 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 142 |
| Lowland Shrub | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Marsh | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Mixed Upland Deciduous | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 |
| Natural Mixed Pines | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 33 |
| Oak | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 214 | 63 | 0 | 0 | 0 | 0 | 284 |
| Planted Mixed Pines | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| Red Pine | 0 | 0 | 0 | 69 | 0 | 116 | 166 | 6 | 0 | 0 | 0 | 0 | 0 | 14 | 370 |
| Upland Conifers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 73 |
| Upland Mixed Forest | 0 | 0 | 0 | 51 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| Total | 554 | 422 | 60 | 509 | 224 | 164 | 330 | 90 | 238 | 107 | 0 | 0 | 0 | 136 | 2835 |



Report 2 – Proposed Treatment Summaries

Gaylord Mgt. Unit
Year of Entry 2015

Compartment 010
Total Compartment Acres: 2,835

Acres by Treatment Type

Commercial Harvest - 541 Tree Planting - 194 Other - 0
Habitat Cut - 0 Opening Maintenance - 16

Cover Type by Harvest Method

| | Clearcut | Selection | Seed Tree | Shelterwood | Thinning | Other - Specify | Total Acres |
|------------------------|------------|-----------|-----------|-------------|-----------|-----------------|-------------|
| | 59 | 0 | 0 | 0 | 0 | 0 | 59 |
| Aspen Types | 91 | 0 | 0 | 0 | 0 | 0 | 91 |
| Mixed Upland Deciduous | 15 | 0 | 0 | 0 | 0 | 0 | 15 |
| Natural Pines | 72 | 0 | 0 | 0 | 0 | 0 | 72 |
| Oak Types | 62 | 0 | 0 | 0 | 0 | 0 | 62 |
| Planted Pines | 146 | 0 | 0 | 0 | 96 | 0 | 241 |
| Total | 445 | 0 | 0 | 0 | 96 | 0 | 541 |



S
t
a
n
d

| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|--|-------|-----------|--------------|-----------|----------|----------------|------------------------|---------------------------|-----------------|
| 52010_OutOfY OE_1-Cut | 58.7 | | | | | Harvest | Clearcut with Reserves | 42120 - Planted Jack Pine | Fld. Tr. Bdy. |
| <p><u>Prescription</u> Final harvest in accordance with the KW management plan. Leave scattered concentrations of oak in small islands or peninsulas that mimic naturally occurring fire related landscape diversity. Total residual should not exceed the minimum retention guideline requirements of 3% of the harvested area.</p> <p><u>Specs:</u></p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> Artificially regenerate with jack pine. <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2012</p> | | | | | | | | | |

| | | | | | | | | | | |
|--|--------------|------|---|-------------------|----|---------|---------|----------------|---|----------------------------|
| 9 | 52010009-Cut | 31.7 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 64 | 141-170 | Harvest | Crown Thinning | 42111 - Planted Red Pine, Mixed Deciduous | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Species thin to remove pin oak, red oak, jack pine, aspen and leave all white oak. In areas with higher density red pine in distinct rows, mark out red pine removing approx. 20 BA/Ac. to target a residual of 120 sq.ft/ac. This will help with equipment operation in these isolated areas with more red pine.</p> <p><u>Specs:</u></p> <p><u>Other</u> Red pine planted with a mix of pin oak, red oak, white oak, jack pine, & minor amount of aspen. Most of stand will be open enough to operate logging equipment during species thinning. There are a few areas with higher density red pine rows to mark out to target a residual BA of 120 sq.ft/ac residual.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor overall success of thinning and health of stand with red pine being the primary management objective. Mixed oak reproduction will also be a secondary objective. <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |

| | | | | | | | | | | |
|---|--------------|------|--------------------------|-------------------|----|---------|---------|------------------------|---------------------------|----------------------------|
| 13 | 52010013-Cut | 71.7 | 42110 - Planted Red Pine | High Density Pole | 59 | 141-170 | Harvest | Clearcut with Reserves | 42120 - Planted Jack Pine | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Wildlife request to final harvest this stand and convert to Kirtland Warbler Mgt along with the adjacent Jack Pine stands to the east. Leave scattered concentrations of red pine & oak in small islands or peninsulas that mimic naturally occurring fire related landscape diversity. Total residual should not exceed the minimum retention guideline requirements of 3% of the harvested area. This stand should be chip harvested to facilitate KW mgt planting unless otherwise approved by Unit Manager for alternative utilization of tops.</p> <p><u>Specs:</u></p> <p><u>Other</u> Red pine plantation with intermixed jack pine. This stand was not thinned out in the past, but some of the jack pine was shaded causing some jack pine mortality. Red pine is healthy with no distinct rows. No sale extensions. Protect snowmobile trail and avoid logging during snowmobile season. Sign trails and restore trail to original condition.</p> <p><u>Comments:</u></p> <p><u>Next</u> Follow Kirtland Warbler guidelines for re-planting jack pine in 2017 with adjacent stands. Monitor success of artificial regeneration. <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |

| | | | | | | | | | | |
|---|--------------|------|---------------------------|-------------------|----|--------|---------|------------------------|---------------------------|----------------------------|
| 15 | 52010015-Cut | 64.0 | 42120 - Planted Jack Pine | High Density Pole | 70 | 81-110 | Harvest | Clearcut with Reserves | 42120 - Planted Jack Pine | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Final harvest for KW mgt. and include with stands to north for reforestation in 2017. Mark out scattered clumps of 2-5 large diameter red pine and oak to leave as reserves. Chip harvest to facilitate KW reforestation efforts.</p> <p><u>Specs:</u></p> <p><u>Other</u> Mature jack pine stand with some mortality in both jack pine & pin oak. Average 5 pulp stick height. Adjacent stand is 12' height. No sale extensions. Protect snowmobile trail by not logging during winter months. Sign trail while adjacent logging occurs. Restore trail to its original condition if used for trucking.</p> <p><u>Comments:</u></p> <p><u>Next</u> Plant jack pine in 2017 along with adjacent stands following the KW guidelines for reforestation. Monitor success of jack pine planting. <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |



| S t a n d | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|-------------------|-------|--|-------------------------|--------------|-------------|-------------------|---------------------------|-------------------------------|-------------------------------|
| 16 | 52010016-Cut | 15.3 | 4191 - Mixed Upland Deciduous with Conifer | High Density Log | 90 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Fld. Tr. Bdy. - Incomplete |
| <u>Prescription</u> Final harvest with reserves: Mark out clumps of 2-5 white oak & pin oak to leave scattered throughout stand. Select healthy oak to leave for residual. | | | | | | | | | | |
| <u>Specs:</u> | | | | | | | | | | |
| <u>Other</u> Mature oak and jack pine stand with minor component of aspen. Mortality noted & stand will not hold without volume loss. Inclusion of bigtooth aspen in northeast corner. Variable density due to mortality in stand. | | | | | | | | | | |
| <u>Comments:</u> | | | | | | | | | | |
| <u>Next</u> Monitor success of natural regeneration which should be a mixed stand of oak, aspen, and some jack pine. | | | | | | | | | | |
| <u>Steps:</u> | | | | | | | | | | |
| <u>Proposed</u> | | | | | | | | | | |
| <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |
| 17 | 52010017-Cut | 30.7 | 42220 - Natural Jack Pine | High Density Pole | 54 | 1-50 | Harvest | Clearcut with Reserves | 4319 - Mixed Upland Forest | Fld. Tr. Bdy. - Incomplete |
| <u>Prescription</u> Final harvest this stand leaving the minor component of red pine uncut. Include this stand in with the adjacent chip harvesting efforts for KW management. | | | | | | | | | | |
| <u>Specs:</u> | | | | | | | | | | |
| <u>Other</u> The mixed deciduous of aspen & oak is approximately 25% of the stand and will create some natural breaks in the KW planting efforts that will mimic the natural landscape. These deciduous areas will be difficult to replant with jack pine. No sale extensions. Protect snowmobile trail and avoid logging during snowmobile season. Sign trails and restore trail to original condition. | | | | | | | | | | |
| <u>Comments:</u> | | | | | | | | | | |
| <u>Next</u> Combine the KW planting efforts for 2017 with adjacent stands. Monitor regeneration success of planted jack pine and natural aspen & oak regeneration. | | | | | | | | | | |
| <u>Steps:</u> | | | | | | | | | | |
| <u>Proposed</u> | | | | | | | | | | |
| <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |
| 24 | 52010024-Cut | 52.1 | 4123 - Red Oak | High Density Log | 88 | 51-80 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Fld. Tr. Bdy. - Incomplete |
| <u>Prescription</u> Final harvest to salvage the dying pin oak and wind damage that has occurred in patches in this stand. There is some 44 year old aspen inclusions to include in the final harvest. Leave scattered oak in clumps with 2-5 trees per clump favoring white oak and any healthy red or mixed oak. | | | | | | | | | | |
| <u>Specs:</u> | | | | | | | | | | |
| <u>Other</u> Oak stand which was selectively thinned in 2000, and the aspen was species thinned out from the perimeter of the stand 44 yrs. ago. | | | | | | | | | | |
| <u>Comments:</u> | | | | | | | | | | |
| <u>Next</u> Monitor success of oak and aspen natural regeneration. | | | | | | | | | | |
| <u>Steps:</u> | | | | | | | | | | |
| <u>Proposed</u> | | | | | | | | | | |
| <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |
| 25 | 52010025-Cut | 64.2 | 42110 - Planted Red Pine | High Density Pole | 61 | 141-170 | Harvest | Crown Thinning | 42110 - Planted Red Pine | Fld. Tr. Bdy. - Incomplete |
| <u>Prescription</u> Species thin to remove the jack pine, pin oak, and aspen. In areas with dense red pine, mark to remove enough red pine to leave approximately 110-120 sq.ft BA/ac. and allow for equipment operation. Skidways can be marked out if needed since the third row sequence is not always evident. This thinning will remove one-third of the density similar to a first time systematic thinning. Leave some healthy appearing oak in pockets. | | | | | | | | | | |
| <u>Specs:</u> | | | | | | | | | | |
| <u>Other</u> Red pine plantation with some intermixed jack pine, pin oak, and minor component of quaking aspen. Some of jack pine and quaking aspen is dying out of stand through competition. | | | | | | | | | | |
| <u>Comments:</u> | | | | | | | | | | |
| <u>Next</u> Stand will be re-visited during the next inventory cycle. | | | | | | | | | | |
| <u>Steps:</u> | | | | | | | | | | |
| <u>Proposed</u> | | | | | | | | | | |
| <u>Start Date:</u> 10/01/2014 | | | | | | | | | | |



| S t a n d | Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|---|------------------------|-------|--|--------------------------|--------------|-------------|-------------------|---------------------------|--|-------------------------------|
| 33 | 52010033_sm all-Cut | 67.7 | 4130 - Aspen | High Density Pole | 45 | 51-80 | Harvest | Clearcut with Reserves | 4131 - Aspen, Oak | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Final harvest with reserves. Cut all aspen, red maple, and any black cherry, or mixed hardwood. Leave all red pine and oak as part of the reserves. In addition, the retention areas should target areas with more concentrated red oak leaving uncut islands following the acreage guidelines for retention of 3%-10%. This will provide more concentrated patches of oak that will not hinder aspen regeneration. Protect wildlife shrubs during harvesting.</p> <p><u>Specs:</u></p> <p><u>Other</u> Aspen stand is in transition from a sapling stand to a small pole stand. Primarily b.tooth aspen 4"-8" dbh and 3-4 pulp sticks per tree. Mix of quaking aspen, red maple, and some Red Oak throughout. Some scattered sawlog red pine relics left 14-22" dbh.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor success of aspen and oak natural regeneration.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |
| 37 | 52010037-Cut | 7.6 | 42221 - Natural Jack Pine, Mixed Deciduous | High Density Pole | 59 | 1-50 | Harvest | Clearcut with Reserves | 42221 - Natural Jack Pine, Mixed Deciduous | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Final harvest with reserves. Harvest this stand with the adjacent aspen to the east. Leave the few scattered old relic red pine within stand along with a few of the healthier oak to create clumps of mixed pine/oak. These clumps can have a minimum of 2-5 trees per clump.</p> <p><u>Specs:</u></p> <p><u>Other</u> Small isolated stand of jack pine that was held last decade, but now has notable mortality. Lots of woody debris on the ground. Some scattered old relic red pine in stand. Aspen has developed into the mix along the edges from the adjacent 44 year old aspen stand which can be included with this harvest effort.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor success of natural regeneration which should produce of mix of jack pine, oak, and aspen.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |
| 49 | 52010049-Cut | 10.1 | 4125 - Black, N. Pin Oak | Medium Density Log | 86 | 1-50 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Final harvest with reserves. Mark to leave a few scattered clumps of oak with 2-5 trees per clump favoring white oak & red oak. Protect advanced oak regeneration in stand.</p> <p><u>Specs:</u></p> <p><u>Other</u> Oak log stand that had the jack pine species thinned out in 1985. This stand is a mix of decadent mixed oak log size trees with a minor component of aspen. Lots of advanced pin oak regeneration in understory.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor success of natural regeneration which should be a mix of Oak and aspen.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |
| 66 | 52010066-Cut | 23.7 | 4132 - Aspen, Jack Pine | High Density Pole | 80 | 51-80 | Harvest | Clearcut with Reserves | 4131 - Aspen, Oak | Fld. Tr. Bdy. - Incomplete |
| <p><u>Prescription</u> Final harvest to promote aspen & oak regeneration. Leave an uncut 150' buffer along Big Creek. Do Not Cut the White Pine or Red Pine which is mostly located along the river corridor. Also mark to leave scattered clumps of 2-5 oak per clump. Favor leaving white or healthy mixed oak.</p> <p><u>Specs:</u></p> <p><u>Other</u> Mature stand of northern pin oak, aspen and jack pine. Evidence of mortality and decline in oak, aspen and jack pine. Stand can be accessed along the powerline road.</p> <p><u>Comments:</u></p> <p><u>Next</u> Monitor success of natural regeneration consisting of aspen & oak. There may also be a minor component of mixed pine regeneration which is acceptable.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |



S
t
a
n
d

| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-----------------|-------|--|-------------------|-----------|----------|----------------|------------------------|--|----------------------------|
| 73 52010073-Cut | 9.9 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Pole | 77 | 81-110 | Harvest | Clearcut with Reserves | 42221 - Natural Jack Pine, Mixed Deciduous | Fld. Tr. Bdy. - Incomplete |

Prescription: Final harvest with reserves. Protect Big Creek ORV Restoration Project by leaving lots of woody debris by gaurd rail. Create a retention area that is approximately 1/2 acre of primarily red pine which is located on the west edge of this stand. This will extend a red pine retention stand left to the southwest of this stand. Place a spec to protect advanced regeneration of oak and white pine during logging as much as possible.

Other Comments: Mature stand of jack pine 5-6 pulp stick average. Well established understory of pin oak, white oak, white pine, and some balsam fir. Existing two-track trail road will be useful for access to avoid the soft sand and wet areas along powerline. Protect the horse trail during logging operations and sign the trail for safety reasons during logging.

Next Steps: Monitor natural regeneration and if needed due to inadequate stocking of jack pine, oak, and aspen, then re-plant with jack pine during the 2017 planting efforts in this compartment.

Proposed Start Date: 10/01/2014

| | | | | | | | | | |
|------------------|------|-------------------|-------------------|----|--------|---------|------------------------|--|----------------------------|
| 108 52010108-Cut | 33.3 | 42250 - Pine, Oak | High Density Pole | 78 | 81-110 | Harvest | Clearcut with Reserves | 42221 - Natural Jack Pine, Mixed Deciduous | Fld. Tr. Bdy. - Incomplete |
|------------------|------|-------------------|-------------------|----|--------|---------|------------------------|--|----------------------------|

Prescription: Clearcut with reserves. Cut all jack pine, aspen, and most of mixed oak. Leave the minor component of red pine, white pine, & white oak uncut. Leaving these species will help with visual & aesthetics along County Rd. 612 & Meridian Line Rd. Mark a few Oak to leave in clumps of 2-5 oak per clump along County Rd. 612 for visual mgt and mast. Also, leave a retention island on the east side of County Rd. 612 by excluding the timber east of the road from any cutting activity.

Other Comments: Mature stand of jack pine mixed with red pine, mixed oak, and aspen. This stand was left in the past as a buffer along County Rd. 612 with a limited factor due to scenic visual values. Adjacent jack pine is now well established & 25' in height. Protect the horse trail during logging operations and sign the trail for safety reasons during logging.

Next Steps: Monitor success of natural regeneration of jack pine, oak, and aspen. In the event the stand does not regenerate adequately, plant with jack pine to re-establish a fully stocked stand favoring jack pine and oak as the management objective.

Proposed Start Date: 10/01/2014

| | | | | | | | | | |
|-----------------------|-----|--------------|--|--|--|-----------------------|-----------------|--------------|----------------------------|
| 28 NF_52010028-NonFor | 4.3 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 3102 - Grass | Fld. Tr. Bdy. - Incomplete |
|-----------------------|-----|--------------|--|--|--|-----------------------|-----------------|--------------|----------------------------|

Prescription: Wildlife is interested in maintaining these openings.
Specs:

Other Comments: Long narrow non-forested openings suitable for wildlife management.

Next Steps: Maintain as prescribed by wildlife biologist.

Proposed Start Date: Unspecified

| | | | | | | | | | |
|-----------------------|-----|--------------|--|--|--|-----------------------|-----------------|--------------|----------------------------|
| 32 NF_52010032-NonFor | 3.5 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 3102 - Grass | Fld. Tr. Bdy. - Incomplete |
|-----------------------|-----|--------------|--|--|--|-----------------------|-----------------|--------------|----------------------------|

Prescription: Wildlife is interested in maintaining these openings.
Specs:

Other Comments: Established openings beneficial for wildlife.

Next Steps: Maintain as prescribed by wildlife biologist.

Proposed Start Date: Unspecified



S
t
a
n
d

| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-----------------------|-------|--------------|--------------|-----------|----------|-----------------------|------------------|----------------------|----------------------------|
| 44 NF_52010044-NonFor | 3.9 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 3102 - Grass | Fld. Tr. Bdy. - Incomplete |

Prescription: Wildlife is interested in maintaining this grassy opening.
Specs:

Other Comments: Long narrow non forested openings which are beneficial for wildlife.

Next Steps: Opening maintenance according to wildlife biologist.

Proposed Start Date: Unspecified

| | | | | | | | | | |
|-----------------------|-----|--------------|--|--|--|-----------------------|-----------------|--------------|----------------------------|
| 48 NF_52010048-NonFor | 3.8 | 3102 - Grass | | | | Non-Forest Management | Other - Specify | 3102 - Grass | Fld. Tr. Bdy. - Incomplete |
|-----------------------|-----|--------------|--|--|--|-----------------------|-----------------|--------------|----------------------------|

Prescription: Wildlife is interested in maintaining this grassy opening.
Specs:

Other Comments: Long narrow opening beneficial for wildlife.

Next Steps: Opening maintenance according to wildlife biologist.

Proposed Start Date: Unspecified

**Total Treatment
Acreage Proposed: 556.2**



S
t
a
n
d

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

#Type! #Type!

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

Total Treatment
Acreage Proposed: 0.0

Report 5 – Site Conditions

Gaylord Mgt. Unit
Kim Lentz : Examiner

Compartment 010
Year of Entry 2015

Availability for Management

| Availability for Management | | | Dominant Site Conditions | | | | | | |
|-----------------------------|-----------------|---------------------|-----------------------------|-------|-----|----|----|----|-----|
| Total Acres | Acres Available | Acres Not Available | | No | 5C | 3J | 3D | 3C | 2G |
| 262 | 257 | 5 | Aspen | 257 | | | | 5 | |
| 1392 | 1389 | 3 | Jack Pine | 1,389 | | 1 | | | 2 |
| 6 | | 6 | Lowland Aspen/Balsam Poplar | | | | | | 6 |
| 45 | 4 | 40 | Lowland Conifers | 4 | | | | | 40 |
| 7 | 3 | 4 | Lowland Deciduous | 3 | | 4 | | | |
| 141 | | 141 | Lowland Mixed Forest | | | 1 | | | 141 |
| 15 | 15 | | Mixed Upland Deciduous | 15 | | | | | |
| 33 | 33 | | Natural Mixed Pines | 33 | | | | | |
| 284 | 223 | 61 | Oak | 71 | 152 | | 11 | | 50 |
| 8 | 8 | | Planted Mixed Pines | 8 | | | | | |
| 370 | 369 | 0 | Red Pine | 369 | | | | | 0 |
| 73 | 28 | 45 | Upland Conifers | 28 | | 45 | | | |
| 58 | 58 | | Upland Mixed Forest | 58 | | | | | |
| 2,693 | 2,388 | 305 | Total Forested Acres | 2,236 | 152 | 51 | 11 | 5 | 239 |
| | 89% | 11% | Relative Percent | | | | | | |

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

| Site No. | Dominant Site Cond Availability | Dominant Site Condition | Acres | Other Site Condition | Other Site Condition | Other Site Condition | Other Site Condition |
|---|---------------------------------|---|-------|---|----------------------|----------------------|----------------------|
| 003 | Not Available | 2G: Too wet (sensitive soils, does not include access issues) | 141 | 3J: Water quality / BMPs (stream, river, or lake) | | | |
| Comments: Big Creek is a natural river with a series of winding tributaries and associated lowland forest and non-forest types. This area also includes the riparian zone on both sides of the river. | | | | | | | |
| 004 | Not Available | 2G: Too wet (sensitive soils, does not include access issues) | 6 | | | | |
| Comments: | | | | | | | |

Report 5 – Site Conditions

Gaylord Mgt. Unit
Kim Lentz : Examiner

Compartment 010
Year of Entry 2015

| | | | | | |
|--|----------------------|---|-----|---|--|
| 005 | Not Available | 2G: Too wet (sensitive soils, does not include access issues) | 51 | 3J: Water quality / BMPs (stream, river, or lake) | |
| Comments: | | | | | |
| 006 | Not Available | 3J: Water quality / BMPs (stream, river, or lake) | 52 | 2G: Too wet (sensitive soils, does not include access issues) | |
| Comments: | | | | | |
| 007 | Not Available | 2G: Too wet (sensitive soils, does not include access issues) | 42 | 3J: Water quality / BMPs (stream, river, or lake) | |
| Comments: Wetland complex with soils that are too wet for logging. Timber is lowly stocked and not desirable for commercial harvest. | | | | | |
| 008 | Available | 5C: Delay treatment for age/size class diversity or exceptional site quality | 152 | | |
| Comments: | | | | | |
| 009 | Not Available | 3C: Designated Quiet Area, Natural Area, or Wilderness | 5 | | |
| Comments: Natural River designation. | | | | | |

Gaylord Mgt. Unit
Kim Lentz : Examiner

Report 5 – Site Conditions

Compartment 010
Year of Entry 2015

| | | | | |
|-----|---------------|----------------------------------|----|--|
| 010 | Not Available | 3D: Recreational / Scenic values | 11 | 5C: Delay treatment for age/size class diversity or exceptional site quality |
|-----|---------------|----------------------------------|----|--|

Comments:



Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

| SCA Name | SCA Category | Detail Type | Recommendation | Acres |
|-----------------|--------------|-------------|----------------|-------|
| Comments | | | | |

**Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area
 HCVA = High Conservation Value Area
 SCA = Special Conservation Area

| Conservation Area | Type | Description |
|-------------------|-----------------------------|---|
| SCA | Archaeological Site | An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available. |
| SCA | Cold Water 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. |
| HCVA | Designated Critical Habitat | Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat. |
| HCVA | Natural Rivers | There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|----------------------|-------|--------------|-------------|--|
| 3 | 42120 - Planted Jack Pine | High Density Pole | 29.9 | 38 | 51-80 | Jack pine 1-3 pulp stick av. with an average of 2 merchantable sticks per tree. Healthy. |
| 6 | 42120 - Planted Jack Pine | High Density Sapling | 249.8 | 18 | | KW Mgt. planted with jack pine in 1996. Jack pine average 10'-16' height with some 12' ht. average. Red pine & Pin Oak log size trees left scattered in overstory. Some of jack pine has some brown needles on outside branches. |
| 9 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 31.7 | 64 | 141-170 | Red pine planted with a mix of pin oak, red oak, white oak, jack pine, & minor amount of aspen. Stand resembles more of a natural red pine stand similar to Pigeon River pine/oak stands. Some mortality in oak & jack pine. Some distinct rows of red pine with an average BA of 180 sq.ft/acre. These concentrated rows of red pine will require some marking to reduce BA to 120 sq.ft./ac. residual. |
| 13 | 42110 - Planted Red Pine | High Density Pole | 71.7 | 59 | 141-170 | Red pine plantation with intermixed jack pine with no distinct rows. Red pine is healthy, and some of jack pine was shaded causing some jack pine mortality. A species thinning to remove all jack pine is not desirable because it would open up stand too much. Stand examiner commented: Do not liquidate this stand yet. Adjacent red pine stands thinned have 6 stick red pine which is a nearby example of red pine site potential. Site Index for red pine = 60 |
| 14 | 42220 - Natural Jack Pine | Low Density Pole | 15.5 | 45 | 1-50 | Natural jack pine low to moderately stocked which has developed in a sem-open pine barren condition. Some planted red pine on southeast end of stand. |
| 15 | 42120 - Planted Jack Pine | High Density Pole | 64.0 | 70 | 81-110 | Mature jack pine stand with some mortality in both jack pine & pin oak. Average 5 pulp stick height. Adjacent stand is 12' height. |
| 16 | 4191 - Mixed Upland Deciduous with Conifer | High Density Log | 15.3 | Uneven Age | 81-110 | Mature oak and jack pine stand with minor component of aspen. Mortality noted & stand will not hold without volume loss. Inclusion of bigtooth aspen in northeast corner. Variable density due to mortality in stand. |
| 17 | 42220 - Natural Jack Pine | High Density Pole | 30.7 | 54 | 1-50 | Moderately stocked stand with a mix of size classes from 3"-4" dbh in understory of jack pine, pin oak, to scattered overstory of red pine sawtimber 12" ave. dbh. Stand offers a nice mix of species, ages, and heights for diversity. |
| 18 | 42110 - Planted Red Pine | High Density Log | 8.1 | 64 | 111-140 | Red pine which has developed into small sawlogs 12" dbh. Other intermixed species were cut out of this stand when jack pine to the west was harvested for KW mgt. This red pine stand is scheduled to be prepared for final harvest in 2013 & re-planted in 2017 with KW mgt. plan. |
| 20 | 42110 - Planted Red Pine | High Density Pole | 6.8 | 61 | 141-170 | Red pine plantation scheduled to be clearcut for KW mgt. in 2013. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|----------------------|-------|--------------|-------------|--|
| 22 | 42110 - Planted Red Pine | High Density Pole | 68.6 | 30 | 81-110 | Red pine plantation which has developed into 1 stick poles. Some old relic red pine left in plantation 18-20" dbh. Some pockets of natural jack pine average 6" dbh throughout with 50-80 sq.ft/ac. In southeast corner of stand, a small retention island of R8, O2, A4, O7, and scattered red maple left which is an different inclusion from rest of stand. |
| 24 | 4123 - Red Oak | High Density Log | 52.1 | 88 | 51-80 | Oak stand which was selectively thinned in 2000, and the aspen was species thinned out from the perimeter of the stand 44 yrs. ago. Lots of deer activity & browsing for acorns. |
| 25 | 42110 - Planted Red Pine | High Density Pole | 65.0 | 61 | 141-170 | Red pine plantation with some intermixed jack pine, pin oak, and minor component of quaking aspen. Some of jack pine and quaking aspen is dying out of stand through competition. |
| 27 | 42110 - Planted Red Pine | Medium Density Log | 16.1 | 61 | 1-50 | Scattered Red Pine left after species thinning was completed in 2000 which removed the jack pine, aspen, and some mixed oak. |
| 29 | 4123 - Red Oak | High Density Log | 151.9 | 88 | 51-80 | Healthy Red Oak stand with some white oak and northern pin oak component. Thinned in 2000 & stand is responding to the it. Overall stand looks good and appears to be at an optimum density. |
| 33 | 4130 - Aspen | High Density Pole | 208.7 | 45 | 51-80 | Aspen stand is in transition from a sapling stand to a small pole stand. Primarily b.tooth aspen 4"-8" dbh and 3-4 pulp sticks per tree. Mix of quaking aspen, red maple, and some Red Oak throughout. Some scattered sawlog red pine relics left 14-22" dbh. |
| 35 | 4131 - Aspen, Oak | High Density Sapling | 11.8 | 20 | | Young aspen stand with intermixed pin oak and jack pine. |
| 36 | 42110 - Planted Red Pine | High Density Pole | 30.0 | 61 | 141-170 | Planted red pine with some jack pine, quaking aspen & pin oak intermixed. KW management with this stand being final harvested in 2013 with Compartment 7 to north. Re-planting scheduled for 2017. |
| 37 | 42221 - Natural Jack Pine, Mixed Deciduous | High Density Pole | 7.6 | 59 | 1-50 | Small isolated stand of jack pine that was held last decade, but now has notable mortality. Lots of woody debris on the ground. Some scattered old relic red pine in stand. Aspen has developed into the mix along the edges from the adjacent 44 year old aspen stand. |
| 39 | 42210 - Natural Red Pine | Medium Density Log | 6.1 | 70 | 1-50 | Moderately stocked red pine 12" ave. dbh left after a shelterwood type cut done in 2006, The harvest removed most of jack pine pulp and pin oak from stand resulting in lots of stump sprout oak and natural jack pine regen. Featured stand is overstory red pine at this time. |
| 41 | 42110 - Planted Red Pine | High Density Pole | 8.2 | 58 | 111-140 | Healthy red pine pole stand at an optimum density. Minor component of pin oak is dying out of stand which has been beneficial for a natural release. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|-------------------------|-------|--------------|-------------|--|
| 42 | 4310 - Pine, Oak Mix | High Density Pole | 7.4 | 66 | 51-80 | This is a mixed stand with jack pine, aspen, and pin oak. This may be more of a challenge to plant for KW with the deciduous component. (Northwest corner of Sec. 34) |
| 43 | 4310 - Pine, Oak Mix | Medium Density Pole | 50.7 | 37 | 1-50 | Jack pine & pin oak developing in a semi-open growing density. Most of pin oak grown from stump sprouts. 1-2 stick jack pine with 1 stick oak. |
| 47 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 59.6 | 6 | | Kirtland Warbler Mgt. with jack pine hand planted in a wave pattern in spring of 2008. Planted jack pine is well established and over 3' in height. Pin oak stump sprouts are 5-8' in height. Scattered old growth red pine left scattered throughout. |
| 49 | 4125 - Black, N. Pin Oak | Medium Density Log | 10.1 | 86 | 1-50 | Oak log stand that had the jack pine species thinned out in 1985. This stand is a mix of decadent mixed oak log size trees with a minor component of aspen. Lots of advanced pin oak regeneration in understory. |
| 51 | 42220 - Natural Jack Pine | High Density Sapling | 17.7 | 29 | | Young sapling size jack pine without merchantable height yet. Considerable amount of pin oak sprouts in stand. |
| 52 | 42120 - Planted Jack Pine | High Density Sapling | 158.4 | 16 | | This stand was harvested, burnt, trenched, then planted in 1998. Well established KW jack pine plantation. Jack pine is 8-10' in height & healthy, Pin oak stump sprouts 10'-12' in height, red pine 8'-10' in height. No overstory noted in this stand. Note: A small inclusion of a horse shoe size stand of jack pine 22' in height with some scattered pole size pin oak along north & north section line. |
| 54 | 6117 - Lowland Deciduous, Mixed Coniferous | High Density Pole | 7.1 | 64 | 1-50 | Wet stand of quaking aspen with beaver flooding in past. Scattered large relic red pine left along the south county line. |
| 56 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 87.2 | 6 | | Kirtland Warbler jack pine plantation created in a wave pattern in 2008. Some large red pine left scattered. Jack pine are well established and over 3' in height with pin oak stump sprouts 5-8' in height. |
| 59 | 429 - Mixed Upland Conifers | High Density Pole | 73.4 | Uneven Age | 51-80 | Moderately stocked jack pine with intermixed quaking aspen & northern pin oak. Note: There was a 7 acre jack pine strip left as a retention stand on a high ridge west of the Big Creek corridor. Minor component of old relic red pine sawlogs left along the south end of stand. There is also an inclusion of moderately stocked swamp conifer with white cedar, black spruce, & balsam fir. |
| 60 | 6112 - Lowland Aspen | Medium Density Pole | 5.7 | 72 | 1-50 | Lowland marshy area with some quaking aspen and lowland conifer. |
| 61 | 42120 - Planted Jack Pine | High Density Sapling | 30.7 | 23 | | Kirtland Warbler planting completed in 1991. Jack pine is still non-merchantable 20' - 22' in height. Planted at a rate of 1189 trees/acre. |
| 62 | 6130 - Fir, Aspen, Maple | High Density Pole | 141.5 | 61 | 1-50 | Stand borders Big Creek which is a designated natural river and part of the Ausable River system. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|-------------------------|-------|--------------|-------------|---|
| 64 | 4125 - Black, N. Pin Oak | High Density Sapling | 7.2 | 8 | | Stand was cut in 2006 and it is adequately stocked with pin oak stump sprouts and some jack pine. |
| 65 | 42120 - Planted Jack Pine | High Density Sapling | 72.5 | 4 | | Stand was final harvested during red pine project and re-planted with 2-0 jack pine stock in spring of 2010. |
| 66 | 4132 - Aspen, Jack Pine | High Density Pole | 23.7 | 80 | 51-80 | Mature stand of northern pin oak, aspen and jack pine. Evidence of mortality and decline in oak, aspen and jack pine. Stand can be accessed along the powerline road. |
| 67 | 4132 - Aspen, Jack Pine | High Density Pole | 4.6 | 73 | 51-80 | Mature stand of mixed aspen, jack pine, and northern pin oak. There is a private strip along the consumers powerline. The Big Creek is a designated natural river which requires a 150' buffer with no cutting. |
| 68 | 4122 - Oak, Pine | High Density Log | 10.6 | 93 | 51-80 | Oak ridge adjacent to the West Branch of Big Creek. Steep hillside adjacent to the Creek which is part of the natural river system. Also, some large red pine on hillside. |
| 69 | 4122 - Oak, Pine | High Density Log | 52.0 | 93 | 51-80 | Mixed stand with pin oak, jack pine, red pine, and aspen. This stand is within the Natural Rivers Designation which is the west branch of Biig Creek and part of the Ausable River system. |
| 70 | 42110 - Planted Red Pine | High Density Pole | 3.1 | 56 | 81-110 | Narrow strip of red pine left as a retention stand when adjacent red pine was final harvested for red pine project in 2009. |
| 72 | 42110 - Planted Red Pine | High Density Pole | 12.4 | 56 | 81-110 | Red pine stand at adequate density. Horse trail runs through it. |
| 73 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Pole | 9.9 | 77 | 81-110 | Mature stand of jack pine 5-6 pulp stick average. Well established understory of pin oak, white oak, white pine, and some balsam fir. Existing two-track trail road will be useful for access to avoid the soft sand and wet areas along powerline. |
| 74 | 6129 - Mixed Coniferous Lowland Forest | High Density Pole | 44.8 | 99 | 81-110 | Lowland conifer primarily white cedar. Black spruce, tamarak, & balsam fir, and white pine component also. White birch is dying out of stand. |
| 75 | 42140 - Planted Mixed Pine | High Density Pole | 8.1 | 65 | 81-110 | Small stand of mixed red pine & jack pine. 90 BA on average. |
| 77 | 42220 - Natural Jack Pine | Low Density Sapling | 36.9 | 33 | | Semi-open natural jack pine with pin oak, and some small red pine. |
| 78 | 42120 - Planted Jack Pine | High Density Sapling | 10.9 | 3 | | Jack pine plantation established in May, 2011. |
| 80 | 42210 - Natural Red Pine | High Density Log | 4.7 | 65 | 81-110 | Small natural stand of red pine developing into 12" dbh with some intermixed jack pine & pin oak. |
| 81 | 42220 - Natural Jack Pine | High Density Sapling | 4.7 | 33 | | Young stand of jack pine developing after the Big Creek Fire in 1981. |



| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|-------|--|----------------------|-------|------------|----------|--|
| 82 | 42110 - Planted Red Pine | High Density Pole | 20.6 | 52 | 111-140 | Red pine plantation with a mix of jack pine and pin oak. Red pine & jack pine appear healthy and growing at a desired density. Some of pin oak was low quality & fallen on ground which has created a natural thinning. |
| 84 | 42220 - Natural Jack Pine | High Density Sapling | 210.7 | 33 | | Most of this stand was established by the Big Creek Fire in 1981 with variable density of jack pine established. This stand was also included in the Kirtlands Warbler Mgt. efforts in 1992. |
| 91 | 42121 - Planted Jack Pine, Mixed Deciduous | Medium Density | 35.4 | 3 | 1-50 | Stand was harvested in 2009 leaving scattered white oak and red pine. Since this was a mixed oak, pine, and aspen stand, it has regenerated with both stump sprout oak and aspen in areas predominant with those species. In more open parts of the stand, jack pine were planted in May of 2011. The newly developing stand is featured since there is adequate height to the natural regeneration. |
| 92 | 42120 - Planted Jack Pine | High Density Sapling | 14.1 | 18 | | Jack pine planted in 1996. |
| 93 | 42120 - Planted Jack Pine | High Density Sapling | 140.7 | 3 | | Stand was planted in spring of 2011 as part of the Kirtland Warbler Plan. Looks good. Scattered red pine log size trees left throughout. Pin oak has also stump sprouted after final harvest. |
| 94 | 42210 - Natural Red Pine | High Density Log | 3.2 | 65 | 81-110 | Red pine stand previously thinned out in 2009. Red pine is average of 12"dbh with a minor component of white oak left in stand. Understory is pin oak stump sprouts and some planted jack pine seedlings where stand canopy was open enough for planting efforts. The Big Creek Fire did touch into this stand. |
| 95 | 42220 - Natural Jack Pine | Low Density Sapling | 8.5 | 33 | | Young jack pine established after the Big Creek Fire in 1981. |
| 99 | 42220 - Natural Jack Pine | Medium Density Pole | 10.0 | 55 | 1-50 | Natural jack pine which is healthy and could hold with the extensive management in this area. |
| 101 | 42220 - Natural Jack Pine | Low Density Sapling | 8.7 | 33 | | This stand has developed after the Big Creek Fire in 1981. |
| 102 | 42210 - Natural Red Pine | High Density Log | 14.1 | Uneven Age | 1-50 | Shelterwood cut done in 2009 leaving scattered White, Pin Oak, and Red Pine. Lots of well established oak stump sprout regeneration and aspen regen. |
| 105 | 4130 - Aspen | High Density Sapling | 12.8 | 33 | 1-50 | Featured stand is A3, Not enough merchantable stems to call it poletimber yet. Fair quality quaking aspen. Note: Small inclusions of J5 left not large enough to meet minimum 4.5 acre mapping standards. Part of the 1981 Big Creek Fire also. |
| 106 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Pole | 77.7 | 33 | 51-80 | Primarily jack pine with a mix of some mixed aspen, pin oak & scattered red pine. This stand was part of the Big Creek Fire in 1981 also. Small inclusion of R7, W7, & O7 that did not meet mapping size. Also, a small inclusion of planted red pine poles along the north central boundary of stand adjacent to the private property access drive. |

S
t
a
n
d

Gaylord Mgt. Unit

Report 8 – Forested Stands

Compartment: 010
Year of Entry: 2015



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|------------|-----------------------|----------------------|-------|--------------|-------------|--|
| 108 | 42250 - Pine, Oak | High Density Pole | 33.3 | Uneven Age | 81-110 | Mature stand of jack pine mixed with red pine, mixed oak, and aspen. This stand was left in the past as a buffer along County Rd. 612 with a limited factor due to scenic visual values. Adjacent jack pine is now well established & 25' in height. Note: Private cabin utilizes state land for driveway access from County Rd. 612. |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|------------------------------------|-------|--------------|---------------------------------|--|
| 1 | 3303 - Mixed Low Density Trees | 2.1 | No | Unspecified | Semi-open area suitable for logging landing. |
| 2 | 3105 - Mixed Upland Herbaceous | 1.4 | No | Unspecified | |
| 4 | 6225 - Bog | 2.5 | No | Unspecified | |
| 5 | 3105 - Mixed Upland Herbaceous | 1.7 | No | Unspecified | |
| 7 | 3105 - Mixed Upland Herbaceous | 1.4 | No | Unspecified | |
| 8 | 790 - Other Bare/Sparsely Vegetate | 1.6 | No | Unspecified | |
| 10 | 3105 - Mixed Upland Herbaceous | 1.1 | No | Unspecified | |
| 11 | 3105 - Mixed Upland Herbaceous | 1.3 | No | Unspecified | |
| 12 | 790 - Other Bare/Sparsely Vegetate | 2.0 | No | Unspecified | |
| 19 | 3105 - Mixed Upland Herbaceous | 1.0 | No | Unspecified | |
| 21 | 3105 - Mixed Upland Herbaceous | 1.7 | No | Unspecified | |
| 23 | 3105 - Mixed Upland Herbaceous | 1.1 | No | Unspecified | |
| 26 | 3105 - Mixed Upland Herbaceous | 1.3 | No | Unspecified | |
| 28 | 3102 - Grass | 4.3 | No | Unspecified | Opening maintenance. |
| 30 | 3105 - Mixed Upland Herbaceous | 1.6 | No | Unspecified | |
| 31 | 3105 - Mixed Upland Herbaceous | 1.5 | No | Unspecified | |
| 32 | 3102 - Grass | 3.5 | No | Unspecified | Opening Maintenance. |
| 34 | 3105 - Mixed Upland Herbaceous | 1.2 | Unspecified | Unspecified | |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|--------------------------------|-------|--------------|---------------------------------|---|
| 38 | 3303 - Mixed Low Density Trees | 5.1 | Yes | Jack Pine | KW planting of jack pine is scheduled for 2017. |
| 40 | 3105 - Mixed Upland Herbaceous | 1.5 | No | Unspecified | |
| 44 | 3102 - Grass | 3.9 | No | Unspecified | Opening maintenance. |
| 45 | 3102 - Grass | 1.0 | No | Unspecified | |
| 46 | 3105 - Mixed Upland Herbaceous | 1.3 | No | Unspecified | |
| 48 | 3102 - Grass | 3.8 | No | Unspecified | Opening maintenance. |
| 50 | 3105 - Mixed Upland Herbaceous | 1.0 | Unspecified | Unspecified | |
| 53 | 3105 - Mixed Upland Herbaceous | 1.5 | No | Unspecified | |
| 55 | 3105 - Mixed Upland Herbaceous | 1.3 | No | Unspecified | |
| 57 | 3105 - Mixed Upland Herbaceous | 1.4 | No | Unspecified | |
| 58 | 3303 - Mixed Low Density Trees | 11.9 | No | Unspecified | |
| 63 | 3105 - Mixed Upland Herbaceous | 1.1 | No | Unspecified | |
| 71 | 6220 - Alder/willow | 11.2 | No | Unspecified | |
| 76 | 3105 - Mixed Upland Herbaceous | 1.3 | No | Unspecified | |
| 79 | 6225 - Bog | 2.8 | No | Unspecified | |
| 83 | 3105 - Mixed Upland Herbaceous | 1.2 | No | Unspecified | |
| 85 | 6225 - Bog | 4.0 | No | Unspecified | |
| 86 | 6230 - Cattail | 1.8 | No | Unspecified | |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|----------------------------------|-------|--------------|---------------------------------|-------------------|
| 87 | 3105 - Mixed Upland Herbaceous | 1.4 | No | Unspecified | |
| 88 | 6225 - Bog | 8.4 | No | Unspecified | |
| 89 | 6225 - Bog | 4.4 | No | Unspecified | |
| 90 | 6225 - Bog | 1.1 | No | Unspecified | |
| 96 | 3105 - Mixed Upland Herbaceous | 1.2 | No | Unspecified | |
| 97 | 3302 - Low Density Conifer Trees | 25.9 | No | Unspecified | |
| 98 | 6225 - Bog | 1.2 | No | Unspecified | |
| 100 | 6225 - Bog | 1.2 | No | Unspecified | |
| 103 | 3105 - Mixed Upland Herbaceous | 1.5 | No | Unspecified | |
| 104 | 6225 - Bog | 2.5 | No | Unspecified | |
| 107 | 3105 - Mixed Upland Herbaceous | 1.8 | No | Unspecified | |