



Compartment Review Presentation

Grayling Forest Management Unit

Compartment 298

Entry Year 2015

Acreage: 3,010

County Crawford

Management Area: Ausable Outwash

Revision Date: 07/22/2013

Stand Examiner: Patrick Mohney

Legal Description:

T25N R02W Sections 1, 11, 12, 14 T25N R01W Sections 30, 31

Identified Planning Goals:

The emphasis of management shall be on retaining and enhancing the natural beauty and biological diversity of the area, and enhancing wildlife habitat for both hunting and wildlife observation purposes while maintaining forest health, productivity, sustainability, species and structural diversity while accounting for visual management and multiple uses. Much of this property was received from the U.S.D.A. Forest Service with four covenants of restriction. Three areas are affected by the restrictions.

Soil and topography:

Soil types within this compartment consist mostly of Grayling, and Graycalm sand, with some Kellogg and Wakeley muck along Thayer creek. Topography is gently rolling with a few ridges.

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

This compartment consists of solid state ownership. It is bounded on the east and south primarily by state land within the Mason Tract, a special management area. It is bounded on the west by state, U.S.D.A. Forest Service land and private land holdings. The north boundary interfaces with private land. Much of the private interface is still currently used as seasonal residences or hunting land. Most private interface on the compartment boundaries is dominated by three private landowners, one of which is Forest Dunes Golf and Country Club (originally known as South Branch Ranch). Forest Dunes Golf and Country Club, has since reorganized and reopened with less acreage. Currently a portion of the original tract is for sale by BankOne. This property is only exposed to the compartment boundaries in a very small area, and has a very jagged boundary line. Obtaining these acres would be of little benefit to the State in its current condition. Much of the compartment property was received in 1985 from the U.S.D.A Forest Service with four covenants restriction.

1. Any use and/or change, which may affect the archaeological research value and/or historical features of any of the described properties in Sections 1 and 12, including but not limited to such activities as timber cutting, road building or improvement, running of mechanize equipment over the property other than on existing roadways, use of metal detectors, and brush removal, is prohibited without prior review and approval of the Michigan State Historic Preservation Officer.
2. In the event of a violation of the above restrictions, the United States or other entity may institute a suit of enjoin such violation, a suit for damages by reason of any breach thereof, or both.
3. The above restrictions shall be binding on the Michigan Department of Natural Resources, its successors or assigns, in perpetuity, but the Michigan State Historic Preservation Officer may, for good cause, modify or cancel any or all of the foregoing restrictions upon written application the Michigan Department of Natural Resources, it successors or assigns. Such modification or cancellation will take into account the exact nature and extent of the proposed construction or other activities and results of any future evaluations of the property's historic and archaeological significance made in accordance with the procedures set forth in Title 36 of the Code of Federal Regulations, Part 800. If the keeper of the National Register determines that any of the above described property is not eligible for nomination to the National Register of Historic Places, the Michigan State Historic Preservation Officer shall deliver to the Michigan Department of natural Resources, its successor or assigns, an appropriate document in recordable form releasing any such property from the conditions, restrictions, and limitations set forth herein.
4. The acceptance of the delivery of this deed or patent shall constitute conclusive evidence of the agreement o the Michigan department of Natural Resources, its successors or assigns, to be bound by these condition, restriction, and limitations, and to perform the obligation herein set forth.

Unique Natural Features:

Thayer Creek, a tributary of the South Branch of the AuSable River, is a designated natural river and trout stream.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

Much of this property was received from the U.S.D.A. Forest Service with four covenants of restriction. Also, stand 131, which is a well stocked white pine sawtimber stand next to a swampy area, interfaces with good wildlife habitat and is visually pleasing.

Watershed and Fisheries Considerations:

This compartment contains Thayer Creek, a tributary to the South Branch of the AuSable River, a designated natural river and trout stream. Thayer Creek offers limited fisheries potential, but does affect the AuSable. Currently, much of Thayer Creek has been dammed by beavers and has active beaver lodges.

Wildlife Habitat Considerations:

The southern portion of the compartment offers excellent wildlife habitat. There is a diverse type of cover and age classes near Thayer Creek, which offer food and cover for a variety of wildlife. Many deer were sighted in the compartment, as well as multiple signs of bear, badger, fox, woodcock, coyotes, beaver, rabbits, and songbirds. Much of the southern part of the compartment is winter deeryard. The compartment does contain a one acre maintained wildlife opening.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. Glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift is the Michigan Formation, which is quarried for gypsum elsewhere in the State. Gravel pits are located in the area and its potential should be good on the upland areas. This area has been sparsely drilled. The nearest production is Hickeys Creek Field, located two miles to the southeast, producing oil from the Richfield and gas from the Prairie du Chien. Oil and gas leases are located just to the east of the Compartment.

Vehicle Access:

Access to most of the compartment is easily obtained from county roads M-72 and South Branch Ranch Road. A series of trail roads make most of the compartment seasonally accessible by a four-wheel drive vehicle. No existing roads need to be closed at this time. All new roads created through management activities are to be closed upon completion.

Survey Needs:

Potential needs for suveys exist.

Recreational Facilities and Opportunities:

The compartment receives heavy dispersed recreational use, partly because it is adjacent to one entrance point for the well-known "Mason Tract". One primary use of the area is hunting, due to the excellent wildlife habitat in the vicinity. The Michigan Riding and Hiking trail runs through a portion of the compartment. The compartment is also adjacent to Canoe Harbor Campground and receives use from campers and canoeists using the nearby AuSable River.

Fire Protection:

Current road system is adequate, and no timber conversion is needed.

Additional Compartment Information:

Due to the compartment's proximity to the Canoe Harbor Campground, and its high recreational potential, they are many opportunities for educational and visual management.

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**

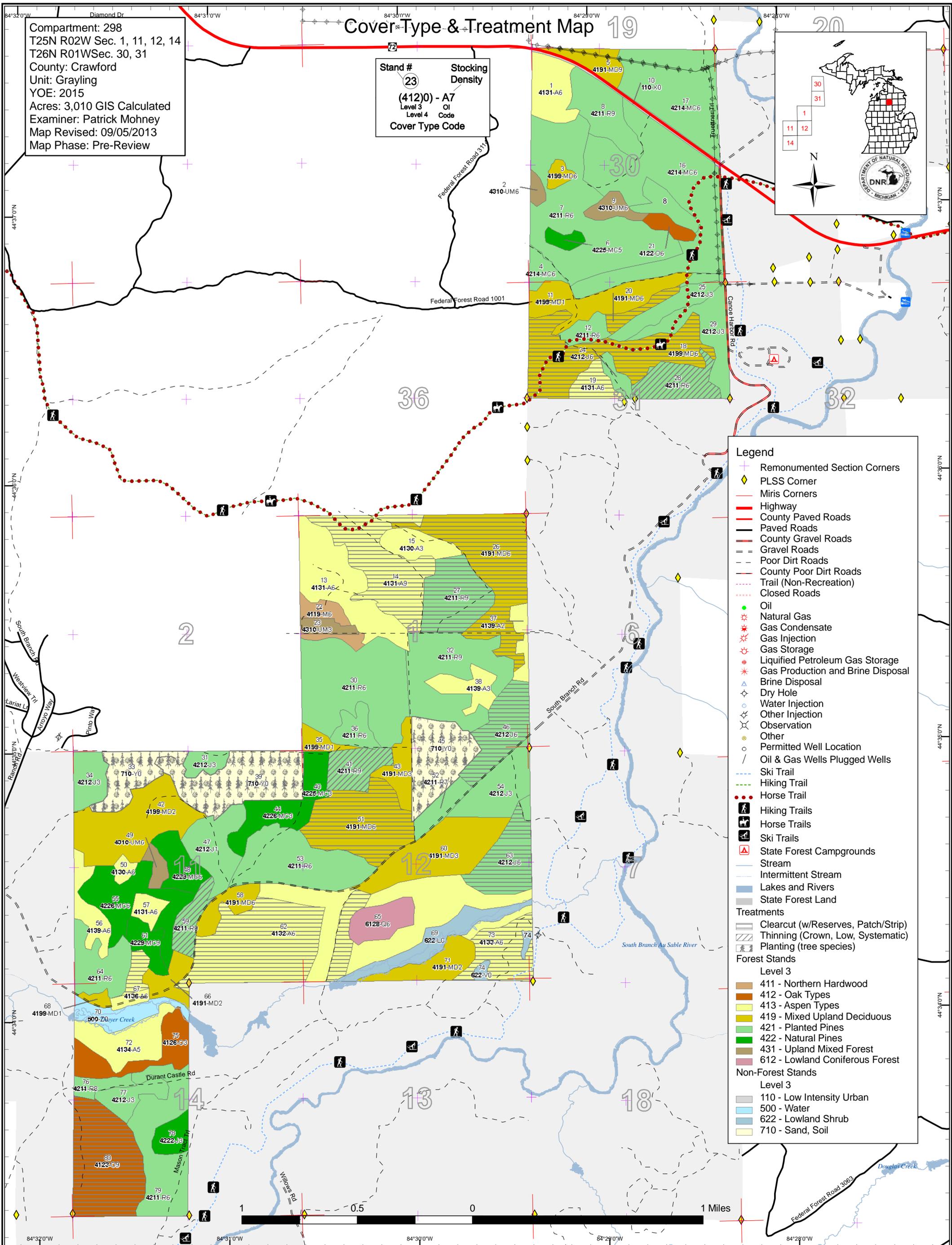
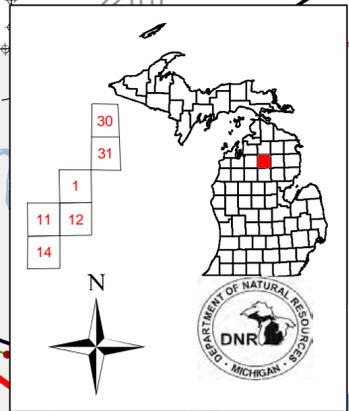
The following information is displayed, where pertinent, on the attached compartment maps:

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

Cover Type & Treatment Map 19

Compartment: 298
 T25N R02W Sec. 1, 11, 12, 14
 T26N R01W Sec. 30, 31
 County: Crawford
 Unit: Grayling
 YOE: 2015
 Acres: 3,010 GIS Calculated
 Examiner: Patrick Mohney
 Map Revised: 09/05/2013
 Map Phase: Pre-Review

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



Legend

- ✦ Remonumented Section Corners
- ◆ PLSS Corner
- ✦ Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Oil
- Natural Gas
- Gas Condensate
- Gas Injection
- Gas Storage
- Liquefied Petroleum Gas Storage
- Gas Production and Brine Disposal
- Brine Disposal
- Dry Hole
- Water Injection
- Other Injection
- Observation
- Other
- Permitted Well Location
- Oil & Gas Wells Plugged Wells
- Ski Trail
- Hiking Trail
- Horse Trail
- Hiking Trails
- Horse Trails
- Ski Trails
- ▲ State Forest Campgrounds
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

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

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

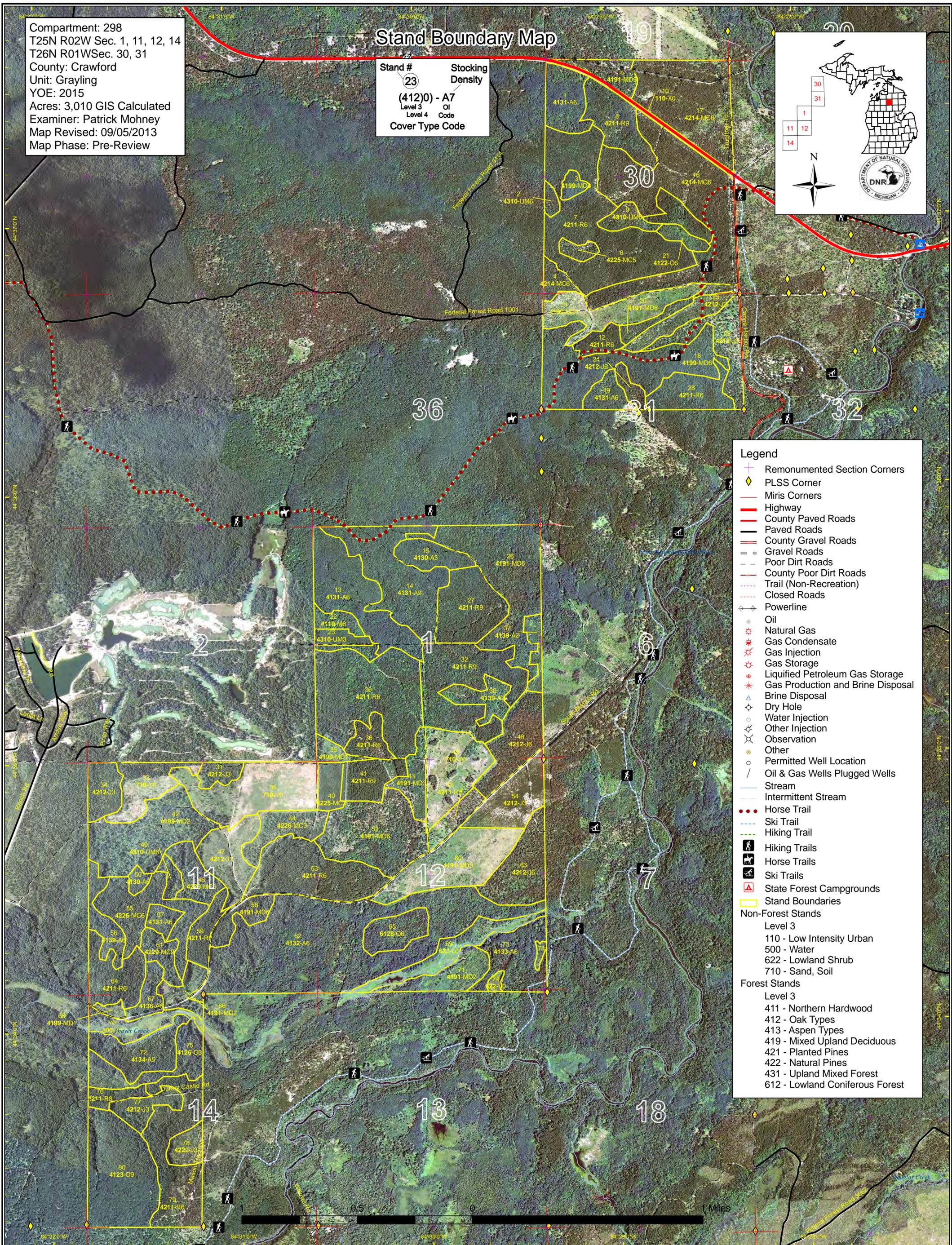
- 110 - Low Intensity Urban
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand, Soil



Compartment: 298
 T25N R02W Sec. 1, 11, 12, 14
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 Map Revised: 09/05/2013
 Map Phase: Pre-Review

Stand Boundary Map

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

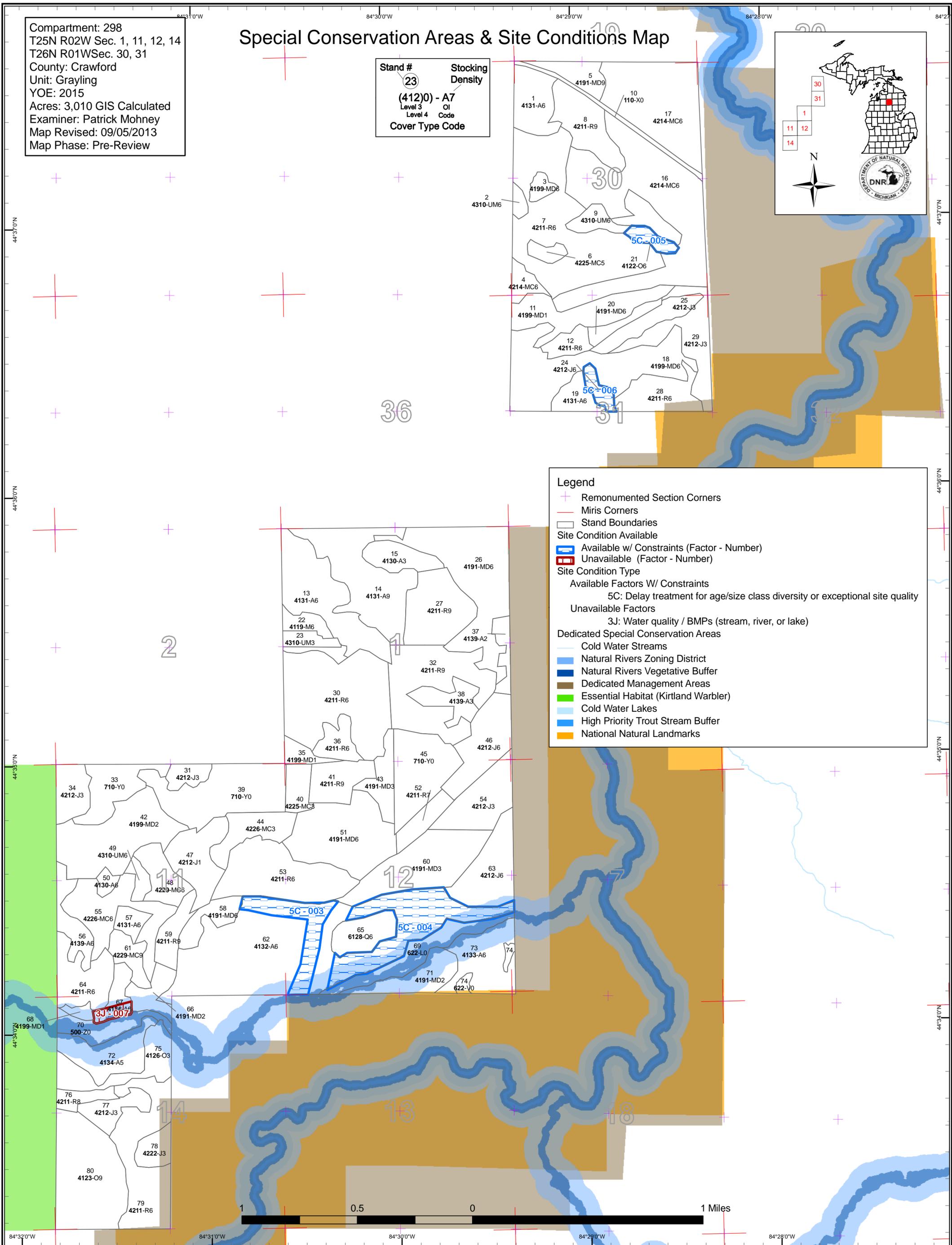
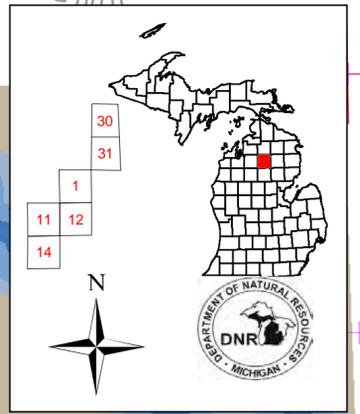


- Legend**
- ✚ Remonumented Section Corners
 - ◆ PLS Corner
 - Miris Corners
 - Highway
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Trail (Non-Recreation)
 - Closed Roads
 - ⚡ Powerline
 - Oil
 - ⊛ Natural Gas
 - ⊛ Gas Condensate
 - ⊛ Gas Injection
 - ⊛ Gas Storage
 - ⊛ Liquefied Petroleum Gas Storage
 - ⊛ Gas Production and Brine Disposal
 - ⊛ Brine Disposal
 - ⊛ Dry Hole
 - ⊛ Water Injection
 - ⊛ Other Injection
 - ⊛ Observation
 - ⊛ Other
 - Permitted Well Location
 - Oil & Gas Wells Plugged Wells
 - Stream
 - Intermittent Stream
 - Horse Trail
 - Ski Trail
 - Hiking Trail
 - ⚡ Hiking Trails
 - ⚡ Horse Trails
 - ⚡ Ski Trails
 - ⚡ State Forest Campgrounds
 - Stand Boundaries
 - Non-Forest Stands**
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 - Level 3
 - 411 - Northern Hardwood
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Compartment: 298
 T25N R02W Sec. 1, 11, 12, 14
 T26N R01W Sec. 30, 31
 County: Crawford
 Unit: Grayling
 YOY: 2015
 Acres: 3,010 GIS Calculated
 Examiner: Patrick Mohney
 Map Revised: 09/05/2013
 Map Phase: Pre-Review

Special Conservation Areas & Site Conditions Map

Stand #
 23
Stocking 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 Condition Type
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
- 3J: Water quality / BMPs (stream, river, or lake)
- Dedicated Special Conservation Areas
- Cold Water Streams
- ▭ Natural Rivers Zoning District
- ▭ Natural Rivers Vegetative Buffer
- ▭ Dedicated Management Areas
- ▭ Essential Habitat (Kirtland Warbler)
- ▭ Cold Water Lakes
- ▭ High Priority Trout Stream Buffer
- ▭ National Natural Landmarks

Report 1 – Total Acres by Cover Type and Age Class



| | Age Class | | | | | | | | | | | | | Total | |
|------------------------|------------|------------|-----------|------------|-------------|------------|------------|-----------|------------|----------|-----------|----------|-----------|----------|-------------|
| | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-109 | 110-119 | 120 + | | Uneven Age |
| Aspen | 0 | 30 | 0 | 89 | 388 | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 599 |
| Bog | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Jack Pine | 79 | 126 | 0 | 0 | 87 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 300 |
| Lowland Conifers | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| Lowland Shrub | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| Mixed Upland Deciduous | 219 | 20 | 27 | 18 | 6 | 0 | 0 | 17 | 260 | 0 | 10 | 0 | 0 | 0 | 577 |
| Natural Mixed Pines | 0 | 14 | 27 | 23 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 138 |
| Northern Hardwood | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Oak | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 85 | 0 | 0 | 0 | 127 |
| Planted Mixed Pines | 0 | 0 | 0 | 0 | 233 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 243 |
| Red Pine | 0 | 0 | 0 | 0 | 541 | 70 | 99 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 725 |
| Sand, Soil | 157 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 157 |
| Upland Mixed Forest | 0 | 9 | 0 | 0 | 0 | 5 | 8 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 33 |
| Urban | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Water | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| Total | 526 | 232 | 55 | 170 | 1313 | 185 | 107 | 32 | 281 | 0 | 95 | 0 | 15 | 0 | 3010 |



Report 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2015

Compartment 298
Total Compartment Acres: 3,010

Acres by Treatment Type

Commercial Harvest - 829 Tree Planting - 157 Other - 0
 Habitat Cut - 0 Opening Maintenance - 0

Cover Type by Harvest Method

| | <i>Clearcut</i> | <i>Selection</i> | <i>Seed Tree</i> | <i>Shelterwood</i> | <i>Thinning</i> | <i>Other - Specify</i> | <i>Total Acres</i> |
|-------------------------------|-----------------|------------------|------------------|--------------------|-----------------|------------------------|--------------------|
| Aspen Types | 264 | 0 | 0 | 0 | 0 | 0 | 264 |
| Mixed Upland Deciduous | 270 | 0 | 0 | 0 | 0 | 0 | 270 |
| Oak Types | 85 | 0 | 0 | 0 | 0 | 0 | 85 |
| Planted Pines | 134 | 0 | 0 | 0 | 75 | 0 | 209 |
| Total | 753 | 0 | 0 | 0 | 75 | 0 | 829 |



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

| | | | | | | | | | | |
|----|--------------|------|-------------------|------------------|----|--------|---------|------------------------|-------------------|-----------------------|
| 14 | 72298014-Cut | 78.1 | 4131 - Aspen, Oak | High Density Log | 55 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |
|----|--------------|------|-------------------|------------------|----|--------|---------|------------------------|-------------------|-----------------------|

Prescription Sale was set up before and never cut. Final harvest stand, use islands for retention, focus retention along forest dunes border for visual. Also
Specs: be sure to protect shore to shore horse trail. Leave 5-10 large canopy oaks for mast production. Use Drumming Log Spec.

Other
Comments:

Next Acceptable regen is oak and aspen.
Steps:

Proposed
Start Date: 10/01/2014

| | | | | | | | | | | |
|----|--------------|------|-------------------------------------|-------------------|----|--------|---------|------------------------|-------------------|-----------------------|
| 18 | 72298018-Cut | 90.7 | 4199 - Other Mixed Upland Deciduous | High Density Pole | 83 | 81-110 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |
|----|--------------|------|-------------------------------------|-------------------|----|--------|---------|------------------------|-------------------|-----------------------|

Prescription Final harvest stand, leave retention in islands so that the shore to shore horse trail will be protected. add trail protection spec to sale. Use
Specs: drumming log spec.

Other
Comments:

Next Acceptable regen is oak, aspen, maple.
Steps:

Proposed
Start Date: 10/01/2014

| | | | | | | | | | | |
|----|--------------|------|-------------------|-------------------|----|--|---------|----------|-------------------|-----------------------|
| 19 | 72298019-Cut | 14.9 | 4131 - Aspen, Oak | High Density Pole | 42 | | Harvest | Clearcut | 4131 - Aspen, Oak | Cmpt. Review Proposal |
|----|--------------|------|-------------------|-------------------|----|--|---------|----------|-------------------|-----------------------|

Prescription Final harvest stand. Leave no retention to maximize regeneration in the stand. Use Drumming log spec.
Specs:

Other
Comments:

Next Acceptable regeneration is aspen and oak.
Steps:

Proposed
Start Date: 10/01/2014

| | | | | | | | | | | |
|----|--------------|-----|--|-------------------|-----|--------|---------|----------|-------------------|-----------------------|
| 20 | 72298020-Cut | 9.7 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 100 | 81-110 | Harvest | Clearcut | 4121 - Oak, Aspen | Cmpt. Review Proposal |
|----|--------------|-----|--|-------------------|-----|--------|---------|----------|-------------------|-----------------------|

Prescription Final harvest stand. Leave no retention to maximize regeneration in small stand. Use Drumming Log Spec.
Specs:

Other
Comments:

Next Acceptable regeneration is oak, aspen and maple.
Steps:

Proposed
Start Date: 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 |
|-----------------------|----------------|-------|--|-------------------|-----------|----------|----------------|------------------------|----------------------|-----------------------|
| | | | | | | | | | | |
| 26 | 72298026-Cut | 93.3 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 89 | 111-140 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |

Prescription Final harvest stand. Let regenerate naturally. Place retention around old foundations by using islands. Use Drumming Log spec.

Specs:

Other

Comments:

Next Steps: Acceptable regeneration is oak, pine, aspen, maple

Proposed

Start Date: 10/01/2014

| | | | | | | | | | | |
|----|--------------|------|--------------------------|------------------|----|---------|---------|----------|--|-----------------------|
| 27 | 72298027-Cut | 49.2 | 42110 - Planted Red Pine | High Density Log | 43 | 111-140 | Harvest | Clearcut | | Cmpt. Review Proposal |
|----|--------------|------|--------------------------|------------------|----|---------|---------|----------|--|-----------------------|

Prescription Final harvest stand. Leave no retention to help with site prep. Trench and plant to jack pine.

Specs:

Other

Comments:

Next Steps: Trench and plant to jack pine.

Proposed

Start Date: 10/01/2014

| | | | | | | | | | | |
|----|--------------|------|---|-------------------|----|---------|---------|----------------|--|-----------------------|
| 28 | 72298028-Cut | 31.7 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 51 | 111-140 | Harvest | Crown Thinning | | Cmpt. Review Proposal |
|----|--------------|------|---|-------------------|----|---------|---------|----------------|--|-----------------------|

Prescription Mark to thin red pine to 80-90 BA. Stand was underplanted so the rows are very difficult to distinguish. Remove all oak.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

| | | | | | | | | | | |
|----|--------------|------|--------------------------|------------------|----|---------|---------|----------------|--|-----------------------|
| 41 | 72298041-Cut | 25.9 | 42110 - Planted Red Pine | High Density Log | 54 | 111-140 | Harvest | Crown Thinning | | Cmpt. Review Proposal |
|----|--------------|------|--------------------------|------------------|----|---------|---------|----------------|--|-----------------------|

Prescription Thin red pine to 80-90 BA. Remove oak as well from the stand. Good regen in the understory, should be a nice mixed stand in the future.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014



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| Treatment Name | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-----------------|-------|---------------------------|-------------------|-----------|----------|----------------|------------------|----------------------|-----------------------|
| 46 72298046-Cut | 42.8 | 42120 - Planted Jack Pine | High Density Pole | 49 | 81-110 | Harvest | Clearcut | | Cmpt. Review Proposal |

Prescription Final harvest stand. Focus any retention in islands along the edge of the stand to help with visual along the road and so that it will not impede the trenching and planting operations.

Other Comments:

Next Steps: Trench and plant to Jack Pine.

Proposed Start Date: 10/01/2014

| | | | | | | | | | |
|-----------------|------|--|-------------------|----|------|---------|------------------------|-------------------|-----------------------|
| 51 72298051-Cut | 76.3 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 89 | 1-50 | Harvest | Clearcut with Reserves | 4121 - Oak, Aspen | Cmpt. Review Proposal |
|-----------------|------|--|-------------------|----|------|---------|------------------------|-------------------|-----------------------|

Prescription Final harvest stand. Focus retention in islands along south branch road and for visual concerns. Leave any large diameter (>16") dbh red and white pine that you may come across.

Other Comments:

Next Steps: Let stand naturally regenerate. If it fails, trench and plant to jack pine. Acceptable natural regen is oak, aspen, maple, pine.

Proposed Start Date: 10/01/2014

| | | | | | | | | | |
|-----------------|------|--------------------------|------------------|----|---------|---------|----------------|--|-----------------------|
| 59 72298059-Cut | 17.7 | 42110 - Planted Red Pine | High Density Log | 68 | 111-140 | Harvest | Crown Thinning | | Cmpt. Review Proposal |
|-----------------|------|--------------------------|------------------|----|---------|---------|----------------|--|-----------------------|

Prescription Thin red pine down to 80-90 BA. Remove oak at the same time.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

| | | | | | | | | | |
|-----------------|-------|-------------------------|-------------------|----|-------|---------|------------------------|--|-----------------------|
| 62 72298062-Cut | 107.8 | 4132 - Aspen, Jack Pine | High Density Pole | 48 | 51-80 | Harvest | Clearcut with Reserves | | Cmpt. Review Proposal |
|-----------------|-------|-------------------------|-------------------|----|-------|---------|------------------------|--|-----------------------|

Prescription Final harvest stand west of mason tract trail. Leave retention along south branch road and mason tract trail for visual in the form of a buffer approximately 100 yards wide the entire way. Cut a strip along east side of Mason Tract trail approximately 100 yards wide the full length of the stand. This will provide visual buffers from the sale, and in ten years when the rest of the stand is cut, the 10 year old regen will provide a visual buffer for the second phase of the sale. Use appropriate buffers for Thayer Creek. Let stand regenerate to aspen. Use Drumming Log Spec.

Other Comments: Aspen, oak, pine is acceptable natural regeneration.

Next Steps:

Proposed Start Date: 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 |
|--|----------------------------------|-------|--------------------------------|-------------------------|--------------|-------------|-------------------|---------------------------|-----------------------------|--------------------------|
| 62 | 72298062- Cut_small_sm all | 17.6 | 4132 - Aspen, Jack Pine | High Density Pole | 48 | 51-80 | Harvest | Clearcut with Reserves | | Cmpt. Review Proposal |
| <p><u>Prescription</u> Final harvest stand west of mason tract trail. Leave retention along south branch road and mason tract trail for visual in the form of a buffer approximately 100 yards wide the entire way. Cut a strip along east side of Mason Tract trail approximately 100 yards wide the full length of the stand. This will provide visual buffers from the sale, and in ten years when the rest of the stand is cut, the 10 year old regen will provide a visual buffer for the second phase of the sale. Use appropriate buffers for Thayer Creek. Let stand regenerate to aspen. Use Drumming Log Spec.</p> <p><u>Specs:</u></p> <p><u>Other</u> Aspen, oak, pine is acceptable natural regeneration.</p> <p><u>Comments:</u></p> <p><u>Next</u></p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |
| 63 | 72298063-Cut | 41.9 | 42120 - Planted Jack Pine | High Density Pole | 47 | | Harvest | Clearcut with Reserves | 4122 - Oak, Pine | Cmpt. Review Proposal |
| <p><u>Prescription</u> Final harvest stand. Use retention in the form of a single island off to one side along the boundary line so that it will not impede trenching and planting or site prep efforts in the event of failed natural regeneration. Let stand regenerate naturally.</p> <p><u>Specs:</u></p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next</u> Acceptable regeneration is oak, jack pine, white pine. If natural regen fails, trench and plant to jack pine.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |
| 67 | 72298067-Cut | 8.8 | 4136 - Aspen, Mixed Conifer | High Density Pole | 54 | | Harvest | Clearcut with Reserves | 4131 - Aspen, Oak | Cmpt. Review Proposal |
| <p><u>Prescription</u> Final harvest stand. Focus retention along Thayer Creek area to achieve appropriate setback. Let regenerate naturally. Use Drumming Log Spec.</p> <p><u>Specs:</u></p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next</u> Acceptable regeneration is aspen, oak.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2014</p> | | | | | | | | | | |
| 73 | 72298073-Cut | 37.2 | 4133 - Aspen, Mixed Pine | High Density Pole | 44 | 141-170 | Harvest | Clearcut with Reserves | 4133 - Aspen, Mixed Pine | Cmpt. Review Proposal |
| <p><u>Prescription</u> Final harvest stand. Let regenerate naturally. Place retention in islands for visual management and to protect the bogs within the stand. Leave red and white pine over 16" dbh. Use Drumming Log Spec.</p> <p><u>Specs:</u></p> <p><u>Other</u> Acceptable regeneration is aspen, oak, pine mix.</p> <p><u>Comments:</u></p> <p><u>Next</u></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 |
|-----------------------|-------------------|-------|-----------|-----------------|--------------|-------------|-------------------|---------------------|-------------------------|--------------------|
|-----------------------|-------------------|-------|-----------|-----------------|--------------|-------------|-------------------|---------------------|-------------------------|--------------------|

| | | | | | | | | | | |
|----|--------------|------|----------------|---------------------|-----|-------|---------|---------------------------|--|--------------------------|
| 80 | 72298080-Cut | 84.9 | 4123 - Red Oak | High Density Log | 104 | 51-80 | Harvest | Clearcut with Reserves | | Cmpt. Review Proposal |
|----|--------------|------|----------------|---------------------|-----|-------|---------|---------------------------|--|--------------------------|

Prescription Final harvest stand. Mark 1-2 large oak per acre for mast. Leave red pine. There are lots of large diameter large canopy oak, so a chipping
Specs: spec would be beneficial. Let regenerate naturally.

Other
Comments:

Next Acceptable regeneration would be oak and mixed pine. If natural regeneration fails, trench and plant to Red pine.
Steps:

Proposed
Start Date: 10/01/2014

| | | | | | | | | | | |
|----|-----------------------|------|------------------|--|--|--|---------------|---------------|--|--------------------------|
| 33 | NF_72298033- Plant | 32.5 | 710 - Sand, Soil | | | | Tree Planting | Machine Plant | | Cmpt. Review Proposal |
|----|-----------------------|------|------------------|--|--|--|---------------|---------------|--|--------------------------|

Prescription
Specs:

Other
Comments:

Next Regen survey at year 1, release herbicide if needed.
Steps:

Proposed
Start Date: Unspecified

| | | | | | | | | | | |
|----|-----------------------|------|------------------|--|--|--|---------------|---------------|--|--------------------------|
| 39 | NF_72298039- Plant | 72.0 | 710 - Sand, Soil | | | | Tree Planting | Machine Plant | | Cmpt. Review Proposal |
|----|-----------------------|------|------------------|--|--|--|---------------|---------------|--|--------------------------|

Prescription
Specs:

Other
Comments:

Next Regen survey, release herbicide if needed.
Steps:

Proposed
Start Date: Unspecified

| | | | | | | | | | | |
|----|-----------------------|------|------------------|--|--|--|---------------|---------------|--|--------------------------|
| 45 | NF_72298045- Plant | 52.2 | 710 - Sand, Soil | | | | Tree Planting | Machine Plant | | Cmpt. Review Proposal |
|----|-----------------------|------|------------------|--|--|--|---------------|---------------|--|--------------------------|

Prescription
Specs:

Other
Comments:

Next Regen survey, Release herbicide if needed.
Steps:

Proposed
Start Date: Unspecified

**Total Treatment
Acreage Proposed: 985.2**



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| 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

Grayling Mgt. Unit

Patrick Mohney : Examiner

Compartment 298

Year of Entry 2015

Availability for Management

| Total Acres | Acres | | Dominant Site Conditions | No | 5C | 3J |
|----------------|-----------|---------------|--------------------------|-------|-----|----|
| | Available | Not Available | | | | |
| 598 | 593 | 6 | Aspen | 493 | 100 | 6 |
| 300 | 300 | | Jack Pine | 291 | 8 | |
| 24 | 24 | | Lowland Conifers | 24 | 0 | |
| 576 | 576 | | Mixed Upland Deciduous | 576 | 0 | |
| 138 | 138 | | Natural Mixed Pines | 138 | | |
| 16 | 16 | | Northern Hardwood | 16 | | |
| 127 | 127 | | Oak | 119 | 9 | |
| 243 | 243 | | Planted Mixed Pines | 243 | | |
| 725 | 725 | | Red Pine | 725 | 0 | |
| 33 | 33 | | Upland Mixed Forest | 33 | | |
| 2,781 | 2,775 | 6 | Total Forested Acres | 2,657 | 118 | 6 |
| | 100% | 0% | 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 | Available | 5C: Delay treatment for age/size class diversity or exceptional site quality | 33 | | | | |
| Comments: Wildlife chose to delay treatment due to break up large stand area being so close to the Mason Tract. | | | | | | | |
| 004 | Available | 5C: Delay treatment for age/size class diversity or exceptional site quality | 70 | | | | |
| Comments: Wildlife chose to delay treatment due to break up large stand area being so close to the Mason Tract. | | | | | | | |

Report 5 – Site Conditions

Grayling Mgt. Unit

Compartment 298

Patrick Mohny : Examiner

Year of Entry 2015

| | | | |
|--|---------------|--|---|
| 005 | Available | 5C: Delay treatment for age/size class diversity or exceptional site quality | 9 |
| Comments: | | | |
| 006 | Available | 5C: Delay treatment for age/size class diversity or exceptional site quality | 8 |
| Comments: Examiner Approved 1/7/2013 | | | |
| 007 | Not Available | 3J: Water quality / BMPs (stream, river, or lake) | 6 |
| 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 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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

| Conservation Area | Type | Description |
|-------------------|--|---|
| SCA | 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 Lake | A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200. |
| SCA | Cold Water Stream | A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210. |
| SCA | Non-Dedicated Natural Areas and National Natural Landmarks | This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action. |
| SCA | Riparian Area | A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity. |
| HCVA | Dedicated Management Areas | Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR. |
| 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 | Legally dedicated Natural Areas, Wilderness or Wild Areas | The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action. |
| 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: |
|----|--|------------------------|-------|--------------|-------------|--|
| 1 | 4131 - Aspen, Oak | High Density Pole | 30.7 | 47 | | PARVVB. stand was cut in 1965 per previous OI. Large RP XLog in stand. Nice looking oak. Mixed size classes for all species. Stand is dominated by big tooth aspen. Not much for ground cover. Some bracken fern and wintergreen. |
| 2 | 4310 - Pine, Oak Mix | High Density Pole | 4.7 | 52 | 81-110 | PVCD/PARVHA. Small jack pine plantation with good mixture of oak species intermixed. Pocketed stand within large red pine plantation. JP is not in great condition. Ground cover is blueberry, moss, bracken. |
| 3 | 4199 - Other Mixed Upland Deciduous | High Density Pole | 6.2 | 48 | 51-80 | PVCD/PARVHA. Stand is borderline sapling/pole sized. could go either way. Few super canopy oak about 20 ba scattered throughout stand. small component of BT aspen. Pocket inside red pine stand. Groundcover blue berry and moss. |
| 4 | 42141 - Planted Mixed Pine, Mixed Deciduous | High Density Pole | 10.1 | 59 | 51-80 | PVCD/PARVHA. Similar to stand 21. Just a tad smaller in dbh. Planting rows are not very well defined. |
| 5 | 4191 - Mixed Upland Deciduous with Conifer | High Density Log | 17.0 | 76 | 51-80 | PVCD/PARVHA. Small stand of oak, maple and aspen. with mixed conifer. Low end of canopy closure. Would treat stand when stand 4 is treated. |
| 6 | 42250 - Pine, Oak | Medium Density Pole | 7.0 | 48 | 1-50 | More open grown stand. not planted. Could have been an old landing or something from previous harvest. Stand would be treated with stand 21. Narrow road down center of stand. Blue berry ground cover. |
| 7 | 42110 - Planted Red Pine | High Density Pole | 131.0 | 48 | 141-170 | PVCD/PARVHA. Red Pine stand with some oak in understory and minor component of stand. Jack pine is also mixed in with RP. Stand has not been row thinned. Planting is erratic and not very intuitive. |
| 8 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Log | 54.1 | 48 | 51-80 | PVCD/PARVHA. This was originally an oak stand, it was underplanted with red pine in 1965. All seems to be growing well at this point. |
| 9 | 4310 - Pine, Oak Mix | High Density Pole | 11.8 | 89 | 81-110 | A very mixed stand. slopes were not planted. |
| 11 | 4199 - Other Mixed Upland Deciduous | Low Density Sapling | 46.7 | 6 | | PVCD/PARVHA. Stand was cut in 2007 Canoe harbor jack (720370501). Majority of stems are oak regen. However most of oak regen was hit pretty hard by frost, not much leaf out. Stand is about 50% canopy coverage, some areas have 0 coverage. Pretty good natural regen for jack pine, seedling stage. |
| 12 | 42110 - Planted Red Pine | High Density Pole | 12.2 | 52 | 141-170 | PVCD/PARVHA. Horse trail is along south side of stand. Previous inventory only states that its at 70 BA. Current inventory records much higher BA in stand. |
| 13 | 4131 - Aspen, Oak | High Density Pole | 68.4 | 35 | | PVCD/PARVVB. Regenerating pole sized stand. Bordering forest dunes golf course. Numerous No Trespassing signs were posted on state land. They have been removed. Stand seems to be healthy and growing well. |



| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|-------|--|----------------------|-------|-----------|----------|---|
| 14 | 4131 - Aspen, Oak | High Density Log | 78.1 | 55 | 81-110 | PVCD/PARVHA. Stand was prescribed, set up and sold (sale#720310501 "Forest Dunes Shelterwood"). Sale was never cut and has been turned back in. Primarily aspen and oak. Some areas do not have much for aspen and more oak in them. Aspen is starting to break down in places. Oak is fair to good quality. Shore to shore horse trail passes through stand. |
| 15 | 4130 - Aspen | High Density Sapling | 20.7 | 37 | | PVCD. Young aspen stand with oak and red maple. Red pine left from previous harvest. Borderline sapling/pole stand. Being conservative and calling sapling sized. Stand was final harvested 1976. |
| 16 | 42140 - Planted Mixed Pine | High Density Pole | 145.1 | 47 | | PVCD/PARVHA. Per previous OI stand was planted to RP in a haphazard fashion by USFS in 1965. Plantation with various species of pine. Some XLog RP throughout. NW corner is almost all RP with sapling sized RM in the understory. Horse trail is in somewhat poor condition. Is approximately 1 foot deep trench, very sandy. |
| 17 | 42140 - Planted Mixed Pine | High Density Pole | 87.7 | 46 | 51-80 | PVCD/PARVHA. Stand was planted with 2-0 stock in 1965 by USFS. Hills thistle supposedly in the area. Eastern edge is at Truettner Trl and is fairly open. Even mix of JP and RP. As you move to west of stand it is dominated by jack pine with Rp and some oak mixed in. Poor quality for all species. |
| 18 | 4199 - Other Mixed Upland Deciduous | High Density Pole | 90.7 | 83 | 81-110 | Mixed stand. Oak and aspen are about the same amount of coverage throughout stand. Oak is uniform, aspen is in clones. Stand was once trenched and planted, but most of the underplanted pine has failed. Shore to shore horse trail passes through the stand. |
| 19 | 4131 - Aspen, Oak | High Density Pole | 14.9 | 42 | | PVCD/PARVHA. Per old OI, stand was underplanted to red pine in 1961. Edge of stand is planted to Jack Pine as you move west. Aspen oak stand is about 50 BA oak. Some pockets heavily consisting of oak. Over aspen has greater coverage. Great oak regen in planted jack pine areas. |
| 20 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 9.7 | 100 | 81-110 | PVCD/PARVHA. Oak with jack pine, maple and aspen. Fairly open understory decent oak regen. Quality of stems poor. Not sure why it wasn't treated with adjacent stands unless. |
| 21 | 4122 - Oak, Pine | High Density Pole | 8.6 | 87 | 1-50 | PVCD/PARVHA. Narrow stand running along side of a slope. Stand was underplanted to RP. Slopes were not planted. |
| 22 | 4119 - Mixed Northern Hardwoods | High Density Pole | 15.8 | 38 | 1-50 | PARVVB. This stand is a multipart polygon. Originally was a stand with a large oak overstory. Over the years it seems to have dropped out of the picture. Now it is mostly red maple and aspen. Seems to be growing well, still some oak in the stand, very few larger stems, most is same size as the red maple and other species. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|-------------------------|-------|--------------|-------------|---|
| 23 | 4310 - Pine, Oak Mix | High Density Sapling | 9.1 | 17 | | PARVVB. I am pretty sure this is a plantation, but the rows are extremely difficult to distinguish due to the very dense regen. I was not able to find any record on it. Oak regen is excellent and keeping right up with everything else. Stand was cut 1995-1997. Jack pine is doing well, again very dense and high stem density. Seems to be growing very well. |
| 24 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Pole | 8.0 | 59 | | PVCD/PARVHA. Jack pine plantation with log sized oak. Approx 30 ba of stand is Oak. |
| 25 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 21.3 | 12 | | PVCD/PARVHA. planted to 2-0 JP in 5/03 under FTP C72-402. Stand is growing fairly well. has some nice oak and cherry regen. |
| 26 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 93.3 | 89 | 111-140 | PVCD/PARVHA. This is a mixed stand. Originally was broken out as multiple stands. After field verification, stands were lumped and will all be treated the same. It appears stand was trenched and planted at some point to JP. Fire seems to have frequented the area. Hodge podge stand with pockets of aspen, oak white pine and jack pine. Other areas mixed deciduous and conifer. Eastern edge goes back to aspen type. Northern edge is more oak dominated. JP densities vary through stand. |
| 27 | 42110 - Planted Red Pine | High Density Log | 49.2 | 43 | 111-140 | PVCD. RP plantation with no recent evidence of any type of treatment. Not sure of planting orientation, difficult to determine. Trench furrows are present but not very consistent. Quality is not great. more of a JP site than a RP site. |
| 28 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 31.7 | 51 | 111-140 | PVCD/PARVHA. Planted red pine. Was underplanted in 1961. Scattered log sized oak throughout. Doesn't appear to have been thinned yet. Some illegal firewood cutting. Rows are difficult to determine. Where heavy clumps of oak are found, there is no RP planted. |
| 29 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 41.4 | 8 | | PVCD/PARVHA. Planted jack pine with fair to good advanced oak regen. Oak and jp are growing pretty evenly. some areas oak is overlapping JP. |
| 30 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 108.2 | 47 | 111-140 | PARVVB. Originally an oak stand that was underplanted with red pine. Two salvage sales were set up, one in 1996, one in 1998 to remove dead oak from the stand. Stand is primarily now red pine with some oak maple and aspen mixed throughout. |
| 31 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 11.0 | 12 | | PVCD. 2003: Stand was forrow seeded to jack pine in 2000 FTP #C72-402. Seeding failed and stand was planted to 2-0 JP in May 2003 under C72-402. Stand seems to be growing well, nice mixed stand at this point. |
| 32 | 42110 - Planted Red Pine | High Density Log | 78.5 | 46 | 111-140 | PARVVB. RP plantation that doesn't appear to have been treated. Rows are difficult to determine. Quality is fair. |
| 34 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 21.1 | 19 | | PARVVB. Stand was planted in 1996. I am assuming with 2-0 stock. Seems to have good survival and growth. Nice oak regen mixed in with it. |



| Stand | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|-------|--|----------------------|-------|-----------|----------|--|
| 35 | 4199 - Other Mixed Upland Deciduous | Low Density Sapling | 8.8 | 6 | | PARVVB. Final harvest 2007 Metal Wheels Oak TS_720350501. Stand is slowly regenerating, some of the oak has passed the browse line. Heavy browse could be the result of cutting such a small stand. |
| 36 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 15.9 | 48 | 51-80 | PVCD/PARVVB. An old oak stand that was underplanted to red pine in the mid 1960's. Red pine is doing well. Decent quality. Starting to prune itself. Still seems to be growing well at this point. |
| 37 | 4139 - Aspen, Mixed Deciduous | Medium Density | 10.7 | 17 | | PARVVB. Previous inventory says that it was scheduled to be planted if natural regen failed. From the aerial it appears as if natural regen is adequate. I will try and get out there and check it out to verify. |
| 38 | 4139 - Aspen, Mixed Deciduous | High Density Sapling | 19.1 | 17 | | PARVVB. Narrow band of regeneratiing trees. Aspen, oak, RM, few log sized trees. Red pine was left from previous harvest in 1996. |
| 40 | 42250 - Pine, Oak | High Density Sapling | 14.1 | 17 | | PARVVB. Stand cut in 1996 South Branch Jack (720379501) Dog hair thick oak regen. Has jack pine coming in underneath. All seems to be growing very well. |
| 41 | 42110 - Planted Red Pine | High Density Log | 25.9 | 54 | 111-140 | PARVVB. Nice quality red pine. Stand was third row thinned in 1997. Stand responded well but is starting to slow down in growth. Understory is fairly dense in spots. |
| 42 | 4199 - Other Mixed Upland Deciduous | Medium Density | 75.3 | 6 | | PARVVB. "Metal Wheels Oak" TS_720350501. Stand has regenerated fairly well. Should be a fully stocked stand. Remaining oak is doing alright. |
| 43 | 4191 - Mixed Upland Deciduous with Conifer | High Density Sapling | 19.7 | 10 | | PVCD/PARVVB. Stand was cut in 2003 to manage for oak. Regen is excellent. Stand is extremely thick and difficult to walk through. |
| 44 | 42260 - Natural Pine, Mixed Deciduous | High Density Sapling | 27.4 | 23 | | PVCD/PARVVB. Stand was cut in 1990. All is natural regen in the stand. Seems to be doing fairly well. Would consider stand fully stocked. |
| 46 | 42120 - Planted Jack Pine | High Density Pole | 42.8 | 49 | 81-110 | PVCD. Jack pine is starting to develop areas of mortality. Each plot that I took had at least 1 or 2 dead trees in it. Most trees are 4-5 sticks tall, not very large diameter, but merchantable. Growth rings are extremely tight, its time to take it. |
| 47 | 42121 - Planted Jack Pine, Mixed Deciduous | Low Density Sapling | 37.7 | 6 | | PVCD/PARVVB. Harvested under contract #720230501, FTP#C72-610 to plant to Jack Pine. Regen survey was done this year. Stand seems to be doing well, decent jack pine survival. |
| 48 | 42290 - Natural Mixed Pine | High Density Pole | 22.8 | 37 | 51-80 | PARVVB. Nice mixed pine stand. Most is just entering pole class. Oak is poor quality. There is a little bit of a low piece of soil toward the northern part of the stand. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|---|-------------------------|-------|--------------|-------------|--|
| 49 | 4310 - Pine, Oak Mix | High Density Pole | 7.6 | 61 | 81-110 | PARVVB. Lots of multi stemmed red maple which ran up the BA measurements. Quality is decent. most is all in pole class. Some larger red and white pine mixed throughout. Understory is mixed but fairly sparse. |
| 50 | 4130 - Aspen | High Density Pole | 5.0 | 46 | 51-80 | PARVVB. Small acreage stand. Aspen is good quality, thats why I split it out. Understory is pretty sparse. |
| 51 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 76.3 | 89 | 1-50 | PVCD/PARVVB. Stand had a small patch (6 Ac.) salvaged in 2003 from tornado damage. Included in this stand just because of how variable the rest of the stand is. Has some patches of dense aspen mixed throughout. Just an all around mixed stand. Oak and aspen is starting to decline in some areas. |
| 52 | 42110 - Planted Red Pine | Low Density Log | 15.3 | 77 | 1-50 | PARVVB. This is residual BA left from a harvest in the stand to the north for visual along the road. It seems to be doing alright for such low basal area out in the open. Not much has blown down at this point. |
| 53 | 42110 - Planted Red Pine | High Density Pole | 71.1 | 61 | 81-110 | PVCD. Tornado damage June 2012 salvage cut 7 acres (retention islands left). Sale thinned in 08 TS#72-033-05-01 "South Branch Red" THIRD ROW THIN IN 1997. Nice quality Red Pine. |
| 54 | 42120 - Planted Jack Pine | High Density Sapling | 40.0 | 16 | | PVCD. Young jack pine plantation. All is growing well, good survival from planting and lots of natural regen filling in. Final harvested and planted in 1997. Heavy natural regen toward center of stand, mainly where skid trails and landings seemed to be located. |
| 55 | 42260 - Natural Pine, Mixed Deciduous | High Density Pole | 51.1 | 46 | 51-80 | PARVVB. Potential Legacy trees in Red Pine. Very nice mixed stand. All species seem to be doing well. Size of RP is variable but there are some very large diameter mixed throughout stand. Understory is very sparse. I covered most of the stand except for the very eastern leg. |
| 56 | 4139 - Aspen, Mixed Deciduous | High Density Pole | 20.3 | 46 | 51-80 | PARVBB/PARVCO. Fair quality aspen stand. Stand is just now entering pole sized. Understory is pretty sparse, not a lot coming in underneath. |
| 57 | 4131 - Aspen, Oak | High Density Pole | 9.4 | 46 | 51-80 | PARVVB. Stand has lower soils than adjacent but I would still call it upland. Decent quality aspen. Understory is doing well. |
| 58 | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole | 17.9 | 34 | 1-50 | pvcd/parvvb. Very mixed stand. Extremely dense. Seems to be growing well. Saw lots of wildlife in stand, lots of young fawns. |
| 59 | 42110 - Planted Red Pine | High Density Log | 17.7 | 68 | 111-140 | PARVVB. Decent quality red pine, very tall but not huge diameter. Dense red maple understory. Responded well to thinning. Was thinned in 1997. Some potential Legacy sized red pine mixed within stand. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|--|----------------------|-------|--------------|-------------|--|
| 60 | 4191 - Mixed Upland Deciduous with Conifer | High Density Sapling | 66.4 | 4 | | PVCD/PARVVB. Cut in 2009, planted in 2011 FTP C72-610. Regen check was done this year. Stand seems to have good survival from initial inventory. Unable to code as a plantation. Regen check will tell the tale more completely. |
| 61 | 42290 - Natural Mixed Pine | High Density Log | 15.3 | 128 | 81-110 | PARVHA/PARVVB. Interesting stand. Some very large diameter pine throughout stand. Understory is mostly pole sized. Stand seems to be growing well. Definitely has legacy tree potential. |
| 62 | 4132 - Aspen, Jack Pine | High Density Pole | 225.9 | 48 | 51-80 | PARVVB. Large acreage stand. Has varying quality aspen throughout. Stand has some pot hole depressions in places. Jack pine is pretty well distributed throughout stand. Ground is wet in spots, but high and dry in others. Stand is operable, even during wet seasons I think it would be easily operable. Cored aspen to check age and quality, it is solid to the center in several spots through stand. Thayer Creek wetland borders south side of the stand. |
| 63 | 42120 - Planted Jack Pine | High Density Pole | 44.3 | 47 | | PVCD/PARVVB. Planted jack pine, stand continues to the east into compartment 300. Mature jack pine with some large oak mixed in. |
| 64 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Pole | 35.1 | 44 | 51-80 | PARVVB. Looks like this was underplanted in the mid 1960's. Quality is decent throughout stand. Very dense stand. Red pine still has good growth on them. Has not done much self pruning yet. Oak is variable quality. Lots of stems just approaching merchantable size at this point. |
| 65 | 6128 - Lowland Coniferous, Mixed Deciduous | High Density Pole | 24.4 | 31 | | Borderline lowland/upland stand. In wet years it would be wet. Dry years, it would be pretty dry. Very dense stand. Has a fair amount of jack pine. Aspen is fair quality. |
| 66 | 4191 - Mixed Upland Deciduous with Conifer | Medium Density | 17.3 | 4 | | PARVVB. Decent oak, pine and aspen regeneration. Pretty dense stand. Tough walking in some spots. |
| 67 | 4136 - Aspen, Mixed Conifer | High Density Pole | 14.4 | 54 | | PARVVB. Poor quality aspen stand. Some of it is starting to fall down. Quality varies throughout stand, but all is pretty low quality. South branch road passes through stand. |
| 68 | 4199 - Other Mixed Upland Deciduous | Low Density Sapling | 4.2 | 7 | | PARVVB. Harvested under contract #720230501, FTP#C72-610 Jack Pine planted in 2009. Seems to be growing well. Have lost some to mortality. Lots of other species filling in as well so it will be a mixed stand. Regen survey should have been done this year. |
| 71 | 4191 - Mixed Upland Deciduous with Conifer | Medium Density | 27.4 | 26 | | PVCD/PARVHA. Nice mixed stand. Oak is growing well and will be a significant stand component. |
| 72 | 4134 - Aspen, Spruce/Fir | Medium Density Pole | 37.7 | 45 | | Tough to get an age on this because its very poor quality. Some of it is starting to fall down. It is barely merchantable. |



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|---|-------------------------|-------|--------------|-------------|---|
| 73 | 4133 - Aspen, Mixed Pine | High Density Pole | 43.7 | 44 | 141-170 | PARVVB. There is a road into this stand, but it is very overgrown. i am guessing it was from previous sale access. Aspen is variable in quality. Declining in some spots, doing well in others. Some very large legacy sized red and white pine scattered throughout stand. NW part of stand has a nice grouping of natural red pine. As you approach thayer creek the stand becomes less dense and eventually fades into some grassy openings. |
| 75 | 4126 - White, Black, N. Pin Oak | High Density Sapling | 33.7 | 10 | | Stand has some wet pockets, I am sure it is very wet during a year with considerable rainfall. Excellent oak regeneration, it is doign well despite some browse. A few residual large oak trees left from harvest. All seems to be doing well. I would consider this a fully stocked oak stand if all this regen makes it to maturity. |
| 76 | 42110 - Planted Red Pine | Medium Density Log | 10.4 | 68 | 51-80 | PVCD/PARVHA. High quality red pine stand. Good oak regen in the understory. Stand is healthy and has responded well to thinning in the past. Thinned in 1992. Could hold another 10 pretty easily. |
| 77 | 42121 - Planted Jack Pine, Mixed Deciduous | High Density Sapling | 18.4 | 13 | | PVCD/PARVHA. Stand was furrow seeded in 2000. Has filled in very well. Oak is hanging in with the jack pine and will likely be a signficiant component of the canopy for the stand. Small aspen clone on east end of stand. |
| 78 | 42221 - Natural Jack Pine, Mixed Deciduous | High Density Sapling | 13.9 | 17 | | PVCD/PARVHA. Stand was created by a wildfire in 1996. Natural regen is decent. Stand seems to be growing well. |
| 79 | 42110 - Planted Red Pine | High Density Pole | 68.7 | 42 | 51-80 | PVCD/PARVHA. Decent quality red pine. Did not make it to the southern most part of the stand, it appears to be less dense according to imagery. Northern most part of the stand has lower quality stems than the rest of the stand. Seems to be growing well. Responded well to 3rd row thin. Thinned in 1997. |
| 80 | 4123 - Red Oak | High Density Log | 84.9 | 104 | 51-80 | PARVHA/PARVVB. Thinned in 1997. Has decent oak regeneration in the understory. Overstory is very nice quality but getting BIG. Growth has definitely slowed in the oak, but is still very healthy. Legacy sized oak? |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|----------------------------|-------|--------------|---------------------------------|---|
| 10 | 11 - Low Intensity Urban | 10.5 | Unspecified | Unspecified | |
| 33 | 710 - Sand, Soil | 32.5 | Plantation | Red Pine | |
| 39 | 710 - Sand, Soil | 72.0 | Plantation | Red Pine | |
| 45 | 710 - Sand, Soil | 52.2 | Plantation | Red Pine | Stand was final harvested 2010 South Branch RPP 72-027-08-01. Stand has been trenched and will be planted. to Red Pine. FTP C72-646 was submitted for planting RP. Trencher was sitting on this site when I was inventorying the stand. |
| 69 | 6229 - Mixed lowland shrub | 33.7 | Unspecified | Unspecified | |
| 70 | 50 - Water | 22.7 | No | Unspecified | Thayer Creek |
| 74 | 6225 - Bog | 5.1 | No | Unspecified | |