



**TRAVERSE CITY FOREST MANAGEMENT UNIT  
COMPARTMENT REVIEW PRESENTATION**

**COMPARTMENT # 147 ENTRY YEAR: 2014**

**Compartment Acreage: 1929      County: Kalkaska**

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**Stand Examiner:** Steve Crigier

**Legal Description:** T25N, R6W Sec: 25, 26, 27

**Management Goals:** This compartment is dominated by 40 year old aspen and oak stands. The majority of this compartment was harvested in the early 70's as wildlife research clearcuts. The aspen is now merchantable so attempting to develop some age class diversity in the aspen cover type is a top priority. The Big Cannon Creek provides high quality habitat for many natural communities. All of the timber harvest activities will be done in a way as to enhance and preserve that habitat. There are also many ORV routes and trails that need to be protected while trucking and harvesting timber.

**Soil and Topography:** The upland soils are mostly Rubicon and Graycalm-Klacking sandy-loam. Some of the nicer clones of bigtooth aspen occur on the Graycalm-Klacking sandy-loams. The lowlands are mostly Ausable-Bowstring Muck. The terrain is mostly flat with some slightly rolling hills.

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

The general area is dominated by State Forest Land. Compartment is a part of the Camp Grayling Lease Land. Forestry and oil and gas development are the primary land uses in the area.

**Unique, Natural Features (include only non-site specific and non-sensitive information):**

The Big Cannon creek runs through the compartment which is a Natural Rivers tributary. The creek corridor provides habitat for a few special concern species. Wood turtles have been found within the compartment and Red shoulder hawks have been seen in lands adjacent to the compartment.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** There are some prehistoric camp sites and woodland mounts located within the compartment.

**Special Management Designations or Considerations:** The Big Cannon Creek is a Natural River tributary. Appropriate buffers will need to be applied to the adjacent treatments. The compartment is also military leased land.

**Watershed and Fisheries Considerations:** Big Cannon Creek flows through Compartment 147. Big Cannon Creek is a Designated Trout Stream in the Manistee River watershed and hosts naturally reproducing populations of brook, brown, and rainbow trout. The Manistee River is a State-designated Natural River. Therefore, there is a 100' buffer for Big Cannon Creek, within which no cutting should take place. Also, BMPS should be followed when working in wet areas near the streams.

**Wildlife Habitat Considerations:**

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact sand and gravel. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift

is the Mississippian Michigan Formation that is quarried for gypsum. Gravel pits are located in Section 33 and 36 and potential is considered good. Fletcher Field is located in the eastern portion of the compartment. The field produces from the Ordovician PdC and has produced over 250,000 mcf gas. The compartment is leased associated with the field and with development of the Utica Shale and Collingwood Formation.

**Vehicle Access:** Fletcher road provides paved access to the north end of the compartment. Township Road is the east boundary and Naples gives access to the compartment on the west end. The interior of the compartment has poor dirt roads, many of which are ORV route, that will need a lot of improvements before hauling from the timber sale areas.

**Survey Needs:** None

**Recreational Facilities and Opportunities:** The Big Cannon Creek provides fishing opportunities. There are also several undesignated camping areas along the creeks southern bank. The Miss-Kal ORV trail runs through the compartment which is a single track trail. The North Missauke ORV Route runs on several of the poor dirt roads in the eastern portion of the compartment.

**Fire Protection:**

**Additional Compartment Information:**

**\*\*\*\* Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

- Cover Type by Age Class**
- Cover Type by Management Objective**
- Compartment Volume Summary**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**

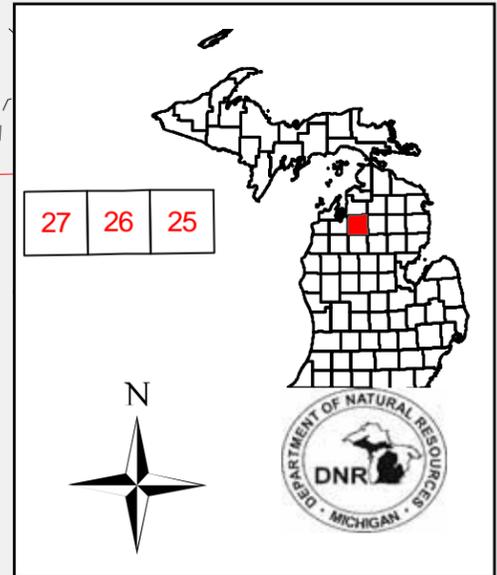
**\*\*\*\* The following information is displayed on the attached compartment maps:**

- Base feature information, stand numbers, cover types**
- Proposed treatments**
- Proposed road access system**
- Suggested potential old growth**

# Cover Type & Treatment Map

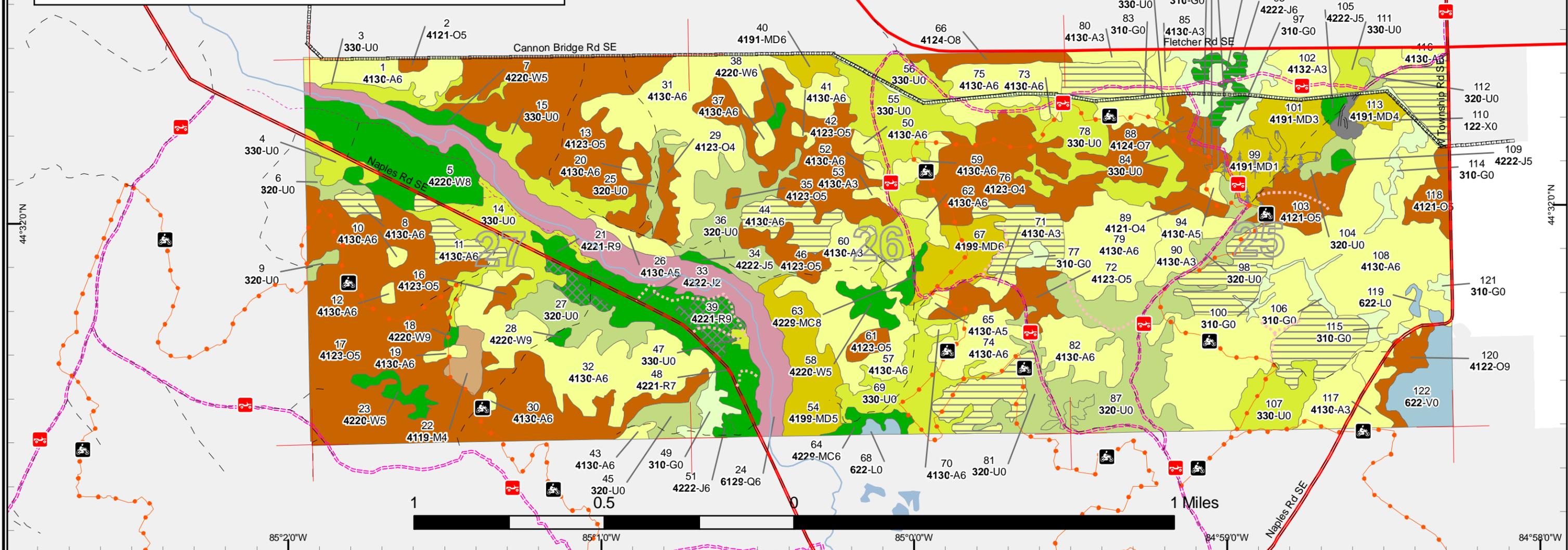
## Legend

- Miris Corners
  - County Paved Roads
  - County Gravel Roads
  - Gravel Roads
  - Poor Dirt Roads
  - Trail (Non-Recreation)
  - Closed Roads
  - Pipeline
  - Motorcycle Trails
  - ORV Routes
  - Motorcycle (DNR Sticker)
  - ORV Route
  - Stream
  - Intermittent Stream
  - Lakes and Rivers
- 
- ### Treatments
- Clearcut (w/Reserves, Patch/Strip)
  - Shelter Wood (w/Reserves)
  - Selection (Group, Single Tree)
  - Planting (tree species)
- ### Forest Stands
- #### Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 422 - Natural Pines
  - 612 - Lowland Coniferous Forest
- ### Non-Forest Stands
- #### Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
  - 622 - Lowland Shrub



Compartment: 147  
 T25N R06W 25, 26, 27  
 County: Kalkaska  
 Unit: Traverse City  
 YOE: 2014  
 Acres: 1,929 GIS Calculated  
 Examiner: Steve Crigier  
 Map Revised: 5/22/2012  
 Map Phase: Pre-Review

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

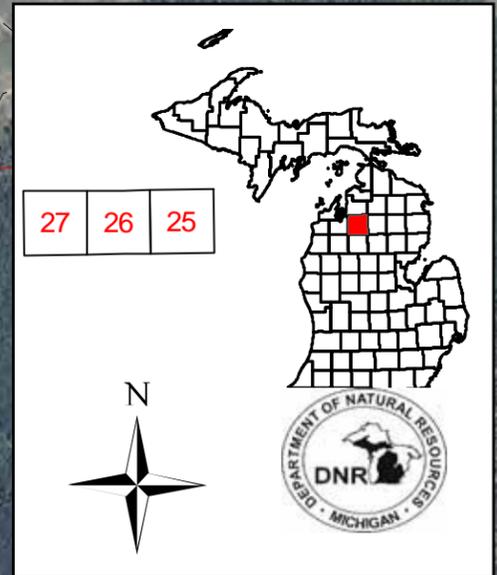


# Stand Boundary Map

## Legend

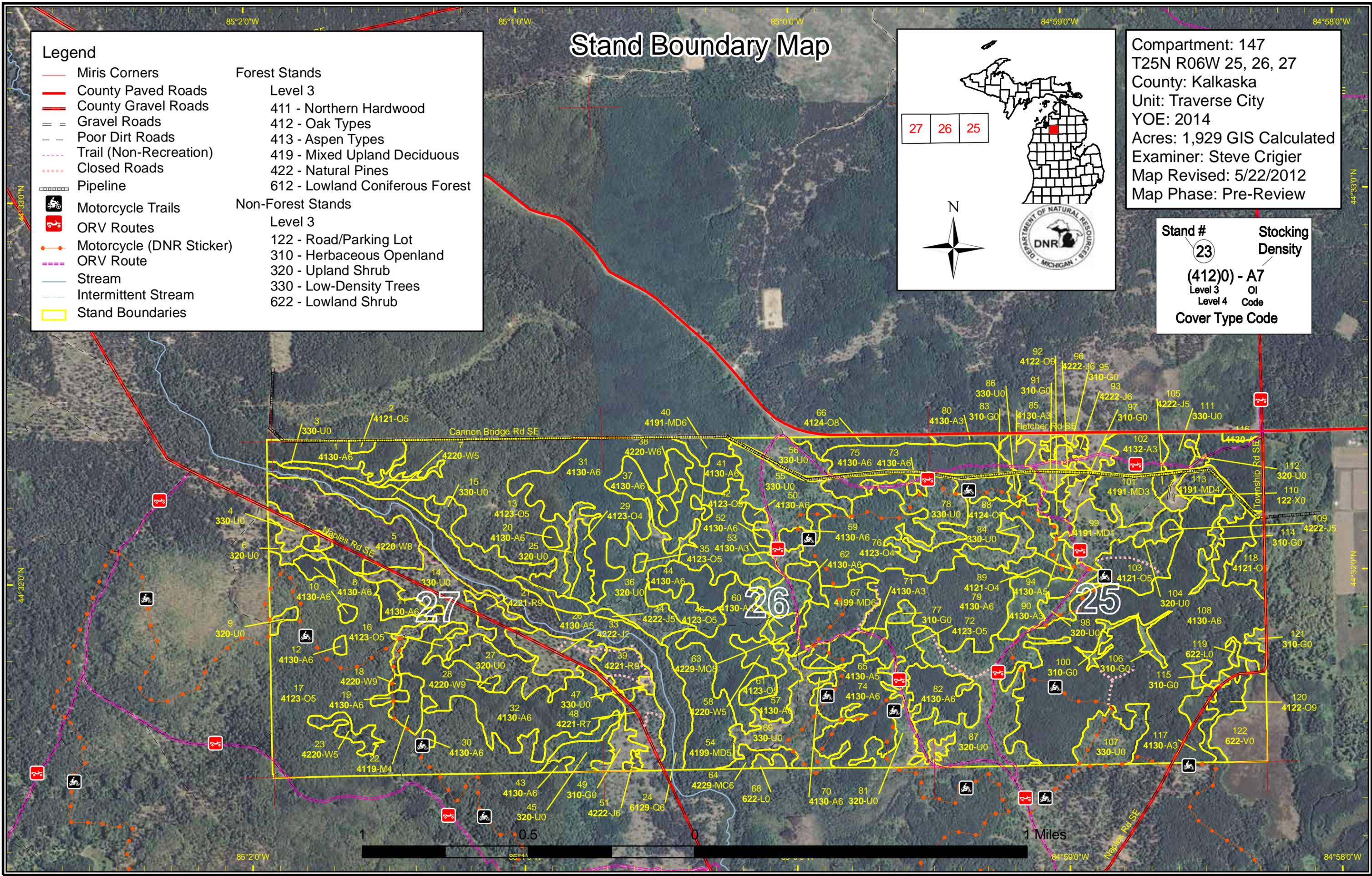
- Miris Corners
- County Paved Roads
- = County Gravel Roads
- = Gravel Roads
- - Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Pipeline
- Motorcycle Trails
- ORV Routes
- Motorcycle (DNR Sticker)
- ORV Route
- Stream
- Intermittent Stream
- Stand Boundaries

- Forest Stands**
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| Stand #                | Stocking Density |
|------------------------|------------------|
| 23                     |                  |
| <b>(412)0 - A7</b>     |                  |
| Level 3                | OI               |
| Level 4                | Code             |
| <b>Cover Type Code</b> |                  |



# Dedicated & Proposed Special Conservation Area Map

## Legend

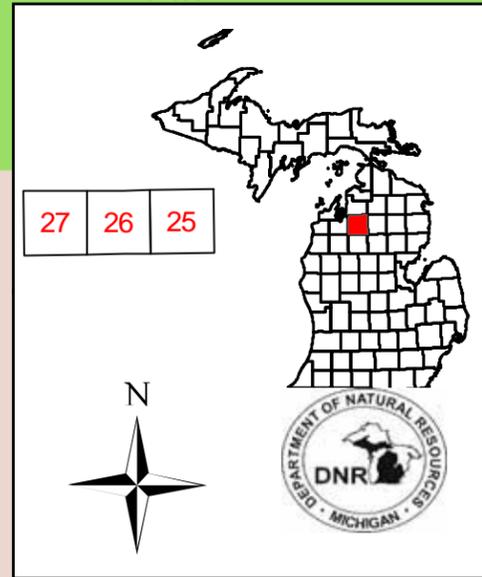
-  Miris Corners
-  Stand Boundaries
- Special Conservation Areas**
-  Natural Rivers Vegetative Buffer
-  Natural Rivers Zoning District
-  Kirtland Warbler Habitat
-  Research, Development, and Military Lands

## Forest Stands

- Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 422 - Natural Pines
  - 612 - Lowland Coniferous Forest

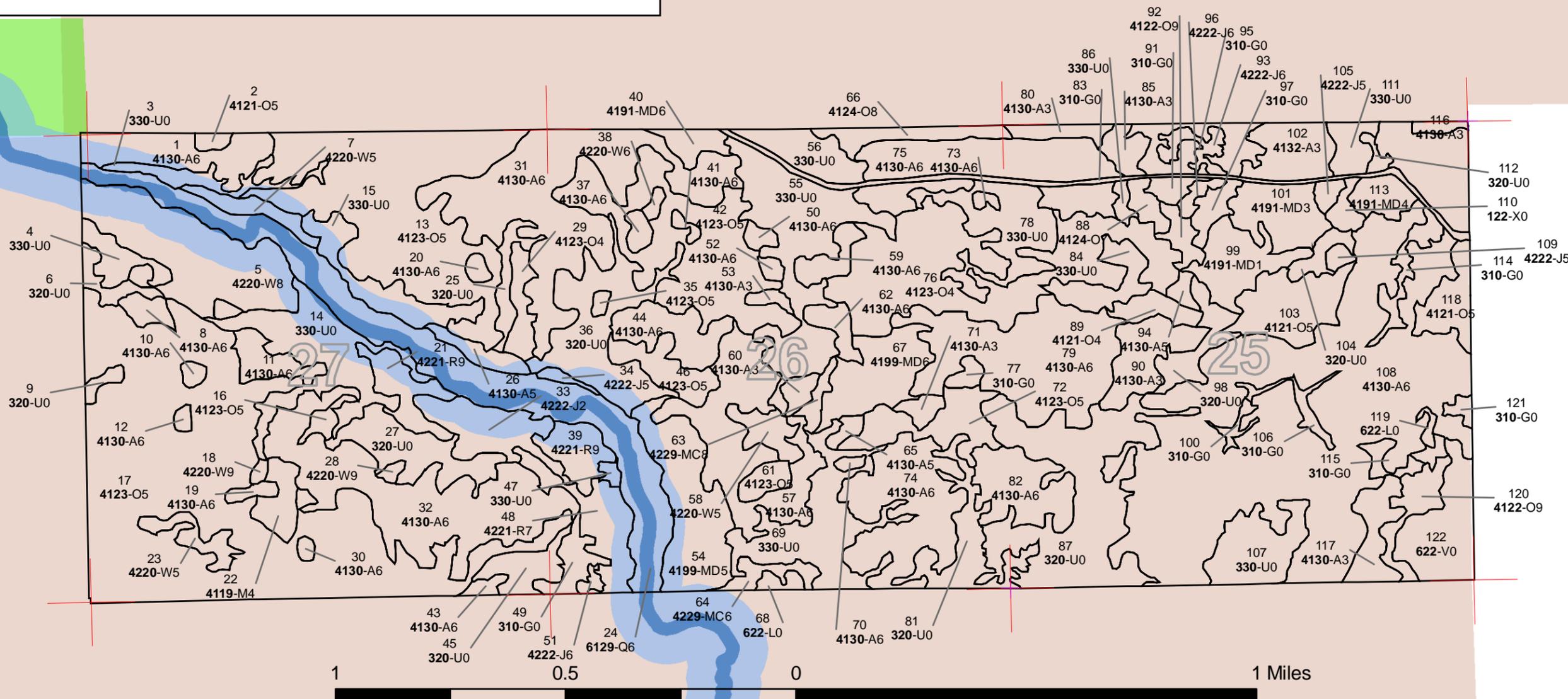
## Non-Forest Stands

- Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees
  - 622 - Lowland Shrub



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 Map Revised: 5/22/2012  
 Map Phase: Pre-Review

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



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



|                        | Age Class  |          |          |            |            |           |          |           |           |          |           |          |          | Total    |             |
|------------------------|------------|----------|----------|------------|------------|-----------|----------|-----------|-----------|----------|-----------|----------|----------|----------|-------------|
|                        | 0-9        | 10-19    | 20-29    | 30-39      | 40-49      | 50-59     | 60-69    | 70-79     | 80-89     | 90-99    | 100-109   | 110-119  | 120 +    |          | Uneven Age  |
| Aspen                  | 59         | 0        | 0        | 23         | 597        | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 678         |
| Bog                    | 20         | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 20          |
| Herbaceous Openland    | 56         | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 56          |
| Jack Pine              | 17         | 0        | 0        | 1          | 2          | 11        | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 31          |
| Low-Density Trees      | 203        | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 203         |
| Lowland Conifers       | 0          | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 71        | 0        | 0        | 0        | 71          |
| Lowland Shrub          | 3          | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 3           |
| Mixed Upland Deciduous | 31         | 0        | 0        | 7          | 57         | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 94          |
| Natural Mixed Pines    | 0          | 0        | 0        | 0          | 0          | 0         | 0        | 5         | 0         | 3        | 0         | 0        | 0        | 0        | 8           |
| Northern Hardwood      | 0          | 0        | 0        | 7          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 7           |
| Oak                    | 0          | 0        | 0        | 449        | 16         | 0         | 0        | 9         | 17        | 0        | 0         | 0        | 0        | 0        | 491         |
| Red Pine               | 0          | 0        | 0        | 0          | 0          | 0         | 0        | 36        | 0         | 0        | 0         | 0        | 0        | 0        | 36          |
| Upland Shrub           | 160        | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 160         |
| Urban                  | 3          | 0        | 0        | 0          | 0          | 0         | 0        | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 3           |
| White Pine             | 0          | 0        | 0        | 0          | 20         | 1         | 1        | 45        | 0         | 0        | 0         | 0        | 0        | 0        | 67          |
| <b>Total</b>           | <b>553</b> | <b>0</b> | <b>0</b> | <b>487</b> | <b>691</b> | <b>12</b> | <b>1</b> | <b>94</b> | <b>17</b> | <b>3</b> | <b>71</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>1929</b> |



## Table 2 – Proposed Treatment Summaries

**Traverse City Mgt. Unit**  
**Year of Entry 2014**

**Compartment 147**  
**Total Compartment Acres: 1929**

### Acres by Treatment Type

|                          |                         |                    |                     |           |
|--------------------------|-------------------------|--------------------|---------------------|-----------|
| Commercial Harvest - 160 | Site Prep - 0           | Tree Planting - 16 | Prescribed Burn - 0 | Other - 0 |
| Habitat Cut - 0          | Opening Maintenance - 0 | Tree Seeding - 0   | Pesticide - 0       |           |

### Cover Type by Harvest Method

|                  | Clearcut | Selection | Seed Tree | Shelterwood | Thinning | Other - Specify | Total Acres |
|------------------|----------|-----------|-----------|-------------|----------|-----------------|-------------|
| <b>Aspen</b>     | 134      | 0         | 0         | 0           | 0        | 0               | 134         |
| <b>Jack Pine</b> | 7        | 0         | 0         | 0           | 0        | 0               | 7           |
| <b>Oak</b>       | 0        | 0         | 0         | 4           | 0        | 0               | 4           |
| <b>Red Pine</b>  | 0        | 15        | 0         | 0           | 0        | 0               | 15          |
| <b>Total</b>     | 141      | 15        | 0         | 4           | 0        | 0               | 160         |

**Table 3 -- Treatments Prescribed  
with No Limiting Factor**



| Stand | Treatment Name | Acres | CoverType    | Size Density      | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status       |
|-------|----------------|-------|--------------|-------------------|-----------|----------|----------------|------------------|----------------------|-----------------------|
| 8     | 61147008-Cut   | 3.8   | 4130 - Aspen | High Density Pole | 43        |          | Harvest        | Clearcut         | 4130 - Aspen         | Cmpt. Review Proposal |

Prescription Clearcut stand. Save the oak if there is any. No other retention necessary, small acreage  
Specs:

Other Sell with stand 11. Use openings for landing areas.  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2013

|    |              |     |              |                   |    |  |         |          |              |                       |
|----|--------------|-----|--------------|-------------------|----|--|---------|----------|--------------|-----------------------|
| 11 | 61147011-Cut | 8.8 | 4130 - Aspen | High Density Pole | 43 |  | Harvest | Clearcut | 4130 - Aspen | Cmpt. Review Proposal |
|----|--------------|-----|--------------|-------------------|----|--|---------|----------|--------------|-----------------------|

Prescription Clearcut stand. Save all of the oak and protect the advanced oak regen. No other retention necessary, small size.  
Specs:

Other Part of the stand is on a decent slope will want to protect from erosion. Keep landing on south side of Naples. There is an archeological hit on the north side in stand 14.  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2013

|    |                    |     |                          |                  |    |         |         |                       |                          |                       |
|----|--------------------|-----|--------------------------|------------------|----|---------|---------|-----------------------|--------------------------|-----------------------|
| 21 | 61147021-Cut_small | 4.9 | 42210 - Natural Red Pine | High Density Log | 70 | 141-170 | Harvest | Single Tree Selection | 42210 - Natural Red Pine | Cmpt. Review Proposal |
|----|--------------------|-----|--------------------------|------------------|----|---------|---------|-----------------------|--------------------------|-----------------------|

Prescription Treat the south half of the stand. Thin stand down to 110-120sqft/ac. Keep some of the larger pine for super canopy trees.  
Specs:

Other Sell with stand 39.  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2013

|    |              |     |                          |                  |    |         |         |                       |                          |                       |
|----|--------------|-----|--------------------------|------------------|----|---------|---------|-----------------------|--------------------------|-----------------------|
| 39 | 61147039-Cut | 9.7 | 42210 - Natural Red Pine | High Density Log | 70 | 141-170 | Harvest | Single Tree Selection | 42210 - Natural Red Pine | Cmpt. Review Proposal |
|----|--------------|-----|--------------------------|------------------|----|---------|---------|-----------------------|--------------------------|-----------------------|

Prescription Lightly thin the Stand down to 110-120sqft/ac. Buffer the Big Cannon Cr. and protect the main trails and camping areas in the stand. Leave some of the large overmature trees for supercanopy.  
Specs:

Other Would recommend going with a cut to length harvest, no skidding of 17' or longer. Stand is the site of the Northmen gathering but looks like they are done using this site.  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2013



| Stand | Treatment Name | Acres | CoverType    | Size Density      | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval              |
|-------|----------------|-------|--------------|-------------------|-----------|----------|----------------|------------------|----------------------|-----------------------|
|       |                |       |              |                   |           |          |                |                  |                      | Status                |
| 44    | 61147044-Cut   | 13.9  | 4130 - Aspen | High Density Pole | 43        |          | Harvest        | Clearcut         | 4130 - Aspen         | Cmpt. Review Proposal |

Prescription Clearcut stand leave any oak and create a few drumming logs per acre. No other retention is necessary, small acreage.

Specs:

Other Comments: Harvest with stand 37. Will have to used the ORV Route for trucking out to Fletcher.

Next Steps:

Proposed Start Date: 10/01/2013

|    |                    |      |              |                   |    |  |         |          |              |                       |
|----|--------------------|------|--------------|-------------------|----|--|---------|----------|--------------|-----------------------|
| 74 | 61147074-Cut_small | 17.9 | 4130 - Aspen | High Density Pole | 43 |  | Harvest | Clearcut | 4130 - Aspen | Cmpt. Review Proposal |
|----|--------------------|------|--------------|-------------------|----|--|---------|----------|--------------|-----------------------|

Prescription Clearcut south 1/2 of the stand. Leave all oak and protect the advanced oak regen. Leave a drumming logs/acre and leave timber/retention along the ORV trail.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

|    |                    |      |              |                   |    |  |         |                        |              |                       |
|----|--------------------|------|--------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|
| 75 | 61147075-Cut_small | 13.5 | 4130 - Aspen | High Density Pole | 43 |  | Harvest | Clearcut with Reserves | 4130 - Aspen | Cmpt. Review Proposal |
|----|--------------------|------|--------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|

Prescription Clearcut the east portion of the stand. Leave some aspen retention along the ORV trail. Leave all oak. Create a dummering log/acre.

Specs:

Other Comments: Sale will have the DTE pipeline running through it. Will want to make them aware of the timber sale.

Next Steps:

Proposed Start Date: 10/01/2013

|    |                    |      |              |                   |    |  |         |          |              |                       |
|----|--------------------|------|--------------|-------------------|----|--|---------|----------|--------------|-----------------------|
| 79 | 61147079-Cut_small | 16.6 | 4130 - Aspen | High Density Pole | 43 |  | Harvest | Clearcut | 4130 - Aspen | Cmpt. Review Proposal |
|----|--------------------|------|--------------|-------------------|----|--|---------|----------|--------------|-----------------------|

Prescription Clearcut the western portion of stand. Leave all the oak and protect the oak regen. Create a drumming log/acre. Also leave a pocket of aspen for retention.

Other Comments: Will have to truck on ORV Route to get to Fletcher.

Next Steps:

Proposed Start Date: 10/01/2013



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| Treatment Name         | Acres | CoverType        | Size Density     | Stand Age | BA Range | Treatment Type | Treatment Method | Cover Type Objective | Approval Status       |
|------------------------|-------|------------------|------------------|-----------|----------|----------------|------------------|----------------------|-----------------------|
| <b>92 61147092-Cut</b> | 4.5   | 4122 - Oak, Pine | High Density Log | 80        | 81-110   | Harvest        | Shelterwood      | 4122 - Oak, Pine     | Cmpt. Review Proposal |

Prescription Shelterwood cut. Cut the aspen and jack pine out. Also remove a few oak to provide for some stump sprouts. Target residual around 30sqft/ac. Protect oak advanced regen.

Other Access might best be off the pipeline. Will want to check with DTE about using the pipeline.

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2013

|                        |     |                           |                   |    |  |         |                        |                           |                       |
|------------------------|-----|---------------------------|-------------------|----|--|---------|------------------------|---------------------------|-----------------------|
| <b>93 61147093-Cut</b> | 4.9 | 42220 - Natural Jack Pine | High Density Pole | 56 |  | Harvest | Clearcut with Reserves | 42220 - Natural Jack Pine | Cmpt. Review Proposal |
|------------------------|-----|---------------------------|-------------------|----|--|---------|------------------------|---------------------------|-----------------------|

Prescription Clearcut stand with the stuff south of the pipeline. Leave a few limby trees/ac for seed. Protect the ORV trail

Specs:

Other Access might be best off pipeline, Check with DTE.

Comments:

Next Plant some JP if natural regen doesn't come in thick enough.

Steps:

Proposed

Start Date: 10/01/2013

|                        |     |                           |                   |    |  |         |                        |              |                       |
|------------------------|-----|---------------------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|
| <b>96 61147096-Cut</b> | 2.3 | 42220 - Natural Jack Pine | High Density Pole | 56 |  | Harvest | Clearcut with Reserves | 4130 - Aspen | Cmpt. Review Proposal |
|------------------------|-----|---------------------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|

Prescription Clearcut stand, and set up with stand to the south. Protect oak regen. Leave a few limby jack pine/acre standing for seed and visual.

Specs:

Other Sell with stand on the north side of the pipeline. Also look into using pipeline for trucking or skidding, that looks to be the best access.

Comments:

Next plant jack pine if natural fails.

Steps:

Proposed

Start Date: 10/01/2013

|                               |      |              |                   |    |  |         |                        |              |                       |
|-------------------------------|------|--------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|
| <b>108 61147108-Cut_small</b> | 14.4 | 4130 - Aspen | High Density Pole | 43 |  | Harvest | Clearcut with Reserves | 4130 - Aspen | Cmpt. Review Proposal |
|-------------------------------|------|--------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|

Prescription Harvest some 20 to 30 acres patches in stand 108 to create some age class diversity. Create a few drumming logs/ac. Leave the oak. Protect the ORV route present. Leave a pocket of aspen for retention.

Specs:

Other  
Comments:

Next

Steps:

Proposed

Start Date: 10/01/2013



| Stand   | Treatment Name             | Acres | CoverType    | Size Density      | Stand Age | BA Range | Treatment Type | Treatment Method       | Cover Type Objective | Approval Status       |
|---|----------------------------|-------|--------------|-------------------|-----------|----------|----------------|------------------------|----------------------|-----------------------|
| 108   | 61147108-Cut_small_1_exp-0 | 21.4  | 4130 - Aspen | High Density Pole | 43        |          | Harvest        | Clearcut with Reserves | 4130 - Aspen         | Cmpt. Review Proposal |
| <p><u>Prescription</u> Treatment is part of a larger stand. Create some 20 to 30 acre clearcuts for age class diversity. Create a few drumming logs. Leave the oak.<br/> <u>Specs:</u> Protect the ORV trails. Leave a pocket of aspen for retention.</p> <p><u>Other</u> Will have to use a part of the ORV Route for hauling.<br/> <u>Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p> |                            |       |              |                   |           |          |                |                        |                      |                       |

|  |                      |      |              |                   |    |  |         |                        |              |                       |
|--|----------------------|------|--------------|-------------------|----|--|---------|------------------------|--------------|-----------------------|
| 108  | 61147108-Cut_small_3 | 21.3 | 4130 - Aspen | High Density Pole | 43 |  | Harvest | Clearcut with Reserves | 4130 - Aspen | Cmpt. Review Proposal |
| <p><u>Prescription</u> Harvest some 20 to 30 acres patches of stand 108 to create some age class diversity. Create drumming some drumming logs/ac. Leave the oak. Protect the ORV trails. Leave a pocket of aspen for retention.</p> <p><u>Other</u> Access will be two track coming off from Naples Rd. Also look to close roads in treatment area made by hunters in the last 10yrs.<br/> <u>Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p> |                      |      |              |                   |    |  |         |                        |              |                       |

|   |                |      |  |                     |   |  |               |            |                           |                       |
|---|----------------|------|--|---------------------|---|--|---------------|------------|---------------------------|-----------------------|
| 99  | 61147099-Plant | 15.6 | 4191 - Mixed Upland Deciduous with Conifer | Low Density Sapling | 7 |  | Tree Planting | Hand Plant | 42120 - Planted Jack Pine | Cmpt. Review Proposal |
| <p><u>Prescription</u> Check site over with TMS 1st and evaluate with no snow. Regen seems to be coming along very slow!<br/> <u>Specs:</u></p> <p><u>Other</u><br/> <u>Comments:</u></p> <p><u>Next Steps:</u> If needed plant site or a portion of with jack pine.</p> <p><u>Proposed Start Date:</u> Unspecified</p> |                |      |  |                     |   |  |               |            |                           |                       |

**Total Treatment  
Acreage Proposed: 173.5**

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



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

#Error

Prescription  
Specs:

Other  
Comment:

Next  
Steps:

Proposed  
Start Date: #Error

Limiting Factor and No  
Treatment Reason

**Total Treatment  
Acreage Proposed: 0**

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

Year of Entry: 2014



| Treatment Name         | Acres | CoverType | Size Density | Stand Age | BA Range | Treatment Type | Treatment Method       | Cover Type Objective | Approval Status                    |
|------------------------|-------|-----------|--------------|-----------|----------|----------------|------------------------|----------------------|------------------------------------|
| 61043_OutOfY<br>OE-Cut | 2.1   |           |              |           |          | Harvest        | Clearcut with Reserves | 4131 - Aspen, Oak    | Cmpt. Review Proposal - Incomplete |

Prescription

Specs: retain some pine and oak for mast and seed production, Follow WLD guidance for CWD creation. Harvest all stems that are not retained.

Other New stand should have mix of oak, pine, aspen and maple.

Comments:

Next

Steps:

Proposed

Start Date: 09/01/2009

|                         |     |  |  |   |  |         |              |                  |                       |
|-------------------------|-----|--|--|---|--|---------|--------------|------------------|-----------------------|
| 61231_OutOfY<br>OE-Thin | 4.6 |  |  | 0 |  | Harvest | Low Thinning | 4122 - Oak, Pine | Cmpt. Review Proposal |
|-------------------------|-----|--|--|---|--|---------|--------------|------------------|-----------------------|

Prescription Within harvest area, remove all aspen. Heavily thin oak and maple to a residual BA of about 50 sf. Leave retention in patches or strips sufficient to meet minimum retention goals.

Other Topography is rather hilly. Combine with treatment in Compartment 133.

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2013

**Total Treatment  
Acreage Proposed: 6.7**

| Stand | Traverse City Mgt. Unit         |                     | 5 – Forested Stands |           |          | Compartment: 147    | General Comments:   |
|-------|---------------------------------|---------------------|---------------------|-----------|----------|---------------------|---|
|       | Level 4 Cover Type              | Size Density        | Acres               | Stand Age | BA Range | Year of Entry: 2014 |   |
| 1     | 4130 - Aspen                    | High Density Pole   | 19.1                | 38        |          |                     | Some areas are heavier to aspen others are an oak and soft maple mix.   |
| 2     | 4121 - Oak, Aspen               | Medium Density Pole | 1.7                 | 38        | 1-50     |                     |   |
| 5     | 42200 - Natural White Pine      | Medium Density Log  | 44.8                | 70        | 1-50     |                     | few campsites along the creek. Stand is real mixed bag. The northwest part of the stand is more of Oak/Pine mix. Looks like it is an old opening filling in. Lots of size classes.                      |
| 7     | 42200 - Natural White Pine      | Medium Density Pole | 6.0                 | 43        | 1-50     |                     | Limby open grown wood. Old railroad grade running through stand.  |
| 8     | 4130 - Aspen                    | High Density Pole   | 3.8                 | 43        |          |                     |   |
| 10    | 4130 - Aspen                    | High Density Pole   | 1.5                 | 38        |          |                     |   |
| 11    | 4130 - Aspen                    | High Density Pole   | 8.8                 | 43        |          |                     | 4-5 stick aspen. Stand is on a slope down to the Creek.   |
| 12    | 4130 - Aspen                    | High Density Pole   | 1.2                 | 43        |          |                     |   |
| 13    | 4123 - Red Oak                  | Medium Density Pole | 85.9                | 38        | 1-50     |                     | A mixed area some areas heavier to aspen, other areas heavier to oak and red maple. Majority seems to be a oak maple mix with clones of bigtooth in areas.  |
| 16    | 4123 - Red Oak                  | Medium Density Pole | 2.7                 | 38        | 1-50     |                     |   |
| 17    | 4123 - Red Oak                  | Medium Density Pole | 179.8               | 38        | 51-80    |                     | Good stocking on the east end of the stand. Lots of advanced regen converting to pole timber in understory. Some areas of M6 and other areas will have some A6 clones in them but mostly and oak stand. |
| 18    | 42200 - Natural White Pine      | High Density Log    | 1.0                 | 55        | 51-80    |                     |   |
| 19    | 4130 - Aspen                    | High Density Pole   | 2.1                 | 43        |          |                     |   |
| 20    | 4130 - Aspen                    | High Density Pole   | 1.7                 | 43        |          |                     | Decent quality  |
| 21    | 42210 - Natural Red Pine        | High Density Log    | 10.4                | 70        | 141-170  |                     | Jack pine was removed in 2005. North end of naples is more of an R7 or R8. Natural red pine stand with lots of size classes.  |
| 22    | 4119 - Mixed Northern Hardwoods | Low Density Pole    | 7.4                 | 38        | 1-50     |                     | Stand is regenerating to more of a soft maple and beech stand.  |



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## Traverse City Mgt. Unit

## 5 – Forested Stands

Compartment: 147  
Year of Entry: 2014

| Stand | Level 4 Cover Type                         | Size Density        | Acres | Stand Age | BA Range | General Comments:   |
|-------|--|---------------------|-------|-----------|----------|---|
| 23    | 42200 - Natural White Pine                 | Medium Density Pole | 6.1   | 43        | 1-50     |   |
| 24    | 6129 - Mixed Coniferous Lowland Forest     | High Density Pole   | 70.5  | 101       | 1-50     | A lowland cedar and spruce stand next to the creek. Stand has scattered red and white pine logs on the transition ground in the overstory. Stand has Big Cannon Creek running through it. Stand is a mixed Natural Pine stand that transitions down to a lowland conifer stand next to the creek. |
| 26    | 4130 - Aspen                               | Medium Density Pole | 5.1   | 43        |          | Former wildlife research clearcut. Not the greatest quality aspen. Long term might try to let the white pine take over. Stand is fairly close to the creek.   |
| 28    | 42200 - Natural White Pine                 | High Density Log    | 1.1   | 65        | 81-110   |   |
| 29    | 4123 - Red Oak                             | Low Density Pole    | 6.8   | 38        | 1-50     | Old wildlife research clearcut. Stand is still transitioning from a sapling to a pole stand.  |
| 30    | 4130 - Aspen                               | High Density Pole   | 1.1   | 43        |          | 5 stick bigtooth, nice quality.   |
| 31    | 4130 - Aspen                               | High Density Pole   | 69.2  | 43        |          | Former wildlife research area.  |
| 32    | 4130 - Aspen                               | High Density Pole   | 60.5  | 43        |          | Nice quality. 5 Stick aspen but is only about 6" in diameter. Hold stand for 10 yrs.  |
| 33    | 42220 - Natural Jack Pine                  | Medium Density      | 16.9  | 7         |          | Stand had the Jack pine removed out of it in 2005 'Big Cannon Jack'. Jack pine seedling are coming in ok. May want to check with TMS about plugging a few more in there.  |
| 34    | 42220 - Natural Jack Pine                  | Medium Density Pole | 1.5   | 38        |          | Limby open grown timber, poor quality. Stand is part of a U0 filling in.  |
| 35    | 4123 - Red Oak                             | Medium Density Pole | 1.1   | 38        | 1-50     |   |
| 37    | 4130 - Aspen                               | High Density Pole   | 2.5   | 43        |          | Former wildlife research clearcut. Might cut to break up the age class. Stand has decent diameters and height for its age.  |
| 38    | 42200 - Natural White Pine                 | High Density Pole   | 1.3   | 43        | 51-80    |   |
| 39    | 42210 - Natural Red Pine                   | High Density Log    | 9.7   | 70        | 141-170  | Nice looking natural pine stand. Stand is the location of where the Northmen have their annual event in the fall. There is a drinking well and lots of campsites. Stocking is variable due to all the trails and camps.   |
| 40    | 4191 - Mixed Upland Deciduous with Conifer | High Density Pole   | 5.3   | 43        | 51-80    | Stand is a mixed bag of everything.   |

| S<br>t<br>a<br>n<br>d | Traverse City Mgt. Unit                |                         | 5 – Forested Stands |              |             | Compartment: 147    | General<br>Comments:  |
|-----------------------|--|-------------------------|---------------------|--------------|-------------|---------------------|---|
|                       | Level 4<br>Cover Type                  | Size<br>Density         | Acres               | Stand<br>Age | BA<br>Range | Year of Entry: 2014 |   |
| 41                    | 4130 - Aspen                           | High Density<br>Pole    | 1.3                 | 43           |             |                     |   |
| 42                    | 4123 - Red Oak                         | Medium<br>Density Pole  | 52.0                | 38           | 1-50        |                     | Old wildlife research clearcut.   |
| 43                    | 4130 - Aspen                           | High Density<br>Pole    | 1.8                 | 43           |             |                     | Old wildlife research clearcut. Hold stand for another 10 yrs. Diameters aren't quite there yet, good height development. Stand continues south of the compartment line. Will want to probably treat with the compartment to the south in 2019 if that stand is prescribed. |
| 44                    | 4130 - Aspen                           | High Density<br>Pole    | 13.9                | 43           |             |                     | Decent height and diameters. Stand is a little immature but a clearcut will help with the age class diversity in the compartment.   |
| 46                    | 4123 - Red Oak                         | Medium<br>Density Pole  | 10.3                | 38           | 1-50        |                     |   |
| 48                    | 42210 - Natural Red<br>Pine            | Low Density<br>Log      | 16.0                | 70           | 1-50        |                     | Stand had the jack pine removed from stand in 2005. 'Big Cannon JP'   |
| 50                    | 4130 - Aspen                           | High Density<br>Pole    | 2.1                 | 43           |             |                     | Former wildlife research clearcut.  |
| 51                    | 42220 - Natural Jack<br>Pine           | High Density<br>Pole    | 1.3                 | 53           |             |                     | Stand looks like a retention area from the adjacent. 'Big Cannon Jack' Sale. Limby open grown timber.   |
| 52                    | 4130 - Aspen                           | High Density<br>Pole    | 1.5                 | 43           |             |                     |   |
| 53                    | 4130 - Aspen                           | High Density<br>Sapling | 1.9                 | 8            |             |                     | Cut in 06, decent regen. 'Fletcher Mix'   |
| 54                    | 4199 - Other Mixed<br>Upland Deciduous | Medium<br>Density Pole  | 31.2                | 42           | 1-50        |                     | Pockets of A6 but is a mix of red maple and red oak.  |
| 57                    | 4130 - Aspen                           | High Density<br>Pole    | 38.9                | 43           |             |                     | Stand is on a bit of a ridge. Nice Bigtooth on west and north end of stand. More quaking and white pine mix in the southeast part of stand.   |
| 58                    | 42200 - Natural White<br>Pine          | Medium<br>Density Pole  | 6.6                 | 43           | 1-50        |                     | Limby and crooked wood. Probably hold for another 20 years or so.   |
| 59                    | 4130 - Aspen                           | High Density<br>Pole    | 5.9                 | 43           |             |                     | Old Wildlife research clearcut.   |
| 60                    | 4130 - Aspen                           | High Density<br>Sapling | 3.0                 | 7            |             |                     | Regenerated nicely.   |
| 61                    | 4123 - Red Oak                         | Medium<br>Density Pole  | 4.4                 | 38           | 1-50        |                     | Stocking is variable. Clumpy timber.  |



| Stand | Traverse City Mgt. Unit             |                      | 5 – Forested Stands |           |          | Compartment: 147    | General Comments:   |
|-------|-------------------------------------|----------------------|---------------------|-----------|----------|---------------------|---|
|       | Level 4 Cover Type                  | Size Density         | Acres               | Stand Age | BA Range | Year of Entry: 2014 |   |
| 62    | 4130 - Aspen                        | High Density Pole    | 4.9                 | 43        |          |                     |   |
| 63    | 42290 - Natural Mixed Pine          | Medium Density Log   | 3.0                 | 91        |          |                     | West portion of this stand had the aspen cut out of the understory in 05 with 'Fletcher Mix'.   |
| 64    | 42290 - Natural Mixed Pine          | High Density Pole    | 4.7                 | 72        | 51-80    |                     | Transition ground down to the bog. Old railroad grade running through the stand.  |
| 65    | 4130 - Aspen                        | Medium Density Pole  | 2.1                 | 43        |          |                     |   |
| 66    | 4124 - Red with White Oak           | Medium Density Log   | 8.4                 | 80        | 1-50     |                     | Stand had the red maple and aspen removed out of it in 2006. Some decent oak regeneration eastern part of the stand has heavy aspen and red maple regen underneath the oak. |
| 67    | 4199 - Other Mixed Upland Deciduous | High Density Pole    | 20.1                | 43        | 51-80    |                     | Real mixed stand, even mix of red oak, red maple and aspen?   |
| 70    | 4130 - Aspen                        | High Density Pole    | 1.1                 | 43        |          |                     |   |
| 71    | 4130 - Aspen                        | High Density Sapling | 3.0                 | 7         |          |                     | Nice regeneration about 15' tall.   |
| 72    | 4123 - Red Oak                      | Medium Density Pole  | 16.2                | 43        | 1-50     |                     | Clumpy timber. Old wildlife research clearcut.  |
| 73    | 4130 - Aspen                        | High Density Pole    | 1.1                 | 43        |          |                     | Nice quality bigtooth.  |
| 74    | 4130 - Aspen                        | High Density Pole    | 37.8                | 43        |          |                     | Nice quality bigtooth. Old wildlife research clearcut. ORV trail runs through stand.  |
| 75    | 4130 - Aspen                        | High Density Pole    | 41.7                | 43        |          |                     | Former wildlife research clearcut.  |
| 76    | 4123 - Red Oak                      | Low Density Pole     | 69.8                | 38        | 1-50     |                     | Old wildlife research clearcut. Stand is still converting from a sapling to a pole stand.   |
| 79    | 4130 - Aspen                        | High Density Pole    | 52.2                | 43        |          |                     | Former wildlife research clearcut. West end of the stand is of good quality 4 + stick timber. Some red oak present at the north end of the stand.                           |
| 80    | 4130 - Aspen                        | High Density Sapling | 4.3                 | 8         |          |                     | Stand was cut in 06. regeneration is doing well 15' tall or so.   |
| 82    | 4130 - Aspen                        | High Density Pole    | 19.1                | 43        |          |                     | Good quality aspen 4-5 sticks tall. East end of stand has more red oak mixed in.  |
| 85    | 4130 - Aspen                        | High Density Sapling | 5.1                 | 7         |          |                     | Stand was originaly a jack pine stand mixed with some aspen that has regenerated after the 'Fletcher Mix' sale to all aspen.  |



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## Traverse City Mgt. Unit

## 5 – Forested Stands

Compartment: 147  
Year of Entry: 2014

|     | Level 4<br>Cover Type                         | Size<br>Density         | Acres | Stand<br>Age | BA<br>Range | General<br>Comments:   |
|-----|---|-------------------------|-------|--------------|-------------|--|
| 88  | 4124 - Red with White<br>Oak                  | Low Density<br>Log      | 3.9   | 80           | 1-50        | Stand had all the aspen, jack pine and redmaple removed out of it in 2005 'Fletcher Mix' sale. Scattered oak logs in the overstory.  |
| 89  | 4121 - Oak, Aspen                             | Low Density<br>Pole     | 5.7   | 38           | 1-50        | Stand is converting from sapling to pole timber.   |
| 90  | 4130 - Aspen                                  | High Density<br>Sapling | 14.6  | 6            |             | Nice regeneration.   |
| 92  | 4122 - Oak, Pine                              | High Density<br>Log     | 4.5   | 80           | 81-110      | Jack pine is starting to deteriorate aspen also seems to be starting to decline. Oak is medium quality stuff.  |
| 93  | 42220 - Natural Jack<br>Pine                  | High Density<br>Pole    | 4.9   | 56           |             | Some pockets are moderately stocked. Some pockets of nice quality JP but is mostly limby open grown wood.  |
| 94  | 4130 - Aspen                                  | Medium<br>Density Pole  | 2.1   | 38           |             |  |
| 96  | 42220 - Natural Jack<br>Pine                  | High Density<br>Pole    | 2.3   | 56           |             | 3 Stick timber, limby wood, low percentage of sawbolts.  |
| 99  | 4191 - Mixed Upland<br>Deciduous with Conifer | Low Density<br>Sapling  | 15.6  | 7            |             |  |
| 101 | 4191 - Mixed Upland<br>Deciduous with Conifer | High Density<br>Sapling | 15.6  | 7            |             | Stand was cut in 2005 and was an aspen jack pine mix. Aspen, cherry and soft maple are about 10' tall the jack pine is coming underneath but is 2-3' tall. Scattered oak logs trees through out. |
| 102 | 4132 - Aspen, Jack Pine                       | High Density<br>Sapling | 13.5  | 7            |             | Stand was cut in 2005. Wildlife wanted the jack pine pole timber to stay. Aspen regen is doing very well.  |
| 103 | 4121 - Oak, Aspen                             | Medium<br>Density Pole  | 18.9  | 38           | 51-80       | Converting from sapling to a pole stand. Some of the timber is 4 sticks tall.  |
| 105 | 42221 - Natural Jack<br>Pine, Mixed Deciduous | Medium<br>Density Pole  | 2.2   | 57           |             | Limby wood.  |
| 108 | 4130 - Aspen                                  | High Density<br>Pole    | 215.5 | 43           |             | Former wildlife research cut. Stand is a little immature to cut yet. However there are some patches have good diameter and height and harvesting them will help break up the age class.          |
| 109 | 42220 - Natural Jack<br>Pine                  | Medium<br>Density Pole  | 1.6   | 46           |             |  |
| 113 | 4191 - Mixed Upland<br>Deciduous with Conifer | Low Density<br>Pole     | 6.5   | 38           | 1-50        |  |
| 116 | 4130 - Aspen                                  | High Density<br>Sapling | 1.7   | 7            |             | Stand cut in 05 with Compartment 143 aspen sale.   |
| 117 | 4130 - Aspen                                  | High Density<br>Sapling | 12.0  | 7            |             |  |

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Traverse City Mgt. Unit

5 – Forested Stands

Compartment: 147  
Year of Entry: 2014



|     | Level 4<br>Cover Type | Size<br>Density        | Acres | Stand<br>Age | BA<br>Range | General<br>Comments:   |
|-----|-----------------------|------------------------|-------|--------------|-------------|--|
| 118 | 4121 - Oak, Aspen     | Medium<br>Density Pole | 10.1  | 38           | 1-50        |  |
| 120 | 4122 - Oak, Pine      | High Density<br>Log    | 8.8   | 78           | 51-80       | Stand had most of the aspen cut out in 2005 with the stand to the west. Oak and redpine overstory. Stand is on transition ground to the bog. |



| Stand | Cover Type                | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|---------------------------|-------|--------------|---------------------------------|-------------------|
| 3     | 330 - Low-Density Trees   | 7.5   | No           | Unspecified                     |                   |
| 4     | 330 - Low-Density Trees   | 7.4   | No           | Unspecified                     |                   |
| 6     | 320 - Upland Shrub        | 4.5   | No           | Unspecified                     |                   |
| 9     | 320 - Upland Shrub        | 2.0   | No           | Unspecified                     |                   |
| 14    | 330 - Low-Density Trees   | 30.9  | No           | Unspecified                     |                   |
| 15    | 330 - Low-Density Trees   | 14.8  | No           | Unspecified                     |                   |
| 25    | 320 - Upland Shrub        | 5.7   | No           | Unspecified                     |                   |
| 27    | 320 - Upland Shrub        | 18.4  | No           | Unspecified                     |                   |
| 36    | 320 - Upland Shrub        | 30.8  | No           | Unspecified                     |                   |
| 45    | 320 - Upland Shrub        | 8.7   | No           | Unspecified                     |                   |
| 47    | 330 - Low-Density Trees   | 1.2   | No           | Unspecified                     |                   |
| 49    | 310 - Herbaceous Openland | 6.6   | No           | Unspecified                     |                   |
| 55    | 330 - Low-Density Trees   | 42.5  | No           | Unspecified                     |                   |
| 56    | 330 - Low-Density Trees   | 11.5  | No           | Unspecified                     |                   |
| 68    | 622 - Lowland Shrub       | 2.1   | No           | Unspecified                     |                   |
| 69    | 330 - Low-Density Trees   | 29.7  | No           | Unspecified                     |                   |
| 77    | 310 - Herbaceous Openland | 2.4   | No           | Unspecified                     |                   |
| 78    | 330 - Low-Density Trees   | 22.4  | No           | Unspecified                     |                   |



| Stand | Cover Type                     | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|--------------------------------|-------|--------------|---------------------------------|-------------------|
| 81    | 320 - Upland Shrub             | 16.8  | No           | Unspecified                     |                   |
| 83    | 3102 - Grass                   | 10.4  | No           | Unspecified                     |                   |
| 84    | 330 - Low-Density Trees        | 10.1  | No           | Unspecified                     |                   |
| 86    | 330 - Low-Density Trees        | 1.9   | No           | Unspecified                     |                   |
| 87    | 320 - Upland Shrub             | 57.4  | No           | Unspecified                     |                   |
| 91    | 3105 - Mixed Upland Herbaceous | 3.1   | No           | Unspecified                     |                   |
| 95    | 310 - Herbaceous Openland      | 12.4  | No           | Unspecified                     |                   |
| 97    | 3105 - Mixed Upland Herbaceous | 4.8   | No           | Unspecified                     |                   |
| 98    | 3205 - Mixed Upland Shrub      | 9.5   | No           | Unspecified                     |                   |
| 100   | 310 - Herbaceous Openland      | 2.0   | No           | Unspecified                     |                   |
| 104   | 320 - Upland Shrub             | 4.3   | No           | Unspecified                     |                   |
| 106   | 310 - Herbaceous Openland      | 3.6   | No           | Unspecified                     |                   |
| 107   | 330 - Low-Density Trees        | 17.3  | No           | Unspecified                     |                   |
| 110   | 122 - Road/Parking Lot         | 3.4   | No           | Unspecified                     |                   |
| 111   | 330 - Low-Density Trees        | 6.1   | No           | Unspecified                     |                   |
| 112   | 320 - Upland Shrub             | 1.6   | No           | Unspecified                     |                   |
| 114   | 310 - Herbaceous Openland      | 6.4   | No           | Unspecified                     |                   |
| 115   | 310 - Herbaceous Openland      | 3.1   | No           | Unspecified                     |                   |



| Stand | Cover Type                | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|---------------------------|-------|--------------|---------------------------------|-------------------|
| 119   | 622 - Lowland Shrub       | 1.2   | No           | Unspecified                     |                   |
| 121   | 310 - Herbaceous Openland | 1.7   | No           | Unspecified                     |                   |
| 122   | 6225 - Bog                | 20.2  | No           | Unspecified                     |                   |



### 7 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

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

| Stand | SCA Type | SCA Name | Acres | Comments |
|-------|----------|----------|-------|----------|
|       |          |          |       |          |



**8 – DEDICATED CONSERVATION AREA DETAILS**

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

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

| Conservation Area | Type                        | Description  |
|-------------------|-----------------------------|--|
| SCA               | Cold Water Stream           | A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.  |
| 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.  |
| SCA               | Research and Military Areas | These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands. |