



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

COMPARTMENT # 140 ENTRY YEAR: 2013

Compartment Acreage: 1597 County: Kalkaska

Stand Examiner: Donna Hagan

Legal Description: T25N, R5W, Sec. N1/2 of 13, 14 & 15

Management Goals: Keep and expand oak and aspen type. Produce medium to high site index oak for timber.

Soil and Topography: Roselawn, Rubicon & Grayling sands. Mostly flat to gently rolling.

Ownership Patterns, Development, and Land Use in and Around the Compartment:
The compartment is all state land and hunting is the primary land use.

Unique, Natural Features (include only non-site specific and non-sensitive information):
Whorled pogonia and Hill's thistle are in this compartment.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There is an archeological concern in section 15.

Special Management Designations or Considerations: All of the compartment is in the 10 year military lease area for training purposes.

Watershed and Fisheries Considerations: No water in this compartment.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan Formation is quarried for gypsum. The nearest gravel pit is just to the north of the compartment. Gravel potential in the compartment is considered good, especially the upland area. Beaver Creek Field is located in Section 13. The field has produced over 16 MBO and 21 Bcf gas from the Devonian Richfield Formation and over 5 Bcf gas from the PdC Formation. The State land in the area of the field is currently leased. A new zone, Detroit River, is in the process of unitization. Most of the area is already part of the Richfield unitized area and some additional acreage to the east in Crawford County.

Vehicle Access: Gravel and two-track county roads surrounds each section in the compartment.

Survey Needs: None needed.

Recreational Facilities and Opportunities: No recreational facilities are in this compartment.

Fire Protection: Fire coverage for this area is assigned to the MDNR Kankaska Field Office with assistance available from the local township Volunteer Fire Departments. DNR wildfire equipment is also available from the Roscommon DNR and Grayling DNR offices. Lack of nearby water for use as a fire suppression source is a concern. Road access is limited in some areas in this compartment. (Comments by Rod Rader, Fire Supervisor, Traverse City Field Office.)

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

Compartment 140
 T25N, R05W, Sec. 13-15
 County: Kalkaska
 Unit: Traverse City
 YOE: 2013
 Acres: 1,597 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 5/25/2011
 Map Phase: Pre-Review

Legend

- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Pipe
- Treatments
 - Thinning (Crown, Low, Systematic)
 - Clearcut (w/Reserves, Patch/Strip)

Forest Stands
 Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines

Non-Forest Stands
 Level 3

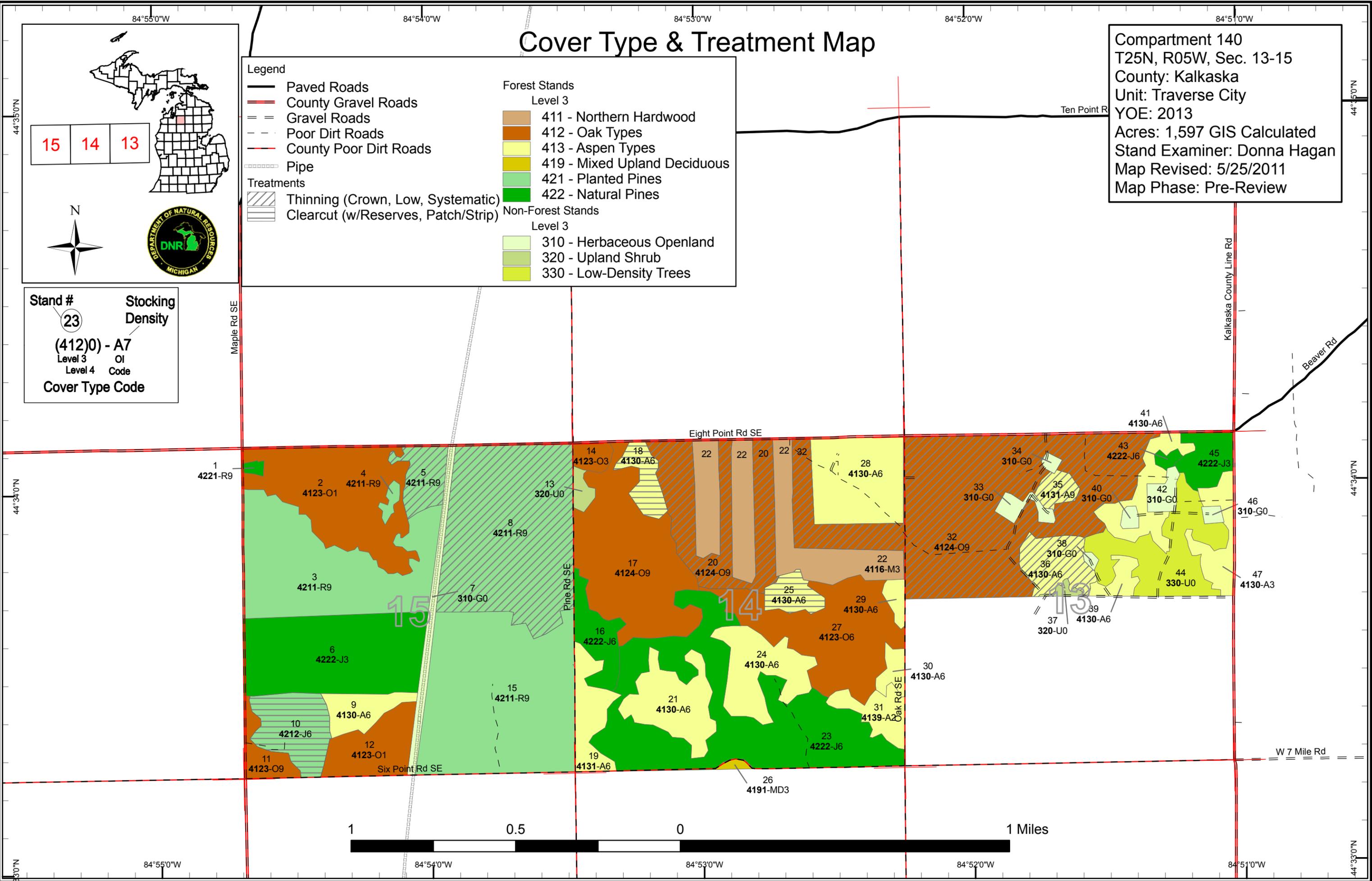
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees

15 14 13

Stand #
 23

Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code

Cover Type Code



Stand Boundary Map

Compartment 140
 T25N, R05W, Sec. 13-15
 County: Kalkaska
 Unit: Traverse City
 YOE: 2013
 Acres: 1,597 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 5/25/2011
 Map Phase: Pre-Review

Legend

| | | |
|--|------------------------------|---------------------------|
|  Miris Corners | Forest Stands | Non-Forest Stands |
|  Paved Roads | Level 3 | Level 3 |
|  County Gravel Roads | 411 - Northern Hardwood | 310 - Herbaceous Openland |
|  Gravel Roads | 412 - Oak Types | 320 - Upland Shrub |
|  Poor Dirt Roads | 413 - Aspen Types | 330 - Low-Density Trees |
|  County Poor Dirt Roads | 419 - Mixed Upland Deciduous | |
|  Pipe | 421 - Planted Pines | |
|  Stand Boundaries | 422 - Natural Pines | |



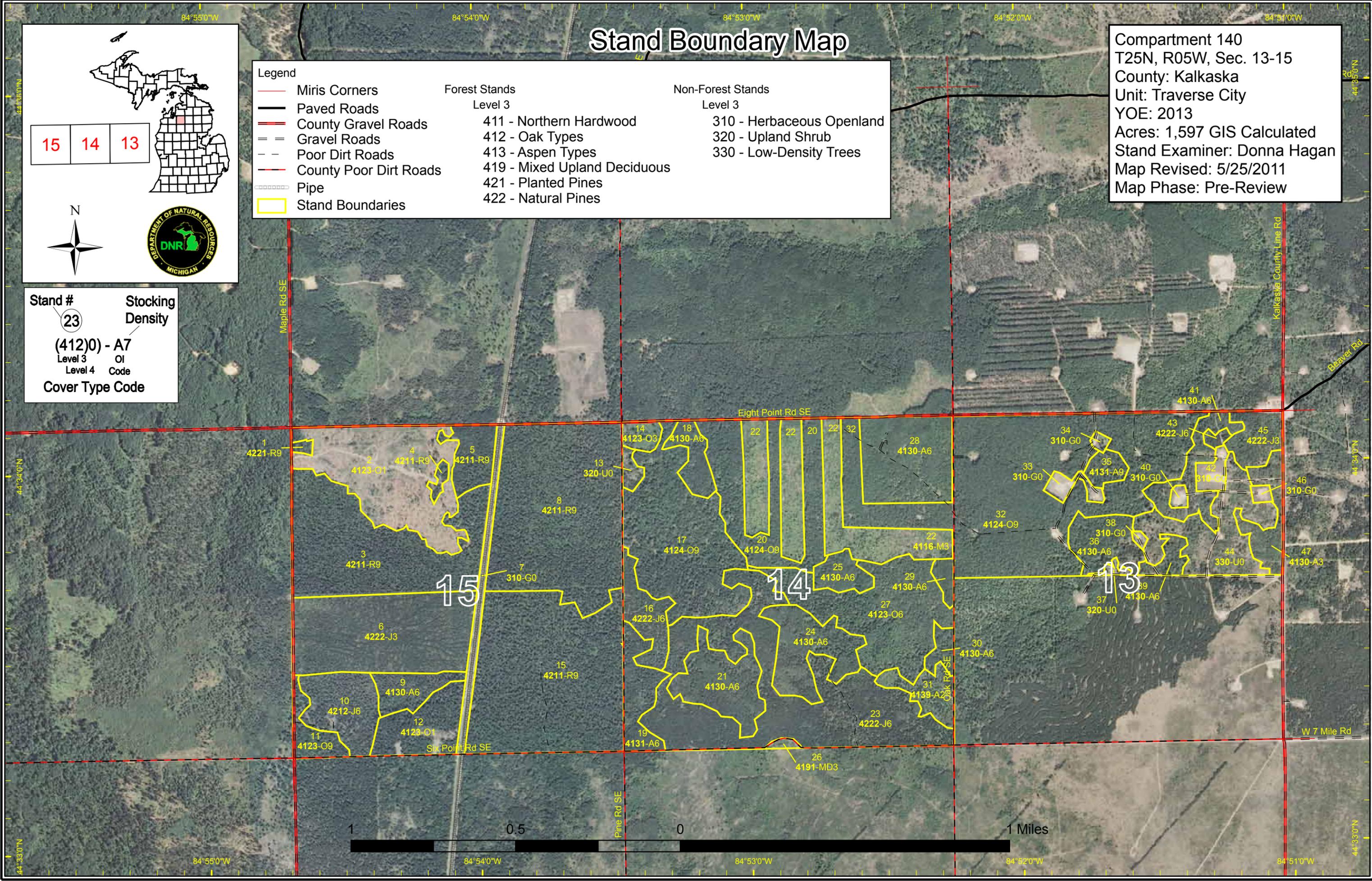
15 14 13




Stand #
 23

Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code

Cover Type Code



44°33'0"N 84°55'0"W 84°54'0"W 84°53'0"W 84°52'0"W 84°51'0"W 44°34'0"N 44°35'0"N

Dedicated & Proposed Special Conservation Area Map

Compartment 140
 T25N, R05W, Sec. 13-15
 County: Kalkaska
 Unit: Traverse City
 YOE: 2013
 Acres: 1,597 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 5/25/2011
 Map Phase: Pre-Review

Legend

- Miris Corners
- High Conservation Value Areas
- Kirtland Warbler Habitat
- Special Conservation Areas
- Research, Development, and Military Lands
- Stand Boundaries

| Forest Stands | Non-Forest Stands |
|------------------------------|---------------------------|
| Level 3 | Level 3 |
| 411 - Northern Hardwood | 310 - Herbaceous Openland |
| 412 - Oak Types | 320 - Upland Shrub |
| 413 - Aspen Types | 330 - Low-Density Trees |
| 419 - Mixed Upland Deciduous | |
| 421 - Planted Pines | |
| 422 - Natural Pines | |

15 14 13

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

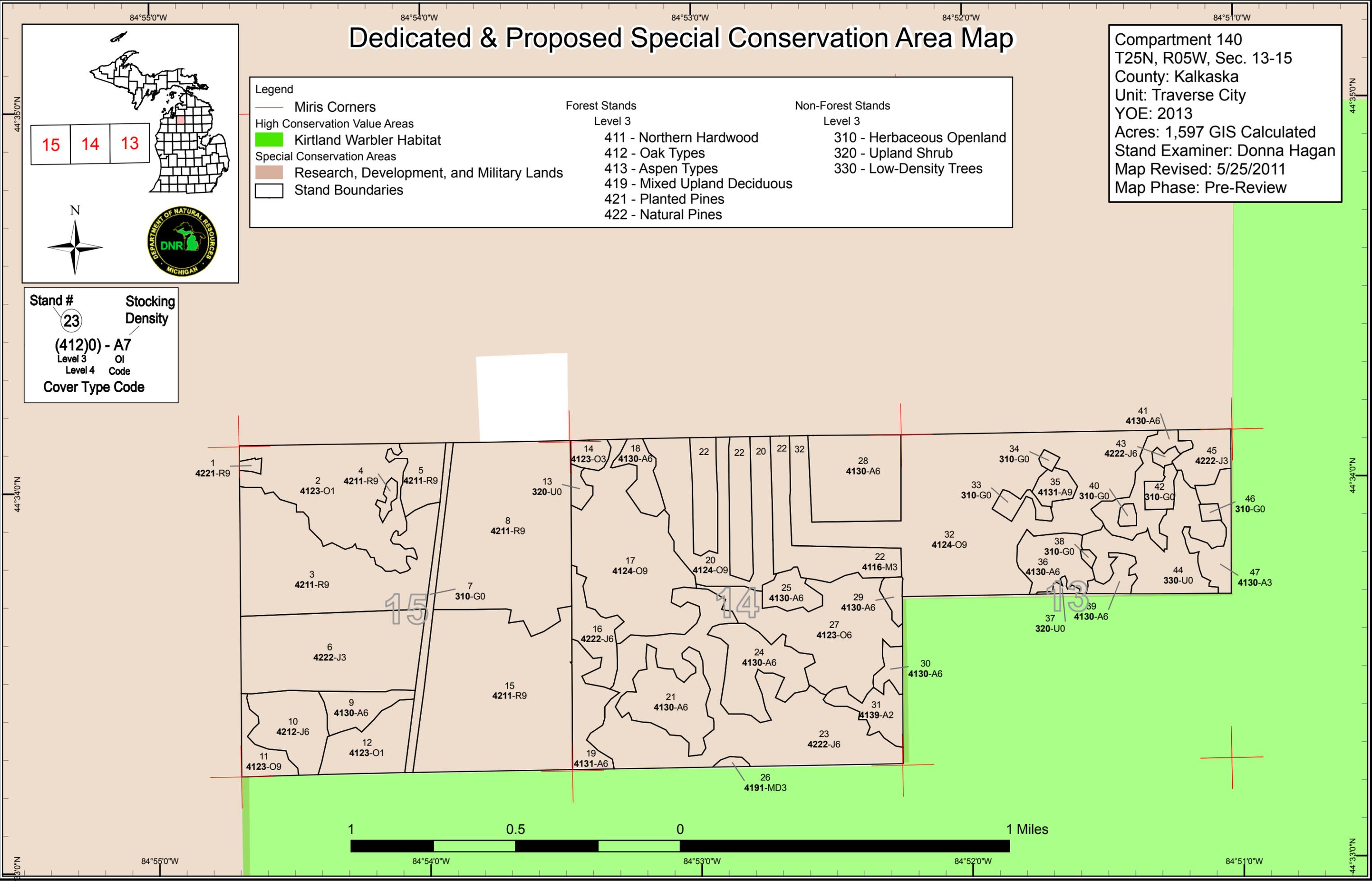
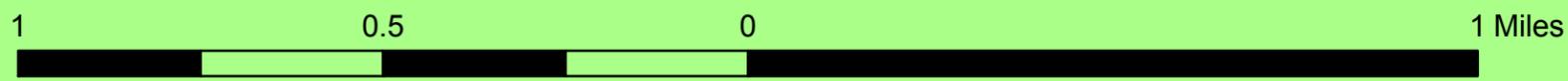
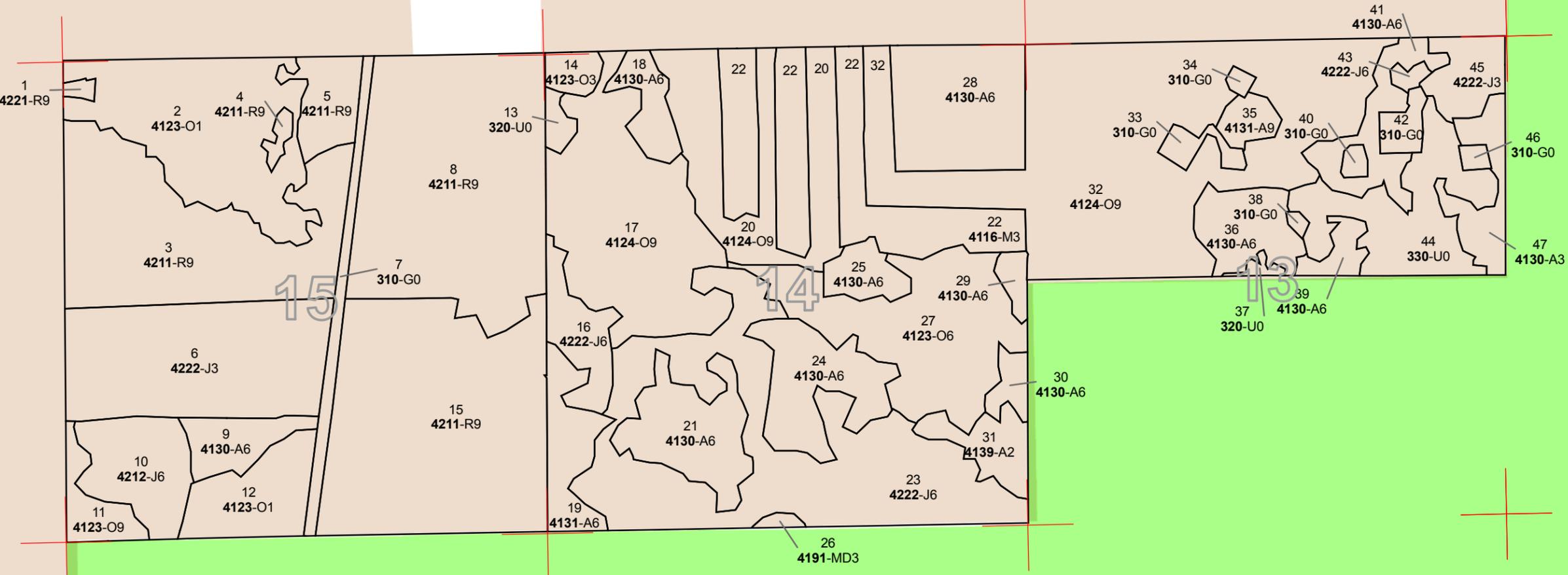


Table 1 – Total Acres by Cover Type and Age Class



| | Age Class | | | | | | | | | | | | | | Total | |
|------------------------|--------------|------------|-----------|-----------|-----------|------------|-----------|----------|------------|----------|-----------|----------|----------|------------|----------|-------------|
| | Non-Forested | 1-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 | 90-99 | 100-109 | 110-119 | 120 + | | Uneven Age |
| Aspen | 0 | 0 | 0 | 16 | 61 | 160 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 264 |
| Herbaceous Openland | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| Jack Pine | 0 | 0 | 98 | 0 | 0 | 144 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 272 |
| Low-Density Trees | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| Mixed Upland Deciduous | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Northern Hardwood | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| Oak | 0 | 110 | 0 | 0 | 0 | 69 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 332 | 0 | 523 |
| Red Pine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 385 | 0 | 0 | 0 | 0 | 0 | 0 | 385 |
| Upland Shrub | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 82 | 180 | 98 | 16 | 61 | 375 | 57 | 0 | 385 | 0 | 12 | 0 | 0 | 332 | 0 | 1597 |



Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2013

Compartment 140
Total Compartment Acres: 1597

Acres by Treatment Type

| | | | | |
|--------------------------|-------------------------|-------------------|---------------------|-----------|
| Commercial Harvest - 473 | Site Prep - 0 | Tree Planting - 0 | Prescribed Burn - 0 | Other - 0 |
| Habitat Cut - 0 | Opening Maintenance - 0 | Tree Seeding - 0 | Pesticide - 0 | |

Cover Type by Harvest Method

| | <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 | 22 | 0 | 0 | 0 | 27 | 0 | 50 |
| Jack Pine | 29 | 0 | 0 | 0 | 0 | 0 | 29 |
| Oak | 0 | 0 | 0 | 0 | 247 | 0 | 247 |
| Red Pine | 0 | 0 | 0 | 0 | 147 | 0 | 147 |
| Total | 52 | 0 | 0 | 0 | 421 | 0 | 473 |

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



| S t a n d | Treatment Name | Acres | Stage1 CoverType | Size Density | Stand Age | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-----------------------|-------------------|-------|---|------------------|--------------|-------------------|---------------------|---|--------------------------|
| 5 | 61140005-Cut | 16.0 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Log | 76 | Harvest | Crown Thinning | 42111 - Planted Red Pine, Mixed Deciduous | Cmpt. Review Proposal |

Prescription Thin down to 100-110 BA.

Specs:

Other

Comments:

Next

Steps:

| | | | | | | | | | |
|---|--------------|-------|-----------------------------|------------------|----|---------|----------------|---|--------------------------|
| 8 | 61140008-Cut | 131.2 | 42110 - Planted Red Pine | High Density Log | 76 | Harvest | Crown Thinning | 42111 - Planted Red Pine, Mixed Deciduous | Cmpt. Review Proposal |
|---|--------------|-------|-----------------------------|------------------|----|---------|----------------|---|--------------------------|

Prescription Thin to 110-110 BA.

Specs:

Other

Trying to get the oak regeneration up and going.

Comments:

Next

Steps:

| | | | | | | | | | |
|----|--------------|------|------------------------------|-------------------|----|---------|---------------------------|------------------|--------------------------|
| 10 | 61140010-Cut | 29.3 | 42120 - Planted Jack Pine | High Density Pole | 55 | Harvest | Clearcut with Reserves | 4129 - Mixed Oak | Cmpt. Review Proposal |
|----|--------------|------|------------------------------|-------------------|----|---------|---------------------------|------------------|--------------------------|

Prescription Take out jack pine allowing the oak regeneration to take over stand.

Specs:

Other

Comments:

Next

Steps:

| | | | | | | | | | |
|----|--------------|------|--------------|-------------------|----|---------|---------------------------|--------------|--------------------------|
| 18 | 61140018-Cut | 11.9 | 4130 - Aspen | High Density Pole | 45 | Harvest | Clearcut with Reserves | 4130 - Aspen | Cmpt. Review Proposal |
|----|--------------|------|--------------|-------------------|----|---------|---------------------------|--------------|--------------------------|

Prescription Final harvest. Leave 10 BA of oak.

Specs:

Other

Comments:

Next

Steps:

| | | | | | | | | | |
|----|--------------|------|------------------------------|------------------|-----|---------|----------------|------------------------------|--------------------------|
| 20 | 61140020-Cut | 56.5 | 4124 - Red with White Oak | High Density Log | 130 | Harvest | Crown Thinning | 4124 - Red with White Oak | Cmpt. Review Proposal |
|----|--------------|------|------------------------------|------------------|-----|---------|----------------|------------------------------|--------------------------|

Prescription Stand already has great regeneration, so thin down to 70-90 BA.

Specs:

Other

Comments:

Next

Steps:

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



| S t a n d | Treatment Name | Acres | Stage1 CoverType | Size Density | Stand Age | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|-----------------------|-------------------|-------|---------------------|-------------------|--------------|-------------------|------------------------|-------------------------|-----------------------|
| 25 | 61140025-Cut | 10.4 | 4130 - Aspen | High Density Pole | 42 | Harvest | Clearcut with Reserves | 4131 - Aspen, Oak | Cmpt. Review Proposal |

Prescription Final harvest leaving all oak
Specs:

Other
Comments:

Next
Steps:

| | | | | | | | | | |
|----|--------------|-------|---------------------------|------------------|-----|---------|----------------|---------------------------|-----------------------|
| 32 | 61140032-Cut | 190.2 | 4124 - Red with White Oak | High Density Log | 130 | Harvest | Crown Thinning | 4124 - Red with White Oak | Cmpt. Review Proposal |
|----|--------------|-------|---------------------------|------------------|-----|---------|----------------|---------------------------|-----------------------|

Prescription Good regeneration already exists so take out all aspen and red maple and thin the oak to 70-90 BA.
Specs:

Other
Comments:

Next
Steps:

| | | | | | | | | | |
|----|--------------|-----|-------------------|------------------|----|---------|----------------|---------------------------|-----------------------|
| 35 | 61140035-Cut | 6.8 | 4131 - Aspen, Oak | High Density Log | 55 | Harvest | Crown Thinning | 4124 - Red with White Oak | Cmpt. Review Proposal |
|----|--------------|-----|-------------------|------------------|----|---------|----------------|---------------------------|-----------------------|

Prescription Remove all aspen and red maple, leave oak.
Specs:

Other
Comments:

Next
Steps:

| | | | | | | | | | |
|----|--------------|------|--------------|-------------------|----|---------|----------------|-------------------|-----------------------|
| 36 | 61140036-Cut | 20.6 | 4130 - Aspen | High Density Pole | 50 | Harvest | Crown Thinning | 4131 - Aspen, Oak | Cmpt. Review Proposal |
|----|--------------|------|--------------|-------------------|----|---------|----------------|-------------------|-----------------------|

Prescription Great regeneration in understory already. Leave oak and no 2" spec.
Specs:

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 473.0**

Table 4 -- Treatments Prescribed with a Limiting Factor



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| Treatment Name | Acres | Stage1 CoverType | Size Density | Stand Age | Treatment Type | Treatment Method | Cover Type Objective | Approval Status |
|----------------|-------|------------------|--------------|-----------|----------------|------------------|----------------------|-----------------|
|----------------|-------|------------------|--------------|-----------|----------------|------------------|----------------------|-----------------|

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Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

| S t a n d | Traverse City Mgt. Unit | | 5 – Forested Stands | | | Compartment: 140 | General Comments: |
|-----------------------|--|----------------------|---------------------|--------------|-------------|---------------------|---|
| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | Year of Entry: 2013 | |
| 1 | 42210 - Natural Red Pine | High Density Log | 1.6 | 78 | 81-110 | | |
| 2 | 4123 - Red Oak | Low Density Sapling | 77.1 | 3 | | | Thornapple Red RPP Sale #97-08. Oak and black cherry were left in sale. Tremendous regeneration. |
| 3 | 42110 - Planted Red Pine | High Density Log | 97.3 | 78 | 81-110 | | A lot of dead jack pine. |
| 4 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Log | 2.6 | 76 | 200+ | | Retention area from Thornapple Red RPP Sale. |
| 5 | 42111 - Planted Red Pine, Mixed Deciduous | High Density Log | 16.0 | 76 | 200+ | | |
| 6 | 42221 - Natural Jack Pine, Mixed Deciduous | High Density Sapling | 83.0 | 18 | | | |
| 8 | 42110 - Planted Red Pine | High Density Log | 131.2 | 76 | 141-170 | | Red pine planted in 1934. In 1982 everything was removed except the red pine. Sale #56-80A. |
| 9 | 4130 - Aspen | High Density Pole | 14.5 | 33 | | | |
| 10 | 42120 - Planted Jack Pine | High Density Pole | 29.3 | 55 | | | Heavy oak regeneration. |
| 11 | 4123 - Red Oak | High Density Log | 11.7 | 90 | 111-140 | | |
| 12 | 4123 - Red Oak | Low Density Sapling | 26.9 | 3 | | | Thornapple Red RPP Sale #97-08. Left oak and black cherry. Tremendous oak regeneration. |
| 14 | 4123 - Red Oak | High Density Sapling | 6.1 | 7 | | | Strip Oak Sale #022-00 |
| 15 | 42110 - Planted Red Pine | High Density Log | 136.2 | 76 | 111-140 | | Red pine planted in 1934. A cut was done in 1984, Sale #028-80, removing everything but the red pine. |
| 16 | 42220 - Natural Jack Pine | High Density Pole | 17.8 | 42 | | | Fletcher Fire went through this area - 1968. |
| 17 | 4124 - Red with White Oak | High Density Log | 85.6 | 134 | 51-80 | | |
| 18 | 4130 - Aspen | High Density Pole | 11.9 | 45 | | | |
| 19 | 4131 - Aspen, Oak | High Density Pole | 20.1 | 42 | | | Fletcher Fire went through this area - 1968. |
| 20 | 4124 - Red with White Oak | High Density Log | 56.5 | 130 | 200+ | | |



| S t a n d | Traverse City Mgt. Unit | | 5 – Forested Stands | | | Compartment: 140 | General Comments: |
|-----------------------|---|-------------------------|---------------------|--------------|-------------|---------------------|---|
| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | Year of Entry: 2013 | |
| 21 | 4130 - Aspen | High Density Pole | 32.8 | 42 | | | Fletcher Fire went through this area - 1968. |
| 22 | 4116 - Mixed N. Hardwood - Aspen | High Density Sapling | 69.9 | 7 | | | Strip Oak Sale # 022-00 |
| 23 | 42220 - Natural Jack Pine | High Density Pole | 124.5 | 42 | | | Fletcher Fire went through this area - 1968. |
| 24 | 4130 - Aspen | High Density Pole | 32.5 | 42 | | | Fletcher Fire went through this area - 1968. |
| 25 | 4130 - Aspen | High Density Pole | 10.4 | 42 | | | |
| 26 | 4191 - Mixed Upland Deciduous with Conifer | High Density Sapling | 1.6 | 42 | | | |
| 27 | 4123 - Red Oak | High Density Pole | 69.3 | 42 | 51-80 | | Fletcher Fire went through this area - 1968. |
| 28 | 4130 - Aspen | High Density Pole | 46.3 | 30 | | | Clearcut in 1981. Sale #8-80A |
| 29 | 4130 - Aspen | High Density Pole | 4.4 | 42 | | | |
| 30 | 4130 - Aspen | High Density Pole | 5.9 | 42 | | | Fletcher Fire went through this area - 1968. |
| 31 | 4139 - Aspen, Mixed Deciduous | Medium Density | 14.4 | 42 | | | Fletcher Fire went through this area - 1968. |
| 32 | 4124 - Red with White Oak | High Density Log | 190.2 | 130 | 171-200 | | |
| 35 | 4131 - Aspen, Oak | High Density Log | 6.8 | 55 | 111-140 | | |
| 36 | 4130 - Aspen | High Density Pole | 20.6 | 50 | | | |
| 39 | 4130 - Aspen | High Density Pole | 6.8 | 40 | | | |
| 41 | 4130 - Aspen | High Density Pole | 20.3 | 41 | | | |
| 43 | 42220 - Natural Jack Pine | High Density Pole | 2.1 | 40 | | | |
| 45 | 42220 - Natural Jack Pine | High Density Sapling | 14.9 | 18 | | | County Line Sale #002-90. All merchantable jack pine, aspen and oak were cut. |



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Traverse City Mgt. Unit

5 – Forested Stands

Compartment: 140
Year of Entry: 2013



| | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |
|----|-----------------------|-------------------------|-------|--------------|-------------|----------------------|
| 47 | 4130 - Aspen | High Density Sapling | 16.4 | 28 | | |



| Stand | Cover Type | Acres | Managed Site | Management Priority (Objective) | General Comments: |
|-------|--------------------------------|-------|--------------|---------------------------------|-------------------|
| 7 | 3102 - Grass | 14.6 | No | Unspecified | Pipeline. |
| 13 | 3205 - Mixed Upland Shrub | 3.8 | No | Unspecified | |
| 33 | 3102 - Grass | 5.4 | No | Unspecified | Well site. |
| 34 | 3102 - Grass | 1.5 | No | Unspecified | Well site. |
| 37 | 3205 - Mixed Upland Shrub | 1.7 | No | Unspecified | |
| 38 | 3102 - Grass | 1.0 | No | Unspecified | Well site. |
| 40 | 3102 - Grass | 2.1 | No | Unspecified | Well site. |
| 42 | 3102 - Grass | 5.9 | No | Unspecified | Well site. |
| 44 | 3303 - Mixed Low Density Trees | 43.9 | No | Unspecified | |
| 46 | 3102 - Grass | 1.9 | No | Unspecified | Well site. |



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 |
|-------------------|-----------------------------|--|
| 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. |
| 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. |