



## TRAVERSE CITY FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT #133 ENTRY YEAR: 2014

Compartment Acreage: 2,544 County: Kalkaska

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**Stand Examiner:** Katie Armstrong

**Legal Description:** T25N R5W Sections 4, 5 and 6; T25N R6W, Section 1

**Management Goals:** Since all of this compartment is owned by or leased to the Department of Military and Veterans' Affairs as part of Camp Grayling, the primary management objective will be maintaining healthy, productive forest stands while facilitating military training. Within this constraint, management will attempt to increase diversity in species composition and age classes. Many of the jack pine stands appear to have been established around the same time. Several large stand were cut following the last inventory but many others also meet age criteria for harvesting. Treatments on the stands most likely to hold for another inventory cycle have been delayed to improve age class diversity. Other management activities, especially to maintain openings, may be implemented to improve wildlife habitat. Primary management challenges include difficulty of regenerating oak especially on poor sites and discouraging establishment of Kirtland's warbler in suitable habitat.

**Soil and Topography:** Terrain ranges from flat to rolling hills. The western part of the compartment is mostly flat. The eastern three-quarters are moderately hilly. The hilly part contains a few kettle-like open areas which are likely frost pockets. Soils are primarily Grayling sand with lesser amounts of Grayling-Graycalm Sand, Croswell Sand, and Au Gres Sand.

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

The entire compartment is State-owned lands. The north half of Section 1 is Military Lease Land. The remaining area is Military Board Land, owned by the DMVA but managed by the DNR. This compartment and all of the land adjacent to it is heavily used by Camp Grayling for training purposes.

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

This compartment is located within landtype associations (LTAs) 3111 and 5111 of sub-section VII.2.2. LTA 3111, characterized by ice contact ridges, few kettle lakes, and excessively drained loamy sand, comprises Sections 4, 5, and the central part of Section 6. Almost 90% of LTA 3111 supported conifer forests or pine/oak barrens at the time of the General Land Office survey. Soil types and fire frequencies determined the plant composition of these forests. LTA 5111 is a broad flat outwash plain with few kettle lakes and excessively drained soils. It comprises most of Section 1 and a portion of Section 6. Historically, this would have been characterized by savannas of jack pine and northern pin oak with scattered red pines.

According to notes from the GLO surveyors, the northwest part of this compartment was dominated by fire-dependant pine plain or barrens communities. Originally there would have been numerous small areas of dry prairie which were associated with several rare species. While there are no records of rare species in this compartment, it does offer potential habitat for several rare dry prairie plants or insects in grassy openings and adjacent compartments have records of rare species.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** There are several old railroad grades within the compartment. The State Historic Preservation Office has documented an archaeological site in Section 5.

**Special Management Designations or Considerations:** The entire compartment is Military Board Land or Military Lease Land.

**Watershed and Fisheries Considerations:** Other than one drainage in Stand 2 which may be seasonally wet, there are no water bodies or streams within this compartment.

**Wildlife Habitat Considerations:** This compartment falls onto two ecological landscapes. An ice contact ridge with excessively drained loamy sand occupies most of sections 4 & 5 and half of section 6. Historically, this landscape was predominantly red and white pine forest with some components of oak and jack pine, affected largely by wildfires encroaching from the adjacent outwash plain. The outwash plain was dominated by fire-dependent communities of jack pine, mixed pine forest, and barrens, and covers most of section 1 and about half of section 6.

The ice contact ridge landscape is currently occupied by oak and aspen stands of various age classes. Military use of the land somewhat limits the habitat management opportunities, but continuing the pattern of various age classes of these types will be beneficial to diverse wildlife species including gray squirrel, wild turkey, scarlet tanager, red-headed woodpecker, red-backed salamander, blue jay, deer, and broad-winged hawk. Small to medium regeneration harvests should include residual islands of mature trees for within-stand diversity and should retain as many mature pines and snags as possible. Oak thinnings should be designed, if possible, to encourage regeneration of pine as well as oak.

Jack pine stands dominate the outwash plain, most of which are mature to overmature. Final harvest of such stands should be designed to mimic the results of wildfire as much as possible, but such treatment may be limited by the requirements of the military use of the land. Medium sized, irregularly shaped cuts should be spread out both spatially and temporally over the next several entry periods. Orienting some cuts in a southwest-northeast pattern will replicate natural fire patterns and increase edge. Leave islands or strips can be incorporated to further mimic fire patterns. Management for mature and regenerating jack pine forests, along with some minimal wildlife opening maintenance, will benefit species such as Nashville warbler, snowshoe hare, badger, garter snake, coyote, field sparrow, golden-crowned kinglet, red squirrel, and red-tailed hawk. Although not specifically being managed for Kirtland's warbler, this endangered species may also occupy regenerating pines to some extent.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium and minor dune sand. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift are the Mississippian Michigan Formation and Marshall Sandstone. These formations used to be quarried for building stones and are currently quarried for gypsum. The nearest gravel pit is located in Section 3 and potential is considered good on the uplands. This area is located just north of the Garfield 8 Field. This field produces from the Devonian Richfield and the Ordovician PdC. The PdC has produced over 46 Bcf gas. This compartment has some oil and gas leases associated with the deep production.

**Vehicle Access:** There is adequate vehicle access to all areas of the compartment.

**Survey Needs:** There are no additional survey needs at this time.

**Recreational Facilities and Opportunities:** The Cranberry Lake Snowmobile Trail runs along the western edge of the compartment. An abundance of open areas, unofficial roads and trails, and variable topography have encouraged significant inappropriate off-road vehicle use.

**Fire Protection:** The heavy concentration of jack pine in the western part of the compartment creates a high potential for large catastrophic fires. Timber sales during the last year of entry have reduced this to some degree but fire danger will increase as those jack pine stands regenerate. Military Road east of Sunset Trail has been identified as a fire break and the road will be maintained as such.

**Additional Compartment Information:** N/A

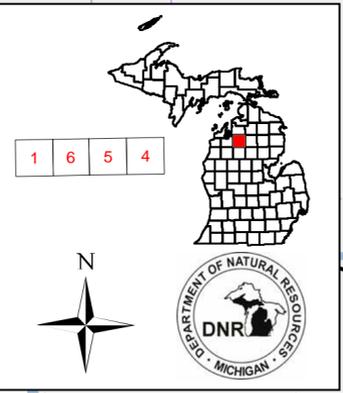
**\*\*\*\* Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

- 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**

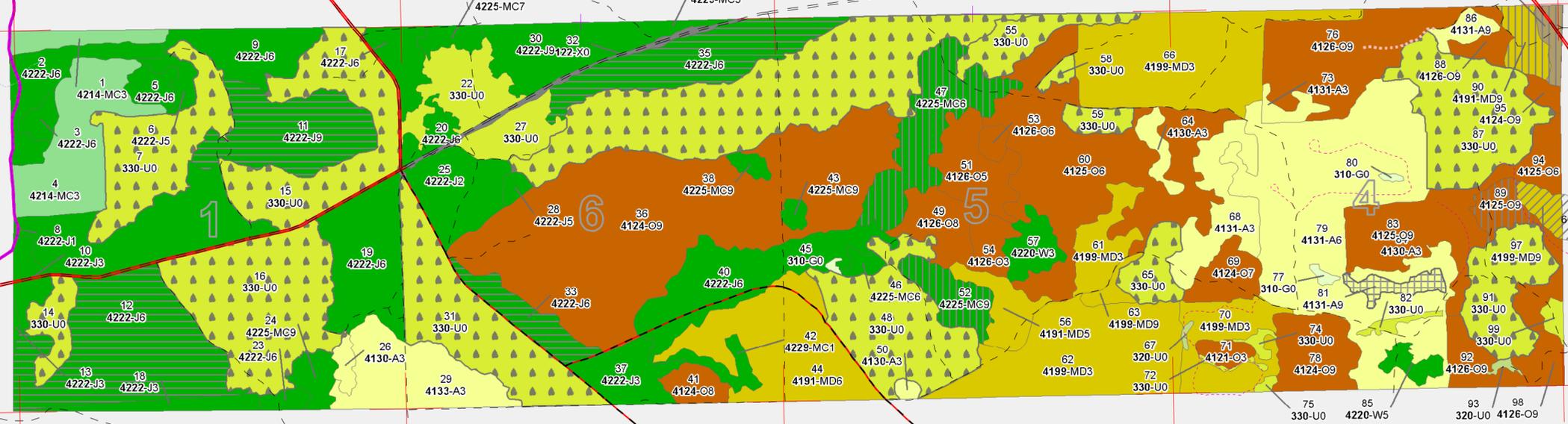
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 T25N, R05W 4, 5, 6  
 T25N, R06W 1  
 County: Kalkaska  
 Unit: Traverse City  
 YOE: 2014  
 Acres: 2,544 GIS Calculated  
 Examiner: Katie Armstrong  
 Map Revised: 5/23/2012  
 Map Phase: Pre-Review



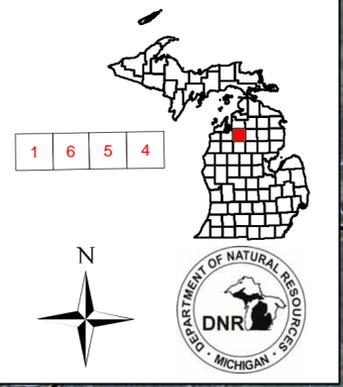
# Cover Type & Treatment Map

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

Legend	
	Miris Corners
	Paved Roads
	County Gravel Roads
	Gravel Roads
	Poor Dirt Roads
	County Poor Dirt Roads
	Trail (Non-Recreation)
	Closed Roads
	Stream
	Intermittent Stream
	Lakes and Rivers
	ORV Routes
	Snowmobile Trails
	ORV Route
	Snowmobile Trail
	State Forest Land
	Planned Regeneration
	Natural
	Seed Tree (w/Reserves)
	Shelter Wood (w/Reserves)
	Thinning (Crown, Low, Systematic)
	Clearcut (w/Reserves, Patch/Strip)
<b>Forest Stands</b>	
<b>Level 3</b>	
	412 - Oak Types
	413 - Aspen Types
	419 - Mixed Upland Deciduous
	421 - Planted Pines
	422 - Natural Pines
	431 - Upland Mixed Forest
<b>Non-Forest Stands</b>	
<b>Level 3</b>	
	122 - Road/Parking Lot
	310 - Herbaceous Openland
	320 - Upland Shrub
	330 - Low-Density Trees



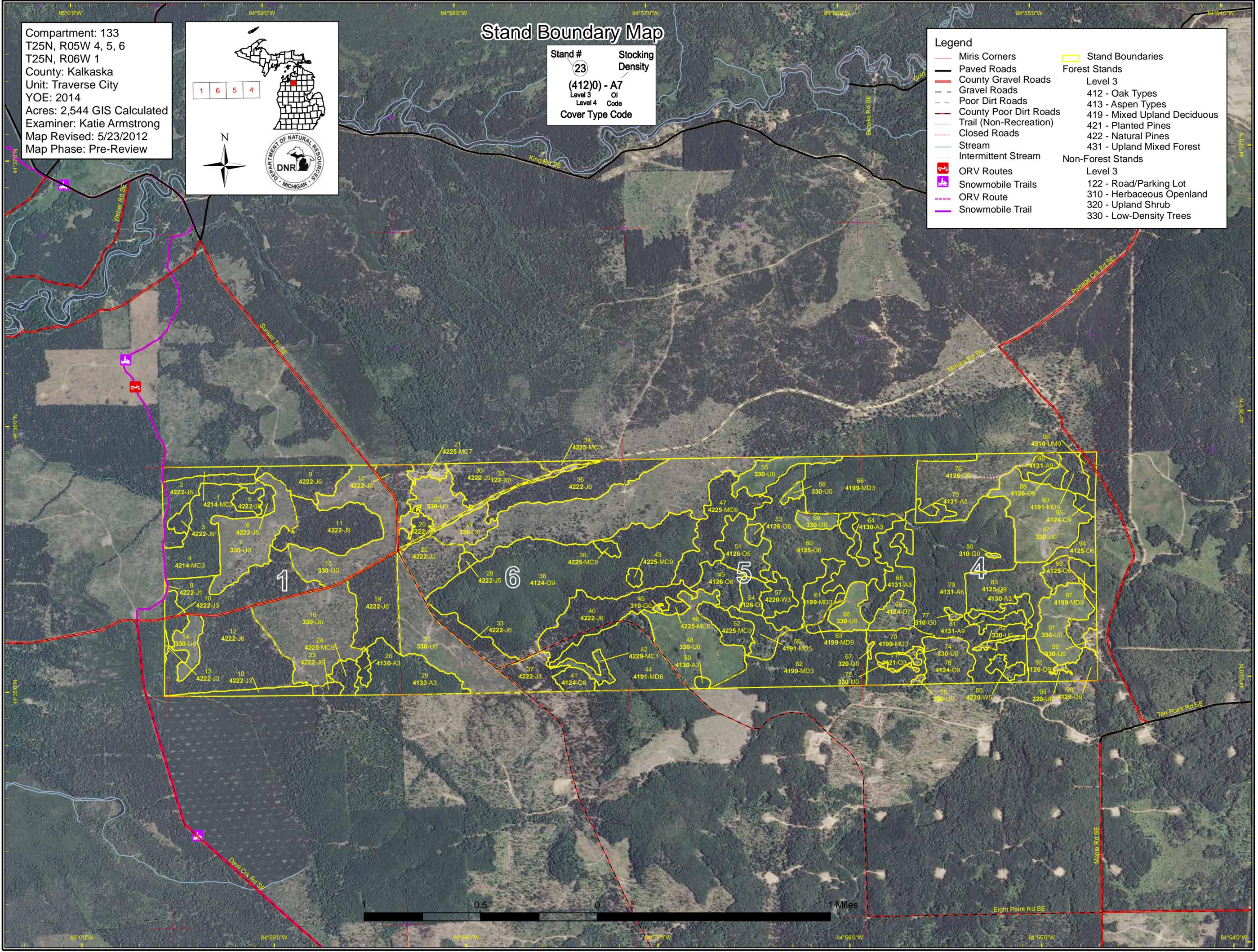
Compartment: 133  
 T25N, R05W 4, 5, 6  
 T25N, R06W 1  
 County: Kalkaska  
 Unit: Traverse City  
 YOE: 2014  
 Acres: 2,544 GIS Calculated  
 Examiner: Katie Armstrong  
 Map Revised: 5/23/2012  
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# Stand Boundary Map

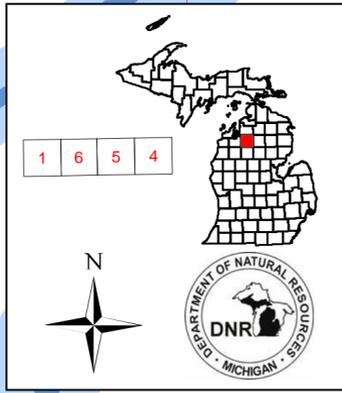
Stand #  
 23  
 (4120) - A7  
 Level 3  
 Level 4  
 Cover Type Code  
 Stacking Density  
 OI  
 Code

- Legend**
- Miris Corners
  - Paved Roads
  - County Gravel Roads
  - Gravel Roads
  - Poor Dirt Roads
  - County Poor Dirt Roads
  - Trail (Non-Recreation)
  - Closed Roads
  - Stream
  - Intermittent Stream
  - ORV Routes
  - Snowmobile Trails
  - ORV Route
  - Snowmobile Trail
- Stand Boundaries**
- Forest Stands**
- Level 3
- 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 431 - Upland Mixed Forest
- Non-Forest Stands**
- Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 320 - Upland Shrub
  - 330 - Low-Density Trees



# Dedicated & Proposed Special Conservation Area Map

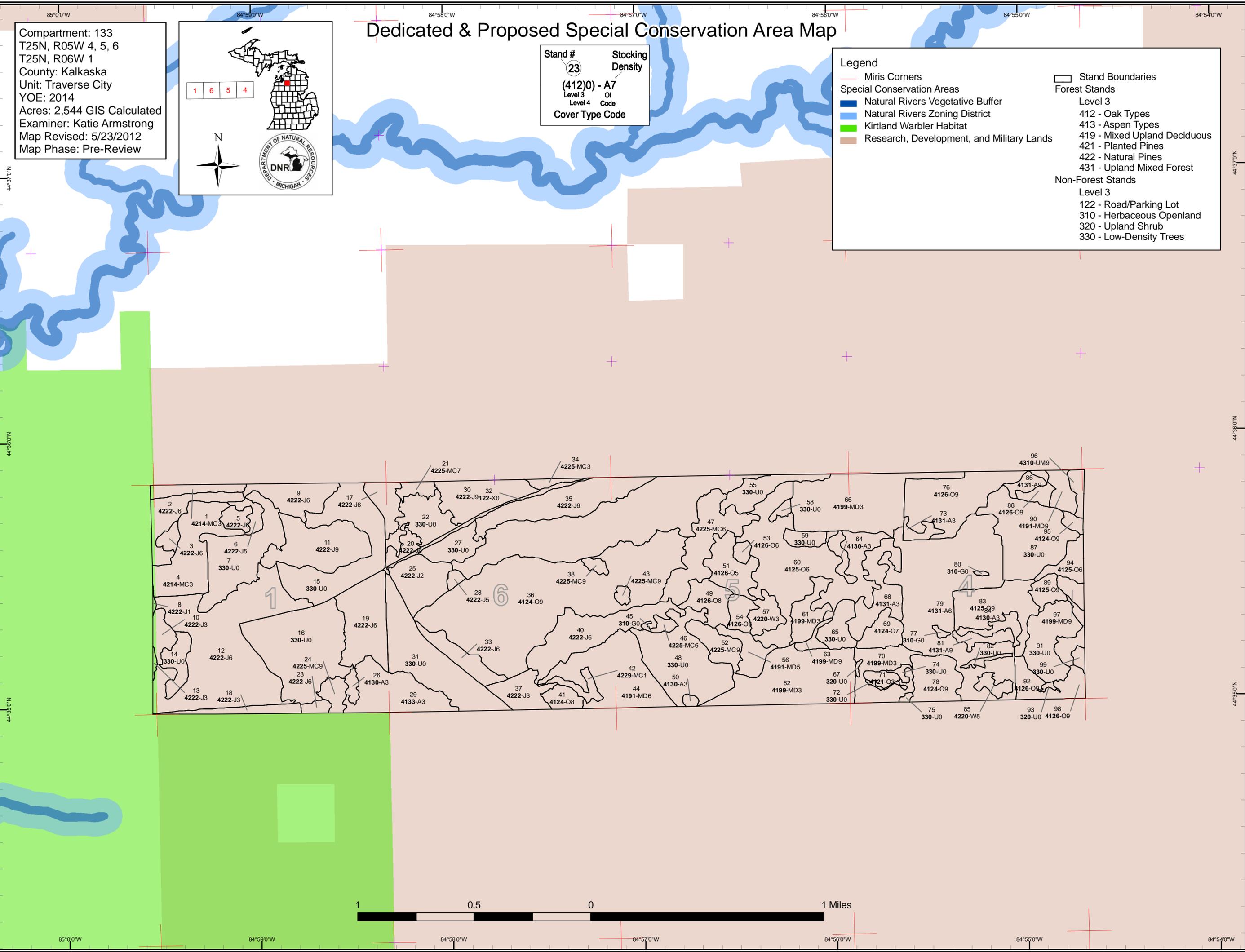
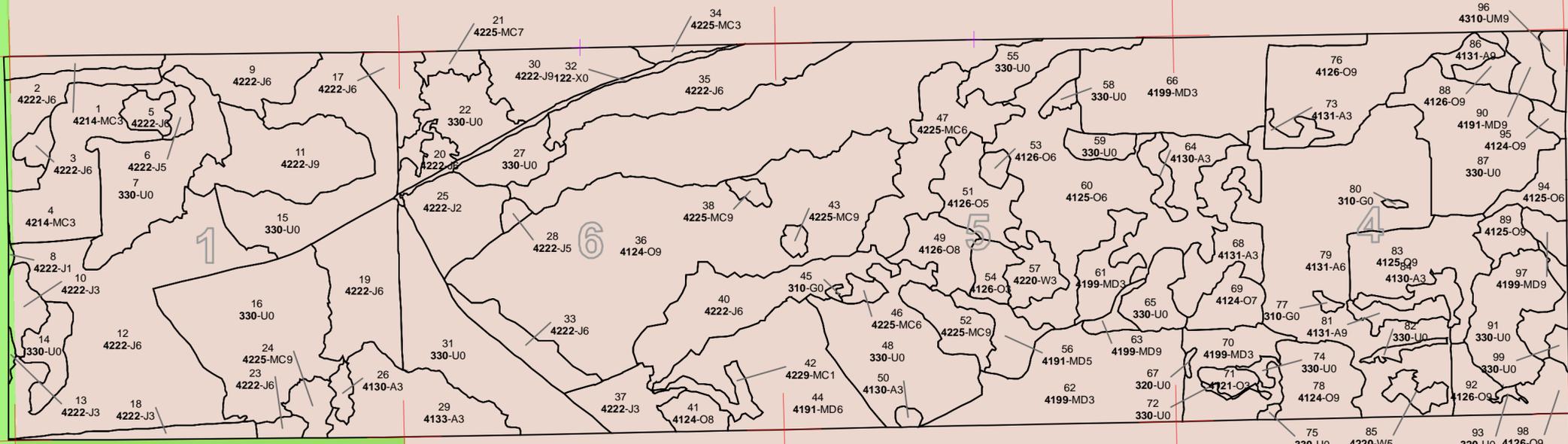
Compartment: 133  
 T25N, R05W 4, 5, 6  
 T25N, R06W 1  
 County: Kalkaska  
 Unit: Traverse City  
 YOE: 2014  
 Acres: 2,544 GIS Calculated  
 Examiner: Katie Armstrong  
 Map Revised: 5/23/2012  
 Map Phase: Pre-Review



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

**Legend**

- Miris Corners
- Special Conservation Areas
  - Natural Rivers Vegetative Buffer
  - Natural Rivers Zoning District
  - Kirtland Warbler Habitat
  - Research, Development, and Military Lands
- Stand Boundaries
- Forest Stands
  - Level 3
    - 412 - Oak Types
    - 413 - Aspen Types
    - 419 - Mixed Upland Deciduous
    - 421 - Planted Pines
    - 422 - Natural Pines
    - 431 - Upland Mixed Forest
  - Non-Forest Stands
    - Level 3
      - 122 - Road/Parking Lot
      - 310 - Herbaceous Openland
      - 320 - Upland Shrub
      - 330 - Low-Density Trees



**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	0	52	47	145	0	0	0	6	7	0	0	0	0	0	257
Herbaceous Openland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Jack Pine	1	30	44	30	69	26	279	68	0	0	0	0	0	0	547
Low-Density Trees	667	0	0	0	0	0	0	0	0	0	0	0	0	0	667
Mixed Upland Deciduous	0	17	106	88	0	0	4	6	63	11	0	0	0	0	296
Natural Mixed Pines	0	0	0	4	9	0	14	46	19	3	0	0	0	0	95
Oak	0	0	5	9	0	0	0	253	130	188	0	0	0	0	586
Planted Mixed Pines	0	0	11	49	0	0	0	0	0	0	0	0	0	0	60
Upland Mixed Forest	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
Upland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Urban	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
White Pine	0	0	0	18	0	0	0	0	0	0	0	0	0	0	18
<b>Total</b>	<b>679</b>	<b>99</b>	<b>213</b>	<b>344</b>	<b>78</b>	<b>26</b>	<b>303</b>	<b>381</b>	<b>219</b>	<b>202</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2544</b>



## Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit  
Year of Entry 2014

Compartment 133  
Total Compartment Acres: 2544

### Acres by Treatment Type

Commercial Harvest - 299	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

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	0	0	7	0	0	0	7
Jack Pine	200	0	0	0	0	0	200
Mixed Upland Deciduous	0	0	0	11	6	0	17
Natural Mixed Pines	0	0	0	59	0	0	59
Oak	0	0	0	9	0	0	9
Upland Mixed Forest	0	0	0	6	0	0	6
<b>Total</b>	<b>200</b>	<b>0</b>	<b>7</b>	<b>86</b>	<b>6</b>	<b>0</b>	<b>299</b>



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>11 61133011-CCReserves</b>	48.4	42220 - Natural Jack Pine	High Density Log	65		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest stand, leaving underrepresented species, where present. Leave retention areas around unofficial camping area and/or as 1-2 acre islands. Include timber sale specifications to encourage jack pine regeneration.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak. If natural regeneration is unacceptable, consider planting red pine.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
<b>12 61133012-CCReserves</b>	86.1	42220 - Natural Jack Pine	High Density Pole	64		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut with reserves leaving retention along Military Road or as scattered islands. Leave all red pine and white pine. Leave most of oak but mark some scattered healthy oak to encourage sprouting. Avoid recently regenerated areas.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> North half of Stand 12 is proposed for later treatment to more evenly distribute jack pine age classes. Retention will be left in both parts.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak. If natural regeneration is unacceptable, consider planting red pine.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
<b>33 61133033-CCReserves</b>	17.3	42220 - Natural Jack Pine	High Density Pole	74		Harvest	Clearcut with Reserves	42250 - Pine, Oak	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut with reserves. Cut all jack pine except retention (probably along Sunset Trail). Also mark some oak to cut, where it will open canopy over advanced regeneration. Leave all red pine.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									
<b>35 61133035-CCReserves</b>	48.2	42220 - Natural Jack Pine	High Density Pole	77		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Clearcut with reserves. Leave retention along Military Road and/or in patches. Leave all oak. Avoid areas of advanced oak regeneration.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>47 61133047- Shelterwood</b>	43.0	42250 - Pine, Oak	High Density Pole	76	81-110	Harvest	Shelterwood	42250 - Pine, Oak	Cmpt. Review Proposal

Prescription Shelterwood harvest with target residual BA around 50 sf. Within harvest area, cut all aspen and jack pine and thin red pine and white pine. Also mark some healthy oak to cut to encourage sprouting. Leave retention in patches or strips to meet minimum retention goals.

Other Include oak wilt spec.  
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak.  
Steps:

Proposed  
Start Date: 10/01/2013

<b>52 61133052- Shelterwood</b>	16.3	42250 - Pine, Oak	High Density Log	82	111-140	Harvest	Shelterwood	42250 - Pine, Oak	Cmpt. Review Proposal
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Prescription Shelterwood harvest with target residual BA around 50 sf. Within harvest area, cut all jack pine, white pine and oak except for green-marked trees. Leave retention in patches or strips to meet minimum retention goals.

Other  
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak.  
Steps:

Proposed  
Start Date: 10/01/2013

<b>81 61133081- SeedtreeCut</b>	7.2	4131 - Aspen, Oak	High Density Log	80	81-110	Harvest	Seed Tree with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
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Prescription Within harvest area, remove all aspen and thin oak to encourage sprouting (mark to cut). Target residual BA is 20-30 sf. Leave retention in patches or strips to meet minimum retention goals.

Other  
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, oak and pine.  
Steps:

Proposed  
Start Date: 10/01/2013

<b>89 61133089- Shelterwood</b>	9.5	4125 - Black, N. Pin Oak	High Density Log	92	81-110	Harvest	Shelterwood	4122 - Oak, Pine	Cmpt. Review Proposal
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Prescription Within harvest area, remove all aspen. Heavily thin oak and pine to a residual BA of about 50 sf. Leave retention in patches or strips sufficient to meet minimum retention goals.

Other Treat with Stand 97.  
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine and oak.  
Steps:

Proposed  
Start Date: 10/01/2013

<b>90 61133090- Shelterwood</b>	10.8	4191 - Mixed Upland Deciduous with Conifer	High Density Log	97	81-110	Harvest	Shelterwood	4122 - Oak, Pine	Cmpt. Review Proposal
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Prescription Within harvest area, remove all aspen. Heavily thin pine and oak to a residual BA of about 50 sf. Leave retention in patches or strips sufficient to meet minimum retention goals.

Other Treat with Stand 96.  
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine, oak, and aspen.  
Steps:

Proposed  
Start Date: 10/01/2013

**Table 3 -- Treatments Prescribed  
with No 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
<b>96 61133096-Shelterwood</b>	6.2	4310 - Pine, Oak Mix	High Density Log	68		Harvest	Shelterwood	42250 - Pine, Oak	Cmpt. Review Proposal

Prescription Within harvest area, remove all jack pine and aspen. Mark other species to cut where it will open canopy over advanced oak regeneration and/or  
Specs: encourage sprouting. Target residual BA of 50 sf. Leave retention in patches or strips sufficient to meet minimum retention goals.

Other Treat with Stand 90.  
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes pine, oak, aspen and maple.  
Steps:

Proposed  
Start Date: 10/01/2013

<b>97 61133097-Cut</b>	6.3	4199 - Other Mixed Upland Deciduous	High Density Log	76	81-110	Harvest	Low Thinning	4124 - Red with White Oak	Cmpt. Review Proposal
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Prescription Within harvest area, remove all aspen. Heavily thin oak and maple to a residual BA of about 50 sf. Leave all red pine. Leave retention in patches  
Specs: or strips sufficient to meet minimum retention goals.

Other Topography is rather hilly. Combine with Out-of-YOE treatment in Compartment 231 to facilitate access.  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2013

**Total Treatment  
Acreage Proposed: 299.4**

**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
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#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 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 OE-Thin	4.6			0		Harvest	Low Thinning	4122 - Oak, Pine	Cmpt. Review Proposal
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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**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42140 - Planted Mixed Pine	High Density Sapling	10.7	22	81-110	Military Lease Land. Similar to Stand 4. Clearcut in 1977. Mixture of natural jack pine and planted red pine. Red pine planted between 1986 and 1994 (FTP C-62-295) in wide spacing and in strips with 4 ch of natural regeneration between strips. Significant jack pine has regenerated even in planted areas. Jack pine and red pine dominance alternates throughout the stand. Red pine is suppressed in areas with good jack pine regeneration but doing ok in areas that were more open. Also contains scattered clumps of log-sized jack pine, showing some mortality, probably remnants from previous stand. Stand continues into Compartment 132, to the north. Snowmobile trail 76 runs along western edge.
2	42220 - Natural Jack Pine	High Density Pole	23.8	32		Military Lease Land. Variable stand. Parts have some planted red pine (like stand to north) but it is heavily suppressed by natural jack pine regeneration. Parts are larger jack pine (at least 48 years old) showing little to no mortality. Some open areas. Shallow drainage runs through northwestern part of stand although it's probably not mapped correctly. Northwest corner also contains poorly drained soil with pockets of different vegetation including leatherleaf. Snowmobile trail 76 runs through western part of stand.
3	42220 - Natural Jack Pine	High Density Pole	5.2	58		Military Lease Land. Appears to be an island of mature jack pine within area that was planted. Jack pine is relatively dense with small diameters.
4	42140 - Planted Mixed Pine	High Density Sapling	48.8	34		Military Lease Land. Similar to Stand 1. Cut in 1977. Mixture of natural jack pine and planted red pine. Red pine planted between 1986 and 1994 (FTP C-62-295) in wide spacing and in strips with 4 ch of natural regeneration between strips. Significant jack pine has regenerated even in planted areas. Jack pine and red pine dominance alternates throughout the stand. Red pine is suppressed in areas with good jack pine regeneration but doing ok in areas that were more open. Some canopy gaps. Lots of leatherleaf in southeastern corner of stand. Snowmobile trail 76 runs along western edge.
5	42220 - Natural Jack Pine	High Density Pole	7.1	57		Military Lease Land. Jack pine is dense but small in diameter. Lots of leatherleaf in the understory but almost no trees; a few white pine seedlings and at least one balsam fir seedling. Soil is poorly drained Au Gres Sand. Very few scattered overstory red pine and white pine.
6	42220 - Natural Jack Pine	Medium Density Pole	6.3	33		Military Lease Land. Cut in 1979. More open than other jack pine stands nearby. Groundcover is more leatherleaf than bracken fern.
8	42221 - Natural Jack Pine, Mixed Deciduous	Low Density Sapling	0.5	8		Military Board Land. Part of My Last Sale, 61-062-03-01, in Compartment 134, cut 4/2004. Stand was scheduled to be planted by WLD but sufficient natural regeneration occurred to meet wildlife specs for Kirtland Warbler area. Barely 25% forested. Snowmobile trail 76 runs along eastern edge.
9	42220 - Natural Jack Pine	High Density Pole	24.5	26		Military Lease Land. Clearcut in 1985. Cut continues into Compartment 132 to the north. Jack pine DBH varies from 2-14" with more older trees in east part of stand. Stand barely meets pole size class. No oak in understory, unlike some other nearby jack pine stands. Old railroad grade runs through east part of stand.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
10	42220 - Natural Jack Pine	High Density Sapling	9.4	26		Military Board Land. Clearcut in 1985. Dense jack pine with a few canopy gaps. Some scattered clumps of log-sized jack pine. Stand continues into Compartment 134 north of Military Road. Snowmobile trail 76 runs along northwest edge.
11	42220 - Natural Jack Pine	High Density Log	48.4	65		Military Lease Land. Mostly jack pine with some mortality. Good oak advanced regeneration, mostly 3-10' tall and 1-2" DBH. Groundcover also includes multiple species of woody shrubs.
12	42220 - Natural Jack Pine	High Density Pole	142.4	64		Mostly Military Board and some Lease Land. Mostly jack pine with scattered poor quality log/pole oak in canopy. Jack pine ranges from 4-16". Oak advanced regeneration is patchy, heavy in places. Some jack pine mortality. Most of red and white pine is south of Military Road. Trace of red maple in canopy. Scattered small openings, especially along western edge south of Military Road, or areas of mortality that have since regenerated.
13	42220 - Natural Jack Pine	High Density Sapling	1.0	19		Military Board Land. Part of Bluejay Jackpine sale, 61-017-93-01, in Compartment 134. Cutting completed 7/1993 and roller chopped 8/1993. Fairly dense regeneration with some gaps. Scattered overstory red pine and white pine. Kirtland Warbler management area.
17	42220 - Natural Jack Pine	High Density Pole	14.1	57		Military Board and Lease Land. Variable stand. Jack pine diameter varies from 2-10". Good oak regeneration (seedlings to 6" DBH) in places. Scattered openings. Some jack pine mortality. Part of central section is an area of near-total jack pine mortality which has regenerated naturally to jack pine, 2" DBH and 10'15' tall, and oak. Rolling hills. Northeast part is adjacent to stand heavily used by military.
18	42220 - Natural Jack Pine	High Density Sapling	10.5	26		Military Board Land. Clearcut in 1985 as part of the Kirtland's warbler habitat program. Sale in Compartment 137 was mistakenly extended into this compartment and onto Military Board Land.
19	42220 - Natural Jack Pine	High Density Pole	44.2	64		Military Board and Lease Land. Variable jack pine DBH: 4-12" with some mortality. Scattered mature oak in canopy with high oak density in understory. Probably more white than red. Scattered semi-open areas. Southeast corner of stand is different but less than 3 acres; less jack pine and more red pine, oak and pole-sized aspen.
20	42220 - Natural Jack Pine	High Density Pole	7.6	69		Military Board Land. Variable, poor quality stand with edges fading into opening. Jack pine diameter varies from 2-12". Some jack pine mortality. Decent advanced oak regeneration. Some military or recreational activity at edges.
21	42250 - Pine, Oak	Low Density Log	6.3	68		Military Board Land. Stand is fairly open with lots of bare sand/soil. Scattered mature trees -- poor quality oaks and jack pine -- are growing on top of ridge. Slope receives heavy use as off-road hill climb area. Also heavily used by military.
23	42220 - Natural Jack Pine	High Density Pole	4.0	64		Military Board Land. Heavy oak understory in places (1/2 - 2" DBH).



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	42250 - Pine, Oak	High Density Log	8.7	47	81-110	Military Board Land. Variable stand. Southern part is dominated by oak but north is more jack pine. Good oak regeneration in parts but mature oak is only fair quality. Very slight hill, but no operability issues. Jack pine is more dominant at north end.
25	42220 - Natural Jack Pine	Medium Density	28.7	17		Military Board Land. Stand was cut in 1994 with all species except oak removed. Good jack pine regeneration with oak throughout. Scattered canopy gaps.
26	4130 - Aspen	High Density Sapling	4.2	26		Military Board Land. Clearcut in 1985. Mostly aspen with a few stump-sprouted maple and oaks.
28	42220 - Natural Jack Pine	Medium Density Pole	2.9	70		Military Board Land. Remnant of Stand 41/OI stand 167, which was cut in 2007. Some jack pine mortality. Very heavy oak understory, ranging from seedling size to 20' tall.
29	4133 - Aspen, Mixed Pine	High Density Sapling	42.6	26		Military Board Land. Clearcut in 1985. Good regeneration with good mix of species, but mostly multi-stem clumps. Hard to tell what dominates. Stand is on a ridge running east-west. Pockets on top of ridge are dominated by pines.
30	42220 - Natural Jack Pine	High Density Log	32.7	69		Military Board Land. Good advanced oak regeneration including saplings 2-4" DBH. Moderate jack pine mortality. Some pockets of total jack pine mortality have allowed oak to grow. Some additional canopy gaps especially along Military Road and northwest corner near area of heavy training use. Evidence of past fire.
33	42220 - Natural Jack Pine	High Density Pole	17.3	74		Military Board Land. Jack pine old but small; DBH 2-14" with some mortality. Very heavy oak understory. Stand is flat terrain at base of hill. Some evidence of fire at south end of stand. South end is smaller jack pine and more open.  "Flat terrain with lots of advanced regeneration. Merchantable timber is in fairly poor condition. Some evidence of fires."
34	42250 - Pine, Oak	High Density Sapling	3.9	37		Military Board Land. Harvested in 1974. Mix of older jack pine and regeneration, as well as log- and seedling-sized oak. Some small canopy gaps.
35	42220 - Natural Jack Pine	High Density Pole	48.2	77		Military Board Land. Mostly jack pine with some poor quality oak in the canopy. Most oak in understory is less than 3' tall. Some jack pine mortality. Jack pine is smaller than stand across Military Road. Gentle hills.
36	4124 - Red with White Oak	High Density Log	209.7	72		Military Board Land. White pine understory is heavy in scattered pockets. Oak quality is fair to moderate. Stand is along a ridge with some moderately steep slopes. Scattered white pine, red pine, jack pine and aspen in overstory. Eastern third (east of N-S) road is older.
37	42220 - Natural Jack Pine	High Density Sapling	19.3	41		Military Board Land. Almost pole-sized jack pine but still mostly saplings. Low oak component. Scattered canopy gaps are openings that are filling in. Some evidence of military training.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	42250 - Pine, Oak	High Density Log	3.4	72		Military Board Land. Pocket of conifer within larger mixed stand. Different mostly because of a heavy white pine understory but also contains larger white pine and red pine in canopy. Poor quality oak. On a relatively steep, north-facing slope.
40	42220 - Natural Jack Pine	High Density Pole	49.5	47		Military Board Land. Variable stand with poor quality timber. Scattered openings. More black cherry than oak in understory with some pockets of pure black cherry sprouts. Rolling hills.
41	4124 - Red with White Oak	Medium Density Log	8.9	70	81-110	Military Board Land. Part of Surveillance Oak sale, 61-060-04-01, thinned winter 05/06. Few stumps sprouted after thinning and there is little oak in understory other than seedlings.
42	42290 - Natural Mixed Pine	Low Density Sapling	7.3	60		Military Board Land. Part of Surveillance Oak sale, 61-060-04-01, clearcut (with reserves) winter 05/06. Most of stand is regeneration -- red maple stump sprouts and oak 5-10' tall -- with some seedlings and overstory red pine, white pine and a few mature oak. Hilly topography. West fork is a valley.
43	42250 - Pine, Oak	High Density Log	2.8	89	81-110	Military Board Land. Small stand of oak and white pine with dense white pine understory. On a slope.
44	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	62.8	86	111-140	Military Board Land. Variable stand. Slight draw in west half of stand. Terrain is moderately hilly. Dense understory; parts will probably shift towards pine. Some parts are log-sized. Oak is moderate to good quality.
46	42250 - Pine, Oak	High Density Pole	3.4	95		Military Board Land. Retention from County Road Oak sale, 61-063-04-01, stand 51 to south, cut spring/fall 2006. Oak is moderate quality but there is little advanced oak regeneration. Trace of red maple in canopy.
47	42250 - Pine, Oak	High Density Pole	43.0	76	81-110	Military Board Land. Variable stand: oak/pine dominance alternates. Dense understory of oak seedlings and saplings and white pine. Parts of stand could shift toward white pine. Aspen in understory is dying out. Rolling hills. Gradual transition into adjacent stands.
49	4126 - White, Black, N. Pin Oak	Medium Density Log	18.0	82	51-80	Military Board Land. Thinned in spring 2006 as part of County Road Oak sale, 61-063-04-01. Some decent quality oak. Good aspen regeneration in gaps.
50	4130 - Aspen	High Density Sapling	1.9	18		Military Board Land. Clearcut in 1994. Dense regeneration consisting of mostly aspen, some multistem red maple, and a fair number of oak seedlings in understory. Oak component is patchy. No advanced oak.
51	4126 - White, Black, N. Pin Oak	Medium Density Pole	24.0	82	81-110	Military Board Land. Part of County Road Oak sale, 61-063-04-01, thinned spring 2006. Heavy browse on sprouts.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	42250 - Pine, Oak	High Density Log	16.3	82	111-140	Military Board Land. Natural pine mixed with oak. Heavy white pine understory. Some very large overstory white pine. On a hill sloping up from southwestern edge. Moderate deer populations. Trace of red pine in understory. Scattered openings, especially in southern end. Some good quality, large red oak in southwestern part.
53	4126 - White, Black, N. Pin Oak	High Density Pole	3.8	80	51-80	Military Board Land. Mixed stand. Pine showing up in aerial photos is coming from dense white pine understory. Mostly pole-sized oak of fair quality.
54	4126 - White, Black, N. Pin Oak	High Density Sapling	9.5	35		Military Board Land. Stand was clearcut in 1977. Dense regeneration. Some oak stems are just reaching pole size. Oak species should be considered as groups. Almost no understory.
56	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	14.4	37		Military Board Land. Stand was probably more open at one time and is slowly filling in with poor quality trees. Mostly multi-stem red maple, black cherry, and poor quality oak. Largest trees are open-grown white pine and some scattered red pine.
57	42200 - Natural White Pine	High Density Sapling	12.1	35	141-170	Military Board Land. Stand was cut in 1977. Dense white pine. No understory.
60	4125 - Black, N. Pin Oak	High Density Pole	110.2	96		Military Board Land. Large, variable stand. Parts are log size but overall the stand is more poles. Contains scattered conifer pockets and small openings, perhaps frost pockets. Moderately hilly terrain. Evidence of past fire. Little advanced oak regeneration. Some aspen mortality.
61	4199 - Other Mixed Upland Deciduous	High Density Sapling	17.0	18		Military Board Land. Stand was clearcut in 1994. Lots of multistem red maple and oak. Some oak seedlings but they are small and suppressed. Scattered openings along edges and road.
62	4199 - Other Mixed Upland Deciduous	High Density Sapling	74.0	35		Military Board Land. This stand was clearcut in 1977. Mixture of oak, red maple and aspen. Some of the oak is just reaching pole size and appears to have decent form. Stand contains scattered pockets of conifer and small openings.
63	4199 - Other Mixed Upland Deciduous	High Density Log	4.4	68		Military Board Land. This stand is at the edge of a younger stand and may be a remnant of that stand. Mostly poor quality oak with some aspen and red maple.
64	4130 - Aspen	High Density Sapling	6.6	18		Military Board Land. Stand was clearcut in 1994. Mostly bigtooth aspen with some oak and maple. Oaks are almost in overstory but are mostly suppressed. Occasional white pine.
66	4199 - Other Mixed Upland Deciduous	High Density Sapling	78.7	28		Military Board Land. Clearcut in 1985. Oak and maple are mostly multi-stemmed/stump sprouts and poor quality. Borderline pole stand. Eastern third has more saplings. Scattered openings ~1/4 acre. Moderately hilly.
68	4131 - Aspen, Oak	High Density Sapling	30.5	18		Military Board Land. Clearcut in 1994. Flat to rolling hills. Mostly aspen with some oak and maple.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
69	4124 - Red with White Oak	Low Density Log	14.0	95	1-50	Military Board Land. Part of Military Oak Sale, 61-020-04-01, cut 12/2008. Green tree oak left. Significant red maple sprouts in places. Others are more open. Scattered oak seedlings but little advanced oak regen. Trace of white pine in the understory. Residual oak is good quality. Residual oak on north side of road is slightly larger. There used to be an opening typed as U0 in the middle of the stand, straddling the road. Evidence of past fire.
70	4199 - Other Mixed Upland Deciduous	High Density Sapling	27.7	27		Military Board Land. Clearcut in 1985. Lots of stump sprout clumps. Less aspen than other mixed stands in this compartment. Some oak and red pine is just reaching pole size and there are scattered log size oaks.
71	4121 - Oak, Aspen	High Density Sapling	5.0	27		Military Board Land. Clearcut in 1985. Mostly moderate quality oak with some aspen and red maple.
73	4131 - Aspen, Oak	High Density Sapling	5.4	18		Military Board Land. Clearcut in 1994. Mostly aspen and maple with some oak mixed in. Red maple is multi-stemmed.
76	4126 - White, Black, N. Pin Oak	High Density Log	54.1	90	51-80	Military Board Land. Thinned 12/2008, Military Oak Sale, 61-020-04-01. Good quality oak, mature trees are more red than white. Thinned less heavily than other stands that were recently thinned. Fair amount of 2-3" oak but it is more white than red. Parts are more of a pole stand than log.
78	4124 - Red with White Oak	High Density Log	25.3	75	51-80	Military Board Land. Cut 12/2008, Military Oak Sale, 61-020-04-01. Good quality oak. Some clumps of oak regeneration 2-4" DBH. Red maple level looks manageable and pine and oak recruitment looks good. Contains some aspen clones. Should be a nicely mixed stand.
79	4131 - Aspen, Oak	High Density Pole	144.8	35		Military Board Land. Clearcut in 1977. Good regeneration. Mostly aspen and oak with some maple. Some aspen has just reached pole size. Oak quality is surprisingly good. Scattered conifers including jack pine, white pine, and red pine, which are only a significant contributor to canopy in isolated pockets. Contains scattered openings with no trees or shrubs, up to 0.5 ac. Rolling terrain.
81	4131 - Aspen, Oak	High Density Log	7.2	80	81-110	Military Board Land. Mixed aspen and oak. Aspen is starting to die. Minimal advanced oak regeneration but moderate number of seedlings.
83	4125 - Black, N. Pin Oak	High Density Log	39.4	82	111-140	Military Board Land. Variable stand. Some parts are more pole-sized than log. Denser than Stand 102. Larger trees are moderate quality. Scattered pockets of conifers and a few small openings. Mostly flat. BA by species: 1) pin oak 80, white oak 20, red oak 10, aspen 0. 2) 40, 20, 20, 40 3) 60, 20, 10, 30
84	4130 - Aspen	High Density Sapling	8.1	18		Military Board Land. Clearcut in 1994. Dense regeneration including mostly bigtooth aspen, with some multistem red maple, and some oak. Oak tends to be more in understory than canopy. Little to no conifer.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
85	42200 - Natural White Pine	Medium Density Pole	6.0	35		Military Board Land. Cut in 1977. Fairly dense white pine just starting to reach pole size. Most significant understory component is also white pine. Canopy also includes some poor quality red oak and stump sprout red maple. Sizeable openings are scattered throughout the stand. Old railroad grade runs through western half.
86	4131 - Aspen, Oak	High Density Log	6.2	76	111-140	Military Board Land. Similar to 98 but trees are slightly larger and canopy is more closed. Little to no oak in understory. Overall diameter is barely log size. BA breakdowns by species are: oak 100, aspen 30; oak 80, aspen 20; oak 70, aspen 100.
88	4126 - White, Black, N. Pin Oak	High Density Log	7.3	82	81-110	Military Board Land. Mixed oak stand with some aspen. Oak is fairly good quality but still seems small,
89	4125 - Black, N. Pin Oak	High Density Log	9.5	92	81-110	Military Board Land. Poor quality oak with varying levels of white pine understory and aspen in canopy. Barely log size. Poor site based on quality of pin oak. Flat terrain to rolling hills.
90	4191 - Mixed Upland Deciduous with Conifer	High Density Log	10.8	97	81-110	Military Board Land. Variable stand with more aspen and oak to the north and more white pine to the south. High oak mortality in areas dominated by white pine. Scattered openings in the north half of stand.
92	4126 - White, Black, N. Pin Oak	High Density Log	21.3	82	81-110	Military Board Land. Variable stand. Moderate, rolling hills. Some oak mortality. Fair quality oak. Little to no understory. Some areas are mostly pole-sized; they have higher density. Contains scattered, small openings.
94	4125 - Black, N. Pin Oak	High Density Pole	12.4	82	81-110	Military Board Land. Poor quality oak is dense but stems are small. Patches of aspen is also poor quality and dying out.
95	4124 - Red with White Oak	High Density Log	3.8	82	111-140	Military Board Land. Mixed oak stand. Mostly red oak with some white. Decent quality, size and volume. Fair amount of red maple in understory and getting into canopy, sapling to pole size; competition could be a problem. Very little advanced oak regeneration. Aspen is starting to die out.
96	4310 - Pine, Oak Mix	High Density Log	6.2	68		Military Board Land. Mixed stand of oak and pine. Some oak seedlings and advanced oak regeneration. Mature oak is of fair quality. Oaks in understory are variable, high concentrations in some places.
97	4199 - Other Mixed Upland Deciduous	High Density Log	6.3	76	81-110	Military Board Land. Middle of south side is more oak than aspen. Some aspen mortality. Good quality oak. Significant red maple in canopy and upper understory. Evidence of fire.
98	4126 - White, Black, N. Pin Oak	High Density Log	9.5	76	81-110	Military Board Land. Moderate quality oak, better south of road. Fair level of advanced oak regeneration.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
7	3303 - Mixed Low Density Trees	51.1	Natural Regen	Jack Pine	Mostly Military Lease and some Board Lands. Part of Aimless Jack sale, 61-069-04-01. Final harvest and chipped, 10/08. All oak was left. A few jack pine seedlings and only trees greater than 3' are cherry sprouts. No oak at north end but scattered log-sized oak and a few clumps of 4-6" DBH oak at south end. Previous stand contained scattered opening along western and southeastern edges that are now hard to distinguish from natural regen.
14	3303 - Mixed Low Density Trees	13.4	Natural Regen	Jack Pine	Military Board Land. Part of Aimless Jack sale, 61-069-04-01, cut 10/2008. Final harvest and chipped. Left all oak. Sparse regeneration consists of low density jack pine seedlings and scattered black cherry sprouts. Only trees taller than 3' were left from sale: less than 10 sf of poor quality oak (4-10" dbh) and scattered black cherry saplings. More jack pine snags than usual. Only mature jack pine left are along redline.
15	3303 - Mixed Low Density Trees	65.3	Natural Regen	Jack Pine	Military Lease Land. Part of Military Sunset Jack sale, 61-102-04-01. Completed 6/08. All jack pine was cut. Fair number of jack pine ~3-4" dbh left. Good jack pine regeneration. Very few scattered mature oaks and a few oak seedlings in places. Occasional mature white pine and red pine. Also, a few black cherry seedlings and saplings. According to OI, previous stand contained small opening in north half along Sunset Trail. It was hard to identify from aerial photos/winter fieldwork.
16	3303 - Mixed Low Density Trees	83.6	Natural Regen	Jack Pine	Military Board Land. Part of Military Jack sale, 61-062-04-01, cut 6/2008. Final harvest of all trees 4" and up. Fair number of jack pine ~3-4" dbh. Good jack pine regeneration. Very few scattered mature oaks and fair number of oak seedlings in places. Also, a few black cherry seedlings and saplings.
22	330 - Low-Density Trees	26.4	No	Unspecified	Military Board Land. Mostly open with widely scattered jack pine seedlings and saplings, black cherry sapling clumps, oak seedlings and saplings and a few larger jack pine and oak. Some recreational use during hunting season.
27	3302 - Low Density Conifer Trees	16.8	No	Unspecified	Military Board Land. Military uses part near road as a landing zone. Clumps of mixed pine and oak saplings and poles and scattered seedlings.
31	3301 - Low Density Deciduous Tree	64.1	Natural Regen	Jack Pine	Military Board Land. Part of Military Jack sale, 61-062-04-01. Cut 6/2008. Final harvest all trees 4" and up. Includes some former openings. Good oak regeneration: dense stump sprouts 5-10' tall and scattered individuals 2-4" DBH. Scattered 4" DBH jack pine. More deciduous than conifer at this stage. Rolling hills.
32	122 - Road/Parking Lot	7.6	No	Unspecified	Military Board Land. Military Road is not maintained by the county through this section and is very sandy. As such, multiple parallel trails have developed. Also used as a fire break.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
39	3303 - Mixed Low Density Trees	132.9	Natural Regen	Jack Pine	Military Board Land. Jack Pine Soldiers sale, 61-098-04-01, completed 5/07. Good jack pine regeneration and clumps of mature jack pine left. Scattered clumps of mature trees. High levels of oak regeneration with only scattered jack pine regeneration. West part has significant red pine and jack pine in 4-6" DBH range and fair amount of oak advanced regeneration. Tail on eastern end is less than 1 acre but has more trees, mostly jack pine (J5) with some oak.
45	310 - Herbaceous Openland	0.7	No	Unspecified	Military Board Land. Small stand with little to no trees or shrubs. Only a few black cherry trees. May be a frost pocket since the stand lies in a depression.
48	330 - Low-Density Trees	62.4	Natural Regen	Oak	Military Board Land. Harvested in spring/fall 2006 as part of County Road Oak sale, 61-063-04-01. Included uncut islands and scattered oak to leave. Good regeneration. Mostly red maple with fair-to-moderate amount of oak. Oak is still mostly seedling-sized. A few white pine seedlings. Some scattered mature white pine, red pine, oak and a small clump of mature oak left near top of ridge.
55	330 - Low-Density Trees	19.2	Natural Regen	Oak	Military Board Land. Unit 2 of Sharon Truck Oak sale, 61-064-04-01. Completed 5/2007. Good oak sprouts with scattered overstory red pine and oaks. Follows ridge.
58	330 - Low-Density Trees	2.9	Natural Regen	Aspen	Military Board Land. Bigtooth aspen, harvested October 2008, part of Buckshot Aspen sale, 61-058-07-01. Some overstory oak, white pine, and red pine. Lots of red maple sprouts, minimal aspen. Oak seedlings include individual stems and root sprouts.
59	330 - Low-Density Trees	7.3	Natural Regen	Aspen	Military Board Land. Bigtooth aspen, harvested October 2008, part of Buckshot Aspen sale, 61-058-07-01. A few oak retained. Regeneration is good -- mostly red maple, oaks, and aspen. Lots of bracken fern. Scattered large white pine.
65	330 - Low-Density Trees	14.6	Natural Regen	Aspen	Military Board Land. Part of Buckshot Aspen, 61-658-07-01, Clearcut 10/2008. A few oak left in the overstory. Low regeneration but not a concern. Lots of stump sprout red maple (3-5' tall) and a few oak seedlings < 3' tall. Some aspen.
67	320 - Upland Shrub	0.7	No	Unspecified	Military Board Land. Small opening with scattered trees. Mostly saplings: jack pine, aspen and oaks. May be a frost pocket.
72	330 - Low-Density Trees	1.3	No	Unspecified	Military Board Land. Small opening on either side of poor dirt road. Contains scattered trees, mostly oak and red maple saplings and white pine seedlings. There is some pole and log-sized aspen and 1 large white pine at the edge.
74	330 - Low-Density Trees	2.1	No	Unspecified	Military Board Land. Opening with scattered trees including mature oak, white pine, jack pine, and red maple. Many large stumps visible.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
75	330 - Low-Density Trees	1.0	No	Unspecified	Military Board Land. Small opening with scattered trees and stumps. Mostly oak and black cherry seedlings and saplings with a few pole-sized oaks.
77	310 - Herbaceous Openland	1.3	No	Unspecified	Military Board Land. Bowl-shaped depression. Probably a frost pocket. No trees or shrubs. Groundcover unknown because of snow. A few stumps are visible.
80	310 - Herbaceous Openland	0.7	No	Unspecified	Military Board Land. Long, narrow bowl-shaped depression. Probably a frost pocket. No trees or shrubs. Groundcover unknown because of snow. A few stumps are visible.
82	330 - Low-Density Trees	2.7	No	Unspecified	Military Board Land. Opening with scattered mature trees including aspen, white pine, and red pine. Very few seedlings.
87	330 - Low-Density Trees	61.6	Natural Regen	Aspen	Military Board Land. Part of Raven Aspen Sale, 61-059-04-01, completed 2/2008. Lots of red maple and some aspen saplings and oak seedlings. A few 2-4" DBH red maple and scattered mature red pine, jack pine and white pine in overstory.
91	3301 - Low Density Deciduous Tree	35.0	Natural Regen	Oak	Military Board Land. Part of Raven Aspen sale, 61-059-04-01. cut 2/2008. Mostly red maple stump sprouts, 5-10' tall, with some oak seedlings and aspen saplings. No mature overstory.
93	320 - Upland Shrub	1.1	No	Unspecified	Military Board Land. Small opening at south end of recent clearcut. Scattered trees and stumps but mostly open. Contains oak seedlings and saplings and a few aspen saplings.
99	330 - Low-Density Trees	2.9	No	Unspecified	Military Board Land. Very disturbed site. Hilly topography and plentiful offroad vehicle use which extends into compartment to east. Scattered trees include mature oaks and oak seedlings, and some red pine saplings. Trees are poor quality.



### 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.