



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

COMPARTMENT # 132 ENTRY YEAR: 2012

Compartment Acreage: 3387 County: Kalkaska

Stand Examiner: Donna Hagan

Legal Description: T26N R6W, Sections 25 & 36
T26N R5W, Sections 28, 29, 30, 31, 32 & 33

Management Goals: Maintaining a variety of cover types and age class diversity which favor a variety of game and nongame species. Since most of the compartment is Military Board Land, which is dedicated to military training and maneuvers, management goals will be modified with their desired training in the compartment. Military use of the area is the priority during summer months (June 1 - September 1).

Soil and Topography: Lupton Muck, Newton Loamy sand, Grayling sand and Graycalm sand.

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

Primarily state owned Military Board land with some private parcels along the Manistee River. Outside of the military use, the land use in this compartment centers primarily upon recreation. Most of the private holdings along the Manistee river have a cabin built near the riverbank.

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

Red-shouldered hawk, N. Kirtland's warbler and Massasauga recorded in compartment.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There is a concern in section 33.

Special Management Designations or Considerations: The Manistee River and all associated tributaries in the compartment are Designated Trout Streams, and the Manistee River in this area is considered a "Blue Ribbon Trout Stream" by Fisheries Division. The Manistee River is under Natural Rivers designation, therefore, no cutting should take place within 175 feet of the Manistee River or within 50 feet of any of the other small tributaries in this area. The river corridor within this compartment is a Quality fishing area with special regulations including "flies only" restrictions. The Manistee River in this area is very heavily used by anglers and recreational canoeists. Most of the compartment is Military Board Land that is dedicated to the military for training and maneuvers. The military use is coordinated by Camp Grayling National Guard.

Watershed and Fisheries Considerations: The Manistee River, Clear Creek, and several unnamed tributaries flow through Compartment 132. All are Designated Trout Streams. The Manistee River hosts self-sustaining populations of brown, brook, and rainbow trout. The Manistee River in this vicinity is very heavily fished by anglers seeking trout. In addition, the Manistee River is protected under the Upper Manistee River Natural Rivers Designation. For Stand 28, bmps should be followed along the unnamed stream.

Wildlife Habitat Considerations: The majority of this compartment falls in a broad, flat outwash plain with dry, sandy soils. This is historically a highly dynamic, fire-driven ecosystem. Maintain a variety of age classes of jack pine within the compartment, aiming for relatively equal acreage of each age class. Thus, a continual presence of mature cover will be present in this important deer wintering area, as well as diverse habitat for numerous songbirds and small mammals, etc. Red pine plantations should retain deciduous trees (e.g. cherry, oak) and down logs as much as possible to diversify within-stand habitat. Bottomland types also provide deer winter cover and habitat for hares, bobcats, and bears. Lowland hardwood forests here have been clearcut in the past with poor results. Some small patch cuts in these types may be appropriate to replicate natural blowdown events, but care must be taken to avoid converting sites to emergent wetland cover. Military operations call for avoidance of creating Kirtland's warbler habitat, so jack pine cuts should be designed with relatively small sized or irregular patches, retaining deciduous trees, snags, and other features useful to wildlife in general but non-conducive to KW occupancy. State owned lands along the river should be maintained in mature forest cover as much as possible, including some super canopy white pine for potential eagle/osprey nests or roosts.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium and dune sand. The glacial drift thickness varies between 200 and 800 feet. Beneath the glacial drift are the Mississippian Michigan Formation and Marshall Sandstone. The Michigan is quarried for gypsum and the Marshall has been used for a building stone in the past. The nearest gravel pit is within one mile to the southeast in the SW of Section 3. Gravel potential in the compartment is considered good, especially the southeast corner. This area is located one mile north of Garfield 8 Field. The field produces from the Devonian Richfield and the Ordovician PdC. The PdC has produced over 46 Bcf gas. There may be additional Devonian and Ordovician potential in the compartment. A couple parcels of DMVA lands are leased.

Vehicle Access: Roads into the compartment are adequate. All the stream crossings are constructed with culverts. A road leading out of stand 84 (Sec. 33), down a steep hillside into stand 80, should be closed due to the severe erosion problems. Some of the abundance of roads in the compartment is due to the development of roads during military use of the area. Additional road closures are desired and must be cleared with the "Operations" segment of the Camp Grayling National Guard.

Survey Needs: Some corners will be needed along the property lines on those Consumers Leases that were bought up by the leasee.

Recreational Facilities and Opportunities: CCC Bridge State Forest Campground - Stand 20 is the south unit of the CCC Bridge SFCG. River Access Sites - A number of access points to the Manistee River are in place along King Road. These informal access points are the subject of evaluation by the Upper Manistee River Access Committee. None of the river access points are officially managed now and some are causing concern due to overuse and degradation to the Manistee River. Most of these sites are simply traditional use areas that were established by fishermen over a period of many years. These same access points are now heavily used by canoeists, float tubers, kayakers and river boat fishermen. This stretch of the Manistee River has been a Quality Fishing area for several years. In 1999, this "Flies Only" area was expanded to include the stretch from M-72 to Yellow Trees Landing. The result was that a great deal of attention and increased use has focused upon the entire river corridor. Hunting - there is fairly heavy pressure during the whitetail deer season.

Fire Protection: This compartment has been hit numerous times by moderately large fires. Large contiguous blocks of explosive Jack Pine fuels, cause this area to be vulnerable to wildfires of catastrophic proportions. Few natural fuelbreaks exist, with the exception of the Manistee River. Heavy use of the area by Military troops in the summer months increases the human factor. The military has, to some degree, reduced careless use of incendiary devices lowering the fire incidence on their land base somewhat. The

threat of loss of life due to being trapped by a full fledged Jack Pine wildfire is a serious concern during peak periods of Military training. Sharon Truck Trail/Howe Road is designated as a fuelbreak. VFD protection is from Bear Lake Fire Dept., and DNRE protection is from the Kalkaska Field Office. The entire compartment falls within Zone 5 which means on a Very High or an Extreme Fire day, DNRE equipment from several stations respond to the fire. Urban Innerface is a major concern along the river, with many cabins and seasonal residences present.

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

Compartment 132
 T26N, R05W, Sec. 28-33
 T26N, R06W, Sec. 25, 36
 County: Kalkaska
 Unit: Traverse City
 YOY: 2012
 Acres: 3,387 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 5/24/2010
 Map Phase: Pre-Review

Cover Type & Treatment Map

Legend

- Miris Corners
- Paved Roads
- Poor Dirt Roads
- Intermittent Stream/Drain
- Stream
- Trails
- Snowmobile Trails
- Access Sites
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand, Soil

Stand #

(23)

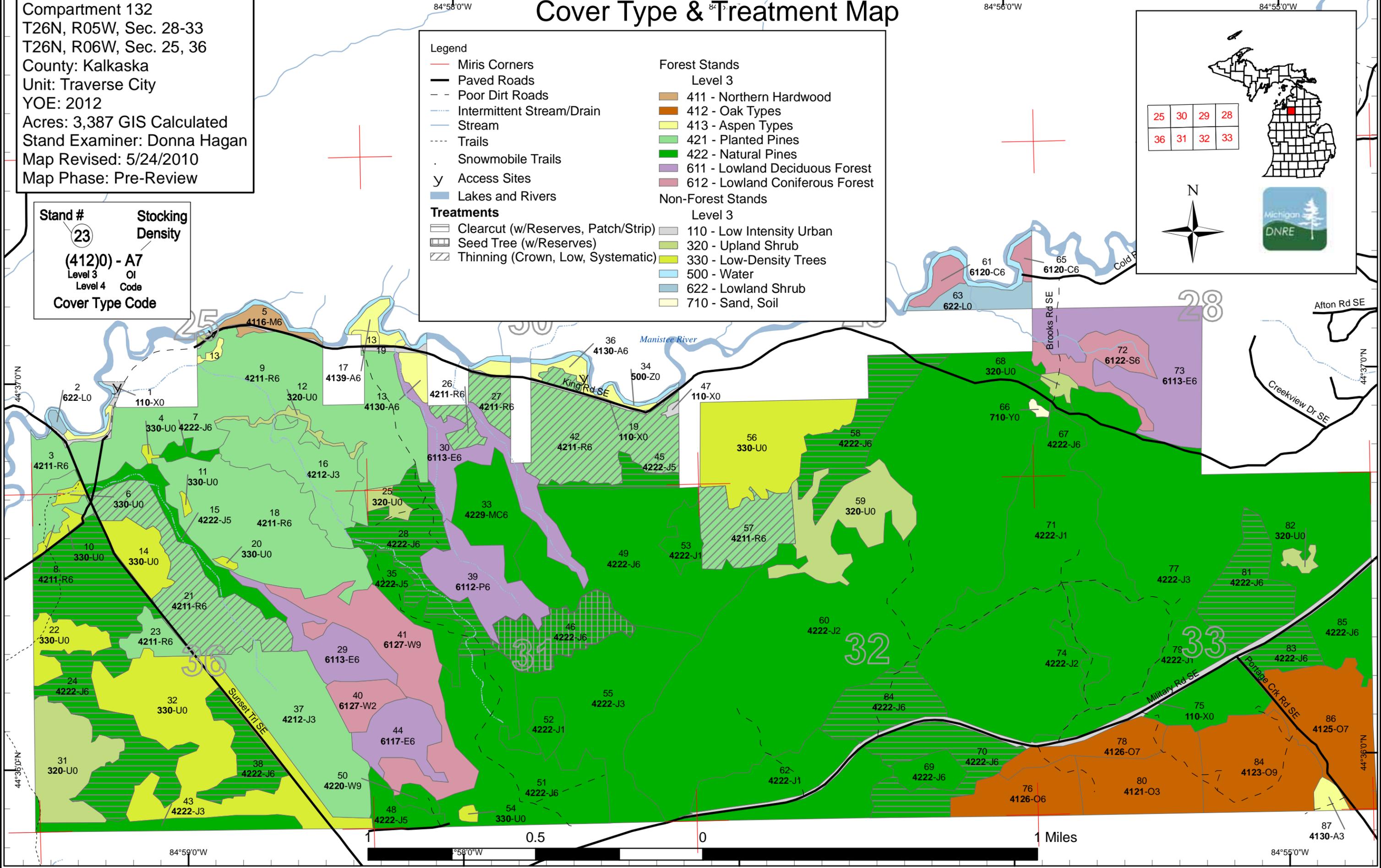
Stocking Density

(412)0 - A7

Level 3 OI
Level 4 Code

Cover Type Code

Michigan DNR logo



44°37'0"N 84°58'0"W 84°56'0"W 84°55'0"W
 44°37'0"N 44°36'0"N 44°36'0"N 44°36'0"N
 84°59'0"W 84°58'0"W 84°55'0"W

Compartment 132
 T26N, R05W, Sec. 28-33
 T26N, R06W, Sec. 25, 36
 County: Kalkaska
 Unit: Traverse City
 YOE: 2012
 Acres: 3,387 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 5/24/2010
 Map Phase: Pre-Review

Stand Boundary Map

Legend

- Miris Corners
- Paved Roads
- - Poor Dirt Roads
- Intermittent Stream/Drain
- Stream
- - - Trails
- Snowmobile Trails
- y Access Sites
- Stand Boundaries

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
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Non-Forest Stands

Level 3

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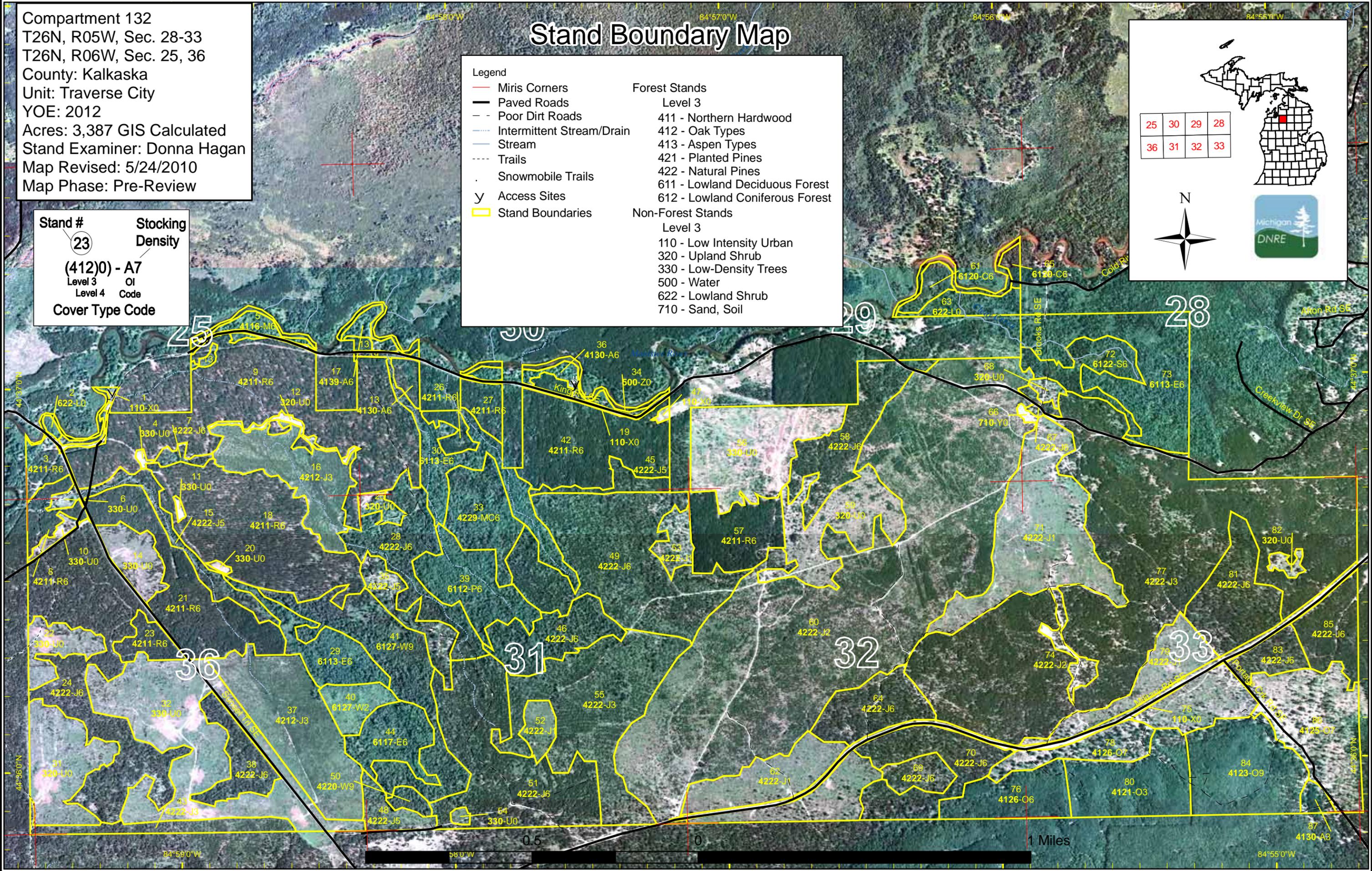
Stand #
23

Stocking Density

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

25	30	29	28
36	31	32	33

N



Dedicated & Proposed Special Conservation Area Map

Compartment 132
 T26N, R05W, Sec. 28-33
 T26N, R06W, Sec. 25, 36
 County: Kalkaska
 Unit: Traverse City
 YOE: 2012
 Acres: 3,387 GIS Calculated
 Stand Examiner: Donna Hagan
 Map Revised: 5/24/2010
 Map Phase: Pre-Review

Legend

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas
- Cold Water Streams
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Kirtland Warbler Habitat
- Campgrounds
- Research, Development, and Military Lands

Forest Stands

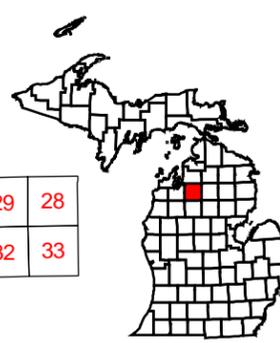
- Level 3
- 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest

Non-Forest Stands

- Level 3
- 110 - Low Intensity Urban
 - 320 - Upland Shrub
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 710 - Sand, Soil

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

84°55'0"W



25	30	29	28
36	31	32	33



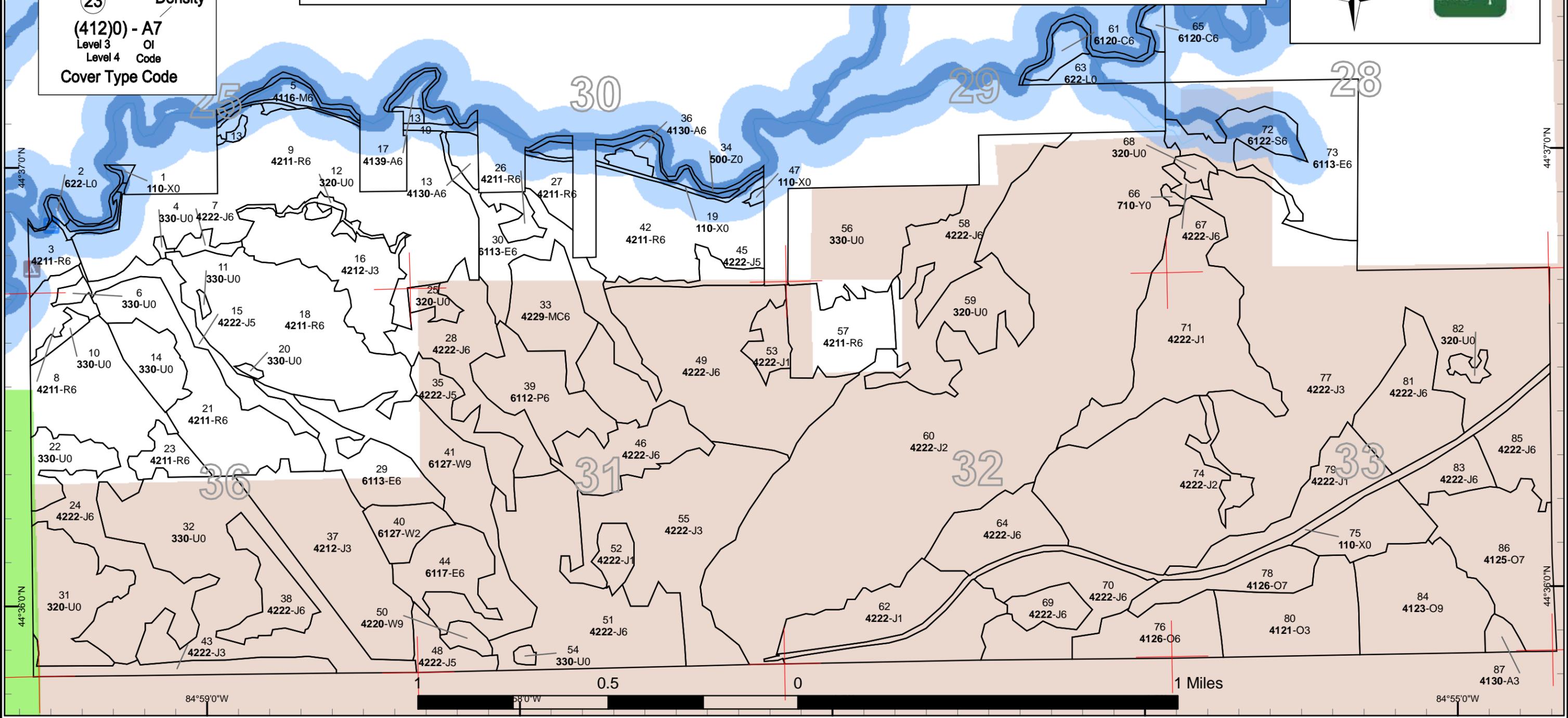



Table 1 – Total Acres by Cover Type and Age Class
(Level 3 Cover Type)



	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 Types	0	0	0	5	0	10	15	0	0	0	0	0	0	0	0	30
Low Intensity Urban	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Low-Density Trees	216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
Lowland Coniferous Forest	0	0	14	0	0	0	0	24	0	0	11	64	0	0	0	113
Lowland Deciduous Forest	0	0	0	0	0	0	37	100	65	0	0	0	0	0	0	203
Lowland Shrub	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Natural Pines	0	0	20	866	134	484	31	198	63	45	5	0	0	0	0	1846
Northern Hardwood	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
Oak Types	0	0	0	46	0	0	0	0	0	88	82	0	0	0	0	216
Planted Pines	0	0	118	0	0	313	147	0	0	0	0	0	0	0	0	579
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Upland Shrub	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105
Water	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Total	394	0	152	917	134	808	230	329	128	133	97	64	0	0	0	3387



Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2012

Compartment 132
Total Compartment Acres: 3387

Acres by Treatment Type

Commercial Harvest - 572	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>
Jack Pine	356	0	33	0	0	0	389
Red Pine	0	0	0	0	182	0	182
Total	356	0	33	0	182	0	572



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	61132021-Cut	61.4	42110 - Planted Red Pine	High Density Pole	48	Harvest	Systematic Thinning	Planted Red Pine	Cmpt. Review Proposal

Prescription Several clumps of pure jack pine pockets are found within stand. Thin red pine, take out jack pine.

Specs:

Other

Comments:

Next

Steps:

24	61132024-Cut	106.8	42220 - Natural Jack Pine	High Density Pole	62	Harvest	Clearcut with Reserves	Planted Jack Pine	Cmpt. Review Proposal
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Prescription Take out jack and leave red pine. Replant North half.

Specs:

Other

Comments: South half of stand is Military Board Land. The red pine that is in this stand has been planted. Mainly concentrated in the central portion of stand.

Next

Steps:

26	61132026-Cut	6.9	42110 - Planted Red Pine	High Density Pole	45	Harvest	Systematic Thinning	Planted Red Pine	Cmpt. Review Proposal
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Prescription Needs a first thinning, however currently there is an access problem that will be cleared up in 2013 when an adjoining parcel becomes state land.

Specs: So hold off until 10/1/2014.

Other

Comments:

Next

Steps:

27	61132027-Cut	10.5	42110 - Planted Red Pine	High Density Pole	45	Harvest	Systematic Thinning	Planted Red Pine	Cmpt. Review Proposal
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Prescription First thinning. Third row thin. Most of stand is Consumers Lease Land, M-38 till 2013. Treatment will be delayed until 10/1/2014.

Specs:

Other

Comments:

Next

Steps:

28	61132028-Cut	44.8	42220 - Natural Jack Pine	High Density Pole	89	Harvest	Clearcut with Reserves	Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Recommend taking out all jack pine 6" and greater, red maple and aspen. This stand has an intermittent creek running through it. This could be the retention area.

Specs:

Other

Comments: Military Board Land. Very old jack pine. A lot falling down.

Next

Steps:

38	61132038-Cut	21.6	42220 - Natural Jack Pine	High Density Pole	62	Harvest	Clearcut with Reserves	Planted Jack Pine	Cmpt. Review Proposal
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Prescription Clearcut and replant to jack pine.

Specs:

Other

Comments: This stand was left uncut last time to break up the stand to prevent attracting nesting Kirtland's Warbler because this is adjacent to Military Board Land.

Next

Steps:



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42	61132042-Cut	67.9	42110 - Planted Red Pine	High Density Pole	45	Harvest	Systematic Thinning	Planted Red Pine	Cmpt. Review Proposal

Prescription Third row thinning.

Specs:

Other Consumer Leases are up in 2011 - M-36, M-34, M-33, so should be good to go by 2012.

Comments:

Next

Steps:

45	61132045-Cut	9.5	42220 - Natural Jack Pine	Medium Density Pole	69	Harvest	Clearcut with Reserves	Natural Jack Pine	Cmpt. Review Proposal
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Prescription Jack pine falling down. Best to final harvest.

Specs:

Other Most of stand falls within a Consumers Lease that will expire in 2011. Wait until 2012 to cut.

Comments:

Next

Steps: May be enough natural jack pine regeneration so don't have to replant.

46	61132046-Cut	33.4	42220 - Natural Jack Pine	High Density Pole	46	Harvest	Seed Tree with Reserves	Natural Mixed Pine	Cmpt. Review Proposal
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Prescription The stand is composed of various species. The goal here should simply be to convert the stand to a species besides jack pine. There is a good stocking of spruce in some areas and other species are scattered around. Some large red and white pine serve as seed sources for those species. Treat taking out the jack pine and red maple.

Other Military Board Land.

Comments:

Next

Steps:

57	61132057-Cut	35.7	42110 - Planted Red Pine	High Density Pole	43	Harvest	Systematic Thinning	Planted Red Pine	Cmpt. Review Proposal
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Prescription 3rd row thin and remove the pockets of pure jack pine.

Specs:

Other Stand was planted in N/S rows. Red and jack pine appear to have been planted together. Red pine grew better and appears that more red was planted. Some small pockets of pure jack pine are found in plantation.

Comments:

Next

Steps:

58	61132058-Cut	42.1	42220 - Natural Jack Pine	High Density Pole	48	Harvest	Clearcut with Reserves	Planted Jack Pine	Cmpt. Review Proposal
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Prescription Clearcut with reserves. Replant to jack pine.

Specs:

Other Military Board Land.

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
64	61132064-Cut	31.3	42220 - Natural Jack Pine	High Density Pole	59	Harvest	Clearcut with Reserves	Natural Jack Pine	Cmpt. Review Proposal

Prescription Leave oak and cherry. Only cut jack pine >4".

Specs:

Other Military Board Land.

Comments:

Next

Steps:

70	61132070-Cut	43.4	42220 - Natural Jack Pine	High Density Pole	76	Harvest	Clearcut with Reserves	Natural Jack Pine	Cmpt. Review Proposal
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Prescription Final harvest with retention. Leave jack pine 4" and under.

Specs:

Other Military Board Land.

Comments:

Next

Steps:

81	61132081-Cut	41.7	42220 - Natural Jack Pine	High Density Pole	66	Harvest	Clearcut with Reserves	Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Pockets of dead trees. Leave the oak and cherry. Cut only jack pine >4".

Specs:

Other Military Board Land.

Comments:

Next

Steps:

83	61132083-Cut	14.8	42220 - Natural Jack Pine	High Density Pole	61	Harvest	Clearcut with Reserves	Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Leave oak and cherry. Cut only jack pine >4".

Specs:

Other Military Board Land.

Comments:

Next

Steps:

**Total Treatment
Acreage Proposed: 571.8**

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

Stand	Traverse City Mgt. Unit			5 – Forested Stands		Compartment: 132	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
3	42110 - Planted Red Pine	High Density Pole	10.3	49	111-140		
5	4116 - Mixed N. Hardwood - Aspen	High Density Pole	7.1	60		Previous inventory had this as an unevenaged stand. Timber consists of red maple, aspen and a few red pine.	
7	42220 - Natural Jack Pine	High Density Pole	3.9	66			
8	42110 - Planted Red Pine	High Density Pole	12.0	48	111-140		First thinning in 2008. Sale #052-04.
9	42110 - Planted Red Pine	High Density Pole	147.1	52	141-170		Third row thinning was completed during winter and spring of 2005. King Road Red Pine Sale #041-02.
13	4130 - Aspen	High Density Pole	10.5	45			Small pocket within red pine stand.
15	42221 - Natural Jack Pine, Mixed Deciduous	Medium Density Pole	19.3	79			
16	42120 - Planted Jack Pine	High Density Sapling	46.7	14			Stand was cut in the fall of 1993. CCC Jackpine Sale #007-92. Was seeded or planted in 1996.
17	4139 - Aspen, Mixed Deciduous	High Density Pole	5.5	50			Consumers lease land M-42. Expires in 2011. Could not really see type from road.
18	42110 - Planted Red Pine	High Density Pole	97.8	49	111-140		First thinning in 2004. Over Here Red Pine #042-02-1.
21	42110 - Planted Red Pine	High Density Pole	61.4	48	111-140		Several clumps of pure jack pine pockets are found within stand. Thin red pine, take out jack??
23	42110 - Planted Red Pine	High Density Pole	10.8	48	51-80		Thinned in 2005. Sale #52-04.
24	42220 - Natural Jack Pine	High Density Pole	106.8	62			South half of stand is Military Board Land. The red pine that is in this stand has been planted. Mainly concentrated in the central portion of stand. Take out jack and leave red pine. Replant North half.
26	42110 - Planted Red Pine	High Density Pole	6.9	45	200+		
27	42110 - Planted Red Pine	High Density Pole	10.5	45			Most of stand is Consumers Lease Land, M-38 till 2013.
28	42220 - Natural Jack Pine	High Density Pole	44.8	89			Military Board Land. Very old jack pine. A lot falling down.
29	6113 - Lowland Maple	High Density Pole	28.0	69			



Stand	Traverse City Mgt. Unit			5 – Forested Stands		Compartment: 132	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
30	6113 - Lowland Maple	High Density Pole	39.3	75			Intermittant streams run through stand. Aspen is found along the creek bed edges where it is slightly more upland.
33	42290 - Natural Mixed Pine	High Density Pole	32.5	45	141-170		Mixed stand with some pockets heavy to red pine/white pine. Other areas heavy to hardwoods with a white pine understory. A small component of oak saplings is coming in. South half of stand is Military Board Land.
35	42220 - Natural Jack Pine	Medium Density Pole	19.8	15			
36	4130 - Aspen	High Density Pole	9.1	55			Along Manistee River.
37	42120 - Planted Jack Pine	High Density Sapling	71.8	15			A timber sale was completed in 1994. Stand was roller chopped and seeded with jack pine in 1994 and northeast part of stand was planted to red pine in 1995. So much jack pine was coming in the area that was planted to red pine I couldn't distinguish the difference so combined stands.
38	42220 - Natural Jack Pine	High Density Pole	21.6	62			This stand was left uncut last time to break up the stand to prevent attracting nesting Kirtland's Warbler because this is adjacent to Military Board Land. Clearcut and replant.
39	6112 - Lowland Aspen	High Density Pole	37.2	57			Military Board Land.
40	6127 - Lowland Pine	Medium Density	14.1	16			Stand was cut in 1993 - Birch Run Sale #010-92. Larger spruce with white pine coming back in.
41	6127 - Lowland Pine	High Density Log	64.4	103	141-170		
42	42110 - Planted Red Pine	High Density Pole	67.9	45	200+		
43	42220 - Natural Jack Pine	High Density Sapling	18.3	22			This stand was clearcut in 1987, although there are some residual older trees in clumps scattered through stand. The jack pine seems to be of natural regeneration, however the red pine that is present here has been planted. The original timber cut originated from the compartment from the south.
44	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	25.9	75			Military Board Land. Stand is somewhat wet. Red maple dominate the stand with scattered large red and white pines. A fair amount of black spruce has developed in the stand also.
45	42220 - Natural Jack Pine	Medium Density Pole	9.5	69			
46	42220 - Natural Jack Pine	High Density Pole	33.4	46			Military Board Land.



Stand	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 132	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
48	42220 - Natural Jack Pine	Medium Density Pole	12.1	30			Military Board Land. Stand is semi open in areas other places it is well stocked. Lots of jack pine most places. Cherry is found in more open areas.
49	42220 - Natural Jack Pine	High Density Pole	117.7	25			Military Board Land. Harvested in 1983, the East half of the stand was not clean cut. There is residual jack pine remaining, somewhat older than the main stand.
50	42200 - Natural White Pine	High Density Log	4.8	96	141-170		Military Board Land. Very nice white pine logs are developing.
51	42220 - Natural Jack Pine	High Density Pole	92.5	35			Military Board Land. Cut in 1974.
52	42220 - Natural Jack Pine	Low Density Sapling	9.0	31			Military Board Land.
53	42221 - Natural Jack Pine, Mixed Deciduous	Low Density Sapling	10.5	25			Military Board Land
55	42220 - Natural Jack Pine	High Density Sapling	95.2	25			Military Board Land. Some pockets of red and white pine were left as residual.
57	42110 - Planted Red Pine	High Density Pole	35.7	43	141-170		Stand was planted in N/S rows. Red and jack pine appear to have been planted together. Red pine grew better and appears that more red was planted. Some small pockets of pure jack pine are found in plantation.
58	42220 - Natural Jack Pine	High Density Pole	42.1	48			Military Board Land.
60	42220 - Natural Jack Pine	Medium Density	415.7	22			Military Board Land. A 600 acre forest fire ran N-NE'ly about a mile on 6/18/87. Some scattered residual timber remains. Jack pine has regenerated naturally. Part of the stand was treated with a HydroAxe by the Military in an attempt to discourage Kirtland's Warbler Habitat from developing. It didn't work. Some areas of the stand are on the lower end of well-stocked and there are some semi-open pockets. Warblers do occupy the stand and Military use of this area is now limited to non-nesting months.
61	6120 - Lowland Cedar	High Density Pole	7.3	94			
62	42220 - Natural Jack Pine	Low Density Sapling	62.0	20			Jack Pine Corner #040-02. Stand was cut in winter of 2004 with a spec to leave everything 4" and under and no cutting of oak, cherry or other pine.
64	42220 - Natural Jack Pine	High Density Pole	31.3	59			
65	6120 - Lowland Cedar	High Density Pole	3.3	94			



Stand	Traverse City Mgt. Unit			5 – Forested Stands		Compartment: 132	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
						General Comments:	
67	42220 - Natural Jack Pine	High Density Pole	3.3	45		Small stand left as retention.	
69	42220 - Natural Jack Pine	High Density Pole	12.0	30		Military Board Land. There was a fire here.	
70	42220 - Natural Jack Pine	High Density Pole	43.4	76			
71	42220 - Natural Jack Pine	Low Density Sapling	89.2	25		Military Board Land. King Road Jack Sale #038-02. Cut in the winter of 2003-04. All 4" and under timber was left. A lot of jack pine seedlings in stand. I found no record of any seeding or planting so it must be natural.	
72	6122 - Black Spruce	High Density Pole	24.0	67			
73	6113 - Lowland Maple	High Density Pole	72.0	67		Part of stand is Military Board Land. Creek bisects stand.	
74	42220 - Natural Jack Pine	Medium Density	8.5	39		Military Board Land.	
76	4126 - White, Black, N. Pin Oak	High Density Pole	31.0	86	51-80	Military Board Land. Sharon Truck Oak Sale #64-04 - completed 5/07. TCR isin Compt. 133.	
77	42220 - Natural Jack Pine	High Density Sapling	346.7	40			
78	4126 - White, Black, N. Pin Oak	Low Density Log	22.1	90	1-50	This stand is part of the Truck Trail Jack Pine Sale #039-02. All jack pine >4" DBH were cut. No oak, cherry or other pine were cut. This part of the sale has more large oak that were left.	
79	42220 - Natural Jack Pine	Low Density Sapling	57.3	20		This stand is part of the Truck Trail Jack Pine Sale #039-02. All jack pine >4" DBH were cut. No oak, cherry or other pine were cut.	
80	4121 - Oak, Aspen	High Density Sapling	46.2	23		Military Board Land. Stand was clearcut in 1986. Sale #024-84-01.	
81	42220 - Natural Jack Pine	High Density Pole	41.7	66			
83	42220 - Natural Jack Pine	High Density Pole	14.8	61		Military Board Land.	
84	4123 - Red Oak	High Density Log	57.2	86		Military Board Land. Radio Hill Oak Sale #092-04. Completed 11/06.	
85	42220 - Natural Jack Pine	High Density Pole	25.9	40		Military Board Land. Stand regenerated from a fire incident.	



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Traverse City Mgt. Unit

5 – Forested Stands
Inventory Method: IFMAP

Compartment: 132
Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	4125 - Black, N. Pin Oak	Low Density Log	59.8	90		Sale #058-04 was harvested in the winter of 04-05. All species >4" were cut except oak.
87	4130 - Aspen	High Density Sapling	4.7	29		Military Board Land.



Stand	Cover Type	Acres	Gen Cmts:
1	11 - Low Intensity Urban	0.9	Access site with scattered cherry.
2	6229 - Mixed lowland shrub	1.4	
4	3302 - Low Density Conifer Trees	1.0	
6	3303 - Mixed Low Density Trees	2.6	
10	3302 - Low Density Conifer Trees	3.8	
11	3302 - Low Density Conifer Trees	0.9	
12	3205 - Mixed Upland Shrub	4.4	
14	3302 - Low Density Conifer Trees	17.9	
19	11 - Low Intensity Urban	10.5	
20	3302 - Low Density Conifer Trees	1.0	
22	3302 - Low Density Conifer Trees	16.7	
25	3205 - Mixed Upland Shrub	5.5	
31	3205 - Mixed Upland Shrub	41.2	
32	3302 - Low Density Conifer Trees	108.0	
34	50 - Water	20.4	
47	11 - Low Intensity Urban	0.9	
54	3303 - Mixed Low Density Trees	1.6	
56	3302 - Low Density Conifer Trees	62.9	Cearcut in winter of 2005. Jack Pine Airstrip Sale #044-02. Planted in 2007.



Stand	Cover Type	Acres	Gen Cmts:
59	3205 - Mixed Upland Shrub	46.6	
63	6229 - Mixed lowland shrub	13.0	
66	710 - Sand, Soil	1.2	
68	3205 - Mixed Upland Shrub	3.7	
75	11 - Low Intensity Urban	24.8	Sharon Refuge Truck Trail/Howe Road
82	3205 - Mixed Upland Shrub	3.4	



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.

Inventory Method: IFMAP

Stand	SCA Type	SCA Name	Acres	Comments
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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.
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
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.