



## TRAVERSE CITY FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 50 ENTRY YEAR: 2011

Compartment Acreage: 2702 County: Grand Traverse

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**Stand Examiner:** Timothy Webb

**Legal Description:** T26N R10W, Sections 17 through 21 & 29 through 33

**Management Goals:** This compartment was previously managed under the Pere Marquette State Forest Plan as part of Resource Management Unit 118, designated for intensive wildlife habitat management. Although that plan has expired, continued focus on wildlife habitat here would support the heavy hunting use in this compartment. Previous extensive harvesting resulted in large areas of pole-sized aspen stands. Although not fully mature, some age-class diversification can be accomplished by harvesting and regenerating scattered blocks within these stands, creating early-successional habitat patches.

Several natural stands of white pine with components of oak, red maple, and red pine are indicative of the successional potential of stands in this outwash plain. Such natural pine stands, once a significant component of this landscape, are now uncommon and should be perpetuated. Several pine stands may benefit from thinning this entry period, particularly red pine plantations. Northern hardwoods on moraine in the south part of the compartment are of generally good quality. Some portions are ready for another thinning this entry period.

There are numerous oil and gas well pads, both active and abandoned, throughout the compartment. Many of the abandoned sites are currently unmanaged and would benefit from plantings geared toward wildlife. Otherwise, conversion to forest cover would be better than allowing them to become overrun with invasive species.

**Soil and Topography:** Land type associations include a generally flat outwash plain covering most of the compartment; outwash channel along the Boardman River in the northern part of the compartment; and moraine ridge landscapes at the south end and extreme north end.

Soil types include Kalkaska, Croswell, and Rubicon sands and loamy sands over most of the uplands. Lowlands and river valley areas include Lupton muck, Roscommon mucky loamy sand, and Tonkey mucky sandy loam soil types.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** This compartment and neighboring compartment 49 to the west form a large block of more or less contiguous state land, surrounded by rural residential parcels of varying size and undeveloped private woodlands. The village of Mayfield and Mayfield Pond Park abut the east side of the compartment. The village of Kingsley is a couple miles to the southeast. A private golf course and Kingsley School Forest property abut the south end of the compartment. River and Garfield roads, two busy commuter routes, plus an active railroad, are along the north and east sides of the compartment.

**Unique, Natural Features:** A sizable wetland complex along Jaxon Creek has been recently acquired by the state within this compartment. The compartment also includes bottomlands along the Boardman River

and Swaintson Creek. Large areas of lowland brush, flood-killed timber, and lowland conifers along these flowages add significantly to the habitat diversity.

**Archeological, Historical, and Cultural Features:** There are no known archaeological features within the compartment. Old apple trees and lilacs here and there suggest locations of abandoned homesteads from the early to mid 1900s. A somewhat unnatural looking drainage runs southeast to northwest through the south ½ of section 19, which may have been created or enhanced to drain wetlands in section 30 in the past for agriculture.

**Special Management Designations or Considerations:** The Boardman River is a designated Natural River, including its tributaries. Timber management is restricted within 100 feet of these water bodies.

A large block of land in the northwest part of the compartment was formerly nominated as a proposed old growth management area. This same area, more or less, will be forwarded for consideration as a biodiversity stewardship area (BSA) during this planning cycle, recognizing the need to remove exotic species or conduct other management as necessary consistent with the objectives for the BSA. This block includes part of the Boardman River valley and adjacent slopes, from which arise numerous seeps and springs feeding small tributaries to the river. Mature hardwood stands on the slopes transition to lowland conifers in the valley.

#### **Watershed and Fisheries Considerations:**

**Wildlife Habitat Considerations:** This compartment falls into 4 different landtype associations, but the bulk is within a broad outwash plain. Some state land lies within moraines on the north and south ends of the compartment. The Boardman River Valley transects the compartment, but has little State land. Maintain a diversity of age classes, species mixes, snags and down logs in upland forests, including some young aspen-dominated stands as well as mature deciduous and bottomland mixed forests types. Most of the aspen forest is currently young to medium aged. However, opportunities exist, and should continue to be acted on in order to diversify the age classes. Specifications for down logs should be included in all aspen harvests to create drumming logs for ruffed grouse and habitat for small mammals and herps in regenerating stands. Include a hardwood component in pine stands as much as possible for within-stand diversity. Allow some stands to become very old and advance in successional stage, especially along stream valleys. Northern hardwood stands on moraines should be managed for diversity of tree species and important within-stand structure such as cavity trees and coarse woody debris. Retain oak as a component wherever possible. Future management of pine stands should consider incorporating small (2-5 acre) islands that are left relatively un-thinned within mature stands to provide winter roosting cover for turkeys. Maintain some old fields and abandoned well sites as openings with fruiting shrubs, bush hogging, hand felling, seeding grasses, and burning or mowing of established grassy fields. Consider closing some unnecessary roads to reduce habitat impacts. Some species associated with aspen-oak-pine forests, rivers, streams, and adjacent mixed swamp forest, are ruffed grouse, black-throated green warbler, wood turtles, brown snake, river otter, white-tailed deer, and least flycatcher.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of an end moraine of coarse-textured till, coarse-textured glacial till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 800 feet. Beneath the glacial drift are the Mississippian Coldwater and Sunbury Shales. There is no current economic use for these rocks. A gravel pit is located in Section 33 and there should be good potential. This area is located along the north edge of the prolific Guelph (Niagaran) reef trend. Most of the Compartment is leased for oil and gas exploration. Additional reefs could be found in the compartment or the Antrim Shale may be developed in this area.

**Vehicle Access:** Access for forest management and recreation are generally good throughout the compartment. One small parcel east of the railroad in section 33 is accessible by vehicles only by crossing

private land. A gate and fence blocking an access road to an abandoned oil well pad in sections 18 & 19 are in disrepair and should be fixed to prevent unnecessary vehicle access below the bluff to the river.

**Survey Needs:** For the most part, the compartment's property corners are well monumented. However, a few individual corners may need to be surveyed and set to facilitate management or confirm possible trespass. There may be a cabin across the property line in the NWSW of sec. 17, and a driveway possibly in trespass in the SESW of sec. 20.

**Recreational Facilities and Opportunities:** This compartment is relatively close to a large population center and therefore receives much recreational use. Both a designated snowmobile trail and the Shore-to-Shore trail traverse the compartment. The Boardman River is quite popular for fishing and float trips. Swaintson and Jaxon Creeks offer additional trout fishing opportunities. Hunting for deer, turkey, grouse, and woodcock are important uses as well.

**Fire Protection:** DNR Fire Protection is from the Traverse City Field Office, and VFD protection is from Battalion# 2 or Battalion #5 – Grand Traverse County. Travel time is adequate from the Traverse City Field Office. Access can be an issue in some sections of this compartment. Urban interface isn't much of a concern. Some pine plantations, and mixed pine in hardwood stands can contribute to larger fires on higher fire danger days.

**Additional Compartment Information:** Ownership is somewhat fragmented, especially along the Boardman River valley. The Grand Traverse Regional Land Conservancy previously explored potential for conservation land acquisition or exchange, but found few if any willing sellers among private landowners in this area.

**\*\*\*\* Cover type details and proposed treatments are listed in the attached reports:**

**Cover Type by Age Class**  
**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 SCAs**

# Cover Type & Treatment Map

Compartment 50  
 T26N, R10W, Sec. 17-21, 29-33  
 County: Grand Traverse  
 Unit: Traverse City  
 YOY: 2011  
 Acres: 2,702 GIS Calculated  
 Stand Examiner: Timothy Webb  
 Map Revised: 5/27/2009  
 Map Phase: Pre-Review

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

### Legend

- Miris Corners
- Paved Road
- Gravel Road
- Poor Dirt Road
- Railroads
- Intermittent Stream/Drain
- Stream
- Trails
- Snowmobile Trails
- Hiking Trails
- Horse Trails
- Lakes and Rivers All

### Treatments

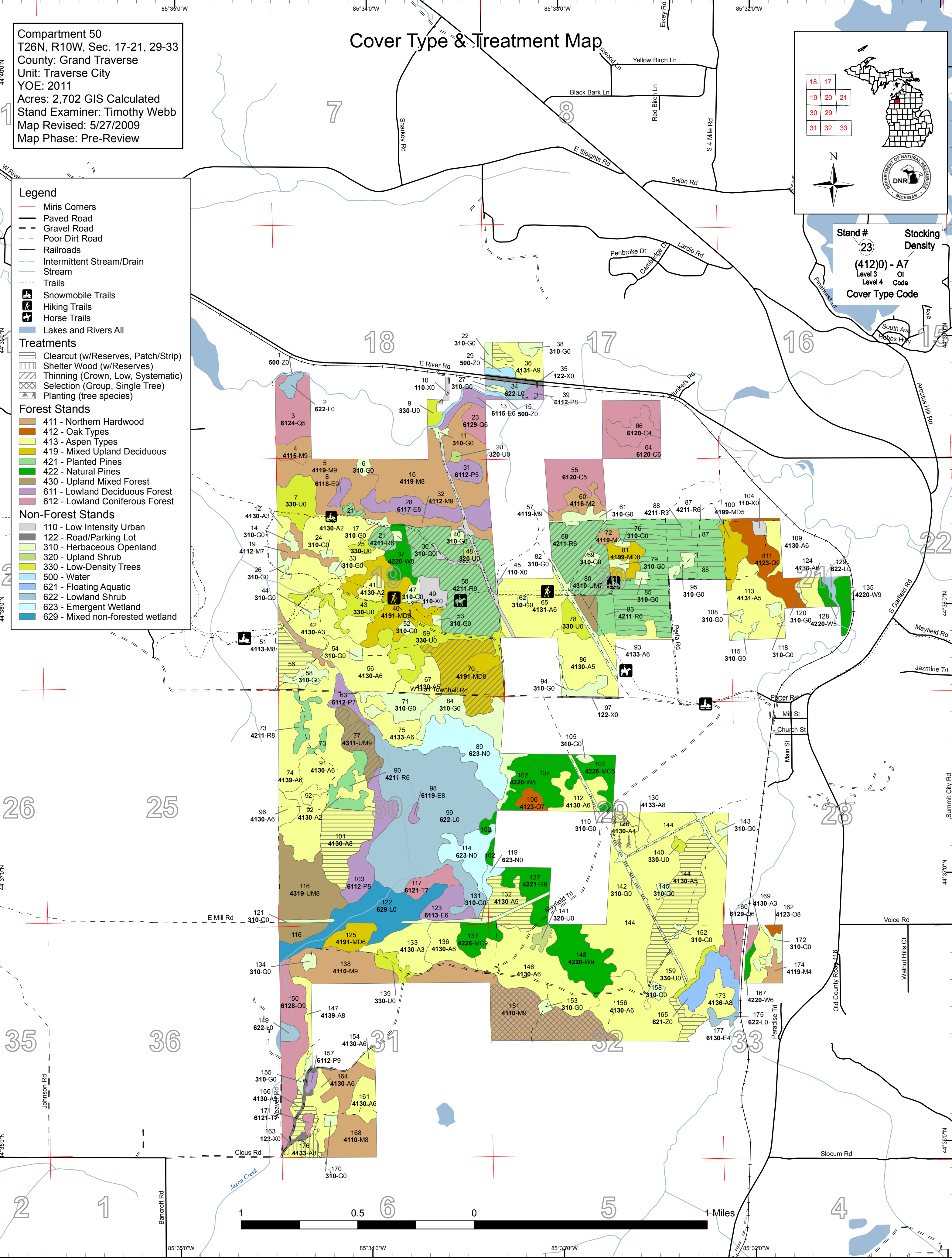
- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Planting (tree species)

### Forest Stands

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

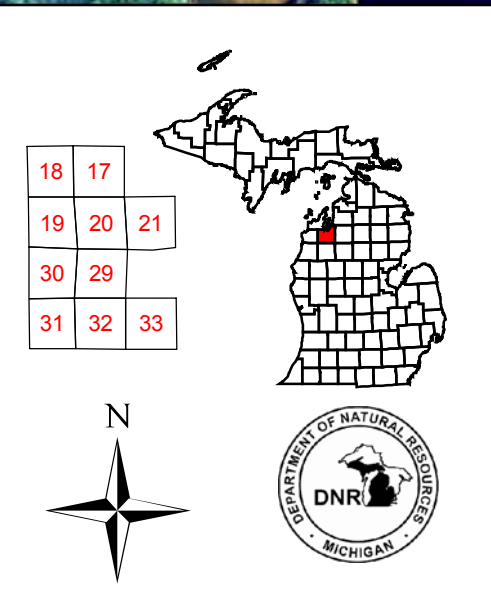
### Non-Forest Stands

- 110 - Low Intensity Urban
- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 621 - Floating Aquatic
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland



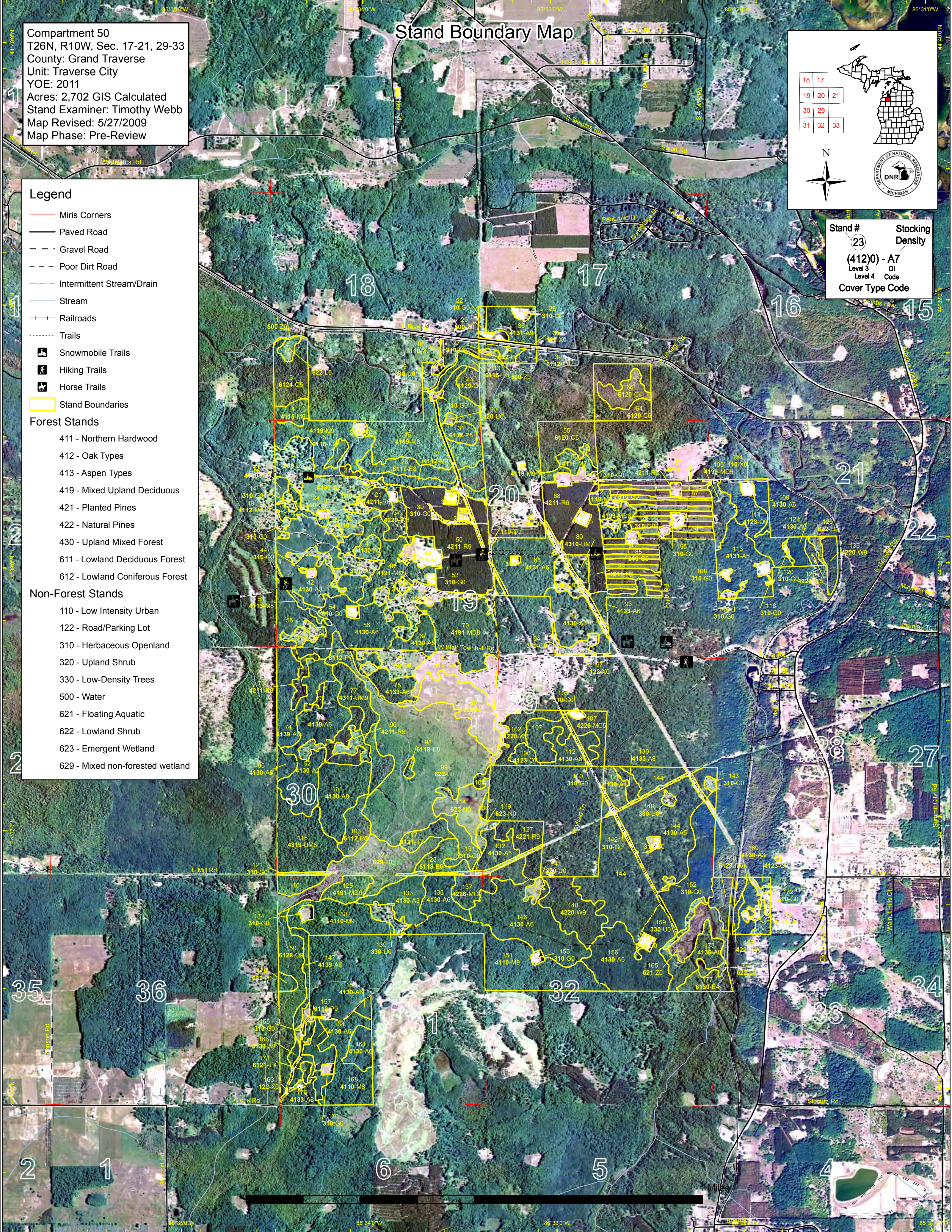
# Stand Boundary Map

Compartment 50  
 T26N, R10W, Sec. 17-21, 29-33  
 County: Grand Traverse  
 Unit: Traverse City  
 YOE: 2011  
 Acres: 2,702 GIS Calculated  
 Stand Examiner: Timothy Webb  
 Map Revised: 5/27/2009  
 Map Phase: Pre-Review



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

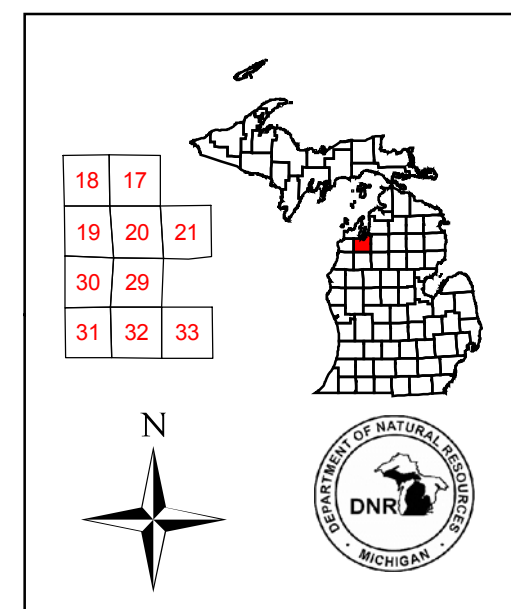
- Legend**
- Miris Corners
  - Paved Road
  - == Gravel Road
  - - - Poor Dirt Road
  - Intermittent Stream/Drain
  - Stream
  - Railroads
  - Trails
  - 🛷 Snowmobile Trails
  - 🚶 Hiking Trails
  - 🐎 Horse Trails
  - 🟡 Stand Boundaries
- Forest Stands**
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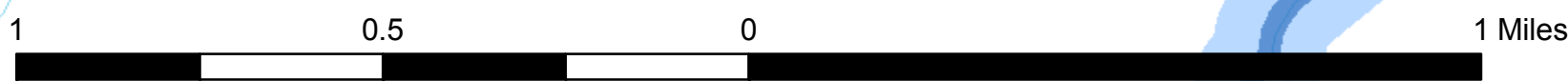
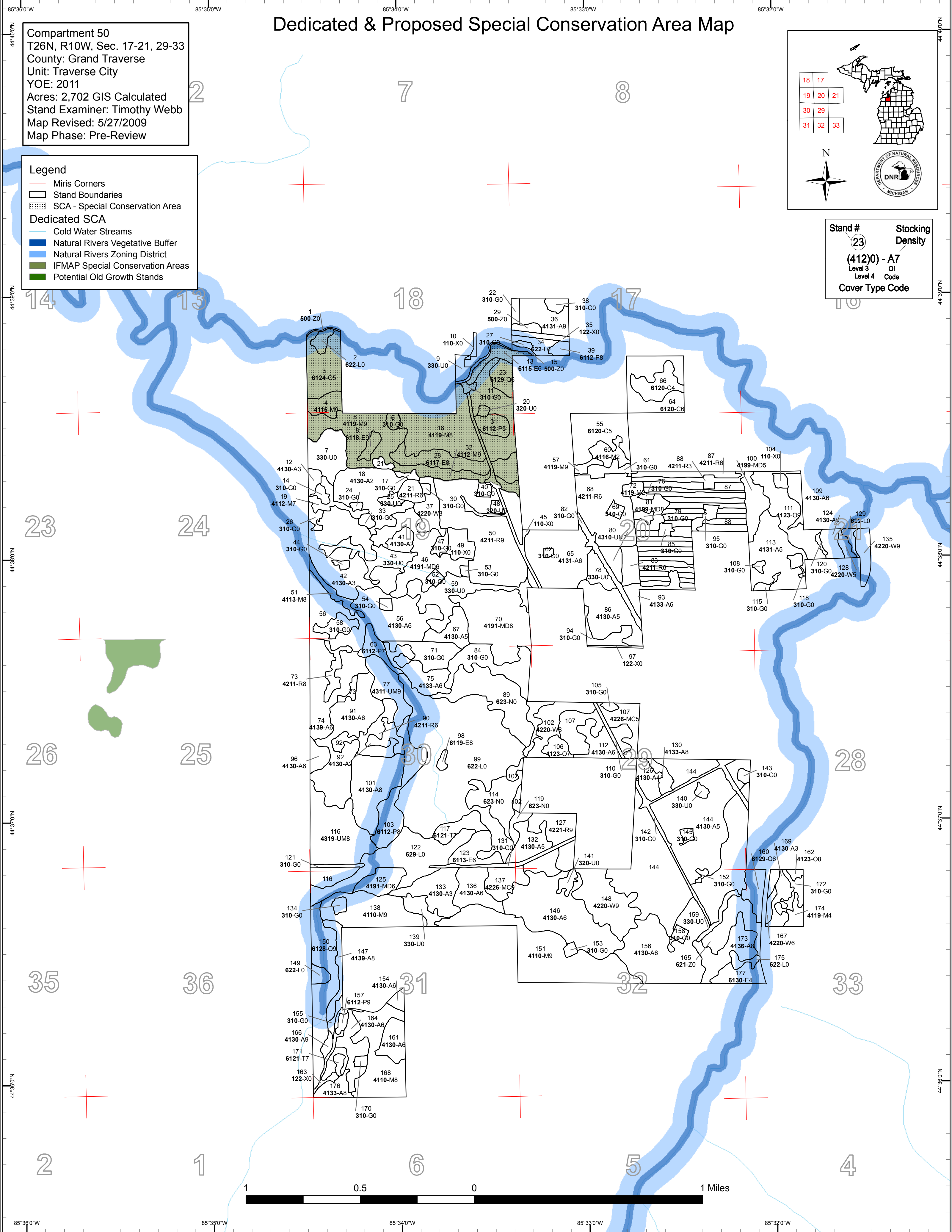
# Dedicated & Proposed Special Conservation Area Map

Compartment 50  
 T26N, R10W, Sec. 17-21, 29-33  
 County: Grand Traverse  
 Unit: Traverse City  
 YOE: 2011  
 Acres: 2,702 GIS Calculated  
 Stand Examiner: Timothy Webb  
 Map Revised: 5/27/2009  
 Map Phase: Pre-Review

- Legend**
- Miris Corners
  - Stand Boundaries
  - SCA - Special Conservation Area
- Dedicated SCA**
- Cold Water Streams
  - Natural Rivers Vegetative Buffer
  - Natural Rivers Zoning District
  - IFMAP Special Conservation Areas
  - Potential Old Growth Stands



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



## Coverture, Acres, and Age summary (Level 3 Cover Type)

Traverse City Mgt. Unit

Compartment 050 Year of Entry 2011

Report Date: 05/27/2009



	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	51.2	78.2	140.0	312.2	232.2	98.3	15.9	7.2	0	0	0	0	0	0	935.2
Emergent Wetland	61.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61.3
Floating Aquatic	18.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18.1
Herbaceous Openland	171.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171.6
Low Intensity Urban	23.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23.6
Low-Density Trees	87.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87.7
Lowland Coniferous Forest	0	0	0	0	0	0	23.2	0	2.0	9.8	52.3	35.0	0	26.4	7.9	156.6
Lowland Deciduous Forest	0	0	0	0	0	14.9	6.8	7.5	13.0	23.7	3.7	0	0	0	25.0	94.6
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.8	10.8
Lowland Shrub	167.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167.9
Mixed non-forested wetland	46.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.9
Mixed Upland Deciduous	0	0	0	0	0	47.5	0	0	10.5	11.7	0	0	0	0	47.8	117.4
Natural Pines	0	0	0	0	0	2.3	42.5	0	33.1	58.8	0	0	0	0	0	136.6
Northern Hardwood	0	0	8.0	3.2	0	0	0	4.5	0	188.8	89.2	0	0	0	0	293.7
Oak Types	0	0	0	0	0	0	1.6	0	5.6	26.3	0	0	0	0	0	33.4
Planted Pines	0	0	41.6	0	0	130.8	76.3	0	0	0	0	0	0	0	0	248.8
Road/Parking Lot	9.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.6
Upland Mixed Forest	0	0	0	0	0	0	6.1	0	0	0	0	0	0	0	68.6	74.7
Upland Shrub	6.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.8
Water	6.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.6
<b>Total</b>	<b>600.2</b>	<b>51.2</b>	<b>127.8</b>	<b>143.2</b>	<b>312.2</b>	<b>427.7</b>	<b>254.7</b>	<b>28.0</b>	<b>71.4</b>	<b>318.9</b>	<b>145.2</b>	<b>35.0</b>	<b>0</b>	<b>26.4</b>	<b>160.1</b>	<b>2701.9</b>

**PROPOSED TREATMENTS  
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
21 61050021-Cut	8.0	42110 - Planted Red Pine	High Density Pole	45	Harvest	Systematic Thinning	Planted Red Pine

Rev  
Cmnt:

Rev Third-row thin. Cut hardwoods only if necessary to facilitate pine harvest and leave on site for CWD; otherwise leave standing for retention.

Spec:

Next None needed.

Steps:

36 61050036-Cut	2.4	4131 - Aspen, Oak	High Density Log	65	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous
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Rev Care should be taken in marking the sale boundary to use topography to blend cut patch into the hillside for aesthetic purposes.

Cmnt:

Rev Clearcut to a 2" diameter limit, marking for retention some oaks and a variety of other species.

Spec:

Next Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood seedlings and stump sprouts, and white pine seedlings.

Steps:

50 61050050-Cut	74.0	42110 - Planted Red Pine	High Density Log	45	Harvest	Systematic Thinning	Planted Red Pine
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Rev

Cmnt:

Rev Third-row thin. Cut hardwoods only if necessary to facilitate pine harvest and leave on site for CWD; otherwise leave standing for retention.

Spec:

Next None needed.

Steps:

56 61050056-Cut	12.9	4130 - Aspen	High Density Pole	42	Harvest	Clearcut with Reserves	Aspen
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Rev

Cmnt:

Rev Clearcut to a 2" diameter limit with some pine/maple/cherry marked for retention. Keep sale boundary back at least 100' from Jaxon Creek.

Spec:

Next Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood seedlings and stump sprouts, and some possible red pine volunteer seedlings along the west edge.

Steps:

68 61050068-Cut	40.9	42110 - Planted Red Pine	High Density Pole	45	Harvest	Systematic Thinning	Planted Red Pine
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Rev

Cmnt:

Rev Third-row thin. Cut hardwoods only if necessary to facilitate pine harvest and leave on site for CWD; otherwise leave standing for retention.

Spec:

Next None needed.

Steps:

70 61050070-Cut	42.3	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	80	Harvest	Crown Thinning	Mixed Upland Deciduous with Conifer
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Rev

Cmnt:

Rev Thin, taking out some of the older aged trees and releasing better quality oak and pine. Remove much of the aspen, but retain some with obvious cavities or potential for cavities.

Spec:

Next None needed.

Steps:

**PROPOSED TREATMENTS  
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
77 61050077-Cut	15.2	4311 - Pine, Aspen Mix	High Density Log	62	Harvest	Crown Thinning	Natural White Pine, Mixed Deciduous

Rev  
Cmnt:

Rev  
Spec: Remove most of the aspen and thin white pine and other species for better spacing and to promote development of understory white pine.

Next  
Steps: Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes white pine seedlings and saplings in canopy gaps. Aspen may also resprout in larger gaps, but will probably be heavily browsed by deer in winter, which is an acceptable outcome of this treatment. If regeneration is not fully stocked, larger gaps and scarification should be employed in a future entry period to develop a mixed-age stand.

101 61050101-Cut	35.0	4130 - Aspen	Medium Density Log	58	Harvest	Clearcut with Reserves	Aspen
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Rev  
Cmnt:

Rev  
Spec: Clearcut to a 2" diameter limit, with reserve island(s) encompassing some pine, totalling 1 to 2 acres. Also reserve scattered oak, red pine.

Next  
Steps: Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood seedlings and stump sprouts, and white pine seedlings.

132 61050132-Cut	20.2	4130 - Aspen	Medium Density Pole	38	Harvest	Clearcut with Reserves	Aspen
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Rev  
Cmnt:

Rev  
Spec: Clearcut to a 2" diameter limit, retaining either some small cover islands or individual pine/aspen trees, totalling about 4-5%.

Next  
Steps: Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible pine seedlings.

144 61050144-Cut	44.1	4130 - Aspen	Medium Density Pole	38	Harvest	Clearcut with Reserves	Aspen
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Rev  
Cmnt:

Rev  
Spec: Clearcut to a 2" limit, retaining oaks and pines. Also leave 2 or 3 uncut islands totalling about 1.5 to 2 acres.

Next  
Steps: Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood seedlings and stump sprouts, and white pine seedlings.

151 61050151-Cut_exp-1	51.8	4110 - Sugar Maple Association	High Density Log	84	Harvest	Single Tree Selection	Sugar Maple Association
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Rev  
Cmnt: Only east part of AOI is being prescribed, leaving west part undisturbed this entry period.

Rev  
Spec: Mark trees for cutting to a residual BA of about 80-90. Retain some beech for mast production, and any obvious cavity trees. Mark some low quality trees to be felled and left for CWD (1 to 2 per acre). Avoid damaging saplings in regeneration holes created in last harvest as much as possible.

Next  
Steps: Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes any mix of hardwood species. Maple, ash, basswood, and cherry are preferred species, although beech and ironwood are likely to dominate in the understory in the short term.

**PROPOSED TREATMENTS  
NO LIMITING FACTORS**



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 3 of 3
166	61050166-Cut	6.0	4130 - Aspen	High Density Log	47	Harvest	Clearcut with Reserves	Aspen	

Rev  
Cmnt:

Rev Clearcut to a 2" diameter limit for habitat/age class diversity, leaving conifers and hardwoods as residuals. Tamarack/wetland in middle of stand could serve as retention for the most part.  
Spec:

Next Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood and white pine seedlings.  
Steps:

173	61050173-Cut	6.9	4136 - Aspen, Mixed Conifer	Medium Density Log	51	Harvest	Clearcut with Reserves	Aspen	
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Rev  
Cmnt:

Rev Clearcut to a 2" diameter limit, marking a variety of species for retention of about 5% canopy coverage. Thin the small red pine inclusion within the AOI.  
Spec:

Next Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood seedlings and stump sprouts, and mixed conifer seedlings.  
Steps:

176	61050176-Cut	6.4	4133 - Aspen, Mixed Pine	Medium Density Log	79	Harvest	Shelter Wood with Reserves	Aspen, Mixed Pine	
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Rev Regeneration resulting from harvest should provide a browse resource for wintering deer.  
Cmnt:

Rev Mark some better white pine, maple, etc. to leave, perhaps 20-30 BA, and cut the rest.  
Spec:

Next Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes aspen sprouting throughout, with some possible mixed hardwood seedlings and stump sprouts, and white pine seedlings. Deciduous regeneration might get heavily browsed, favoring less palatable conifers over time. This is an acceptable outcome, with long-term conversion to a more pine-dominated type.  
Steps:

126	61050126- Plant	8.9	4130 - Aspen		30	Tree Planting	Hand Plant	Aspen, Mixed Conifer	
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Rev Objective is to eventually convert poor, sparse aspen stand to mixed pine. Aspen removal in the future could be either by natural mortality, harvest, or herbicide. This may be a low priority project for DNR staff, but might possibly be done by a volunteer group.  
Cmnt:

Rev Interplant red pine to supplement natural white pine regeneration. Hand scalp, filling in small openings in stand. Red and white oak acorns could be planted in addition to red pine seedlings.  
Spec:

Next Regeneration survey to follow harvesting at appropriate interval(s). Expected, acceptable regeneration includes mixed pine and oak at a moderate stocking level.  
Steps:

**Total Treatment  
Acreage Proposed: 375.0**

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Traverse City Mgt. Unit  
Inventory Method: IFMAP

### PROPOSED TREATMENTS WITH LIMITING FACTORS

Compartment: 050      Entry Yr: 2011  
Date 05/27/2009



Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 1 of 1
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Limiting Factor  
and Comment:

Rev  
Cmnt:

Rev  
Spec:

Next  
Steps:

No Treatment  
Reason

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**Total Treatment  
Acreage Proposed:      0**



**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 Name	Acres	Comments
28	61050028	211.3	Part of a potential old growth area nominated in 1997, now being forwarded as a Special Conservation Area to perpetuate mature forest cover and protect springs and seeps feeding into the Boardman River. Management ability is severely limited by these water features and by steep terrain.



## 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	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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water 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.