



# Report 1 – Compartment Review Presentation

## Traverse City Forest Management Unit

Compartment 33

Entry Year 2015

Acreage: 1,851

County Manistee

Management Area: Manistee Plains

**Revision Date:** 04/30/2013

**Stand Examiner:** Patrick Cotant

### **Legal Description:**

T24N, R13W, Sections, 1, 5, 6, 7, 12, 18

### **Identified Planning Goals:**

The compartment was designated as mixed use in the Pere Marquette Resource Management Plan.

### **Soil and topography:**

Roscommon-AuGres-Croswell – poorly drained sands; Montcalm-McBride-Kalkaska, Kalkaska-Rubicon – deep, droughty sands; Carlisle-Carbondale-Karston – mucks; Saugatuck – somewhat poorly drained. Topography is level.

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

This compartment has been split since the last entry period. All lands in Springdale Twp were designated as compartment 233. All lands in Cleon Twp are compartment 33. The majority of land within the compartment is private. State ownership consists of two separate blocks of ownership, one on the west of the compartment and the other on the east end. The east block is adjacent to other State ownership in Wexford County which is managed by the Cadillac Forest Management Unit.

### **Unique, Natural Features:**

Dutchman's Creek flows through Compartment 33. Dutchman's Creek is a Designated Trout Stream, and is a tributary to Bear Creek, in the Manistee River watershed. Dutchman's Creek most likely has seasonal populations of brook trout, brown trout, rainbow trout (steelhead), coho salmon, and chinook salmon. Bear Creek is a critical component of the Manistee River watershed in that it produces wild steelhead parr. Therefore, maintaining excellent water quality in the Bear Creek watershed is critical.

### **Archeological, Historical, and Cultural Features:**

None known.

### **Special Management Designations or Considerations:**

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

Dutchman's Creek flows through Compartment 33. Dutchman's Creek is a Designated Trout Stream, and is a tributary to Bear Creek, in the Manistee River watershed. Dutchman's Creek most likely has seasonal populations of brook trout, brown trout, rainbow trout (steelhead), coho salmon, and chinook salmon. Bear Creek is a critical component of the Manistee River watershed in that it produces wild steelhead parr. Maintaining excellent water quality in the Bear Creek watershed is critical. Therefore, we ask that all BMPs are followed when working near Dutchman's Creek, particularly for Stand 38.

### **Wildlife Habitat Considerations:**

West block: This part of the compartment falls predominantly on a very poorly drained flat lake plain landscape (LTA 6149), characterized by muck soils and flat terrain. While the presettlement cover in this LTA was mainly conifer swamp, present forest cover in the compartment is dominated by mixed deciduous swamp, shrub swamp, bog, and some low ridges of aspen and pine. Diverse fruiting shrubs, including chokeberry, wild raisin, and dogwood occupy more open areas, especially within and adjacent to non-forested wetlands. Dutchman Creek, with evidence of beaver activity, crosses the compartment. Forest treatments should provide some small or narrow final harvests, retaining components of saplings, conifers, snags, and woody debris as much as possible to mimic natural blowdowns. Individual tree or group selection cuts in hardwood-dominated stands would also be consistent with natural disturbance patterns. Activity should be confined to more well-drained low ridges or to frozen-soil conditions to avoid rutting and compaction of soils and possible disturbance to drainage patterns in the swamps. The resulting habitat mosaic will benefit species such as brown snake, black bear, broad-winged hawk, deer, ruffed grouse, downy woodpecker, mink, bobcat, and snowshoe hare. Some areas of later-successional swamp hardwoods should be retained in older, large diameter tree cover, perhaps via old-growth designation.

The northwest half of section 6 and west sides of sections 7 and 18 are on a flat lake plain landscape (LTA 6111), characterized by loamy sands and relatively flat terrain. Presettlement forests of beech-maple and white pine-beech-red maple are today dominated by pine plantations, aspen-hardwood mixes on moist soils, and some wetlands and remnant fields. GLO surveyors reported large windthrow areas which were perhaps the dominant natural change factor, along with natural succession. Existing openings contain numerous upland fruiting shrubs important to many songbirds and small mammals, and should be managed as semi-open habitats. Most of the aspen types have been regenerated in previous decades, now providing young deciduous cover and open patches for ruffed grouse, chestnut-sided warblers, meadow voles, wild turkey, and red fox. Wildlife will benefit from thinning and diversification of monotypic pine plantations, especially if scattered deciduous trees are retained.

East block: State lands in sections 1 and 12 are on an end moraine landscape with coarse-textured soils (LTA 2211). Northern hardwoods occupy most of the state acreage here, with some aspen regeneration, shallow marsh, and mixed conifer swamp in low areas. Selective harvest to manage and perpetuate hardwoods should retain all conifers and a component of snags and coarse woody debris. This hardwood forest/wetland matrix provides habitat for species including red-bellied woodpecker, white-breasted nuthatch, wood frog, raccoon, red-shouldered hawk, and gray fox.

### **Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of lacustrine sand and gravel and minor end moraine of coarse-textured glacial till. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift is the Devonian Ellsworth Shale. The Ellsworth is used for cement products. The nearest gravel pit is located in Section 9 and potential may be limited to the uplands. This area is located northwest of the Niagaran reef trend and potential appears to be limited. The Antrim Shale gas play is located nearby and appears to have potential. Most of the State land is currently leased or nominated for oil and gas development.

### **Vehicle Access:**

Access to land in section 5 is via a small forest road through compartment 31 to the north. This area would provide for a very large roadless area if this road were to be blocked. Recommend blocking road that passes through stand 18 after treatment because of continued trash dumping in this area. An old culvert needs to be replaced on two track road in stand 35 if continued use of this road is desired.

### **Survey Needs:**

24N, 13W, sections 1 and 12. Survey and delineation of the Consumers Power transmission line ownership.

### **Recreational Facilities and Opportunities:**

Snowmobile trail #3 (Betsie River Snowmobile Trail) runs North/South near the the western edge of the compartment on an old rail grade, as well as along the northern boundary along Countyline Street. Snowmobile trails located on straight, flat, rail grades, and roads tend to invite high speeds, which increases safety concerns. Proposed timber management activities should include trail protection specifications to reduce impacts, increase safety, as well as serve as an example of how silviculturally sound timber harvesting practices can co-exist, and often improve recreation and wildlife experiences for future generations. Non-winter harvests, coupled with a "flush cut" specification adjacent to the trails are suggested considerations. Deer and ruffed grouse hunting opportunities are important to many local hunters. (TMN 3/13)

### **Fire Protection:**

Copemish-Cleon Volunteer Fire Department, and Platte River Field Office

### **Additional Compartment Information:**

Recommended land disposals: none

Recommended land acquisitions: none

**The following reports from the Inventory are attached:**

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

**The following information is displayed, where pertinent, on the attached compartment maps:**

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatment Map

Compartment: 033  
T24N R13W  
Sections 1, 5, 6, 7, 12, 18  
County: Manistee  
Unit: Traverse City  
YOE: 2015  
Acres: 1,851 GIS Calculated  
Examiner: Patrick Cotant  
Map Revised: 05/28/2013  
Map Phase: Web Post

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

**Legend**

- Miris Corners
- Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trails
- Snowmobile Trail
- Ski Trail
- Hiking Trail
- Bike Trail
- Horse Trail
- Pipeline
- Powerline
- PLSS Corner
- Culverts
- Bridges

**Type**

- Gate
- Stream
- Intermittent Stream
- Lakes and Rivers

**Treatments**

- Thinning (Crown, Low, Systematic)
- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

**Forest Stands**

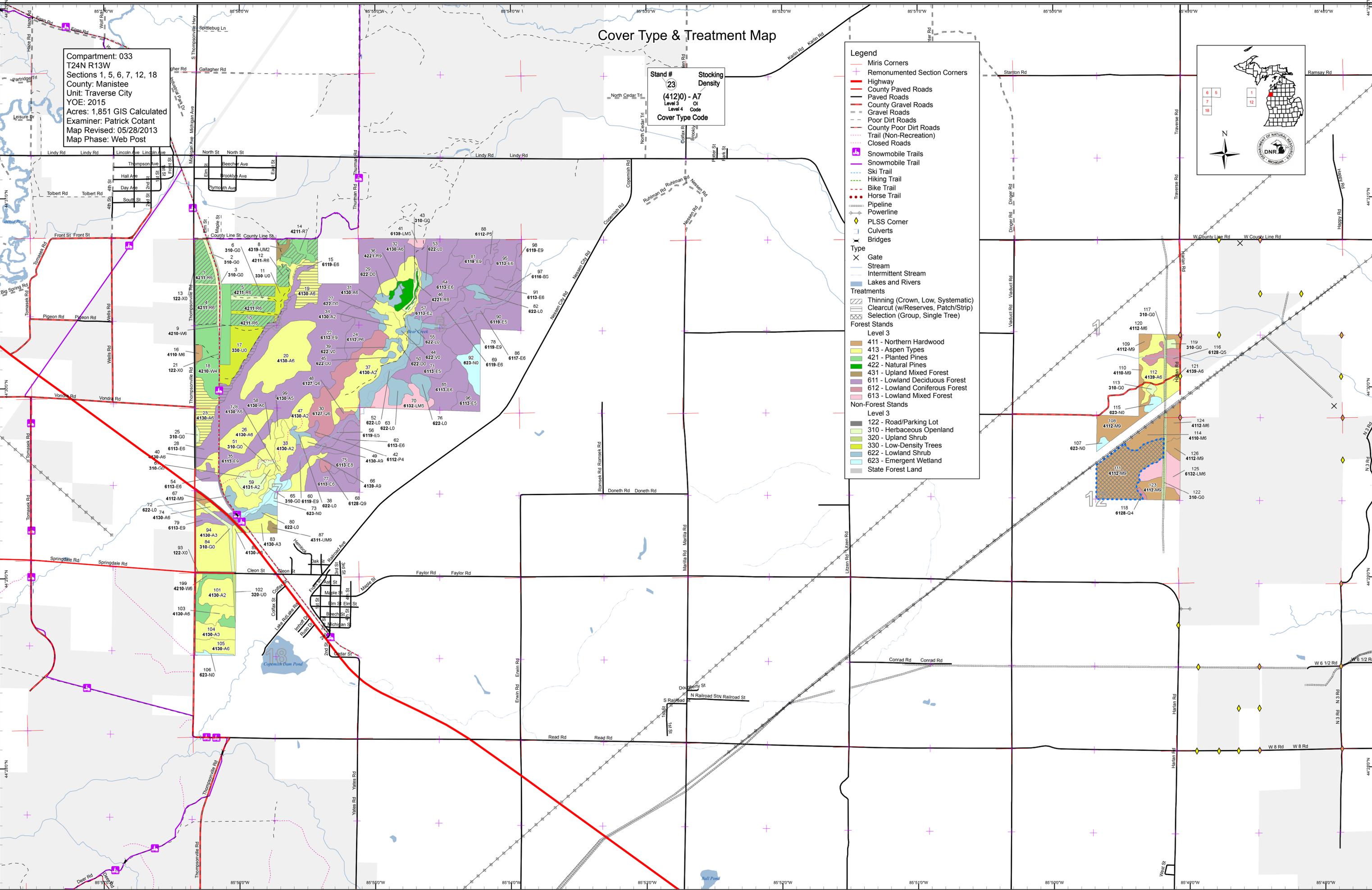
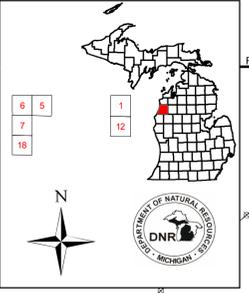
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

**Non-Forest Stands**

Level 3

- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- State Forest Land

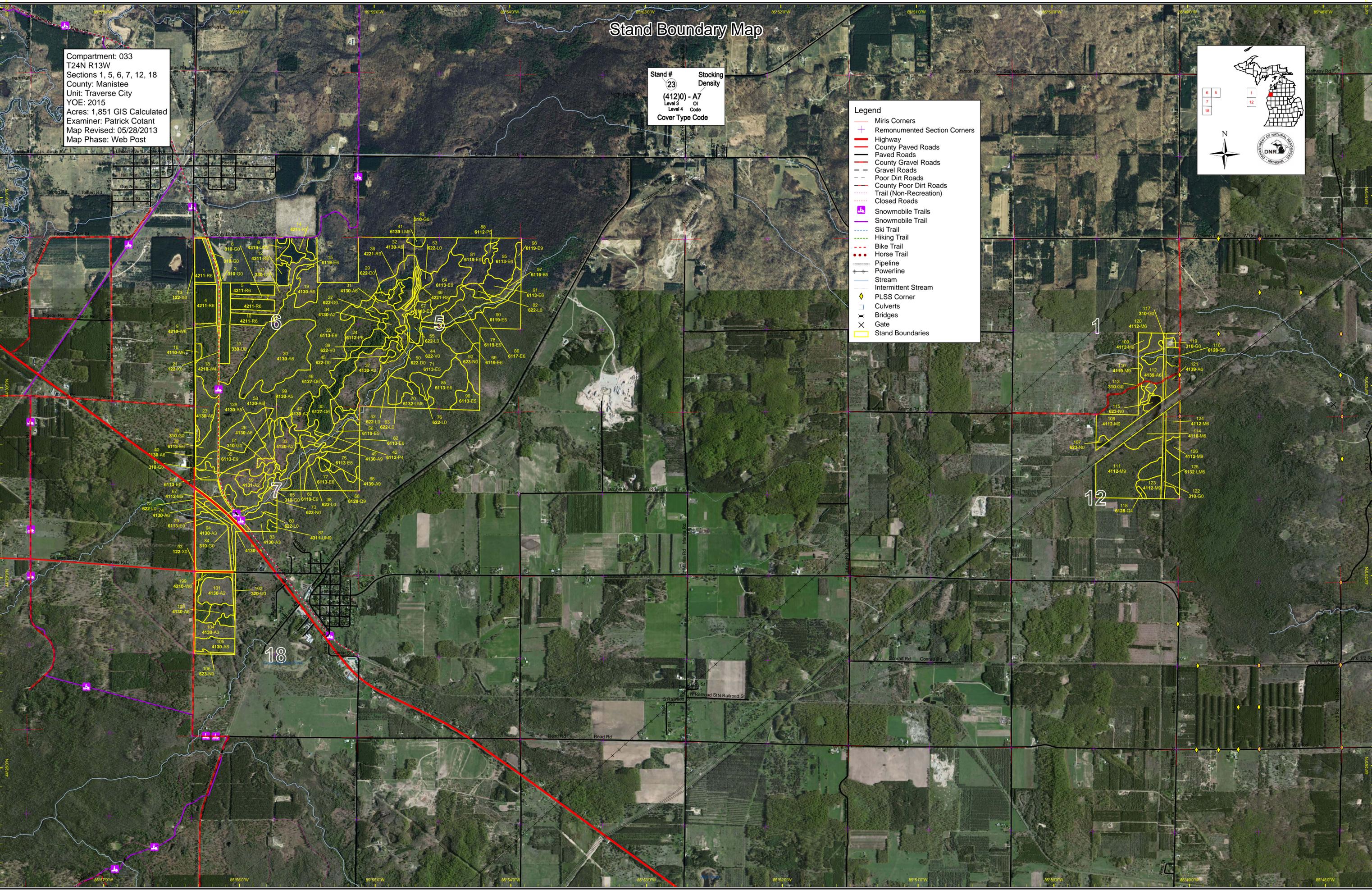
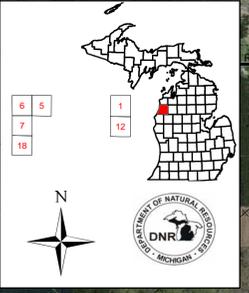


# Stand Boundary Map

Compartment: 033  
T24N R13W  
Sections 1, 5, 6, 7, 12, 18  
County: Manistee  
Unit: Traverse City  
YOE: 2015  
Acres: 1,851 GIS Calculated  
Examiner: Patrick Cotant  
Map Revised: 05/28/2013  
Map Phase: Web Post

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

- Legend**
- Miris Corners
  - Remonumented Section Corners
  - Highway
  - County Paved Roads
  - Paved Roads
  - County Gravel Roads
  - Gravel Roads
  - Poor Dirt Roads
  - County Poor Dirt Roads
  - Trail (Non-Recreation)
  - Closed Roads
  - Snowmobile Trails
  - Snowmobile Trail
  - Ski Trail
  - Hiking Trail
  - Bike Trail
  - Horse Trail
  - Pipeline
  - Powerline
  - Stream
  - Intermittent Stream
  - PLSS Corner
  - Bridges
  - Gate
  - Stand Boundaries



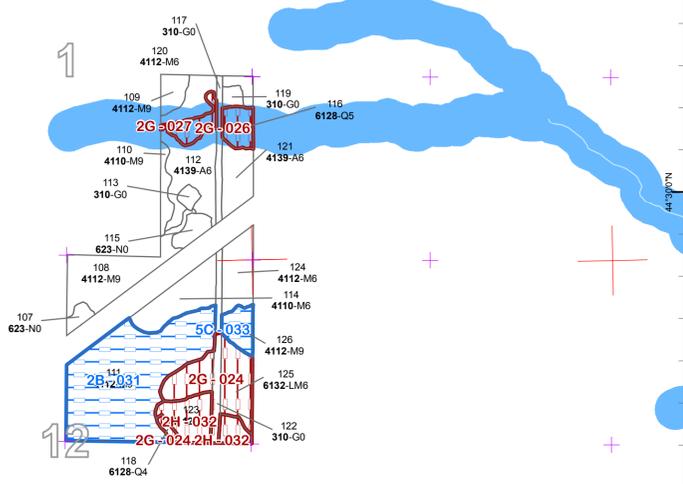
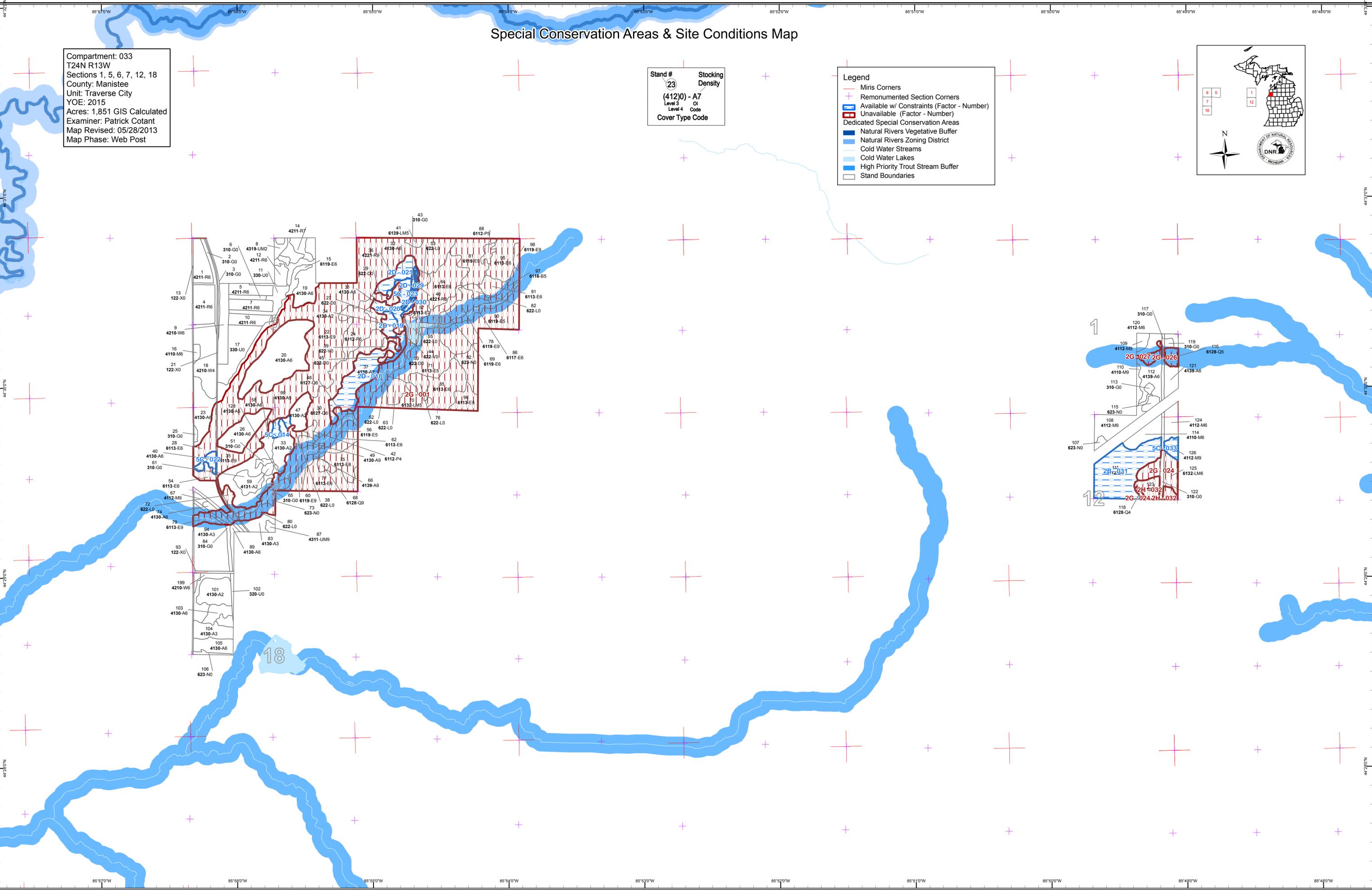
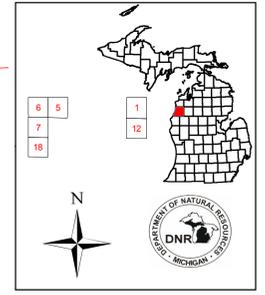
# Special Conservation Areas & Site Conditions Map

Compartment: 033  
 T24N R13W  
 Sections 1, 5, 6, 7, 12, 18  
 County: Manistee  
 Unit: Traverse City  
 YOE: 2015  
 Acres: 1,851 GIS Calculated  
 Examiner: Patrick Cotant  
 Map Revised: 05/28/2013  
 Map Phase: Web Post

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

**Legend**

- Miris Corners
- ⊕ Remonumented Section Corners
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Dedicated Special Conservation Areas
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Stand Boundaries



Report 2 – 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	28	85	64	61	190	10	11	4	0	0	0	0	0	0	453
Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Herbaceous Openland	56	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Low-Density Trees	42	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Lowland Aspen/Balsam Poplar	0	0	0	3	0	4	0	0	28	0	0	0	0	0	35
Lowland Conifers	0	0	1	0	0	0	58	0	0	3	0	0	0	0	62
Lowland Deciduous	0	0	6	0	12	23	63	44	235	268	0	0	0	29	681
Lowland Mixed Forest	0	0	0	19	0	0	0	0	20	0	0	0	0	3	42
Lowland Shrub	78	0	0	0	0	0	0	0	0	0	0	0	0	0	78
Marsh	35	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Northern Hardwood	0	0	0	3	0	0	0	3	44	0	0	0	0	91	139
Paper Birch	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7
Red Pine	0	0	0	0	0	86	1	8	9	0	0	0	0	0	104
Treed Bog	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Upland Mixed Forest	4	0	0	0	0	0	2	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	24	0	0	0	0	0	0	0	0	0	0	0	0	0	24
White Pine	0	0	0	0	0	66	0	0	0	0	0	0	0	0	66
<b>Total</b>	<b>288</b>	<b>85</b>	<b>71</b>	<b>86</b>	<b>209</b>	<b>189</b>	<b>135</b>	<b>58</b>	<b>336</b>	<b>271</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123</b>	<b>1851</b>



# Report 3 – Proposed Treatment Summaries

Traverse City Mgt. Unit  
Year of Entry 2015

Compartment 033  
Total Compartment Acres: 1851

### Acres by Treatment Type

Commercial Harvest - 199    Tree Planting - 0    Other - 0  
Habitat Cut - 0    Opening Maintenance - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	41	0	0	0	0	0	41
Lowland Deciduous Forest	12	0	0	0	0	0	12
Northern Hardwood	0	60	0	0	0	0	60
Planted Pines	0	0	0	0	86	0	86
<b>Total</b>	<b>53</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>0</b>	<b>199</b>



S  
t  
a  
n  
d

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1 61033001-Cut1	15.6	42110 - Planted Red Pine	High Density Pole	54	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Recommend conducting a second thinning with the focus on removing suppressed, defected or otherwise poorly formed individuals. Occasional  
Specs: higher quality trees will need to be removed for spacing purposes. Attempt to remove approximately 1/3 of volume with some areas of variability in areas of stand where more defect is present.

Other  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2014

4 61033004-Cut1	20.0	42110 - Planted Red Pine	High Density Pole	54	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
-----------------	------	--------------------------	-------------------	----	---------	---------	----------------	--------------------------	-----------------------

Prescription Recommend conducting second thinning with focus on removing suppressed, defected and poorly formed trees. Some higher quality trees will  
Specs: need to be harvested to achieve desired spacing/stocking levels. Attempt to remove approximately 1/3 of the volume overall with some variability in places.

Other  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2014

5 61033005-Cut1	11.2	42110 - Planted Red Pine	High Density Pole	53	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
-----------------	------	--------------------------	-------------------	----	---------	---------	----------------	--------------------------	-----------------------

Prescription Recommend thinning stand by removing suppressed, defected or otherwise poorly formed individuals. Some higher quality trees along with  
Specs: occasional small diameter utility poles should be removed to account for spacing. Attempt to remove approximately 1/3 of overall volume.

Other  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2014

7 61033007-Cut1	11.3	42110 - Planted Red Pine	High Density Pole	53	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
-----------------	------	--------------------------	-------------------	----	---------	---------	----------------	--------------------------	-----------------------

Prescription Recommend thinning stand by removing suppressed, defected or otherwise poorly formed individuals. Some higher quality trees along with  
Specs: occasional small diameter utility poles should be removed to account for spacing. Attempt to remove approximately 1/3 of overall volume.

Other  
Comments:

Next  
Steps:

Proposed  
Start Date: 10/01/2014



S  
t  
a  
n  
d

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
10 61033010-Cut1	10.7	42110 - Planted Red Pine	High Density Pole	53	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Stands 5 and 7 to the north have slightly higher BA and diameter averages. BA, size and overall stand condition still warrants treatment.  
Specs: Recommend thinning stand by removing suppressed, defected or otherwise poorly formed individuals. Some higher quality trees along with occasional small diameter utility poles should be removed to account for spacing. Attempt to remove approximately 1/3 of overall volume.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

12 61033012-Cut1	16.9	42110 - Planted Red Pine	High Density Pole	52	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
------------------	------	--------------------------	-------------------	----	---------	---------	----------------	--------------------------	-----------------------

Prescription Conduct 2nd thinning with focus on removing suppressed and defected individuals. If thinned, BA should be reduced by approximately 1/3.  
Specs: Some irregularity in rows throughout stand.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

19 61033019-Cut	19.8	4130 - Aspen	High Density Pole	48		Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
-----------------	------	--------------	-------------------	----	--	---------	----------	--------------	-----------------------

Prescription --Patrick Cotant : 04/05/2013 comments:

Specs: Harvest all trees within treatment area. Retention will be area based with portions of stand left out of sale area - namely the two fingers in western portion of stand, one extending south and the other west, adjacent to red pine stand. Recommend no individual tree retention unless wildlife habitat would benefit, i.e. stick nests. Apply dead and down creation along stand edges where stand abuts lowland e-type - stand 22. Could consider felling red marked boundary trees into adjacent stand 22. Treatment area has been approximated but will most likely be different during sale set up due to wet soils. Attempt to harvest 15-20+ acres with a small amount of this acreage coming from adjacent stand.

Other Comments: Access to stand should be through narrow finger of adjacent stand 22. Will most likely need crane mats for skidding/forwarding through this area. Landing placement should be somewhere in stand 11 or in portion of stand 19 that was excluded from treatment area.

Next Steps:

Proposed Start Date: 10/01/2014

22 61033022_sm all-Cut	12.0	6113 - Lowland Maple	High Density Log	95	111-140	Harvest	Clearcut	6113 - Lowland Maple	Cmpt. Review Proposal
------------------------	------	----------------------	------------------	----	---------	---------	----------	----------------------	-----------------------

Prescription Recommend harvest along western edge of stand, adjacent to upland opening. There is a small topo change and within this transition zone aspen and declining ash are more prevalent. Recommend harvesting narrow strip to remove aspen/ash and red maple in an attempt to regenerate aspen and red maple while salvaging rapidly declining ash. Place eastern stand edge as far as possible into lowland areas, attempting to remove some larger red maple. Consider felling marked boundary line trees into adjacent lowland to provide enhanced low ground cover. Due to the fact that this is only a small portion of the stand 22, retention can be considered area based.

Other Comments: Be mindful of high water table and sheet flow, most notably along eastern stand edge, during sale set up. Recommend placing seasonal harvest restriction on sale - winter only.

Next Steps:

Proposed Start Date: 10/01/2014



S  
t  
a  
n  
d

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
23 61033023-Cut	21.1	4130 - Aspen	High Density Pole	42		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Final harvest stand leaving a couple small retention islands located specifically across from PVT residences. In addition, all WP should be left throughout stand to account for aesthetics along Thompsonville road while also helping to maintain some vertical structure and thermal cover for wildlife within stand. Stand includes some pockets of smaller diameter aspen and some wet areas along southern/eastern edge. Harvest all aspen regardless of merchantability and avoid excessively wet areas during sale set up. Some areas of stand will inevitably be excluded from harvest and should be considered area based retention.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

**Total Treatment Acreage Proposed: 138.6**



S  
t  
a  
n  
d

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
111 61033111-Cut	60.0	4112 - Maple, Beech, Cherry Association	High Density Log	86	141-170	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: BA averages approx 170 sq ft/ac overall based on 20 BA swings. Recommend thinning at this time to remove defect and improve overall spacing/stocking. Stand was thinned last YOE and is responding well. Areas of dense regeneration are present. Thin stand down to appropriate stocking levels, approximately 80-100 BA overall should be the target. Release crowns by removing some log sized trees and canopy competitors will also harvesting suppressed and defected individuals in the intermediate layers of the canopy.

Other Comment: Access will require Consumers Energy permission to cross powerline ROW. If permission is granted then sale should be OK to harvest. Survey Markers are present.

Next Steps:

Proposed Start Date: 10/01/2014

Limiting Factor 2B: Unknown if access through adjacent landowner(s) is possible

**Total Treatment Acreage Proposed: 60.0**

Report 6 – Out of YOE – Treatments  
 Prescribed with No Limiting Factor

Year of Entry: 2015



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28218	5.9	Unspecified				Harvest	Other - Specify in Comments	Unspecified	Cmpt. Review Proposal

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date:

28219	7.2	Unspecified				Harvest	Other - Specify in Comments	Unspecified	Cmpt. Review Proposal - Incomplete
-------	-----	-------------	--	--	--	---------	-----------------------------	-------------	------------------------------------

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date:

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

Next Steps:

Proposed Start Date: 09/01/2009

**Total Treatment Acreage Proposed: 15.3**

## Report 7 – Site Conditions

Traverse City Mgt. Unit  
Patrick Cotant : Examiner

Compartment 033  
Year of Entry 2015

### Availability for Management

Total Acres	Acres		Dominant Site Conditions	Dominant Site Conditions					
	Available	Not Available		No	5C	2H	2G	2D	2B
453	438	15	Aspen	353	10		15	74	
35		35	Lowland Aspen/Balsam Poplar				35		
62		62	Lowland Conifers				62		
680	17	663	Lowland Deciduous	17			663		
42		42	Lowland Mixed Forest				42		
139	126	13	Northern Hardwood	61	6	13			60
7		7	Paper Birch				7		
104	104		Red Pine	94	9			1	
6	6		Upland Mixed Forest	6					
66	66		White Pine	66					
1,594	757	837	Total Forested Acres	596	25	13	824	76	60
	47%	53%	Relative Percent						

*\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
001	Not Available	2G: Too wet (sensitive soils, does not include access issues)	924				
<b>Comments:</b>							
014	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5				
<b>Comments:</b> Delay for age/size class diversity.							

## Report 7 – Site Conditions

Traverse City Mgt. Unit

Patrick Cotant : Examiner

Compartment 033

Year of Entry 2015

018	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	43	5C: Delay treatment for age/size class diversity or exceptional site quality	
<p><b>Comments:</b> Stand is lowly stocked younger aspen however when it is desirable to treat stand these improvements will be necessary. Culvert/bridge would be needed between stand 41 and 32 along with road improvements to 2-track heading northward to Lindy Rd.</p>					
019	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	7	5C: Delay treatment for age/size class diversity or exceptional site quality	
<p><b>Comments:</b> Access to stand would require bridge/culvert between stands 41 and 32 and road improvements to 2-track heading northward to Lindy Rd. Stand is lowly stocked younger aspen however when it is desirable to treat stand these improvements will be necessary.</p>					
020	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	8	5C: Delay treatment for age/size class diversity or exceptional site quality	
<p><b>Comments:</b> Bridge/culvert would be needed between stands 41 and 32, in addition road improvements would be needed on 2-track heading northbound to Lindy Rd. Delay treatment until adjacent/surrounding stands are ready for treatment.</p>					
021	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	17	5C: Delay treatment for age/size class diversity or exceptional site quality	
<p><b>Comments:</b> Culvert/bridge would be needed between stands 41 and 32 along with road improvements to 2-track heading northbound to Lindy Rd. Consider treating next YOE keeping in mind that extensive work will need to be done to access road. Delay treatment until sur</p>					
022	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	6		
<p><b>Comments:</b></p>					

## Report 7 – Site Conditions

Traverse City Mgt. Unit

Patrick Cotant : Examiner

Compartment 033

Year of Entry 2015

023	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	9		
<b>Comments:</b> Isolated, natural red pine stand with variable size classes present. Lowland conifers in understory along edges. Lots of wildlife use throughout stand, no known/noticeable management activity since origin of stand. Recommend leaving stand as is to prog					
024	<b>Not Available</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	25	2B: Unknown if access through adjacent landowner(s) is possible	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
<b>Comments:</b> This conglomeration of stands is very wet and therefore access is very limited.					
026	<b>Not Available</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	6	3J: Water quality / BMPs (stream, river, or lake)	
<b>Comments:</b> Wet area, lowland areas throughout with seeps common. Small stream flows from west>east through majority of stand.					
027	<b>Not Available</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	5		
<b>Comments:</b> Wet area, lowland areas throughout with seeps common. Small stream flows from west>east through majority of stand.					
029	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	5	5C: Delay treatment for age/size class diversity or exceptional site quality	
<b>Comments:</b>					

## Report 7 – Site Conditions

Traverse City Mgt. Unit

Patrick Cotant : Examiner

Compartment 033

Year of Entry 2015

030	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	1	5C: Delay treatment for age/size class diversity or exceptional site quality
<b>Comments:</b> Narrow strip of				
031	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	60	
<b>Comments:</b>				
032	<b>Not Available</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	13	
<b>Comments:</b>				
033	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	6	2B: Unknown if access through adjacent landowner(s) is possible
<b>Comments:</b> Small stand, steep slopes in portions, some small lowland pockets, namely along eastern edge and along powerline ROW.				



### Report 8 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
<b>Comments</b>				



**Report 9 – 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	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 Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	High Density Pole	15.6	54	171-200	Stand has been 1/3 row thinned, responding well overall. BA is at a level which warrants another thinning; recommend conducting a second thinning with the focus on removing suppressed, defected or otherwise poorly formed individuals. Occasional higher quality trees will need to be removed for spacing purposes.
4	42110 - Planted Red Pine	High Density Pole	20.0	54	171-200	Stand was third row thinned along with stand 1 last YOE and is responding well. Recommend conducting second thinning with focus on removing suppressed, defected and poorly formed trees. Some higher quality trees will need to be harvested to achieve desired spacing/stocking levels. Scattered beech and balsam fir in understory.
5	42110 - Planted Red Pine	High Density Pole	11.2	53	171-200	Red pine plantation, growing well following second thinning. BA, size and overall stand condition warrants treatment. Recommend thinning stand by removing suppressed, defected or otherwise poorly formed individuals. Some higher quality trees along with occasional small diameter utility poles should be removed to account for spacing.
7	42110 - Planted Red Pine	High Density Pole	11.3	53	171-200	Red pine plantation, growing well following second thinning. BA, size and overall stand condition warrants treatment. Recommend thinning stand by removing suppressed, defected or otherwise poorly formed individuals. Some higher quality trees along with occasional small diameter utility poles should be removed to account for spacing.
8	4319 - Mixed Upland Forest	Medium Density	3.7	9	1-50	Scattered red pine were left as residual following harvest last YOE. Thick jack pine, red maple, black cherry and scattered aspen have regenerated throughout stand with scattered red pine saplings as well. Regeneration is adequate. First age is resulting regen from harvest, second age is overstory red pine.
9	42100 - Planted White Pine	High Density Pole	18.0	54	141-170	Stand was row thinned last YOE by removing 2 rows and leaving 4. W/in removed rows WP seedlings are very thick however they are small, <1'. Could thin stand in some way, possibly marking to cut through the remaining 4 rows.
10	42110 - Planted Red Pine	High Density Pole	10.7	53	141-170	Red pine plantation, growing well following second thinning. Stands 5 and 7 to the north have slightly higher BA and diameter averages. BA, size and overall stand condition still warrants treatment. Recommend thinning stand by removing suppressed, defected or otherwise poorly formed individuals. Some higher quality trees along with occasional small diameter utility poles should be removed to account for spacing.
12	42110 - Planted Red Pine	High Density Pole	16.9	52	171-200	Stand was row thinned last YOE and is responding relatively well. Some irregularity in rows. Could conduct 2nd thinning with focus on removing suppressed and defected individuals. If thinned, BA should be reduced by approximately 1/3.
14	42110 - Planted Red Pine	Low Density Log	8.0	74	1-50	Stand was delineated from adjacent stand 12, scattered red pine were marked to leave. resulting stand equates to an R7 stand with dense red maple regen in portions and scattered red pine regen in other areas. Regeneration is adequate. seed tree with immediate follow up scarification or red pine supplemental planting, natural regen has been spotty in this area. may need stage 2 diameter data



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	6119 - Mixed Lowland Deciduous Forest	High Density Pole	5.1	48		mix of red maple, aspen, little bit of black ash
16	4110 - Sugar Maple Association	High Density Pole	2.5	74	111-140	Very nice quality sm pole stand w/ some small logs, stand would benefit from light non-comm thinning--good core, good age
18	42101 - Planted White Pine, Mixed Deciduous	Low Density Pole	32.7	54	1-50	Stand was treated last YOY by shelterwood harvesting majority of stand area. Small portion was row thinned adjacent to stand 16. Hdwd species and aspen are regenerating very well throughout.
19	4130 - Aspen	High Density Pole	24.0	48		Stand is actually a mixture of upland/lowland. Took a closer look at stand once access was made easier by snow depth and found it to be ready for harvest. Access may be difficult as wet soils are present around perimeter of stand. Stand delineation should be able to follow treatment boundary however expect some adjustments due to wet soils during sale set up. Attempt to harvest approximately 15-20 acres of aspen with some lowland aspen/red maple included. (old comment) sub canopy changes through stand, shrub/cherry dominate in north end, red maple dominates in south end
20	4130 - Aspen	High Density Pole	69.6	44		Descent quality aspen stand with difficult but doable access. Stand is very wet on both sides. Consider harvest w/ accompanying road improvements next YOY ~ 2025. age documented from previous inventory and timber sale records
22	6113 - Lowland Maple	High Density Log	268.4	95	111-140	Lowland red maple stand with ash and aspen along edges. Very wet throughout the year, difficult to access, would be extremely difficult to conduct any commercial harvest operations within interior of stand. Recommend possible harvest along western edge of stand, adjacent to upland opening. There is a small topo change and within this transition zone aspen and declining ash are more prevalent. Recommend harvesting narrow strip to remove aspen/ash and red maple in an attempt to regenerate.
23	4130 - Aspen	High Density Pole	21.1	42		Aspen stand with some variability in size and stocking when going from north to south. Overall fair quality with some better quality clones, most notably in the northern portion of the stand. well developed subcanopy layer, rubus, misc. shrubs, stand becomes increasingly "damp" as you move from north to south, but no standing water or true lowland indicators, started to pick up some black ash along the border with stand to the south
24	6112 - Lowland Aspen	High Density Pole	28.0	85		
26	4130 - Aspen	High Density Pole	26.1	28		Fair quality aspen stand with hdwd species scattered throughout. shrubs heavier along lowland influenced edges and absent in the center of the stand. Classified stand as pole sized overall however stand is a mixture of pole/sapling sized individuals.
28	6113 - Lowland Maple	High Density Pole	14.0	68		stand appears to have been cut approx. 38 years ago resulting in many red maple stump sprouts that are of poor quality, 1st age is larger diameter single stem red maple (fewer of these than stump sprouts)



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	6127 - Lowland Pine	High Density Pole	44.5	63	81-110	Stand shows variability when viewing aerial photo, only accessed northern edge of stand to gather data however so BA most likely has a greater range than what is entered in stage 1 data. Stand is wet in places with some hummocks of dry ground. Scattered aspen and red maple pockets with some q-type species in more open areas of stand. natural lowland white pine
31	4130 - Aspen	High Density Pole	7.5	45		Fair quality aspen stand, good stocking overall. WP scattered throughout stand. Some small areas of low ground. Recommend evaluating next YOE for final harvest options with stand 32 to the north. Will require a culvert/road work or temp bridge.
32	4130 - Aspen	High Density Pole	16.8	45		descent quality aspen stand on upland, surrounded by lowland RM and alder stands. Difficult access to stand-would require a culvert/temp bridge to access. Recommend attempting to do these road improvements next YOE and final harvest w/ adjacent stand 31. pockets of red maple, large vernal pond wet area in northeast part of stand
33	4130 - Aspen	Medium Density	15.1	8		
34	4130 - Aspen	Medium Density	7.2	16		"humocky" with lowland influences around edges and in pockets, blueberry heavy in spots, but light overall
35	6113 - Lowland Maple	High Density Log	21.5	85		Lowland maple stand with aspen and some declining ash along edges. See previous comments regarding culvert. This trail was most likely used as access when harvesting adjacent aspen stand-there is an old access road running n/s through preinvnetory stand # 55. Road is rutted and barely passable due to a collapsed old culvert. Water is still passing through the culvert, low priority to replace, road could be closed to prevent further rutting.
36	42210 - Natural Red Pine	High Density Log	8.9	89	111-140	Small, isolated red pine stand with variable size class red pine throughout. Moss groundcover in places, wet soils become more evident along western edge along with some lowland coniferes entering into the mix where stand transitions to adjacent lowland complex. Red maple a significant component throughout stand.
37	4130 - Aspen	Medium Density	42.9	16		many scattered little lowland inclusions. Small openings throughout aspen regen.
40	4130 - Aspen	High Density Pole	5.6	48		age same as red maple cut in adjacent (north) stand
41	6139 - Mixed Lowland Forest	Medium Density Pole	3.1	Uneven Age		
42	6112 - Lowland Aspen	Low Density Pole	3.0	30		Lowly stocked ash/aspen stand, ash is declining rapidly, adjusted species composition accordingly-forested wet area dominated by black ash in the south half and by aspen in the north half



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
46	42210 - Natural Red Pine	Medium Density Log	1.2	64	51-80	Narrow, lowly stocked red pine stand with some aspen throughout. blends into adjacent non forested type in places.
47	4130 - Aspen	Medium Density	13.1	8		
48	6127 - Lowland Pine	High Density Pole	2.9	63	111-140	Made BA estimates from northern edge of stand and based on stand 30's BA data. Similar stands-stand is same as preinventory # 31, but doesn't qualify for multi-part polygon due to no documented age of origin (by plant or cut record)
49	4130 - Aspen	High Density Log	3.7	74		Stand is on the lower end of the 75-100% canopy closure. Descent quality aspen in places, some variability throughout but overall aspen is in the log size class. No access possibilities for this stand, surrounded by lowland types on all sides, very wet.
54	6113 - Lowland Maple	High Density Pole	6.7	48		very "clumpy", stump sprouts similar to stand 39
56	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	10.4	Uneven Age		
57	6113 - Lowland Maple	Medium Density	6.1	25		Stand data estimated from scant notes recorded by Bill Rollo while doing non-forested inventory on this stand which turned out to be forested. His notes read simply "maples, ash, birch; seasonally wet; E3". This stand's data were assumed based on these notes and general knowledge of nearby types.
58	4130 - Aspen	High Density Pole	35.6	36		Some variability in size, stocking and quality throughout stand. Some small pockets of blow down, some hypoxylon in small localized areas. Stand is a mixture of pole/sapling sized trees, identified stand as pole sized.
59	4131 - Aspen, Oak	Medium Density	2.8	36		
60	6119 - Mixed Lowland Deciduous Forest	High Density Log	14.7	60		Lowland stand along creek, some cedar mortality in areas previously flooded. Some recent beaver activity, see old comments-a few cedars along creek, old beaver activity, heard red shoulder hawks in the vicinity
62	6113 - Lowland Maple	High Density Pole	14.2	52		
64	6113 - Lowland Maple	High Density Pole	33.9	60		
66	4139 - Aspen, Mixed Deciduous	High Density Log	10.9	68		Recommend treating to remove/regenerate aspen however access is not available. stand is on an elevated ridge extending north from private property. Wet on all sides except south. Foot path from private property runs north /south the length of the ridge. Noticed one or two large red oaks, pockets of conifer sub canopy (thermal cover) along northwest edge of stand along the base of the ridge.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
67	4112 - Maple, Beech, Cherry Association	High Density Log	2.1	Uneven Age	111-140	Low volume, mediocre quality stand. SM is epicormic branching, BC and RM are descent quality. Age taken on larger RM. two hemlocks in canopy, ground cover is lycopodium
68	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	2.7	90	111-140	Got as close as possible to stand in order to estimate BA measurements. Stand was field visited last inventory so no other stage 1 data was edited-(old comment) natural white pine, pocket of conifer cover, wanted to label it "lowland natural white pine" but that is not in the classification key
69	6119 - Mixed Lowland Deciduous Forest	High Density Pole	10.4	87		
70	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	19.7	84		
71	6113 - Lowland Maple	Medium Density Pole	42.0	84		
74	4130 - Aspen	High Density Pole	3.6	53		Small aspen stand, descent quality-broken in 1/2 by powerline ROW. Stand is adjacent to M-115 and is also wet along eastern/southern edge.
75	6113 - Lowland Maple	Medium Density Log	18.7	75		Viewed stand from edge, difficult to access, very wet. Pretty lowly stocked, could see some blowdown (see old comments) Stand was field inventoried last YOY so not much stage 1 data was edited. Black ash declining, adjusted canopy composition to account for this-varying age classes from natural disturbance (wind throw, blow down) some very large black ash present in stand,
77	6113 - Lowland Maple	High Density Pole	25.5	70		Another difficult to access stand, crossed PVT from RR grade to view stand from edge. Some large WP, scattered blow down. Black ash is declining, adjusted canopy composition to reflect this. Did not change remaining stage 1 data with the exception of estimating a 1st age.
78	6119 - Mixed Lowland Deciduous Forest	High Density Log	15.8	87		
79	6113 - Lowland Maple	High Density Log	8.8	Uneven Age		Black ash is declining rapidly, standing snags make up some of the canopy but canopy percentages for BA have been reduced. Stand is wet with standing water in many locations throughout. Dutchman Creek flows through stand, maintained wood duck box north of creek, east of powerline
81	6119 - Mixed Lowland Deciduous Forest	High Density Log	29.4	80		
83	4130 - Aspen	High Density Sapling	9.0	34		
85	6113 - Lowland Maple	High Density Pole	29.7	87		



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	9.7	Uneven Age		
87	4311 - Pine, Aspen Mix	High Density Log	2.1	65		Found two private survey corners in the SE corner. They are both rls caps, approx. 30' apart. One is marked with a green and white t post, the other is only marked with a wood picket. There is an unidentified shrub species in the sub canopy, medium density, 3 - 10
88	6112 - Lowland Aspen	Medium Density Pole	4.0	51		Increment core poor - age not reliable, quite likely older. Aspen declining; 79' tall. Red maple in multi-stemmed stump sprouts from high stumps (past winter cut?). Raspberry, goldenrod, ferns. BA about 100.
89	4130 - Aspen	High Density Pole	4.7	38		Small, narrow aspen stand adjacent to powerline ROW and PVT.
90	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	49.4	87		
91	6113 - Lowland Maple	High Density Pole	9.3	56	51-80	
94	4130 - Aspen	High Density Sapling	37.7	23		evidence of heavy rutting in north 1/3 of stand from previous cut, upland site, but encompasses transition area to lowland adjacent stand to the north
95	6113 - Lowland Maple	High Density Pole	22.0	80		
96	6113 - Lowland Maple	Medium Density Pole	11.9	87		
97	6116 - Lowland Birch	Medium Density Pole	7.2	46		Band of solid white birch saplings/small poles parallel to creek; BA about 50; 39' tall. "5% black ash" actually a mix of ash/elm/red maple.
98	6119 - Mixed Lowland Deciduous Forest	High Density Log	3.3	80		
99	4130 - Aspen	Medium Density Pole	4.8	55		for age class diversity if needed possible treat south portion of stand (north portion would be difficult to access)  small pockets of red oak south end of stand, retain if stand is treated. north end of stand has lowland transition influence with greater sub canopy diversity.
101	4130 - Aspen	Medium Density	21.5	17		Check cut record for age



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
103	4130 - Aspen	High Density Pole	8.6	40		Variable quality aspen stand, some small sapling/smaller size class pockets. Overall stand is pole sized. WP scattered throughout along with some RM and BC. Small vernal ponds along north edge. 2nd age is for WP. Recommend waiting until next YOE to harvest stand, add adjacent stand 199 to sale as well.
104	4130 - Aspen	High Density Sapling	13.7	17		
105	4130 - Aspen	High Density Pole	13.1	44		Variable size/quality aspen stand-mixture of QA and BTA. Small bog adjacent to stand on southern edge, near powerline ROW. Would recommend harvesting stand next YOE, allow to grow one more rotation. Consider back sale area off of bog edge a short distance. R. maple/b. ch. subcanopy is variable-high in some areas and low in others. Most prevelant in low areas around bog. Tree stand - no (illeg) but (illeg) name, and left up all year.
108	4112 - Maple, Beech, Cherry Association	High Density Log	20.5	89	81-110	Heavy bramble in understory, regen consists mainly of beech and ironwood with small pockets of cherry regen. Some scattered SM regen! nice quality r. maple and cherry, stand is somewhat low an east and west ends, vernal pool east end, hemlock sub canopy component limited to these "end " areas. S. maple/ash found more in center of stand.
109	4112 - Maple, Beech, Cherry Association	High Density Log	4.4	86	141-170	Descent hdwd stand, somewhat difficult access but doable. Beech are large individuals providing good cavity nesting habitat. SM and RM are of best quality, ash seems to be holding up ok. Because of low volume, consider waiting until next YOE when adjacent aspen stand is more likely to be treated and conduct harvest in this stand then.
110	4110 - Sugar Maple Association	High Density Log	3.6	Uneven Age	141-170	Narrow hardwood stand, small acreage and therefore relatively low volume. PVT boundary along western edge, PVT property had thinning conducted recently. Cherry is of high quality, overall stand quality is descent. Average BA is in the 150 sq ft/ac range. Recommend thinning next YOE with adjacent aspen stand due to low volume/small acreage.
111	4112 - Maple, Beech, Cherry Association	High Density Log	60.0	Uneven Age	141-170	Good quality hardwood stand, cherry is of exceptional quality. Regen is descent throughout with some dense pockets of SM, cherry and beech regen. Pockets of hemlock throughout, most notably in eastern and southern areas of the stand. Some scattered ash throughout. BA averages approx 170 overall, recommend thinning at this time to remove defect and improve overall spacing/stocking. As old management consideration comment states - permission will be needed to cross powerline ROW. Old comment - stand was thinned last entry period, cherry stumps sprout regen. "carpet of blackberry and raspberry
112	4139 - Aspen, Mixed Deciduous	High Density Pole	23.9	40		Descent quality stand of mixed aspen with red maple and BC common throughout. scattered WP and BF in mid-canopy layer. Slightly wet in northern portions of stand. Some topo ~10 ft of variation where stand drops to adjacent wet Q-type. This slope should be avoided when stand is treated. Consider treating stand next YOE and incorporate thinnings of adjacent two hdwd stands, both are small acreage. verified previous inventory age in field



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
114	4110 - Sugar Maple Association	High Density Pole	14.3	Uneven Age	81-110	Dense raspberry understory with descent regen throughout stand, mainly ironwood and beech but pockets of cherry, sugar maple and red maple do exist. Stand thinned last YOY, canopy responding well to treatment, regen is adequate, not exceptional. good quality sugar maple, trace amounts of white ash and beech also present in stand
116	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	10.5	60		Wet stand divided by powerline ROW. Mixed species composition, pockets of larger diameter trees with higher stocking. Also areas of low stocking, poor quality, low DBH individuals. Some mortality occurring in black ash component. As noted, there is a small stream flowing E?W through stand, overall area is quite wet-seeps and stream flow. large amount of dead and down, regen pockets and age classes as the result of numerous blow downs, springs/seeps, small creek flowing west to east originates west of powerline,
118	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	1.2	25		Lowland area, extends south of compartment boundary-very wet, pocket of cattails in NW corner, springs, standing water, marsh marigolds, various age classes of regeneration
120	4112 - Maple, Beech, Cherry Association	High Density Pole	2.6	34	51-80	Overall relatively low quality stand, stump sprout origin. Heavy to RM with BC and aspen also common throughout. Look like black cherry has descent potential, aspen of low quality. Scattered BF and WP in mid to upper canopy. Very scattered sugar maple individuals within stand. ground cover is lycopodium
121	4139 - Aspen, Mixed Deciduous	High Density Pole	9.3	34		Northern portion of stand has a higher percentage of black cherry and red maple, however overall aspen seems to be the dominant component throughout. Scattered conifers in canopy. County road has been rerouted and now traverses directly through center of stand. stand is heavy to black cherry, this general area has produced some of the nicest black cherry sawlogs in the TCFMU.
123	4112 - Maple, Beech, Cherry Association	High Density Log	13.2	80	81-110	Very heavy to Hemlock, influence of wet soils is visible along ROW that splits stand. Very little if any hemlock individuals break through into the main canopy, interesting vertical structure, rare to see so much hemlock in the sub-canopy, stand bisected by powerline. OI basal area was 110, but access precludes treatment, so no stage 2.
124	4112 - Maple, Beech, Cherry Association	High Density Pole	10.8	Uneven Age	81-110	Lots of bramble throughout understory, some hardwood regeneration in sapling layer, mostly ironwood. Sugar maple seedling layer is slightly more advanced following treatment but still small and not yet beyond browse pressure. heavy maple seedling layer 1-2 feet tall
125	6132 - Mixed Lowland Forest with Cedar	High Density Pole	19.2	35		Wet stand, lots of variability in species composition. Lowland conifers providing lots of cover throughout stand. Trail running down powerline basically terminates adjacent to this stand due to standing water. springs, marsh marigolds, but no flowing water, bisected by powerline,
126	4112 - Maple, Beech, Cherry Association	High Density Log	5.6	80	111-140	Lots of hemlock in understory providing good thermal cover. Lots of turkey activity within stand. Overstory is in descent shape, moderate quality mainly consisting of red maple-well developed hemlock subcanopy, completely overtopped by deciduous. vernal pools areas along west edge.

S  
t  
a  
n  
d

Traverse City Mgt. Unit

## Report 10 – Forested Stands

Compartment: 033

Year of Entry: 2015



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
128	4130 - Aspen	Medium Density Pole	1.4	55		for age class diversity if needed possible treat south portion of stand (north portion would be difficult to access)  small pockets of red oak south end of stand, retain if stand is treated. north end of stand has lowland transition influence with greater sub canopy diversity.
199	42100 - Planted White Pine	High Density Pole	15.2	52	141-170	Limited access to eastern portion of stand-multi part- would require a road/skid trail for access. Small stand overall, WP plantation w/ scattered aspen throughout. Recommend waiting to harvest until adjacent stand 103 has advanced in size a bit more, most likely next YOE.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	31021 - Cool Season Grass	6.8	No	Low (NonForested)	West side of old rail grade. Could mow or burn, but not a priority. Mullein, hoary alysum, St. Johnswort also present.
3	3105 - Mixed Upland Herbaceous	2.9	No	Low (NonForested)	Stand is open strip along east side of old rail grade. "unlisted" spp is cladonia. Also trace amounts of hoary alysum.
6	3101 - Poverty Grass, Cladonia	3.9	No	Medium (NonForested)	Cut or burn seedling red pine. "unlisted" spp = cladonia.
11	3301 - Low Density Deciduous Tree	13.5	No	Low (NonForested)	"unlisted" spp = cladonia
13	122 - Road/Parking Lot	5.6	No	Low (NonForested)	
17	3301 - Low Density Deciduous Tree	28.6	No	Medium (NonForested)	Portion of stand along east edge, adjacent to 2-track, should have been split out as a separate stand and labeled "3104-degraded". That portion is almost all knapweed, other exotics, cladonia and poverty grass, and would be a site to convert to warm season grasses.
21	122 - Road/Parking Lot	7.9	No	Low (NonForested)	Old rail grade, now snowmobile trail. This stand is grade itself, adjacent open ROW is typed in separate stands.
25	3104 - Degraded	1.2	No	Medium (NonForested)	
27	6224 - Treed Bog	4.8	No	Low (NonForested)	Open water pools seasonally. Unlisted spp = dewberry. "Viburnum" = wild raisin.
29	6224 - Treed Bog	6.5	No	Low (NonForested)	Appears to hold open standing water seasonally. "Viburnum" is wild raisin.
38	6221 - Fen	3.6	No	Low (NonForested)	
39	6225 - Bog	2.2	No	Low (NonForested)	Open bog with shrub/tree fringe, a few white pine saplings and poles in middle. "Viburnum" is wild raisin (currently not in pick-list).
43	3103 - Rubus-Fern	4.6	No	Medium (NonForested)	Long, narrow opening with strip of aspen/black cherry up the middle.
44	6225 - Bog	1.5	No	Low (NonForested)	
45	6224 - Treed Bog	2.1	No	Low (NonForested)	Succeeding slowly to white pine. "Viburnum" is wild raisin.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
50	6224 - Treed Bog	1.3	No	Low (NonForested)	North 1/3: slight rise, small stand of RP & BS poles with blueberry, sphagnum, some bracken fern below, other shrubs. RP natural, nice diversity patch within bog/aspens regen. area. "Viburnum" is wild raisin.
51	3103 - Rubus-Fern	2.1	No	Medium (NonForested)	Aspen encroaching along edges. Pretty solid fern - leave alone. Looks good for woodcock.
52	6220 - Alder/willow	27.9	No	Low (NonForested)	2 red-shouldered hawks nearby. Wet. Need waders to cross stream. A few pole snags. "Viburnum" = wild raisin.
53	6221 - Fen	3.6	No	Low (NonForested)	Thick red maple saplings west side adjacent to upland, tapering into thick tangle of dogwood/willow/sedge. Standing water seasonally, but dry to mucky when inventoried. Iris present. "Viburnum" is wild raisin.
55	6220 - Alder/willow	7.6	No	Low (NonForested)	Willows with a few dogwood mixed in. Trace of oyster fern.
61	3103 - Rubus-Fern	11.4	No	Low (NonForested)	
63	622 - Lowland Shrub	11.0			
65	3105 - Mixed Upland Herbaceous	2.0	No	Low (NonForested)	Stand is upland on slope and lowland at the bottom - could be split into two stands. Unlisted spp. = goldenrod.
72	6229 - Mixed lowland shrub	5.1	No	Low (NonForested)	Marginally a lowland type, some parts are barely upland. Ground cover includes goldenrod on higher areas.
73	6239 - Mixed Emergent Wetland	12.4	No	Low (NonForested)	Dense ground cover of mostly joe-pye weed, also some goldenrod, boneset, vervain, oyster fern, cardinal flower.
76	622 - Lowland Shrub	7.8			
80	6220 - Alder/willow	6.8	No	Low (NonForested)	
82	6220 - Alder/willow	4.6	No	Low (NonForested)	goldenrod present
84	31021 - Cool Season Grass	6.4	No	Low (NonForested)	Powerline R.O.W. A middle section NW of elbow is lowland shrub and sedge.
92	6239 - Mixed Emergent Wetland	15.0	No	Low (NonForested)	Stand was cover typed from adjacent, similar cover on private land along county road to east. Lots of cattail, but not quite 60%. Herbs = joe pye weed, mint, boneset, poison ivy, jewelweed, many others.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
93	122 - Road/Parking Lot	10.6	No	Low (NonForested)	M-115, Springdale and Thompsonville Roads
102	3205 - Mixed Upland Shrub	2.3	No	Low (NonForested)	Probably maintained by utility co. Some low, wet spots. Trace of broomsedge.
106	6233 - Wet Meadow	2.0	No	Low (NonForested)	Powerline R.O.W. Undulating between dry hills and wetlands. Slightly more wetland acreage. Likely maintained by utility company.
107	6233 - Wet Meadow	2.2	No	Low (NonForested)	Likely standing water in spring. Trace of iris.
113	3104 - Degraded	1.8	No	Medium (NonForested)	Possibly plant in with pine or plant something to add nutrients to the soil. "Unlisted" spp = leafy spurge.
115	6233 - Wet Meadow	3.8	No	Low (NonForested)	
117	3103 - Rubus-Fern	4.2	No	Low (NonForested)	Consider incorporating open part of adjacent forested stand (preinventory #119) into this stand, consists of cherry and rubus. Some patches of cattails.
119	3104 - Degraded	2.0	No	Low (NonForested)	"unlisted" spp = leafy spurge, legume = white sweet clover
122	3103 - Rubus-Fern	6.6	No	Low (NonForested)	Reed canary, cattails are in low spots. One half-acre spot of cattails.