# DNR DNR

# Report 1 - Compartment Review Presentation

**Traverse City Forest Management Unit** 

Compartment 6
Entry Year 2015

Acreage: 2,351
County Benzie

**Management Area: Benzie Moraines** 

Revision Date: 04/25/2013

Stand Examiner: Tim Webb

**Legal Description:** 

T27N R14W Sections 3, 4, 9, 10, 15, 16

# **Identified Planning Goals:**

This compartment falls within the Benzie Moraines management area, for which a plan is being developed. The current draft of the plan calls for maintenance of northern hardwood, aspen, and plantation pine cover types, among others, using mainly partial with some final harvests.

There are numerous pine plantations of various species throughout the compartment. Red and white pine plantations are growing well and should be maintained with periodic thinnings. Several of these have a significant component of hardwoods and can gradually be managed toward a more natural mix, focusing on retention of higher quality trees with each thinning and on increasing within-stand species diversity. A part of one of the white pine plantations is being proposed for a regeneration harvest this planning period to help balance age classes within the management area. Three mature jack pine plantations have significant damage from a March 2012 snowstorm and are being proposed for clearcutting and natural regeneration.

While there are some better-than-average quality hardwood stands in the compartment, most are of middling quality and are at risk of significant insect damage and subsequent tree species loss. Ash trees are succumbing to emerald ash borer, and beech scale has begun to spread. Most of the compartment's hardwood stands can be managed in the long run toward uneven-aged conditions via periodic selection cutting, with attention given this entry period to salvaging ash and reducing the beech component. Some stands of lower quality should be considered for regeneration harvest, particularly on excessively drained soil types. Previous clearcuts in mixed hardwood-aspen stands have resulted in well-stocked aspen, cherry and maple regeneration, with small amounts of other hardwoods.

Aspen stands in the compartment are mostly immature. Some small regeneration cuts of merchantable aspen would benefit local wildlife habitat diversity, including mature aspen inclusions within hardwood stands. Scattered forest openings should be maintained as such for local wildlife habitat diversity.

#### Soil and topography:

Soils within the compartment are predominantly Kaleva and Benzonia sands, with minor occurrences of other sandy soil types. Topography is generally rolling to hilly, with numerous small kettle depressions. There are two notable valleys, one stretching from near the middle of section 4 to the east then south through section 3; the other running southwest to northeast through state land in section 15 and across the southeast part of section 10.

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

State ownership is solid and contiguous with other state land in adjacent compartments to the north, east, and south. There is one isolated quarter-section in section 16 which is contiguous with state land in compartment 7. Private lands in the SW part of this compartment and to the west are predominantly rural residential tracts with woodlots and old farm fields and orchards.

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

Remnant black walnut trees have spread from an old farmstead and are scattered around south section 10 and north section 15, providing a unique mast resource.

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

There is evidence of old homesteads at several sites within the compartment. Bland Cemetery is just to the north across Oviatt Road. An old rail grade runs SW-NE through a valley in parts of sections 10 and 15.

# **Special Management Designations or Considerations:**

None.

#### Watershed and Fisheries Considerations:

There are no waterbodies in this compartment, so Fisheries has no concerns at this time.

#### Wildlife Habitat Considerations:

Approximately 15% of compartment 6 lies on a broad moraine ridge. This LTA is characterized by having well-drained sandy loams on rolling ridges. In presettlement times this LTA was almost completely beech-maple forest. Currently, State ownership of this LTA in compartment 6 is mostly northern hardwoods and pine plantations. Existing hardwood stands should be managed to perpetuate the cover type, providing habitat for species such as red-bellied woodpecker, gray squirrel, wild turkey, white-breasted nuthatch, and blue-spotted salamander. Timber prescriptions should be designed to maintain species diversity as well as include specs for snags, coarse woody debris, and conifer retention. Some of the slash should be left in piles for small animal habitat. Red and white pine plantations have hardwood regeneration in the understories. Many of these stands could be gradually moved via periodic thinnings toward northern hardwood types, retaining a significant conifer component.

The remainder of the compartment is located on a broad flat outwash plain. Presettlement vegetation was mostly beechmaple forest. Wild fires were common to most of this LTA, but the situation of this area near Lake Michigan and between moraines probably limited fire frequency, allowing later successional stages to predominate. Currently, this outwash plain within this compartment harbors a mosaic of conifer plantations, hardwoods, remnant fields, and a few young aspen stands. Conifers are rare outside the plantations. This LTA should be managed to perpetuate hardwoods, allow some of the pine plantations and openings to succeed to hardwoods, and maintain selected openings. Beech is an especially important species to attempt to maintain as a component, considering the presence of EAB. Pockets of higher quality aspen could be maintained adjacent to hardwood stands via periodic patch cutting. These aspen pockets should be located in the fringes of draws, where fires or windstorms might have naturally pushed into adjacent ridges. Such a habitat mosaic would benefit species such as red squirrel, American redstart, chestnut-sided warbler, ruffed grouse, white-tailed deer, broad-winged hawk, and red-backed salamander. Suitable northern goshawk habitat may be present.

# Mineral Resource and Development Concerns and/or Restrictions

Benzie County surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured glacial till. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Devonian Traverse Group. The Traverse is used for stone and cement products. The nearest gravel pit is located one mile to the west and potential should be good. This area is located northwest of the Antrim Shale gas play. The Antrim Shale appears to be pinched out and to have limited potential. There are currently no oil and gas leases in the compartment.

#### **Vehicle Access:**

Access is mostly adequate throughout the compartment for management purposes, although some trail roads are partly closed in. A short connector is being proposed to link an existing trail road in section 10 to another trail road leading to Valley Road. This will improve timber harvesting options and avoid the snowmobile trail.

#### **Survey Needs:**

Monumentation is adequate.

# **Recreational Facilities and Opportunities:**

Snowmobile trail #3 (Platte River Snowmobile Trail) runs roughly North/South through sections 3, 10, and 15 of the compartment. Proposed timber management activities should include trail protection specifications to reduce impacts, as well as serve as an example of how silviculturally sound timber harvesting practices can co-exist, and often improve recreation and hunting experiences for future generations. A non-winter harvest, coupled with avoiding the use of the trail as a haul route, is suggested. The area is also popular for deer hunting. Dispersed recreation includes berry and mushroom picking. Sleeping Bear Dunes National Lakeshore is less than 2 miles west of the compartment. Garey Lake group camp area, and Garey Lake designated-site State Forest Campgrounds are less than 2 miles to the east of the compartment.

# **Fire Protection:**

Initial attack fire protection for this compartment is normally handled out of the Platte River DNR office with assistance provided by the Homestead Volunteer Fire Department in Honor. Additional mutual aid is provided from Almira VFD and, if needed, from Leelanau County fire departments. Because no fire officers are stationed at Platte River, initial attack for wildland fire suppression is now dispatched from the Traverse City Field Office. Road access into all areas is fair, with some limitations on larger equipment because all interior access roads in the area are seasonal dirt roads. Wildfire in the compartment has historically been relatively low; due to the fuel types this is not a high risk area. Travel time for equipment from the Traverse City Field Office is a concern.

# **Additional Compartment Information:**

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** 

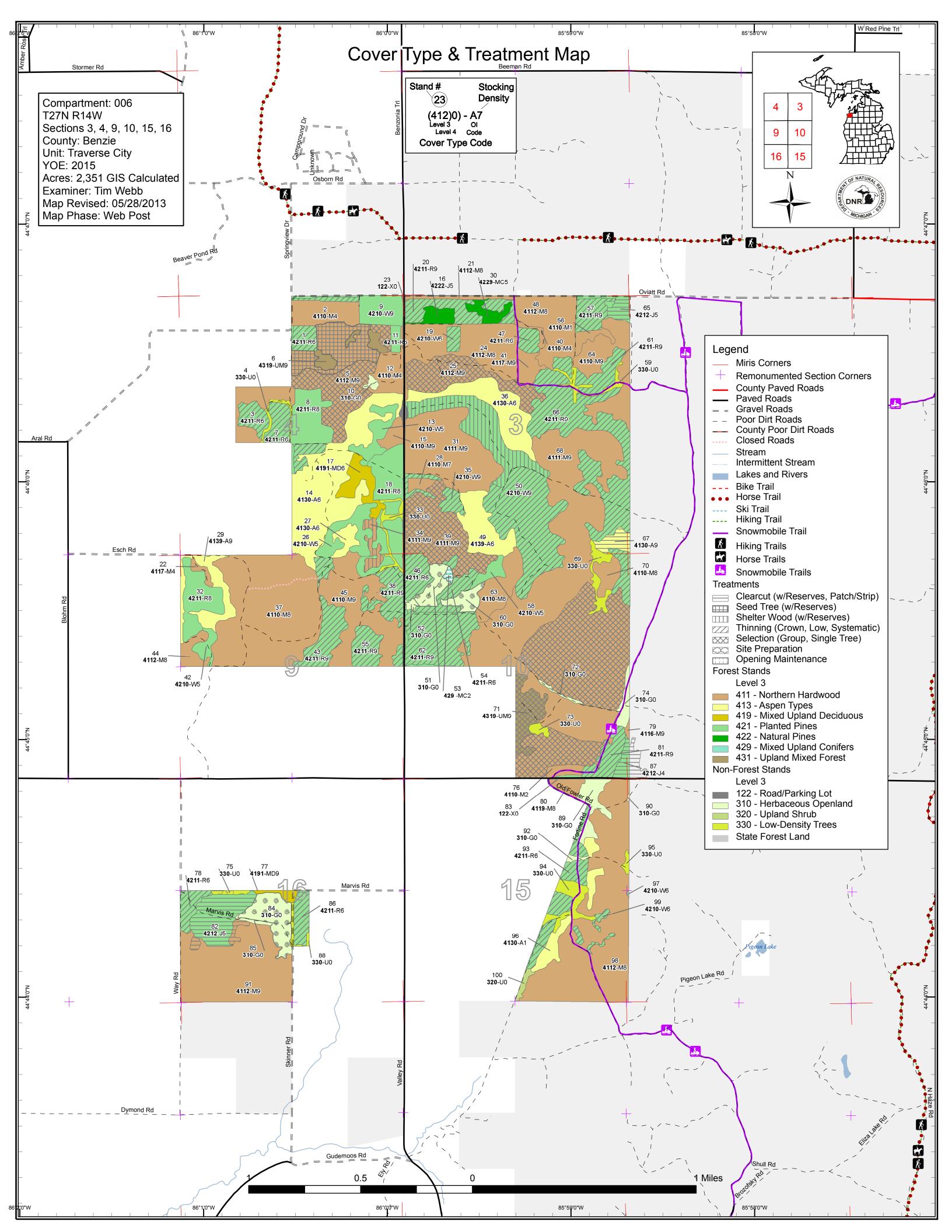
The following information is displayed, where pertinent, on the attached compartment maps:

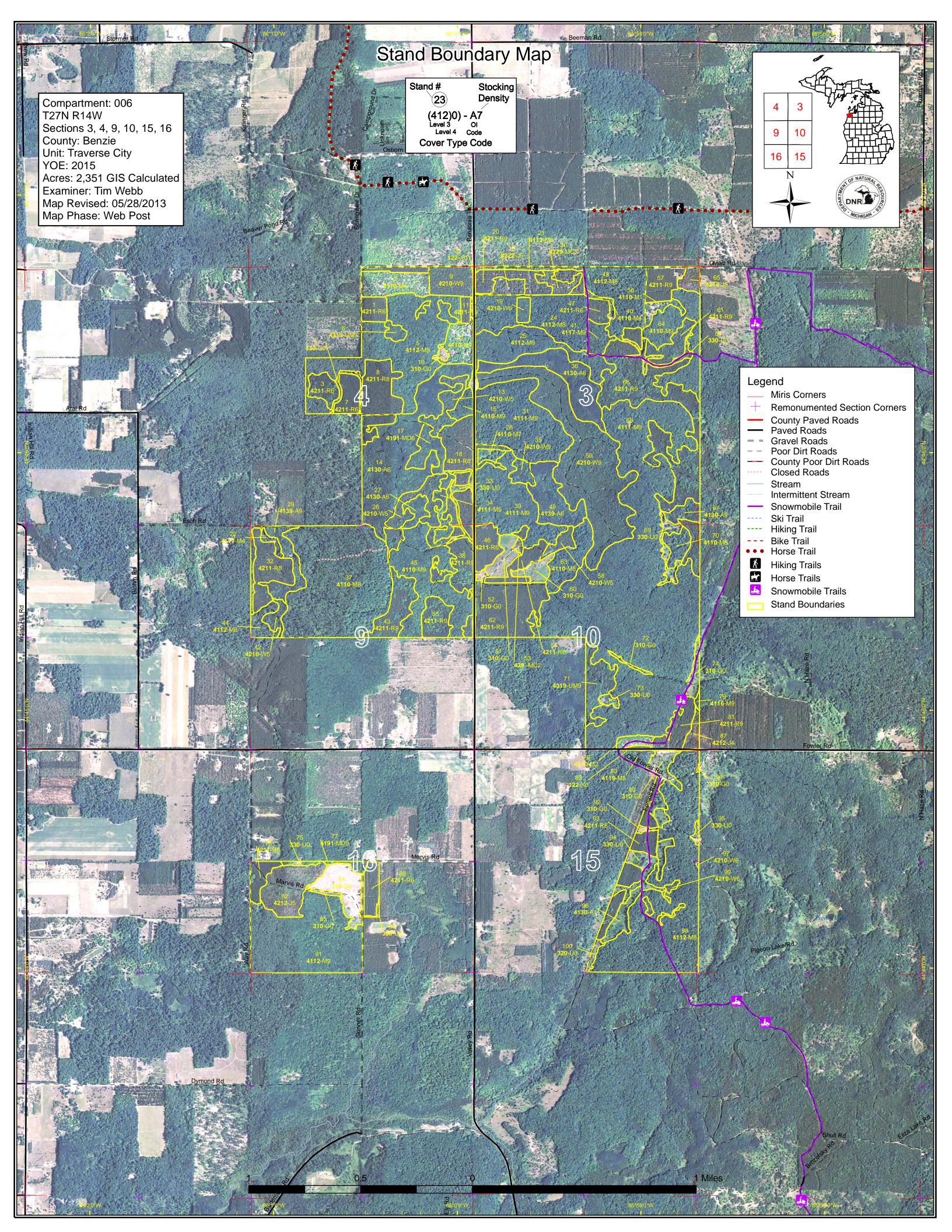
Base feature information, stand boundaries, cover types, and numbers

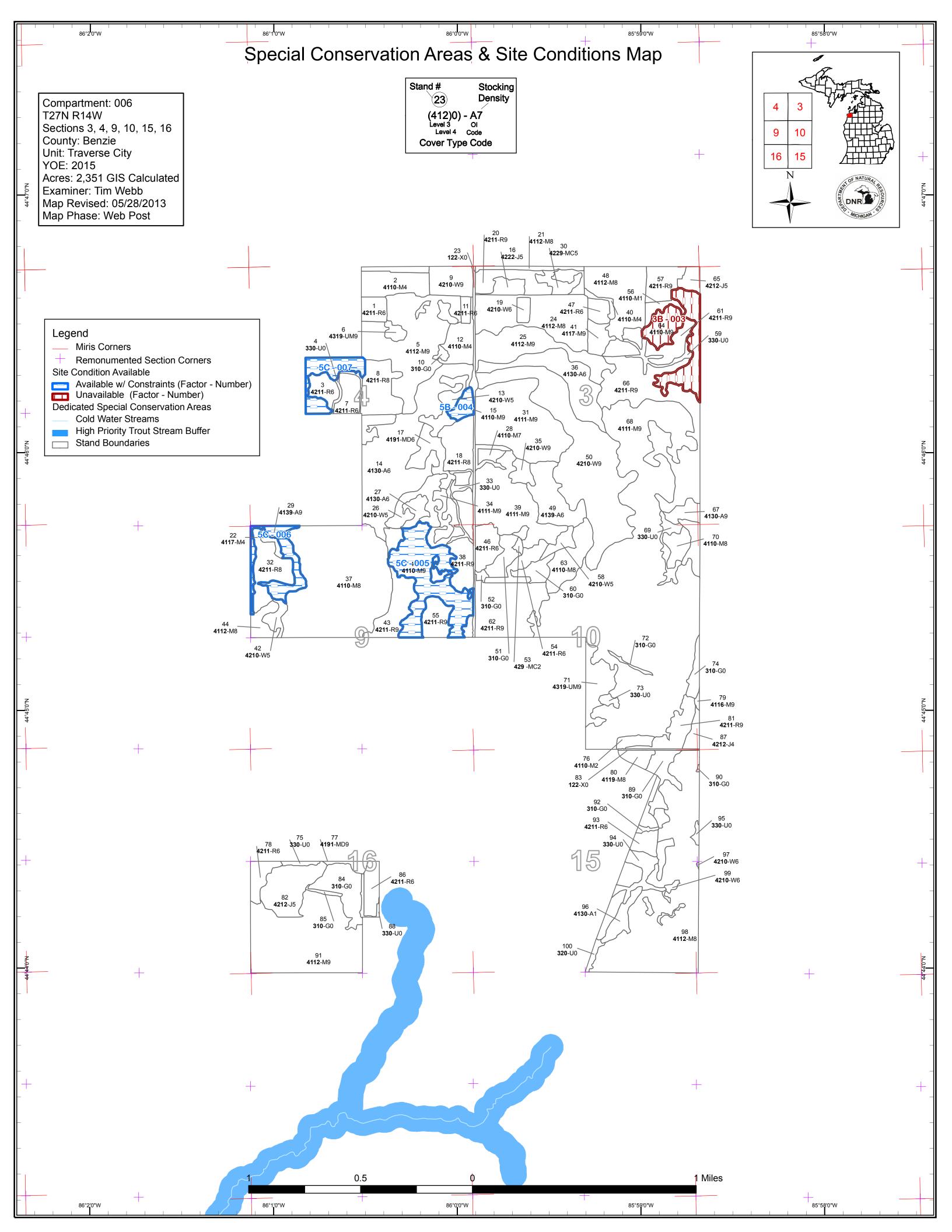
**Proposed treatments** 

Site condition boundaries

Details on the road access system







Traverse City Mgt. Unit
Timothy Webb: Examiner

DNR DNR

#### Age Class

Age Class																
		60	70,79	Park /	No. No.	and a second	\$0.50 /	80,00	120	St. St.	888	on a	72,73	70 <sup>*</sup> Jr.	Se /	, so
Aspen	16	0	37	121	7	19	0	0	0	0	0	0	0	0	199	
Herbaceous Openland	64	0	0	0	0	0	0	0	0	0	0	0	0	0	64	
Jack Pine	0	0	0	0	0	34	5	0	0	0	0	0	0	7	46	
Low-Density Trees	41	0	0	0	0	0	0	0	0	0	0	0	0	0	41	
Mixed Upland Deciduous	0	0	0	14	3	0	0	0	0	0	0	0	0	0	17	
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	
Northern Hardwood	0	0	0	5	46	5	0	22	671	38	501	0	0	0	1288	
Red Pine	0	0	0	0	48	389	21	0	0	0	0	0	0	0	458	
Upland Conifers	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Upland Mixed Forest	0	0	0	0	0	27	0	0	0	0	0	0	0	0	27	
Upland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
White Pine	0	0	0	0	10	178	0	0	0	0	0	0	0	0	188	
Total	137	0	37	140	114	652	26	22	671	38	501	0	0	14	2351	



# **Report 3 – Proposed Treatment Summaries**

Traverse City Mgt. Unit Year of Entry 2015

Compartment 006 Total Compartment Acres: 2351

# **Acres by Treatment Type**

Commercial Harvest - 897

Tree Planting - 28

Other - 1

Habitat Cut - 0

Opening Maintenance - 1

	Cover Type by Harvest Method									
		Se S								
Aspen Types		7	0	0	0	0	0	7		
Northern Hardwood		10	285	33	7	0	0	334		
Planted Pines		44	0	0	41	452	0	537		
Upland Mixed Forest	0 18 0 0 0 18									
	Total	61	304	33	48	452	0	897		

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006 Year of Entry 2015

Deciduous

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	61006001-Cut	10.7	42110 - Planted Red Pine	High Density Pole	56	141-170	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Mark stand for a thinning, reducing the BA to about 120. Focus marking on multi-stemmed, suppressed, or defective trees as much as possible. Specs:

Retain scattered hardwoods.

Other Comments:

Next None needed.

Steps:

S

<u>Proposed</u>

Start Date: 10/01/2014

61006003-Cut 9.3 42111 - Planted High 141-170 Harvest Low Thinning 42111 - Planted Cmpt. Review Red Pine, Mixed Red Pine, Mixed Proposal Density

Prescription Mark stand for a thinning, focusing on suppressed or defective pines. Also mark hardwoods, removing a large percentage of beech where

possible. Residual BA should be about 120 where heavy to pines; about 90 in hardwood patches. Specs:

<u>Other</u>

Comments:

Next None needed

Steps:

**Proposed** 

Start Date: 10/01/2014

High 61006005-32.8 4112 - Maple. 87 111-140 Harvest Seed Tree with 4112 - Maple. 5 Cmpt. Review seed tree Beech, Cherry **Density Log** Reserves Beech, Cherry Proposal Association Association

Prescription Mark about 10-30 BA of individual trees or clumps of maple, cherry, basswood, and a few beech to retain; include some cavity trees. Cut all

other trees over 2" dbh. Leave 1-2 felled trees per acre for CWD. Specs:

Deciduous

Other\_ This prescription is for the lower quality north half of the original stand. The south part will be prescribed for selection harvest.

Comments:

Next Check for regeneration at appropriate intervals. Regen. may be initially dominated by beech and ironwood, but cherry, maple, and basswood are Steps:

desired regen. in the long-run (20+ years).

Proposed

10/01/2014 Start Date:

5 61006005-43.3 High 111-140 Single Tree 4112 - Maple, Cmpt. Review 4112 - Maple, Harvest Beech, Cherry selection Density Log Selection Beech, Cherry Proposal Association Association

Prescription Mark for cutting down to a residual BA of about 90. Create some CWD during harvest operations. Mark most of the beech, but retain some for

mast/cavity trees, and any potential scale-resistant trees. Some regen. holes should develop around large-crowned trees marked for removal. Specs:

Other Comments:

Check regeneration at appropriate intervals. Cherry, maple, and basswood are desired species, although beech and ironwood may dominate Next

Steps: intially.

Proposed

Start Date: 10/01/2014

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006 Year of Entry 2015

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7	61006007-Cut	16.7	42110 - Planted Red Pine	High Density Pole	56	171-200	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Mark for thinning, focusing on any suppressed or defective trees; residual BA about 120. Retain any scattered hardwoods.

Specs:

S

Other Comments:

None needed.

<u>Next</u> Steps:

<u>Proposed</u>

Start Date: 10/01/2014

61006019-Cut 4.2 42101 - Planted High 200+ Harvest Low Thinning 42101 - Planted Cmpt. Review White Pine, Mixed White Pine, Mixed Proposal Density Deciduous Pole Deciduous

Prescription Mark for a thinning down to a residual BA of +/- 130. Focus removal on poor quality trees of all species, especially weevil-damaged or

suppressed white pine. Specs:

<u>Other</u>

Comments:

<u>Next</u> None needed.

Steps:

**Proposed** 

Start Date: 10/01/2014

61006020-Cut 20.6 42110 - Planted High 64 141-170 Harvest Crown Thinning 42110 - Planted Cmpt. Review 20 Red Pine **Density Log** Red Pine Proposal

Prescription Mark for thinning, targeting multi-stemmed and bark-damaged trees first. Remove any merchantable jack pine. Residual BA: 120-130. Use

appropriate sale specifications to protect the adjacent snowmobile trail. Specs:

<u>Other</u>

Comments:

<u>Next</u> None needed.

Steps:

**Proposed** 

10/01/2014 Start Date:

61006021-Cut 5.2 4112 - Maple. Medium 56 81-110 Harvest Clearcut with 4112 - Maple, Cmpt. Review 21 Beech, Cherry **Density Log** Reserves Beech, Cherry Proposal Association

Association

Prescription Clearcut, retaining maple saplings as much as possible and some scattered better-quality hardwood seed trees.

Specs:

Other Comments:

Next Conduct regen checks at appropriate intervals post-harvest. Acceptable regen includes cherry and maple with a component of red pine, although

some beech and jack pine will likely regenerate as well.

Steps: **Proposed** 

10/01/2014 Start Date:

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006 Year of Entry 2015

Deciduous

42110 - Planted

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
25	61006025-Cut	37.9	4112 - Maple, Beech, Cherry Association	High Density Log	87 J	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Mark for selection harvest with a residual BA of 70-80. Focus on beech removal, and create some regen gaps, especially around aspen clones. Specs:

Leave some beech for mast/cavities, or any potential scale-resistant trees. Create some CWD during harvest operations.

Other\_ Comments:

S

Next Check regeneration at appropriate intervals post-harvest. Desired species include maple, cherry, and aspen, although beech may dominate

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

61006034-Cut 6.7 4111 - S.Maple, High 111-140 Harvest Shelter Wood 4110 - Sugar Maple Cmpt. Review Hard Mast with Reserves **Density Log** Association Proposal

Association

Prescription Shelterwood harvest, retaining about 30 BA of better quality, well-distributed hardwoods and white pine. Harvest in snow-free season for

scarification and better chances for maple and pine regeneration over beech and ironwood. Retain 1-2 cut trees per acre for CWD. Specs:

Other Comments:

Check for regeneration at appropriate intervals post-harvest. Desired regeneration includes sugar maple, basswood, and white pine, plus aspen <u>Next</u> Steps:

at the north end of the stand.

**Proposed** 

10/01/2014 Start Date:

42101 - Planted 61006035-Cut 9.6 High 56 200+ Harvest Low Thinning 42101 - Planted Cmpt. Review White Pine, Mixed Density Log White Pine, Mixed Proposal

Deciduous

Prescription Mark rows to cut (every 3rd), plus additional low-quality, suppressed, or weevil-damaged trees in adjacent rows. Residual BA: about 150.

Harvest

Low Thinning

Specs:

Other\_ Current BA is high, about 250.

17.3

Comments:

None needed. <u>Next</u>

Steps:

38

Proposed

10/01/2014 Start Date:

61006038-Cut

141-170 Red Pine Density Log Red Pine Proposal

Prescription Mark for a thinning with a residual BA of about 120-130. Some hardwoods should be marked as well, focusing on multi-stemmed sugar maple, but retain most of the hardwood. A few cut hardwoods could be left for CWD.

42110 - Planted

Specs:

High

<u>Other</u> Comments:

North portions of the stand were thinned late last entry period and are not being prescribed this entry period.

56

Next None needed. Steps:

Proposed

10/01/2014 Start Date:

Cmpt. Review

Traverse City Mgt. Unit Compartment: 006 Report 4 -- Treatments Prescribed Year of Entry 2015 with No Limiting Factor s t а **Treatment** Acres CoverType Size BA **Treatment Treatment Cover Type** Approval n Method Objective d Name Density Age Range Type **Status** 53.8 4112 - Maple, 4111 - S.Maple, High 81 111-140 Single Tree Cmpt. Review 39 61006039-Cut Harvest Hard Mast Density Log Selection Beech, Cherry Proposal Association Association Prescription Mark for selection harvest with a residual BA of 70-80. Focus on removing most of the beech, except leave 5-10 BA for mast, cavities, or Specs: potential scale resistance. Some regen. holes will result from removal of beech clumps or large-crowned trees. Create some CWD during harvest operations (e.g. cull beech). Other Comments: Check regeneration at appropriate intervals post-harvest. Desired species include maple and cherry, although beech and ironwood may <u>Next</u> dominate initially. Steps: Proposed Start Date: 10/01/2014 24.8 42111 - Planted 171-200 Harvest Low Thinning 42111 - Planted Cmpt. Review 43 61006043-Cut High Red Pine, Mixed **Density Log** Red Pine, Mixed Proposal Deciduous Deciduous Prescription Mark both red pine and hardwoods for thinning, with a residual BA of about 120 in pine patches and about 90 in hardwoods. Focus hardwood marking on beech and low quality trees; retain some beech and cherry for mast and cavities. Create some CWD during harvest operations. Specs: Other Comments: **Next** None needed. Steps: **Proposed** 10/01/2014 Start Date: 42110 - Planted 42110 - Planted Cmpt. Review 46 61006046-Cut 126 High 46 171-200 Harvest Low Thinning Red Pine Red Pine Proposal Density Pole

Prescription Mark for thinning, reducing BA to about 120. Protect adjacent old homestead site.

Specs:

Other Stand was previously marked but not cut; there may be some faded paint still visible.

Comments:

Next None needed.

Steps:

Proposed

Start Date: 10/01/2014

47 61006047-Cut 15.7 42110 - Planted High 56 141-170 Harvest Low Thinning 42110 - Planted Cmpt. Review Red Pine Density Red Pine Proposal Pole

Prescription Mark for thinning, reducing the BA to about 120. Focus removal on suppressed or defective trees. Retain scattered hardwoods for diversity.

Use appropriate sale specifications to protect the adjacent snowmobile trail. Specs:

Other\_ Comments:

<u>Next</u> None needed.

Steps:

**Proposed** 

10/01/2014 Start Date:

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006 Year of Entry 2015

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
50	61006050- shelterwood	41.0	42101 - Planted White Pine, Mixed Deciduous	High Density Log	56 I	171-200	Harvest	Shelter Wood with Reserves	42201 - Natural White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Mark about 30-40 BA of trees to retain, including good quality trees of a variety of species, plus any cavity trees. Cut most of the aspen. Pine Specs:

left should be sturdy & wind-firm. Leave 1-2 cut trees per acre for CWD. Consider snow-free harvest for scarification.

Other Most or all of the current retention should be left long-term to nurse regeneration, to protect white pine from weevil damage, and for habitat Comments:

diversity. This will result in a 2-aged stand.

N<u>ext</u> Check for regeneration at appropriate intervals post-harvest. White pine, cherry and maple are desirable species, plus any patches of aspen. If

regeneration fails, consider replanting with white or red pine. Steps:

<u>Proposed</u>

S

Start Date: 10/01/2014

61006050-thin 72.1 42101 - Planted High 171-200 Harvest Low Thinning 42101 - Planted Cmpt. Review White Pine, Mixed . Proposal White Pine, Mixed Density Log Deciduous Deciduous

Prescription Thin down to about 120 BA, marking better quality trees of all species to retain, plus any cavity trees. Cut all other trees >2" dbh. Focus removal

on suppressed, weevil-damaged, and low-quality trees. Create some CWD during harvest operations. Specs:

<u>Other</u> Harvesting this stand may require construction of a short segment of connector road for better access.

Comments:

Next

None needed.

Steps:

**Proposed** 

10/01/2014 Start Date:

61006054-Cut 12.3 42110 - Planted High 46 141-170 Harvest Low Thinning 42110 - Planted Cmpt. Review 54 Red Pine Density Red Pine Proposal Pole

Prescription Mark for thinning down to a residual BA of about 120. Focus removal on any suppressed or defective trees. Protect adjacent old homestead site.

Specs:

Other\_ Comments:

Next None needed.

Steps:

**Proposed** 

10/01/2014 Start Date:

61006055-Cut 15.4 42111 - Planted High 171-200 42111 - Planted Cmpt. Review 55 56 Harvest Low Thinning Red Pine, Mixed Red Pine, Mixed Density Log Proposal Deciduous Deciduous

Prescription Mark both red pine and hardwoods for thinning, with a residual BA of about 120 in pine patches and about 90 in hardwoods. Focus hardwood marking on beech and low quality trees; retain some cavity trees and cherry for mast. Create some CWD during harvest operations. Specs:

Other

Comments:

None needed.

Next Steps:

**Proposed** 

Start Date: 10/01/2014

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006 Year of Entry 2015

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
57	61006057-Cut	12.2	42110 - Planted Red Pine	High Density Log	59	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Mark for a thinning down to a residual BA of about 120. Retain scattered cherry for diversity. Protect adjacent old homestead site.

Specs:

S

Other Comments:

Next

None needed.

Steps:

61

Proposed

Start Date:

10/01/2014

61006061-Cut

12.2 42111 - Planted

Red Pine. Mixed

High Density Log 56 141-170 Harvest

Low Thinning

42111 - Planted Red Pine, Mixed Cmpt. Review Proposal

Deciduous

Prescription Mark both red pine and hardwoods for thinning, with a residual BA of about 120 in pine patches and about 90 in hardwoods. Focus hardwood marking on low quality trees; retain some cavity trees and cherry for mast. Create some CWD during harvest operations. Use appropriate sale Specs:

specifications to protect the adjacent snowmobile trail.

Deciduous

Other

Comments:

<u>Next</u>

None needed.

Steps:

**Proposed** 

10/01/2014 Start Date:

61006062-Cut 42110 - Planted 42110 - Planted Cmpt. Review 43.5 High 171-200 Harvest Low Thinning Red Pine Red Pine Proposal **Density Log** 

Prescription Cut all Scotch pine; mark red and white pine down to a residual BA of about 130. Retain hardwoods for diversity. Protect adjacent old

Specs: homestead site.

Other Property Comments:

None needed. <u>Next</u>

Steps:

**Proposed** 

10/01/2014 Start Date:

5.8 42120 - Planted 42220 - Natural 61006065-Cut Medium 56 Harvest Clearcut Cmpt. Review Jack Pine Jack Pine Proposal Density Pole

Prescription Clearcut to a 2" diameter limit. There may be a few scattered hardwoods that could be retained if sound; otherwise no viable retention.

Specs:

Other\_ Stand has substantial storm damage.

Comments:

Monitor regeneration. Jack pine regeneration with some hardwood is acceptable. If inadequate, site-prep and plant red pine.

**Next** Steps:

Proposed

10/01/2014 Start Date:

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006 Year of Entry 2015 Approval

а **Treatment** Acres n d Name 82.4 66 61006066-Cut

42111 - Planted Red Pine, Mixed Deciduous

CoverType

High 56 Density Log

Age

Size

Density

111-140

BA

Range

Harvest Low Thinning

42111 - Planted Red Pine. Mixed Deciduous

**Cover Type** 

Objective

Cmpt. Review Proposal

Status

Specs:

s t

Prescription Mark both red pine and hardwoods for thinning, with a residual BA of about 120 in pine patches and about 90 in hardwoods. Focus hardwood marking on low quality trees; retain some cherry for mast and aspen for cavities. Create some CWD during harvest operations. Use appropriate sale specifications to protect the adjacent snowmobile trail.

<u>Other</u>

Comments:

None needed <u>Next</u>

Steps:

Proposed

Start Date: 10/01/2014

61006067-Cut

7.3 4130 - Aspen

High **Density Log** 

81-110 46

Harvest

**Treatment** 

Type

Clearcut with Reserves

**Treatment** 

Method

4130 - Aspen

Cmpt. Review Proposal

Prescription Clearcut to a 2" diameter limit. Mark up to 10% retention coverage of hardwood clumps including various size classes.

Specs:

Other

This prescription is intended to provide local age-class diversity.

Comments:

**Next** Check regeneration at appropriate intervals post-harvest. Aspen is the intended regen species, but cherry and maple would be acceptable as

Steps:

Proposed

10/01/2014 Start Date:

68 61006068-Cut 4111 - S.Maple, Hard Mast

High **Density Log** 

102 81-110 Harvest

Single Tree Selection

4110 - Sugar Maple Cmpt. Review Association

Proposal

Association

150.2

18.4

Specs:

Prescription Mark for a selection harvest, reducing BA to about 70-80. Cut all ash and most of the beech; also target multi-stemmed and low quality trees of other species. Create some CWD during harvest operations.

<u>Other</u> Comments: The main purpose is to harvest ash and beech before mortality from EAB & BBD. Early marking and sale, prior to the final compartment review in summer 2013, is recommended, as ash is already dying. This will be via the "Chapter 7" review process for prescription approval outside of the normal compartment review process. The prescription is, however, being presented as part of this YOE 2015 compartment review so it can be viewed in the context of other proposed prescriptions in the comparment. The remainder of the stand, with much less ash and beech, will be withheld from harvest this YOE.

**Next** Steps: Check for regeneration at appropriate intervals post-harvest. Maple, cherry and basswood are desirable species, although beech, ironwood and ash will likely dominate in the short term.

Proposed

Start Date: 06/03/2013

61006071-Cut

4319 - Mixed **Upland Forest** 

High Density Log 55 141-170 Harvest

Single Tree Selection

4319 - Mixed **Upland Forest**  Cmpt. Review Proposal

Prescription Mark both white pine and hardwoods for selection harvest, with an average residual BA of about 110. Focus removal on low guality multistemmed hardwoods and suppressed & weevil damaged white pine. Some regen gaps will be created around large-crowned older maples Specs: marked for removal. Retain some cherry for mast.

Other

Comments:

Next

Check regen gaps at appropriate intervals post-harvest. Desirable regen includes white pine, cherry and sugar maple.

Steps:

**Proposed** 

Start Date: 10/01/2014

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006
Year of Entry 2015

DNR DICHIGAN

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
78	61006078-Cut	8.8	42110 - Planted Red Pine	High Density	56	171-200	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

<u>Prescription</u> Mark for thinning, reducing BA to about 120. Leave hardwoods for diversity. Focus removal on any suppressed or defective pines.

Specs:

S

Other Comments:

Comments:

None needed.

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

81 61006081-Cut 14.1 42110 - Planted High 56 171-200 Harvest Crown Thinning 42110 - Planted Cmpt. Review Red Pine Proposal

Prescription Mark for thinning, with a residual BA of about 120-130. Use appropriate sale specifications to protect the adjacent snowmobile trail. Retain

Specs: hardwoods for diversity.

Other Dense hardwood saplings may be difficult to work through, especially west side of stand.

Comments:

None needed.

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

82 61006082-Cut 28.5 42120 - Planted Medium 56 Harvest Clearcut with 42110 - Planted Cmpt. Review Jack Pine Density Reserves Red Pine Proposal

Pole

1 0.0

Prescription Clearcut to a 2" diameter limit. Retain scattered hardwoods.

Specs:

Other Stand has substantial storm damage.

Comments:

Next Allow the JP to germinate for a couple years post-harvest to spend the seed bank, then burn (roller chop if burning not possible), then trench,

Steps: then plant red pine. Work around any aspen regeneration that may come in after 3 adjacent aspen patches get cut.

<u>Proposed</u>

Start Date: 10/01/2014

86 61006086-Cut 9.7 42110 - Planted High 56 141-170 Harvest Low Thinning 42110 - Planted Cmpt. Review Red Pine Density Red Pine Proposal

Pole

Prescription Mark for thinning with a residual BA of 120-130. Focus marking on multi-stemmed pines.

Specs:

Other No other species available for retention.

Comments:

Next None needed.

Steps:

Proposed

Start Date: 10/01/2014

# Report 4 -- Treatments Prescribed with No Limiting Factor

Compartment: 006
Year of Entry 2015

DEPARTMEN	DNR
1	MICHIGAN

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
87	61006087-Cut	10.0	42120 - Planted Jack Pine	Low Density Pole	62		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

<u>Prescription</u> Clearcut to a 2" diameter limit. There may be a few scattered hardwoods that could be retained if sound; otherwise no viable retention.

Specs:

S

Other Stand has substantial storm damage. The rest of this stand, in adjacent compartment 5 to the east, should be cut at the same time (out of

Comments: YOE); attach to the YOE 2013 sale in comp. 5 stand 55.

Next Monitor regeneration. Jack pine regeneration with some hardwood is acceptable. If inadequate, site-prep and plant red pine.

Steps:

<u>Proposed</u>

Start Date: 07/22/2013

91 61006091-Cut 4.3 4112 - Maple, High 82 81-110 Harvest Clearcut with 4130 - Aspen Cmpt. Review Reserves Proposal

Association

Prescription Clearcut to a 2" diameter limit. Mark scattered individuals/clumps of hardwoods for retention (3-5% cover).

Specs:

Other Comments:

Next Check for adequate regeneration. Aspen, along with mixed hardwood seedlings and stump sprouts, are expected and desirable regen species.

Steps: Failing that, consider hand planting white pine.

**Proposed** 

Start Date: 10/01/2014

93 61006093-Cut 23.2 42110 - Planted High 45 171-200 Harvest Systematic 42110 - Planted Cmpt. Review Red Pine Density Thinning Red Pine Proposal

Pole

Prescription Harvest every 3rd row. Small areas on steeper slopes may need to be marked. Retain hardwoods for diversity. Use appropriate sale

Specs: specifications to protect the adjacent snowmobile trail.

Other Correct

Comments:

None needed.

Steps:

Proposed

Start Date: 10/01/2014

42100 - Planted 42100 - Planted qq 61006099-Cut 4.1 High 49 141-170 Harvest Systematic Cmpt. Review Thinning White Pine Density White Pine Proposal

Pole

<u>Prescription</u> 3rd-row thin, plus mark additional poor quality trees in adjacent rows, including both white pine and some hardwoods. Use appropriate sale

Specs: specifications to protect the adjacent snowmobile trail. Residual BA: about 110-120.

<u>Other</u>

Comments:

None needed.

Steps:

<u>Proposed</u>

Start Date: 10/01/2014

Compartment: 006 Traverse City Mgt. Unit Report 4 -- Treatments Prescribed Year of Entry 2015 with No Limiting Factor s t а **Treatment** Acres CoverType Size BA **Treatment Treatment Cover Type** Approval n Method Name **Density** Range Objective **Status** Age Type 0.6 3301 - Low Density 42110 - Planted Cmpt. Review 75 NF\_61006075-Site Prep Trenching Prep Deciduous Trees Red Pine Proposal Prescription Trench for planting. Specs: Other Plant this small opening when adjacent harvested jack pine stand gets replanted. Comments: Next Plant red pine. Steps: Proposed Start Date: 10/01/2014 53 61006053-1.3 429 - Mixed Upland Medium 8 **Brush Cutting** 3103 - Rubus-Fern Cmpt. Review Non-Forest NonFor Conifers Density Management Proposal Sapling Prescription Roller-chop and/or burn this dense patch of volunteer Austrian pine saplings to create a wildlife opening. Specs:

<u>Other</u>

Comments:

<u>Next</u> Steps: Potentially plant with a desirable grass/haerbaceous cover mix.

Proposed

Start Date: Unspecified

**Total Treatment** 

898.7 **Acreage Proposed:** 

Traverse City Mgt. Unit Report 5 -- Treatments Prescribed with Compartment: 006 a Limiting Factor s Year of Entry 2015 t **Treatment** Acres CoverType Size Stand ВА **Treatment Treatment Cover Type Approval** n Method Objective Status Name Density Age Range Type #Type! **Prescription** Specs: Other Comment: **Next** Steps: Proposed #Type!

Total Treatment
Acreage Proposed:

Start Date: # Limiting Factor

0

# Report 6 - Out of YOE - Treatments

Year of Entry: 2015

			Prescr	ibed w	ith No L	imiting Fact	or		DNR DURCE
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									

retain some pine and osk for mast and seed production, Folllow WLD guidance for CWD creation. Harvest all stems that are not retained. Specs:

<u>Other</u>

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

Comments:

<u>Next</u> Steps:

**Proposed** 

Start Date: 09/01/2009

**Total Treatment** 

15.3 **Acreage Proposed:** 

98%

2%

Tim Webb: Examiner

Compartment 006 Year of Entry 2015

Availability for Management											
Total	Acres	Acres		Domina	nt Site	Cond	ditions				
Acres	Available	Not Available		No	5C	5B	3B				
199	199		Aspen	180	19						
46	46		Jack Pine	46							
17	17		Mixed Upland Deciduous	17							
7	7		Natural Mixed Pines	7							
1288	1250	38	Northern Hardwood	1,169	75	6	38				
457	457		Red Pine	457							
1	1		Upland Conifers	1							
27	27		Upland Mixed Forest	27							
188	188		White Pine	188							
2,231	2,193	38	Total Forested Acres	2,093	94	6	38				

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.

Not Available 3B: Threatened, endangered, and special concern species/communities  Comments:  38 5C: Delay treatment for age/size class diversity or exceptional site quality  Output  Comments:  38 5C: Delay treatment for age/size class diversity or exceptional site quality							
004 Available 5B: Retention for 6							
regeneration purposes							
Comments:  Just thinned in 2007 and BA only 113; hold for 10 years for site recovery and potential development of regeneration.							

# **Report 7 – Site Conditions**

Traverse City Mgt. Unit
Tim Webb: Examiner

Compartment 006 Year of Entry 2015

005	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	57
В		for 10 years to maintain some ue being targeted instead.	inharvested areas in the compartment this YOE and to stay closer to MA plan harvest targets; other stands
006	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	19
_	omments: spen is in decent	shape; hold for 10 years. MA pl	lan calls for no aspen regen harvests this YOE.
007	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	18
Co	omments:		

Compartment: 006
Year of Entry: 2015



# 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
Comments				

Compartment: 006
Year of Entry 2015



# 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.

Conservation Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area						
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	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.							

S t	Traverse City	y Mgt. Unit		Report 10 -	- Forested	d Stands Compartment: 006 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	High Density Pole	12.6	56	141-170	Sugar maple is in a patch along the north side of the north block of the stand; pine saplings along open edges.
2	4110 - Sugar Maple Association	Low Density Pole	20.3	43	1-50	Mixed sugar maple & red pine taking over an old orchard. Aspen is in a single patch at the east edge of the stand. Scattered Scotch pine and white pine.
3	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	9.3	56	141-170	
5	4112 - Maple, Beech, Cherry Association	High Density Log	93.9	87	111-140	
6	4319 - Mixed Upland Forest	High Density Log	8.2	54	111-140	Beech scale is present.
7	42110 - Planted Red Pine	High Density Pole	17.6	56	171-200	Stand includes a narrow open strip along the west edge of the SE block, with sparse hardwood saplings.
8	42110 - Planted Red Pine	Medium Density Log	23.6	56	111-140	Goodquality stand; some minor storm damage.
9	42100 - Planted White Pine	High Density Log	16.4	54	141-170	
11	42110 - Planted Red Pine	High Density Pole	3.3	56	111-140	
12	4110 - Sugar Maple Association	Low Density Pole	15.0	47	1-50	Old apple orchard reclaimed by hardwoods. Scattered dead/dying apple trees. Ash are dying from EAB. there are a few scattered patches of quaking aspen poles.
13	42101 - Planted White Pine, Mixed Deciduous	Medium Density Pole	12.7	54	141-170	Thinned in spring 2010.
14	4130 - Aspen	High Density Pole	87.9	35		Small patch of white pine at the north end of the stand.
15	4110 - Sugar Maple Association	High Density Log	6.2	86	111-140	Thinned in 2007. Scattered dying ash. Beech scale is present.
16	42220 - Natural Jack Pine	Medium Density Pole	6.7	Uneven Age	1-50	Mixed ages of pines seeded in from adjacent/previous plantation, with a remnant component of log-sized planted red pine. One age-class of jack pine is predominant (about 20 years old per whorl count). Red maples are multi-stemmed stump sprouts. Jack pine saplings have substantial bending & breaking from snow loads.
17	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	14.3	35	81-110	Stand has patches of planted white pine embedded in regenerated aspen/maple. Scattered older aspen and maple.
18	42110 - Planted Red Pine	Medium Density Log	19.5	56	111-140	Minor damage from snowstorms. Bigtooth aspen is in one patch.

S t	Traverse City	Traverse City Mgt. Unit			- Forested	Stands Compartment: 006 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	4.2	54	200+	Numerous weevil-damaged pines.
20	42110 - Planted Red Pine	High Density Log	20.6	64	141-170	
21	4112 - Maple, Beech, Cherry Association	Medium Density Log	5.2	56	81-110	Narrow stand between the road and red pine plantation. Low quality timber.
22	4117 - Mixed N. Hardwood - Pine	Low Density Pole	2.7	41	1-50	Hardwoods and red pine encroaching into an old opening.
24	4112 - Maple, Beech, Cherry Association	Medium Density Log	53.5	87	51-80	Beech scale is present.
25	4112 - Maple, Beech, Cherry Association	High Density Log	38.8	87	111-140	Fair to good timber quality. Scattered patches of planted white pine poles/saplings.
26	42100 - Planted White Pine	Medium Density Pole	16.6	54	141-170	Aspen is mostly in one clone in the SE part of the stand. Scale present on pine. Hardwoods are mostly wolfy, multi-stemmed sugar maple. Scattered dying ash.
27	4130 - Aspen	High Density Pole	6.5	35		Beech scale is present.
28	4110 - Sugar Maple Association	Low Density Log	3.6	86	51-80	Old field succeeding to hardwoods: sparse, mature, multi- stemmed open grown sugar maple and black cherry with patchy sugar maple saplings and poles. Scattered white pine, dying ash.
29	4139 - Aspen, Mixed Deciduous	High Density Log	18.8	56	81-110	Heterogenous mix of aspen and hardwoods, some semi-open patches.
30	42290 - Natural Mixed Pine	Medium Density Pole	7.0	Uneven Age	51-80	Mixed ages of pines seeded in from adjacent plantation, plus a remnant component of log-sized planted red pine. One age-class of pole-sized red pine is predominant (about 31 years old per whorl count). Red maples are multi-stemmed stump sprouts.
31	4111 - S.Maple, Hard Mast Association	High Density Log	71.2	86	81-110	Scattered yellow birch.
32	42110 - Planted Red Pine	Medium Density Log	23.2	59	111-140	Stand still has some room to grow in the canopy from the last thinning. Some breakage from snow storms.
34	4111 - S.Maple, Hard Mast Association	High Density Log	6.7	86	111-140	Beech scale is present; ash are dying from EAB. Hilly. Stand blends into white pine plantation at NW corner.
35	42101 - Planted White Pine, Mixed Deciduous	High Density Log	9.6	56	200+	
36	4130 - Aspen	High Density Pole	36.5	26		

S t	Traverse City	y Mgt. Unit		Report 10	– Forested	d Stands Compartment: 006 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	4110 - Sugar Maple Association	Medium Density Log	132.5	87	51-80	Scattered hemlock; some planted white pine in the SW part of the stand; scattered yellow birch. Ash are dying from EAB; beech scale is present.
38	42110 - Planted Red Pine	High Density Log	36.4	56	141-170	Hardwoods are concentrated in the south part of the stand; includes a few ash, black cherry, and red maple.
39	4111 - S.Maple, Hard Mast Association	High Density Log	53.8	81	111-140	Scattered white pine, bigtooth aspen.
40	4110 - Sugar Maple Association	Low Density Pole	2.5	44	1-50	Trail road/gap between hardwood and red pine stands. Partly used in 2006 as a landing for neighboring hardwood stand, then seeded with rye.
41	4117 - Mixed N. Hardwood - Pine	High Density Log	8.3	87	81-110	
42	42101 - Planted White Pine, Mixed Deciduous	Medium Density Pole	5.5	56	141-170	Hardwoods are mostly wolfy, multi-stemmed.
43	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	24.8	56	171-200	Beech scale is present.
44	4112 - Maple, Beech, Cherry Association	Medium Density Log	8.1	87	81-110	Mixed regeneration resulting from last thinning is mostly beech and iron wood, with some cherry and ash, lots of blackberry.
45	4110 - Sugar Maple Association	High Density Log	57.2	86	111-140	EAB and beech scale are present.
46	42110 - Planted Red Pine	High Density Pole	12.6	46	171-200	One acre patch in NW corner was thinned in 2010.
47	42110 - Planted Red Pine	High Density Pole	15.7	56	141-170	Scattered wolfy, multi-stemmed hardwoods.
48	4112 - Maple, Beech, Cherry Association	Medium Density Log	38.5	94	81-110	Many multi-stemmed tree. Generally good quality, especially black cherry. Numerous cherry seedlings, and some red maple seedlings/sprouts, resulting from last thinning. There are a few hemlocks in the NW part of the stand, and some scattered aspen and elm.
49	4139 - Aspen, Mixed Deciduous	High Density Pole	26.6	36		Scattered patches of planted white pine within the stand, plus inclusions of mature hardwoods.
50	42101 - Planted White Pine, Mixed Deciduous	High Density Log	113.1	56	171-200	Low quality black cherry; quite a bit of weevil damage in white pine.
53	429 - Mixed Upland Conifers	Medium Density	1.3	8		Former Austrian pine plantation was clearcut in about 2001. This stand may have been the landing area for surrounding cut areas; filled in with volunteer seedlings.
54	42110 - Planted Red Pine	High Density Pole	12.3	46	141-170	

S t	Traverse City	y Mgt. Unit		Report 10	- Forested	d Stands Compartment: 006 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
55	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	15.4	56	171-200	Hilly. Dense hardwood regeneration under pines.
56	4110 - Sugar Maple Association	Low Density Sapling	5.3	40	1-50	Hardwoods reclaiming an old open lane; still partly open.
57	42110 - Planted Red Pine	High Density Log	14.2	59	141-170	Stand includes a small opening: old homestead site/foundation. Just a few old sugar maples along the road and some scattered black cherry.
58	42100 - Planted White Pine	Medium Density Pole	5.5	46	141-170	Age approximate from whorl count.
61	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	12.2	56	141-170	Stand is a mosaic of hardwood patches and planted pines. Small amount of aspen.
62	42110 - Planted Red Pine	High Density Log	44.9	56	171-200	Stand includes some scattered hardwoods, mostly along the road and the south edge of the stand. Also includes about 1.5 acre triangular patch of white pine near the SW corner, down in a depression; patchy distribution of Scotch pine. Good quality red pine, has some potential for utility poles. Thick hardwood saplings in south half of stand.
63	4110 - Sugar Maple Association	Medium Density Log	20.9	77	51-80	Slopes downward to east and decreases in quality.
64	4110 - Sugar Maple Association	High Density Log	37.9	87	111-140	Generally good quality timber. Bigtooth aspen is in scattered clones. Scattered beech and red maple.
65	42120 - Planted Jack Pine	Medium Density Pole	5.8	56		Stand has substantial storm damage.
66	42111 - Planted Red Pine, Mixed Deciduous	High Density Log	82.4	56	111-140	Stand is a mosaic of planted pine and patches of hardwoods.  Patches of quaking aspen are poor quality, but the aspen is nursing some decent hardwood regeneration.
67	4130 - Aspen	High Density Log	7.3	46	81-110	Some mortality in aspen.
68	4111 - S.Maple, Hard Mast Association	High Density Log	350.9	102	81-110	Numerous multi-stemmed trees. Beech scale is scattered through the stand. Infested with EAB.
70	4110 - Sugar Maple Association	Medium Density Log	8.8	102	51-80	Semi-open stand with some larger open-grown trees, numerous multi-stemmed.
71	4319 - Mixed Upland Forest	High Density Log	18.4	55	141-170	Many suppressed white pines, old wolfy maples, multi-stemmed maples. Rows of WP are erratic.
<b>76</b>	4110 - Sugar Maple Association	Medium Density	5.0	35	1-50	
77	4191 - Mixed Upland Deciduous with Conifer	High Density Log	3.0	45	111-140	Stand has some older, larger trees along road and edge.

S t				Report 10	– Forested	d Stands Compartment: 006 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
78	42110 - Planted Red Pine	High Density Pole	8.8	56	171-200	Some patches of hardwood included in the stand along the edge.
79	4116 - Mixed N. Hardwood - Aspen	High Density Log	0.8	76	81-110	This is the edge of a hardwood stand which is mostly in the adjacent compartment.
80	4119 - Mixed Northern Hardwoods	Medium Density Log	5.7	86	81-110	Small patch of planted red pine along road.
81	42110 - Planted Red Pine	High Density Log	15.0	56	171-200	
82	42120 - Planted Jack Pine	Medium Density Pole	28.5	56		Stand has substantial damage from a March 2012 snowstorm.
86	42110 - Planted Red Pine	High Density Pole	9.9	56	141-170	Numerous double-stemmed trees.
87	42120 - Planted Jack Pine	Low Density Pole	5.1	62		
91	4112 - Maple, Beech, Cherry Association	High Density Log	93.9	82	81-110	Patch of hemlock in NW corner surrounded by younger hardwoods; semi-open. Numerous multi-stemmed maple. Poor old beech in places. Beech scale is present. Ash is infested with EAB, dying. Sugar maple is of low quality. Some good quality red maple in places.
93	42110 - Planted Red Pine	High Density Pole	23.2	45	171-200	
96	4130 - Aspen	Low Density Sapling	15.6	4		Three patches clearcut in spring 2009. Stand has scattered residual hardwoods (sugar maple, black cherry, yellow birch, beech).
97	42100 - Planted White Pine	High Density Pole	0.1	49	111-140	Stand data copied from adjacent stand in compartment 5. Thinned in 2007.

4112 - Maple, Beech,

Cherry Association

42100 - Planted White

Pine

98

99

Medium

Density Log

High Density Pole 141.2

4.1

102

49

81-110

141-170

Hilly, some frost pockets/depressions. Stand has small amounts of bigtooth aspen, ironwood, & basswood. Beech scale and

EAB are present.

Pine is limby; numerous weeviled trees. Many overtopped/dead

white pine.

# Report 11 - Nonforested Stands

Compartment: 006 Year of Entry: 2015



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	3301 - Low Density Deciduous Tree	2.9	No	Low (NonForested)	Narrow opening between red pine plantation blocks.
10	3102 - Grass	1.7	No	Medium (NonForested)	Old farm field/orchard.
23	122 - Road/Parking Lot	10.8	No	Low (NonForested)	Valley Road
33	3303 - Mixed Low Density Trees	5.2	No	Low (NonForested)	Open lanes between red pine plantation blocks, filling in with trees.
51	3102 - Grass	9.8	Planted	Red Pine	Former Austrian pine plantation was clearcut in about 2001, then replanted to red pine (and some white pine on periphery) in 2008.
52	3102 - Grass	1.4	No	Medium (NonForested)	Old homestead site . A few old fruit trees and lilac patches.
59	3301 - Low Density Deciduous Tree	6.5	No	Low (NonForested)	Open lanes between pine plantation blocks, succeeding to hardwoods.
60	3102 - Grass	7.6	Planted	Red Pine	Former Austrian pine plantation was clearcut in about 2001, then replanted to red pine (and some white pine on periphery) in 2008.
69	3301 - Low Density Deciduous Tree	7.7	No	Medium (NonForested)	Mosaic of fern patches, grass/forb patches, clumps of mixed hardwoods, and black cherry scattered throughout.
72	3103 - Rubus-Fern	1.5	No	Low (NonForested)	Long, narrow opening along draw/road through hardwood type.
73	3301 - Low Density Deciduous Tree	2.3	No	Medium (NonForested)	Open grown cherries surrounded by expanding halos of sugar maple saplings.
74	3103 - Rubus-Fern	5.8	No	Low (NonForested)	Low valley covered with fern and patches of grass/spotted knapweed.
75	3301 - Low Density Deciduous Tree	1.9	Yes	Aspen	Stand is a narrow strip between a jack pine plantation and the property line. small opening in the middle, with mixed young trees east and west.
83	122 - Road/Parking Lot	1.5	No	Unspecified	Fowler Road
84	310 - Herbaceous Openland	21.6	Planted	Red Pine	Scattered retained cherry, maple, and clumps of red pine.
85	3103 - Rubus-Fern	1.5	No	Low (NonForested)	

# Report 11 - Nonforested Stands

Compartment: 006 Year of Entry: 2015



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
88	3302 - Low Density Conifer Trees	2.2	No	Medium (NonForested)	Opening along Skinner Road and edges of red pine plantation.
89	3103 - Rubus-Fern	12.2	No	Low (NonForested)	About 60/40 fern vs. knapweed (some horsemint) per 2003 inventory. Dense patch of sugar maple saplings in east arm of the stand.
90	3103 - Rubus-Fern	0.2	No	Low (NonForested)	This small stand is just the tip of a larger opening in the adjacent compartment.
92	310 - Herbaceous Openland	1.2	No	Low (NonForested)	Used as a timber landing in 2010.
94	3301 - Low Density Deciduous Tree	10.8	No	Low (NonForested)	1/2 acre hardwood inclusion. Variably sized cherry throughout.
95	3302 - Low Density Conifer Trees	1.3	No	Low (NonForested)	This stand straddles a compartments 5 & 6.
100	3204 - Mast Producing Shrub	2.4	Yes	Medium (NonForested)	