



**Shingleton Forest Management Unit
Compartment Review Presentation
Compartment #188 Entry Year: 2013
Compartment Acreage: 1182 County: Alger**

Revision Date: 8-18-11

Stand Examiner: Robert Tylka

Legal Description: T46N R17W Sections 12 and 13

RMU (if applicable):

Management Goals: To provide users with a variety of benefits commonly associated with publicly-owned forest lands. This compartment is located in an area considered to be primary winter deer range (Petrel Deer Yard) and is managed in cooperation with Wildlife Division in accordance with their deeryard management plans.

Soil and Topography: This area features medium-to-heavy textured soils. The topography is generally flat with only slight changes in elevation.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The Forest Land Group owns 80 acres in section 12, while the state owns the rest of the land in these sections and the vast majority of the surrounding lands as well. There are no developed facilities within this compartment.

Unique, Natural Features:

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations: This compartment lies within the Petrel Deeryard. Timber management activities are coordinated with Wildlife Division in accordance with their deeryard management goals.

Watershed and Fisheries Considerations: Fisheries Values in this compartment are poor. Commencement Creek is classified Second Quality Warm Water (SQWW).

Wildlife Habitat Considerations: This compartment is located within the Grand Marais Sandy End Moraine Outwash sub-subsection. The average growing season is approximately 120 days. The extreme winter temperature generally reaches approximately -35 F. Snowfall in this compartment averages 170 to 180 inches annually. A review of the General Land Office survey notes show the upland presettlement vegetation was dominated by northern hardwoods which contained a mixture of hemlock, yellow birch, sugar maple, and red maple. Cedar, tamarack, balsam fir, and ash dominated the lowlands. A small tributary to Commencement Creek originates in section 12 and courses down through the eastern portion of section 13 before dumping into the Commencement. Beaver pond along this creek and windthrow were the major forms of natural disturbance within the compartment. Although the current major timber types within the compartment are very similar to those found at the time of the original survey, there appears to be a significant reduction in species diversity within the northern hardwoods. The loss of diversity is associated with a substantial reduction in hemlock and yellow birch. Lowland stands appear to be quite similar in species composition as was found during the original surveys. This compartment lies on the eastern edge of

the Petrel Deeryard. As such, wildlife habitat goals center upon providing winter food and shelter for deer. Northern hardwood stands will be managed in a manner that will maintain closed canopy in some areas while creating structural diversity. Additionally, attempts will be made to restore the tree species diversity within the northern hardwood stands. This will be accomplished by protecting hemlock, and using cutting prescriptions that will promote hemlock, black cherry, and yellow birch. Furthermore, under plantings of white pine and hemlock should restore some of the natural conifer components within the hardwood stands. Gray wolves (Federal and Michigan endangered) are known to frequent this area, especially during the winter deeryarding time frame. Moose (Michigan special concern) have also been observed within the compartment. Other wildlife species of interest within this compartment may include Blackburnian warbler, gray jay, fisher, marten, black bear, and bobcat.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured glacial till and peat and muck. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien (PdC) subcrops below the glacial drift. The PdC could be used for stone. The nearest gravel pit (quarry?) is in the SW of Section 14 and there appears to be gravel potential in Section 13. There is no commercial oil and gas production in the UP.

Vehicle Access: Access via Star Siding Road and the Petrel Road is adequate. The Commencement Road runs through the compartment, and a network of overgrown spur roads exists from previous timber management activities.

Survey Needs: None at this time.

Recreational Facilities and Opportunities: The area is locally popular for hunting deer and small game. There are no developed recreational facilities in this compartment.

Fire Protection: Difficulties with fire suppression may arise due to the nature of the heavy soils and slow drainage associated with them. Access across the large lowland conifer stands in section 12 is likely to be problematic.

Additional Compartment Information: The un-evenaged upland hardwood stands in this area are capable of producing high quality wood products, and are intensively managed to do so.

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

- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summary**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**
- ◆ **Stand Details (Forested and Nonforested)**
- ◆ **Dedicated and Proposed Special Conservation Areas**

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

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

➤

Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Unrepen Age
Cedar	0	0	0	0	0	0	0	0	0	286	0	67	0	0	0	353
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Herbaceous Openland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Conifers	0	0	0	0	0	0	0	0	33	0	0	0	0	0	0	33
Lowland Deciduous	0	0	0	4	0	0	0	3	0	4	0	0	0	0	22	32
Lowland Mixed Forest	0	0	0	0	0	0	0	0	64	16	0	0	0	0	0	80
Lowland Shrub	112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	112
Marsh	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	514	514
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	1	0	0	22	23
Water	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Total	146	0	0	4	0	0	0	3	97	305	0	67	0	0	560	1182



Table 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2013

Compartment 188
Total Compartment Acres: 1182

Acres by Treatment Type

Commercial Harvest - 94	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 3	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Lowland Conifers	33	0	0	0	0	0	33
Lowland Deciduous	4	0	0	0	0	0	4
Lowland Mixed Forest	57	0	0	0	0	0	57
Total	94	0	0	0	0	0	94



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	41188002-Cut	3.5	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	88	Harvest	Clearcut with Reserves	6117 - Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
<u>Prescription</u> Reserve all hemlock, cedar, & white pine. Winter cut only, and no chipping allowed.									
<u>Specs:</u>									
<u>Other</u> Access from the east via the Commencement Creek Rd.									
<u>Comments:</u>									
<u>Next</u> Natural regeneration - all commercial lowland species are acceptable.									
<u>Steps:</u>									
4	41188004-Cut	44.2	6139 - Mixed Lowland Forest	Medium Density Pole	76	Harvest	Clearcut with Reserves	6139 - Mixed Lowland Forest	Cmpt. Review Proposal
<u>Prescription</u> Reserve all hemlock, cedar & white pine. Winter cut only, and no chipping allowed.									
<u>Specs:</u>									
<u>Other</u> Access is either from the woods road to west in Cmp 187 or from the east via the Commencement Creek Road.									
<u>Comments:</u>									
<u>Next</u> Natural regeneration - all commercial species present are acceptable. Prescribed fire may be considered to increase the chances of getting more cedar & hemlock regeneration.									
<u>Steps:</u>									
10	41188010-Cut	32.9	6120 - Lowland Cedar	Medium Density Log	76	Harvest	Clearcut with Reserves	6120 - Lowland Cedar	Cmpt. Review Proposal
<u>Prescription</u> Reserve all cedar, hemlock & white pine, and leave some pockets of cedar as reserve areas for a seed source. Winter cut only, and no chipping allowed.									
<u>Specs:</u>									
<u>Other</u> Access either from to Commencement Creek Rd. to the east or from the woods road to the west in Cmp 187.									
<u>Comments:</u>									
<u>Next</u> Prescribed fire for natural regeneration - cedar is the most desirable species to regenerate, but all commercial species present are acceptable.									
<u>Steps:</u> The ultimate goal is to produce a fully-stocked cedar stand.									
23	41188023-Cut	13.2	6139 - Mixed Lowland Forest	High Density Log	80	Harvest	Clearcut with Reserves	6112 - Lowland Aspen	Cmpt. Review Proposal
<u>Prescription</u> Reserve all hemlock, cedar, white pine, and yellow & paper birches. Winter cut only, and no chipping allowed.									
<u>Specs:</u>									
<u>Other</u>									
<u>Comments:</u>									
<u>Next</u> Natural regeneration - aspen & all conifers are acceptable species.									
<u>Steps:</u>									
31	NF_41188031- NonFor	2.9	Non-Forested		0	Non-Forest Management	Other - Specify	31022 - Warm Season Grass	Cmpt. Review Proposal
<u>Prescription</u> Opening maintenance/planting per WLD specs.									
<u>Specs:</u>									
<u>Other</u> WLD has identified this stand as a likely candidate for a opening maintenance/food planting in order to provide critical food sources for deer as									
<u>Comments:</u> they break out of the adjacent winter deer yarding areas in spring.									
<u>Next</u>									
<u>Steps:</u>									

**Total Treatment
Acreage Proposed: 96.8**

Table 4 -- Treatments Prescribed with a Limiting Factor



S
t
a
n
d

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
----------------	-------	------------------	--------------	-----------	----------------	------------------	----------------------	-----------------

#Error

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

**Out of YOE -- Treatments
Prescribed with No Limiting Factor**

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41022_OutOfY OE-Cut	35.6				Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> 3rd row thinning. Cut all trees in designated rows. Rows can be spaced wider apart in areas with lower basal area. Do not cut hemlock and oak.								
<u>Specs:</u>								
<u>Other Comments:</u> Do not cut any trees within 50 feet of the West Branch Manistique River.								
<u>Next Steps:</u> Thin next year of entry.								
41049_OutOfY OE_1-Cut	4.7				Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription:</u> Mark red pine and white pine to 30 sq. ft. Create gaps in canopy for regeneration where pine exists. Areas that have thicker young poles can be								
<u>Specs:</u> marked to 80. Cut all other species except hemlock and oak if present.								
<u>Other Comments:</u> Access to stand is too difficult for continuous thinning.								
<u>Next Steps:</u> Regeneration walkthrough during next inventory cycle. Acceptable regeneration includes any species mixture currently found onsite.								
41053_OutOfY OE-Cut	10.2				Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<u>Prescription:</u> Mark red pine and white pine to 30 sq. ft. Create gaps in canopy for regeneration where pine exists. Areas that have thicker young poles can be								
<u>Specs:</u> marked to 80. Cut all other species except hemlock and oak if present.								
<u>Other Comments:</u> Access to stand is too difficult for continuous thinning.								
<u>Next Steps:</u> Regen walkthrough during next inventory cycle. Acceptable regeneration includes any species mixture currently found onsite.								
Total Treatment Acreage Proposed:		50.5						



Stand	Shingleton Mgt. Unit			5 – Forested Stands		Compartment: 188	Year of Entry: 2013
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	6120 - Lowland Cedar	High Density Log	286.0	88	111-140		
2	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	3.5	88	81-110	Wet site - Unevenaged characteristics due to some partial cutting, natural disturbances & variable site indices. The age given here is from previous inventory records, but it is likely that the white pine, hemlock & cedar are older.	
4	6139 - Mixed Lowland Forest	Medium Density Pole	44.2	76	141-170	Species composition varies from place to place within this stand and unevenaged characteristics are becoming more evident as natural disturbances create more age class diversity. Overall the stand is a mosaic of small patches of different timber types. The age given is quoted from past inventory, but in reality there are both younger & older trees present.	
5	4110 - Sugar Maple Association	Medium Density Log	7.7	Uneven Age	81-110		
7	4312 - Hemlock, Mixed Deciduous	High Density Log	1.5	Uneven Age	81-110	Transitional zone between the upland hardwoods and lowland conifers. The first age given is from a representative hemlock, but evidence of age class diversity is visible.	
8	4110 - Sugar Maple Association	Medium Density Log	9.1	Uneven Age	51-80	Stand also has a few hemlock & yellow birch present.	
9	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	2.3	Uneven Age	81-110	Transitional zone between the upland hardwoods and lowland conifers. The first age given is from a representative hemlock, but evidence of age class diversity is visible.	
10	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Log	32.9	76	81-110	Cedar mix on wet ground - the age given here is from previous inventory, but age class diversity is becoming evident. There are older trees included, especially the hemlock.	
11	6120 - Lowland Cedar	High Density Log	2.6	105	81-110	A stream flows through this stand from a nearby pond (adjacent to the northwest) down into Commencement Creek.	
12	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	21.8	Uneven Age	111-140	Unevenaged characteristics are highly evident in this red maple/hemlock association.	
13	4110 - Sugar Maple Association	Medium Density Log	9.1	Uneven Age	81-110	Select cut last entry.	
14	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	20.0	78	81-110	Slow-growing timber on a wet site - trees are definitely larger up on the hummocks.	
15	4110 - Sugar Maple Association	Medium Density Log	14.8	Uneven Age	51-80		
16	42390 - Mixed Non-Pine Upland Conifers	High Density Log	20.2	Uneven Age	171-200	Hemlock/white pine association on a transitional site between uplands and lowlands.	

S
t
a
n
d

Shingleton Mgt. Unit

5 – Forested Stands

Compartment: 188
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Log	0.7	105	171-200	Finger of upland conifer/hardwood mix extending into the lowlands from a similar stand to the east in the adjoining compartment.
18	6113 - Lowland Maple	High Density Pole	2.7	66		Strip of red maple over fir/maple regeneration between the upland hardwoods and the lowland brush.
19	4112 - Maple, Beech, Cherry Association	Medium Density Pole	33.8	Uneven Age	81-110	Select cut last entry.
20	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	2.4	80	51-80	
22	4110 - Sugar Maple Association	High Density Pole	119.3	Uneven Age	81-110	Last selection cut in the 1990's - BA is still low, but possibly ready to cut again next entry.
23	6139 - Mixed Lowland Forest	High Density Log	13.2	80	81-110	At rotation age - cut now.
24	6120 - Lowland Cedar	High Density Pole	13.8	105	111-140	Slow-growing cedar mix with a creek/drainage running through it from the pond to the east.
27	4110 - Sugar Maple Association	Medium Density Log	39.3	Uneven Age	81-110	High quality sugar maple stand.
28	6119 - Mixed Lowland Deciduous Forest	Medium Density	3.6	27	1-50	Young timber
29	4110 - Sugar Maple Association	High Density Log	166.8	Uneven Age	81-110	High quality unevenaged sugar maple/basswood stand, with a few yellow birch & conifers scattered throughout.
30	4110 - Sugar Maple Association	Medium Density Log	113.9	Uneven Age	51-80	
32	6120 - Lowland Cedar	High Density Pole	50.3	105	141-170	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	6239 - Mixed Emergent Wetland	23.4	No	Unspecified	Wet area featuring a mix of grasses/sedges and various shrubs including willow, tag alder, dogwood and low shrub spp. The tall shrubs are primarily found along the perimeter of the stand.
6	50 - Water	3.0	No	Unspecified	
21	6229 - Mixed lowland shrub	35.5	No	Unspecified	
25	50 - Water	4.6	No	Unspecified	
26	6220 - Alder/willow	76.7	No	Low (NonForested)	
31	3105 - Mixed Upland Herbaceous	2.9	No	Unspecified	



7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Stand	SCA Type	SCA Name	Acres	Comments



8 – DEDICATED CONSERVATION AREA DETAILS

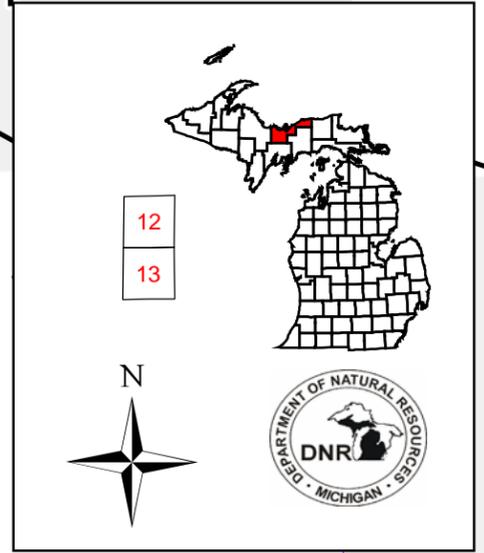
* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
--------------------------	-------------	--------------------

Cover Type & Treatment Map

Compartment 188
 T46N, R17W, Sec. 12,13
 County: Alger
 Unit: Shingleton
 YOE: 2013
 Acres: 1,182 GIS Calculated
 Stand Examiner: Bob Tylka
 Map Revised: 9/15/2011
 Map Phase: Pre-Review



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

Legend

- Miris Corners
- + Remonumented Section Corners
- Paved Roads
- - - Poor Dirt Roads
- Lakes and Rivers
- Intermittent Stream/Drain
- Stream
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Other Treatment - See Comments

Forest Stands

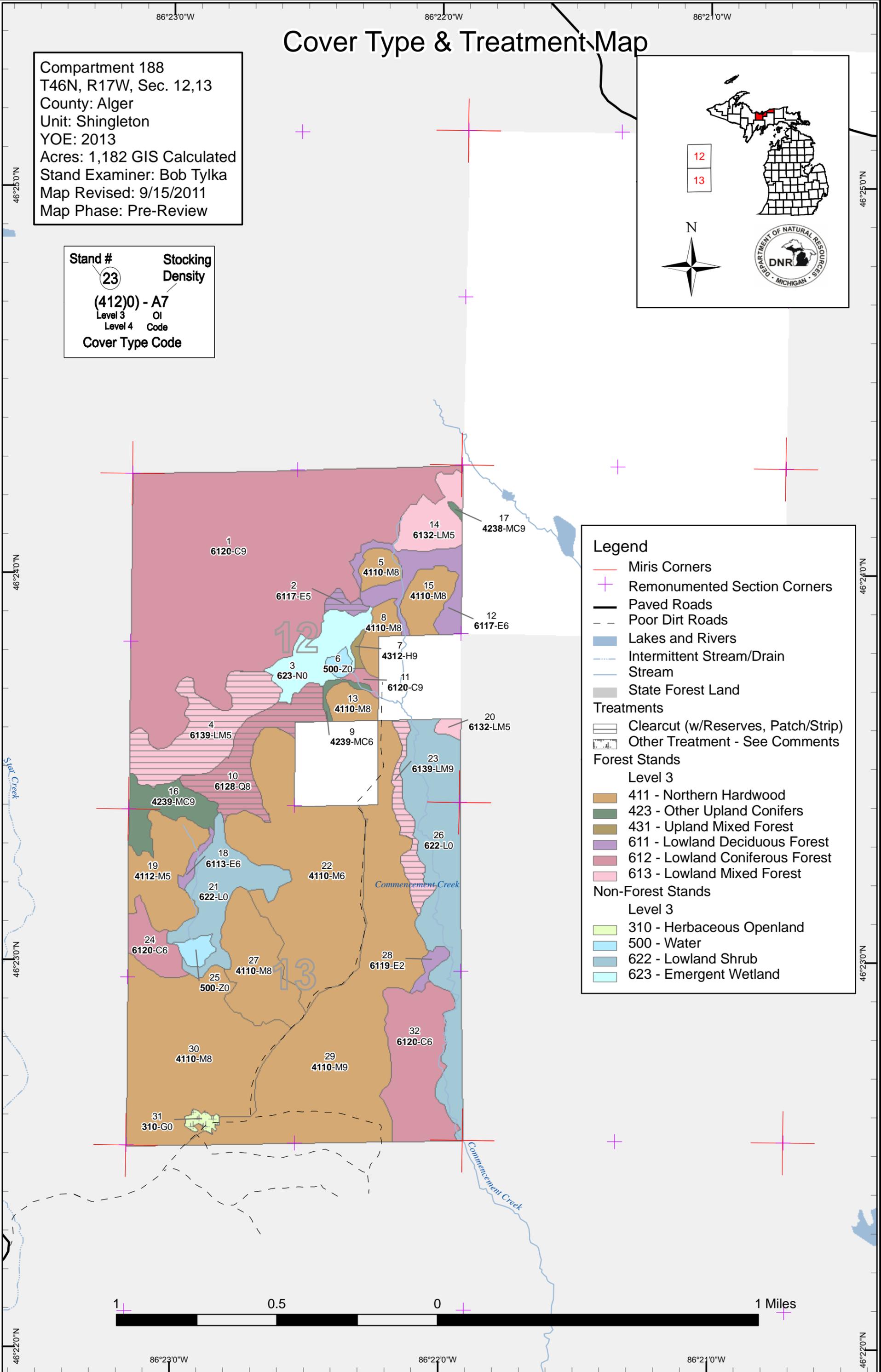
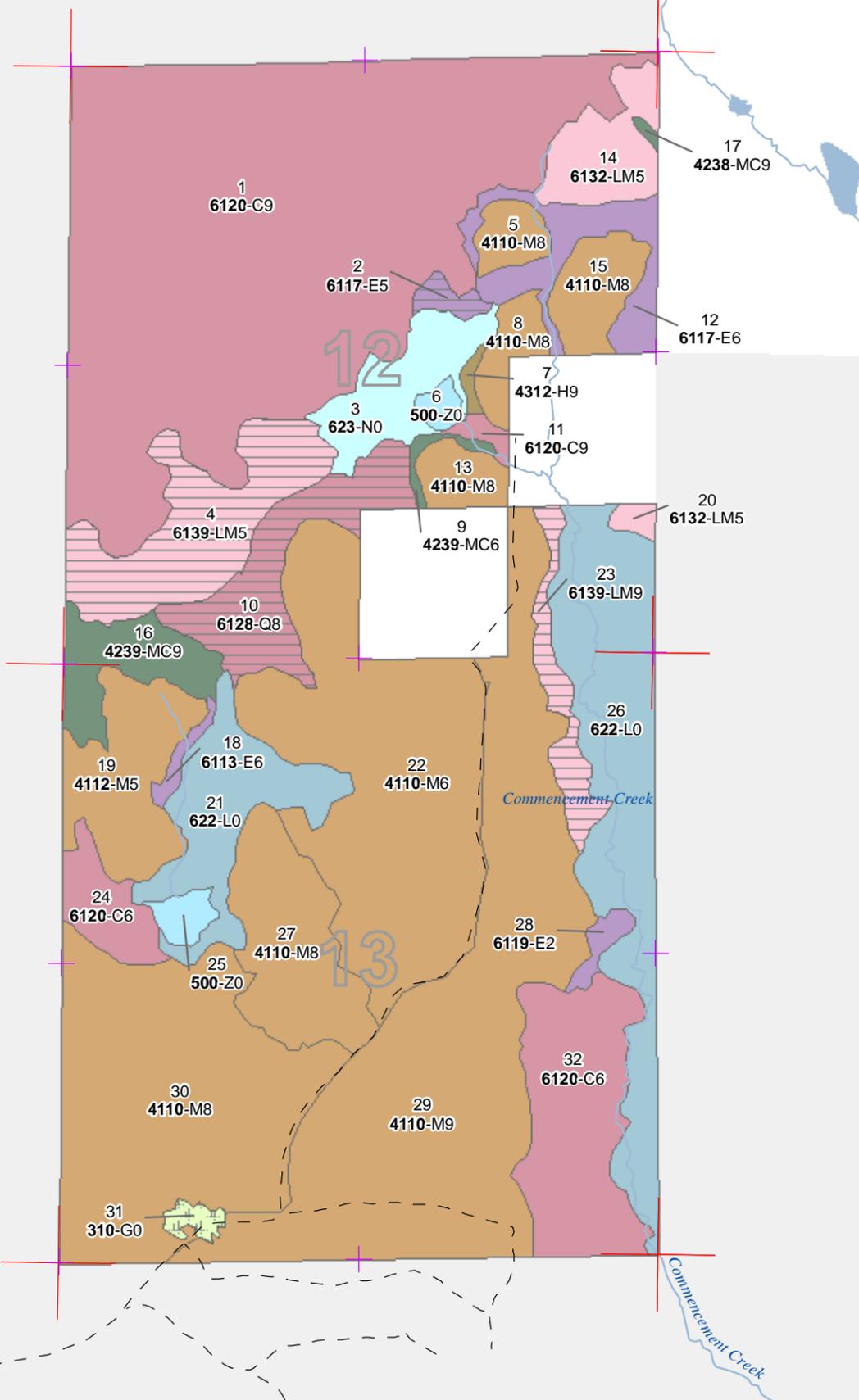
Level 3

- 411 - Northern Hardwood
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



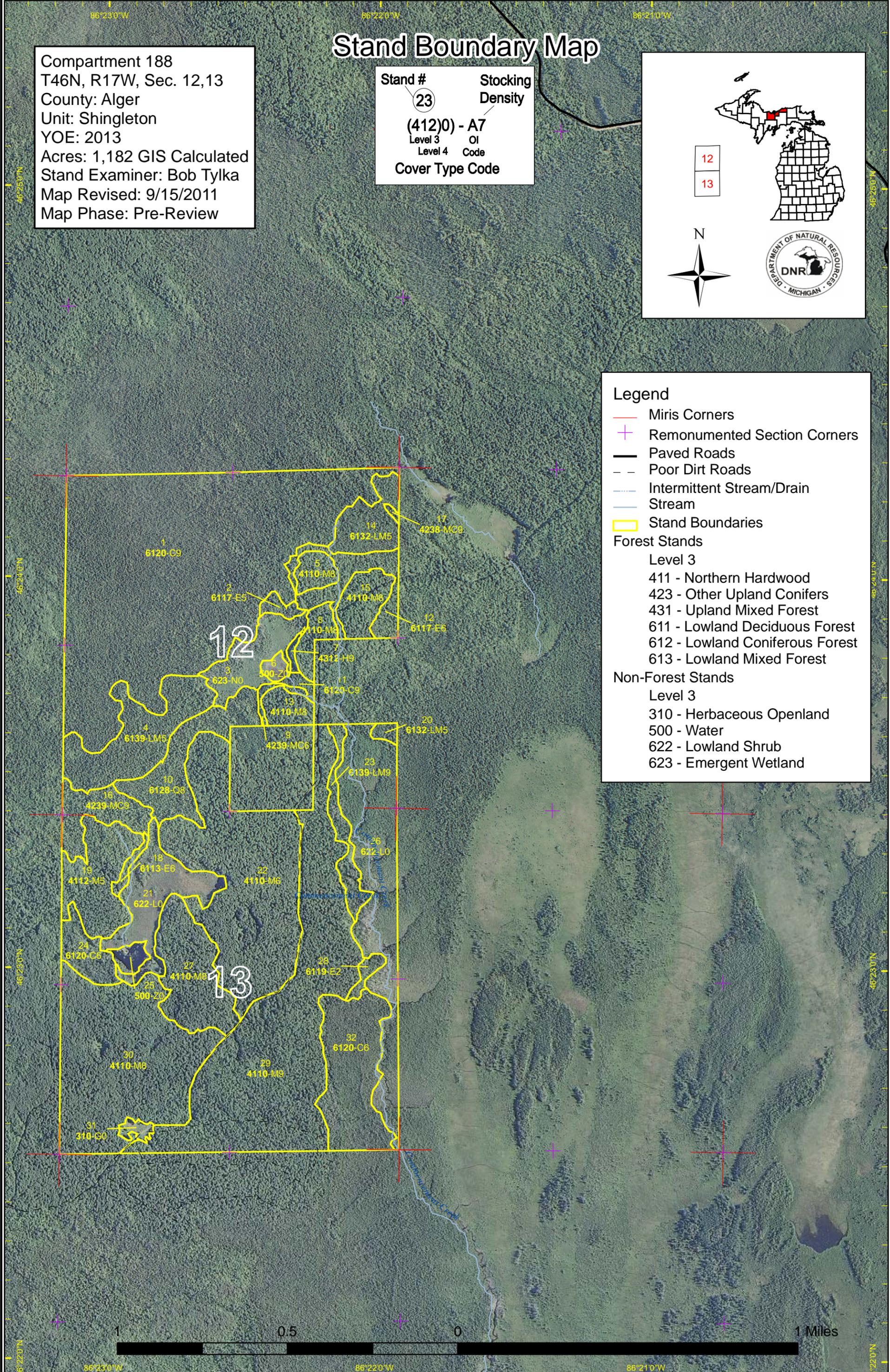
Stand Boundary Map

Compartment 188
 T46N, R17W, Sec. 12,13
 County: Alger
 Unit: Shingleton
 YOE: 2013
 Acres: 1,182 GIS Calculated
 Stand Examiner: Bob Tylka
 Map Revised: 9/15/2011
 Map Phase: Pre-Review

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

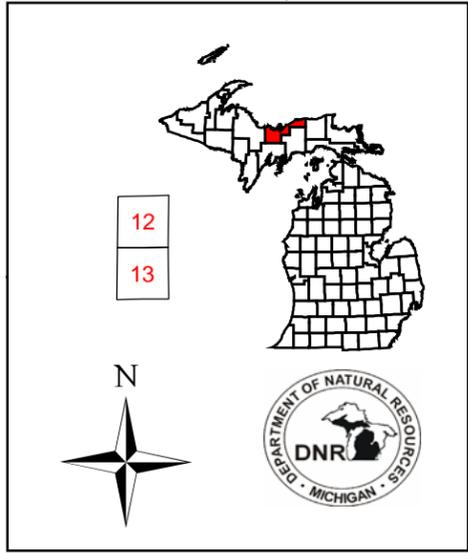


- Legend**
- Miris Corners
 - + Remonumented Section Corners
 - Paved Roads
 - - - Poor Dirt Roads
 - Intermittent Stream/Drain
 - Stream
 - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland



Compartment 188
 T46N, R17W, Sec. 12,13
 County: Alger
 Unit: Shingleton
 YOE: 2013
 Acres: 1,182 GIS Calculated
 Stand Examiner: Bob Tylka
 Map Revised: 9/15/2011
 Map Phase: Pre-Review

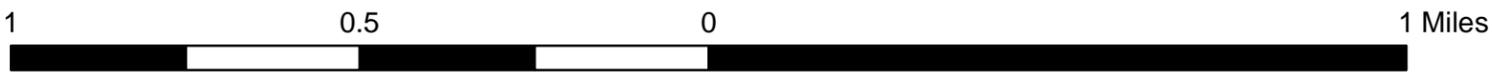
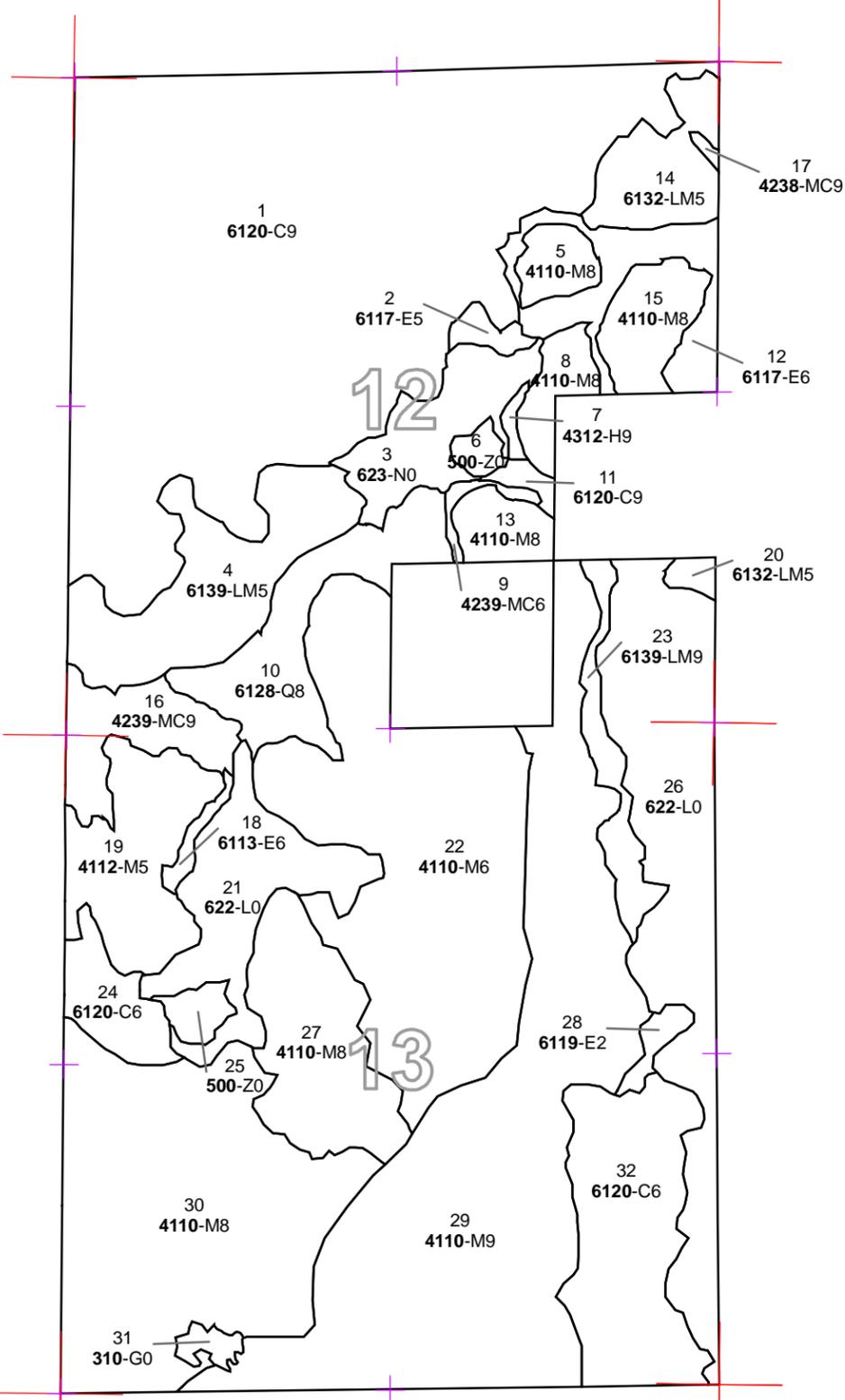
Dedicated & Proposed Special Conservation Area Map



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

Legend

- Miris Corners
- + Remonumented Section Corners
- Stand Boundaries
- Proposed Special Conservation Areas
 - ▨ SCA - Special Conservation Area
 - ▩ SCA Removal
- Dedicated Special Conservation Areas
 - Deer Wintering Areas
- Forest Stands
 - Level 3
 - 411 - Northern Hardwood
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands
 - Level 3
 - 310 - Herbaceous Openland
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland



86°23'0"W 86°22'0"W 86°21'0"W

46°25'0"N

46°24'0"N

46°23'0"N

46°25'0"N

46°24'0"N

46°23'0"N