



**Escanaba Forest Management Unit
Compartment Review Presentation
Compartment #013 Entry Year: 2013
Compartment Acreage: 659 County: Menominee**

Revision Date: July 13, 2011

Stand Examiner: Dustin Salter, Forester FMD, Bill Rollo, Wildlife Division

Legal Description: T36N R27W Sections 4, 5, and 6

Management Goals: This compartment has three major cover types. They are aspen, lowland hardwood, and mixed lowland conifer cover types. There are four aspen and upland mixed stands that will be final harvested this decade. There are also three lowland conifer stands that will be harvested. These stands are over mature and are in need of treatment while there still are viable seed trees. The eastern larch beetle is present within the compartment. This beetle is killing the tamarack within the compartment and throughout Menominee County. There are also three lowland hardwood stands that will be treated this decade.

Soil and Topography: This compartment contains Onaway-Nadeau fine sandy loam, Cathro-Ensley complex, Lupton-Cathro, Summerville-Cunard fine sandy loam, Onaway fine sandy loams, and Ensley mucky silt loam. This compartment is made up of well drained fine sandy loams with areas of poorly drained black muck and peat. The terrain is nearly level with areas of undulating topography.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is located in the middle of a block of state forest land that is about 20 miles long and 8 miles wide in the southwestern part of Menominee County. In and around the compartment the land holdings are broken up, with many private parcels within this block of state land. The south, east, and west edges of the stand are completely surrounded by private land. The primary use for this area is for recreation.

Unique, Natural Features: None

Archeological, Historical, and Cultural Features: None Known

Special Management Designations or Considerations: None

Watershed and Fisheries Considerations: The Ross Creek runs through the southern portion of section 4.

Wildlife Habitat Considerations: This compartment is located within the Nathan-Banat Moraines Management Area. The moraines are situated in a forest-agricultural interface that has a preponderance of cedar, aspen, and northern hardwood cover types. Popular game species such as deer and wild turkey do well here. This small compartment contains a large (94-acre) aspen stand prescribed for final harvest and regeneration. White oak, hemlock, and white pine will be retained for diversity and mast (oak acorns), as will a portion of the red oak trees. Efforts were made to exclude cedar from harvest or limit its take due to the unreliability of regeneration of this species. Maintenance of mature cedar trees, both as scattered individuals and as larger clumps/patches, provides winter cover for a variety of wildlife species.

Mineral Resource and Development Concerns and/or Restrictions: Sections 4 – 6, T36N-R27W, Menominee Co Surface sediments consist of a medium-textured glacial till. The glacial drift thickness varies between 10 and 50 feet. Beneath the glacial drift is the Cambrian Trempealeau Formation, which could be

used for stone and it overlaps Precambrian aged rocks, which may have metallic and nonmetallic mineral potential. State land was previously leased in the area for metallic exploration. A gravel pit is located in Section 4, and there appears to be good potential. No economic oil and gas production has been found in the UP.

Vehicle Access: The main access into the compartment on the west side is off of the Pokovich Lane with a two-track road heading into the east. The west side of the compartment is accessed by the Wiregrass road.

Survey Needs: Four corners will need to be set.

Recreational Facilities and Opportunities: There are no developed facilities within this compartment. The primary recreational uses are hunting and four-wheeling.

Fire Protection: This compartment consists mostly of forest types that do not pose a severe fire threat. Access into this compartment is very good for suppression activities. There are also water sources near by.

Additional Compartment Information: This compartment does not have any stands listed as SCA.

- **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 +		Uneven Age
Aspen	0	107	44	38	62	5	94	0	0	0	0	0	0	0	0	350
Cedar	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5
Lowland Deciduous	0	0	0	0	0	0	0	0	0	66	0	0	0	0	0	66
Lowland Shrub	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	75	0	0	0	0	75
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	7
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18
Red Pine	0	0	0	44	0	0	2	0	0	0	0	0	0	0	0	46
Tamarack	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	60
Upland Spruce/Fir	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	27	107	105	82	62	5	96	0	0	66	126	0	0	0	0	675



Table 2 – Proposed Treatment Summaries

Escanaba Mgt. Unit
Year of Entry 2013

Compartment 013
Total Compartment Acres: 675.5

Acres by Treatment Type

Commercial Harvest - 159	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 63	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen	99	0	0	0	0	0	99
Lowland Conifers	0	0	5	0	0	0	5
Lowland Deciduous	0	0	8	30	0	0	37
Lowland Spruce/Fir	0	0	68	0	0	0	68
Mixed Upland Deciduous	7	0	0	0	0	0	7
Northern Hardwood	0	0	0	0	5	0	5
Total	107	0	81	30	5	0	222



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	33013001-Cut	4.7	4110 - Sugar Maple Association	High Density Pole	94	Harvest	Crown Thinning	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription:</u> Thin this stand down to 80 to 90 basal area. Mark some of all species and in all size classes, maintaining or enhancing species diversity. <u>Specs:</u> <u>Other</u> This is the first treatment for this stand, no regeneration is expected. <u>Comments:</u> <u>Next</u> <u>Steps:</u>									
3	33013003-Cut	94.3	4130 - Aspen	High Density Pole	51	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription:</u> Clearcut this stand, leaving hemlock, white pine, white oak, and enough retention trees, clumps, or patches to meet the guidelines. Leave a <u>Specs:</u> component of red oak also. Manage for aspen, but a mix of the current species is acceptable. <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u>									
5	33013005-Cut	7.6	6115 - Lowland Ash	Medium Density Pole	81	Harvest	Seed Tree with Reserves	6121 - Tamarack	Cmpt. Review Proposal
<u>Prescription:</u> Harvest this stand, leaving a mix of seed trees. Most of the seed trees should be tamarack and spruce. Manage this stand for tamarack <u>Specs:</u> primarily, but any mix of the current overstory species is acceptable. <u>Other</u> 10 to 15 cords of cedar will be cut in this stand. <u>Comments:</u> <u>Next</u> <u>Steps:</u>									
6	33013006-Cut	5.4	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	97	Harvest	Seed Tree with Reserves	6121 - Tamarack	Cmpt. Review Proposal
<u>Prescription:</u> Harvest this stand, leaving seed tree clumps. The clumps should consist of a mix of the overstory species, including cedar. Leave enough to <u>Specs:</u> meet the retention guidelines. Manage this stand for tamarack, but a mix of the current overstory species is acceptable. <u>Other</u> About 40 to 50 cords of cedar would be harvested. <u>Comments:</u> <u>Next</u> <u>Steps:</u>									
11	33013011-Cut	63.3	6122 - Black Spruce	High Density Pole	90	Harvest	Seed Tree with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<u>Prescription:</u> Harvest this stand, leaving seed tree clumps along with the thickest patch of cedar on the south end of the stand. The clumps should consist of <u>Specs:</u> a mix of the overstory species. Leave enough to meet the retention guidelines. Manage this stand for spruce and tamarack, but a mix of the current overstory species is acceptable. <u>Other</u> About 150 cords of cedar would be harvested. <u>Comments:</u> <u>Next</u> <u>Steps:</u>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	33013014-Cut	4.9	4134 - Aspen, Spruce/Fir	High Density Pole	42	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Clearcut this stand, leaving cedar and black cherry for retention and diversity. Manage this stand for aspen, but a mix with the current overstory species is acceptable.

Other
Comments:

Next
Steps:

15	33013015-Cut	7.5	4199 - Other Mixed Upland Deciduous	High Density Pole	94	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Clearcut this stand. Mark trees/clumps of hardwood to retain for diversity and retention. Leave some hardwood cavity trees. Aspen is the desired species, but a mix of the overstory species is acceptable.

Other
Comments:

Next
Steps:

19	33013019-Cut	18.5	6118 - Lowland Deciduous with Cedar	High Density Pole	81	Harvest	Shelterwood	6115 - Lowland Ash	Cmpt. Review Proposal
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Prescription Shelterwood cut the central portion of this stand. Leave 20 to 30 basal area of the existing species, harvest all other trees. The leave trees will be a mix of the current species, with an emphasis on tamarack seed trees. Manage this stand for a mix of tamarack, spruce, balm, and ash. Any combination is acceptable, but tamarack will be the dominate species long term.

Other About 20 cords of cedar would be cut in this stand.
Comments:

Next
Steps:

22	33013022-Cut	11.1	6118 - Lowland Deciduous with Cedar	High Density Pole	81	Harvest	Shelter Wood with Reserves	6115 - Lowland Ash	Cmpt. Review Proposal
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Prescription Shelterwood cut this stand, leaving 20 to 30 basal area of the overstory species. Leave a mix of species, including cedar. Manage this stand for a mix of tamarack, spruce, balm, and ash; any combination of these species is acceptable. Do not cut west of the Wiregrass Lake road and also leave a 25 foot no cut buffer along Ross Creek and in the next 75 feet leave the basal area slightly higher than the rest of the stand.

Other About 25 cords of cedar would be harvested.
Comments:

Next
Steps:

28	33013028-Cut	4.7	6122 - Black Spruce	High Density Pole	90	Harvest	Seed Tree with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
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Prescription Harvest this stand, leaving seed tree clumps. They should consist primarily of spruce and tamarack. Manage this stand for spruce and tamarack, any mix is acceptable.

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 222.0**

Table 4 -- Treatments Prescribed with a Limiting Factor



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

**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
33002_OutOfY OE-Cut	0.7				Harvest	Clearcut with Reserves	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal

Prescription Final harvest this stand, leaving some seed trees. Harvest this stand with stand 13 in comp 1.

Specs:

Other Decent quality tamarack and spruce stand.

Comments:

Next Manage this stand for a mix of tamarack and spruce primarily, but a mix with other lowland species is acceptable.

Steps:

**Total Treatment
Acreage Proposed: 0.7**



Stand	Escanaba Mgt. Unit			5 – Forested Stands		Compartment: 013 Year of Entry: 2013
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4110 - Sugar Maple Association	High Density Pole	4.7	94	141-170	Very good quality hardwood stand. This will be the stands first thinning.
2	42110 - Planted Red Pine	Low Density Pole	27.1	20		The original stand was clearcut in 1991 on contract 018-88-01. It was sprayed, trenched, and planted in 1993 on FTP 33-317. The red pine regen is very patchy, large areas are not currently stocked. This stand will have to managed as a natural stand due to the spacing in the stand. I would recommend scarifying the open areas once the red pine stems start producing cones to help fill in the remaining stand. The stand is heavy to sedge.
3	4130 - Aspen	High Density Pole	94.3	51		Mature, good quality aspen stand. The southern part of the stand has more hardwood and is a little lower and wetter. This part of the stand will have to be cut in a dry summer or during winter.
4	6121 - Tamarack	Medium Density	26.7	17		Stand was cut in 1994 on contract 001-94-01. Stand has fully regenerated to tamarack.
5	6115 - Lowland Ash	Medium Density Pole	7.6	81		Poorly stocked ash stand with other species mixed in.
6	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	5.4	97		This stand is a mixed lowland type. Half of the stand is primarily ash and the other half is a mix of cedar, spruce, and tamarack.
7	6120 - Lowland Cedar	High Density Pole	19.9	97		Decent quality cedar with pockets of tamarack in the east half and the west half has a higher percentage of other species in the west half. Look at harvesting parts of this stand next decade when stand 10 is harvested.
8	6121 - Tamarack	High Density Sapling	10.0	15		Stand was final harvested in 1996 on contract 001-94-01. This stand has fully regenerated to tamarack.
10	4134 - Aspen, Spruce/Fir	High Density Pole	62.1	39		Stand is a mix of aspen and balsam fir primarily. Harvest this stand next decade.
11	6122 - Black Spruce	High Density Pole	70.5	90		Stunted black spruce stand.
12	4119 - Mixed Northern Hardwoods	High Density Pole	3.1	94	111-140	Good quality hardwood stand. This stand could be thinned, but the stand is small and access is difficult. So wait 10 years to thin when stand 10 is harvested.
13	6121 - Tamarack	Medium Density	23.0	17		Stand was final harvested in 1993-94 on contract 010-88-01. The cedar and hemlock was retained. This stand has areas of regeneration and areas of thick tag alder.
14	4134 - Aspen, Spruce/Fir	High Density Pole	4.9	42		Decent quality aspen stand. This stand is being harvested to allow access into stand 11. A contractor will need to push a trail into this stand from the north to reduce the skidding distance.

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Escanaba Mgt. Unit

5 – Forested Stands

Compartment: 013
Year of Entry: 2013

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	4199 - Other Mixed Upland Deciduous	High Density Pole	7.5	94		Poor quality hardwood stems with aspen and birch mixed in. The birch and aspen is dying out.
16	4130 - Aspen	High Density Sapling	50.1	4		Stand was final harvested in 2007 on contract 030-03-01. The pine, oak, elm, beech, and yellow birch was retained along with two legacy patches.
17	4119 - Mixed Northern Hardwoods	High Density Pole	4.5	94	81-110	Decent quality hardwood stand, not in need of a thinning at this time.
18	6115 - Lowland Ash	Medium Density Pole	10.7	81	51-80	Poor quality ash stand.
19	6118 - Lowland Deciduous with Cedar	High Density Pole	34.7	81		Primarily an ash stand with some cedar in the northern part. Cut the central part of the stand. The north end has more cedar and smaller ash and the south end has small ash that doesn't have many merchantable stems.
20	4134 - Aspen, Spruce/Fir	Medium Density	43.7	13		Stand was final harvested in 1998 on contract 024-98-01.
21	4130 - Aspen	Medium Density	56.5	5		Stand was final harvested between 2005 and 2007 on contract 030-03-01. The pine, oak, elm, beech, and yellow birch was retained.
22	6118 - Lowland Deciduous with Cedar	High Density Pole	12.6	81		Lower quality ash stand.
23	42330 - Upland Fir	Medium Density	1.6	17		Stand was cut in 1993-94 on contract 010-88-01.
24	4130 - Aspen	High Density Sapling	38.3	28		
25	42110 - Planted Red Pine	High Density Log	2.2	52		Pine plantation that has been thinned 3 times.
26	4110 - Sugar Maple Association	High Density Pole	5.8	94		Stand was thinned in 2005 on contract 030-03-01. Heavy sedge in stand.
27	42110 - Planted Red Pine	High Density Pole	16.7	21		Stand was trenched and planted in 1993 on FTP #33-321.
28	6122 - Black Spruce	High Density Pole	4.7	90		Stunted black spruce stand.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
9	6220 - Alder/willow	26.7	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

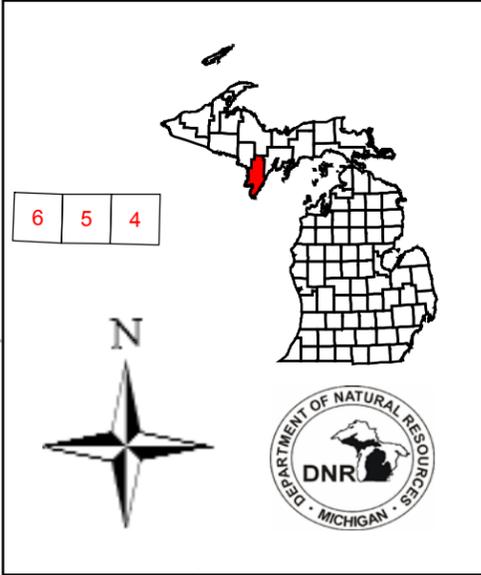
* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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

Conservation Area	Type	Description
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.

Cover Type & Treatment Map

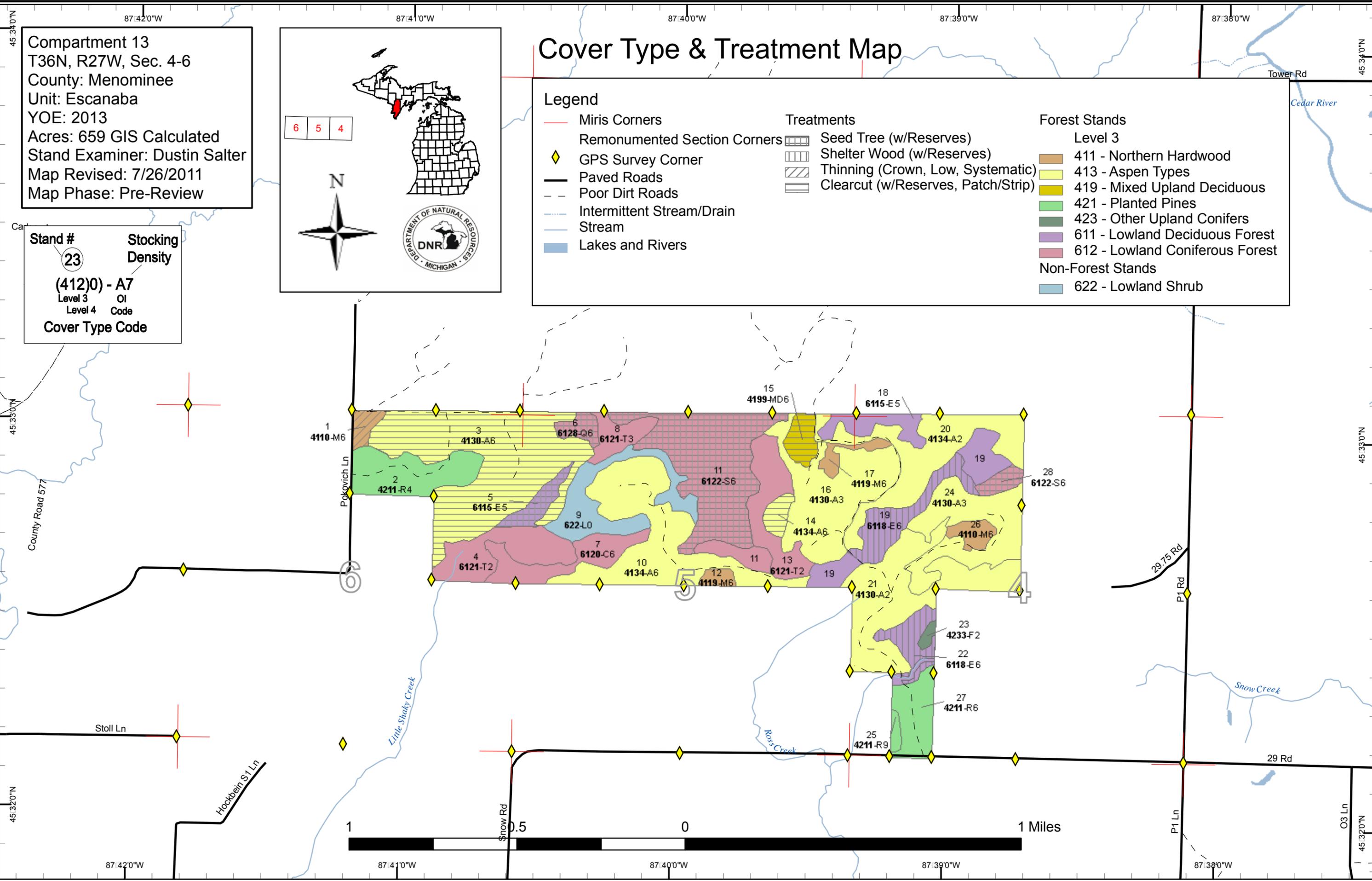
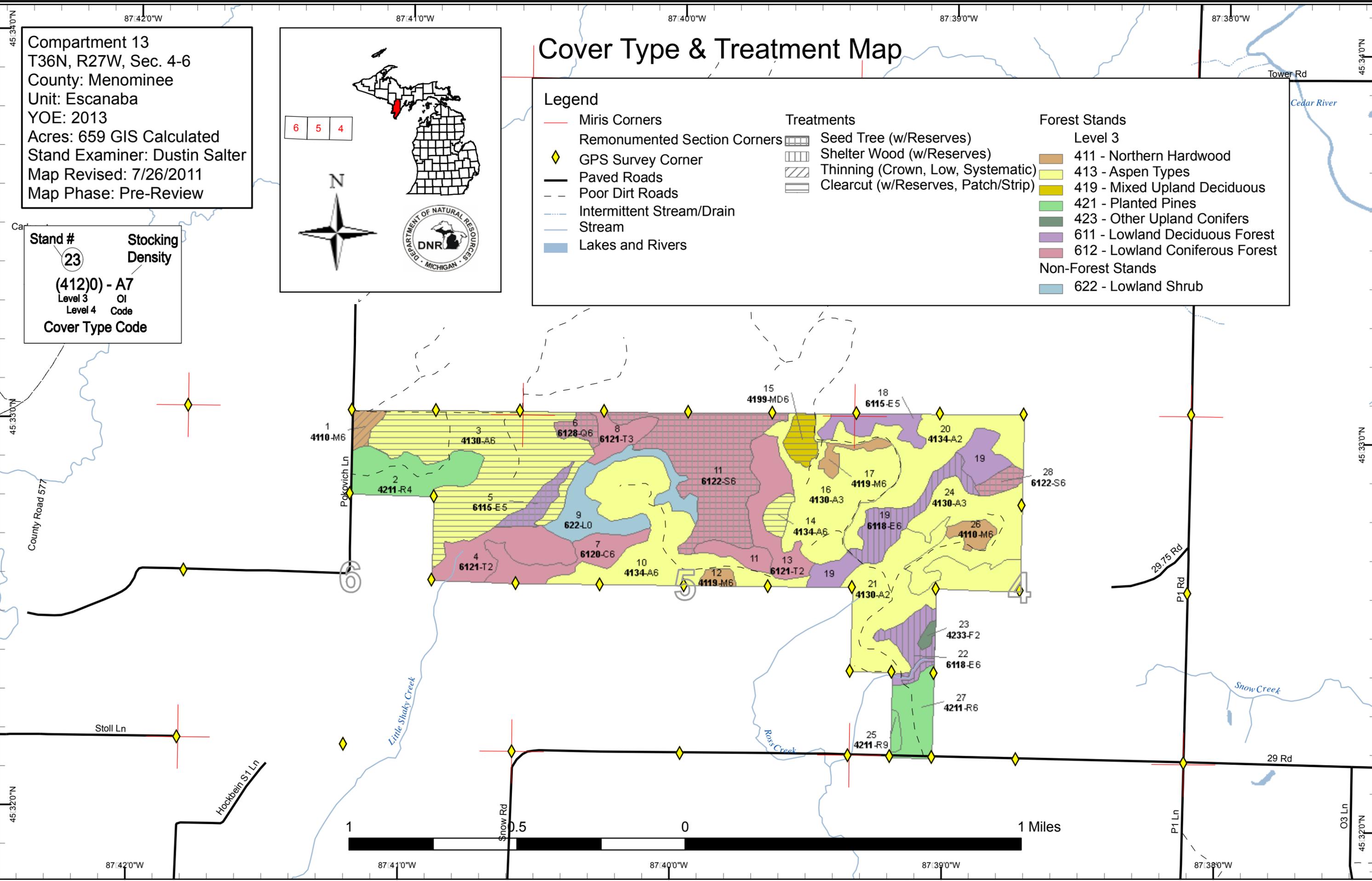
Compartment 13
 T36N, R27W, Sec. 4-6
 County: Menominee
 Unit: Escanaba
 YOY: 2013
 Acres: 659 GIS Calculated
 Stand Examiner: Dustin Salter
 Map Revised: 7/26/2011
 Map Phase: Pre-Review



Legend

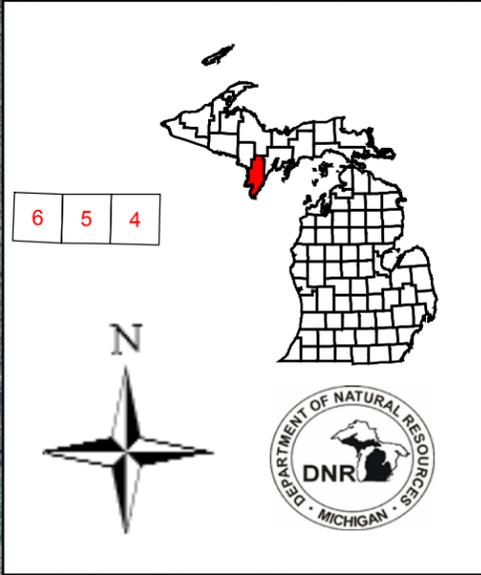
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|--------------------------------|--------------------------------------|-----------------------------------|
| — Miris Corners | ▨ Seed Tree (w/Reserves) | ■ Forest Stands |
| ◆ Remonumented Section Corners | ▨ Shelter Wood (w/Reserves) | Level 3 |
| ◆ GPS Survey Corner | ▨ Thinning (Crown, Low, Systematic) | ■ 411 - Northern Hardwood |
| — Paved Roads | ▨ Clearcut (w/Reserves, Patch/Strip) | ■ 413 - Aspen Types |
| - - - Poor Dirt Roads | | ■ 419 - Mixed Upland Deciduous |
| — Intermittent Stream/Drain | | ■ 421 - Planted Pines |
| — Stream | | ■ 423 - Other Upland Conifers |
| ■ Lakes and Rivers | | ■ 611 - Lowland Deciduous Forest |
| | | ■ 612 - Lowland Coniferous Forest |
| | | Non-Forest Stands |
| | | ■ 622 - Lowland Shrub |

Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Compartment 13
 T36N, R27W, Sec. 4-6
 County: Menominee
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 Map Revised: 7/26/2011
 Map Phase: Pre-Review

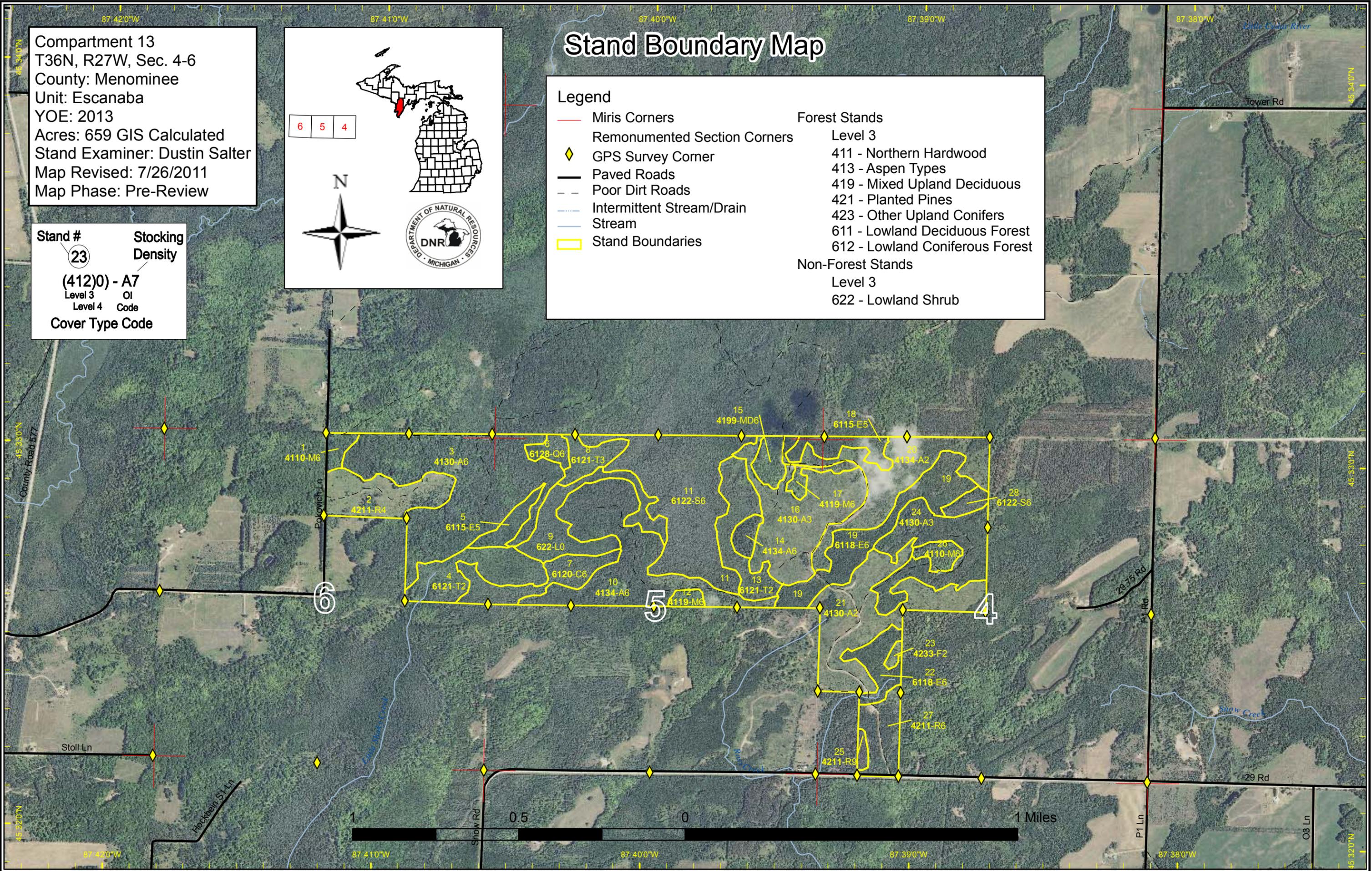
Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Stand Boundary Map

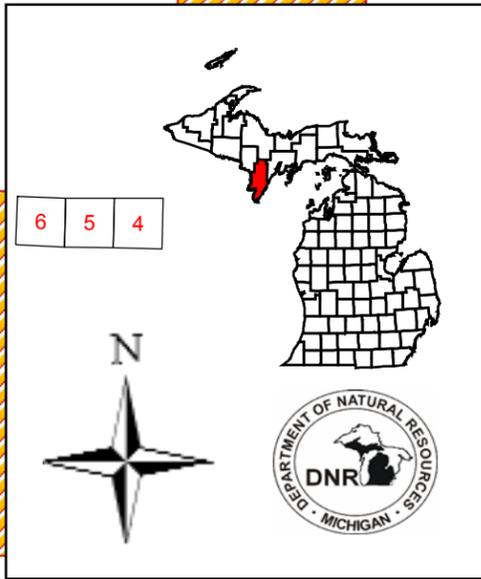
Legend

—	Miris Corners	Forest Stands
◆	Remonumented Section Corners	Level 3
◆	GPS Survey Corner	411 - Northern Hardwood
—	Paved Roads	413 - Aspen Types
- -	Poor Dirt Roads	419 - Mixed Upland Deciduous
—	Intermittent Stream/Drain	421 - Planted Pines
—	Stream	423 - Other Upland Conifers
□	Stand Boundaries	611 - Lowland Deciduous Forest
		612 - Lowland Coniferous Forest
		Non-Forest Stands
		Level 3
		622 - Lowland Shrub



Dedicated & Proposed Special Conservation Area Map

Compartment 13
 T36N, R27W, Sec. 4-6
 County: Menominee
 Unit: Escanaba
 YOE: 2013
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 Map Revised: 7/26/2011
 Map Phase: Pre-Review



Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend	
— Miris Corners	Forest Stands
— Remonumented Section Corners	Level 3
◆ Survey Corners	411 - Northern Hardwood
□ Stand Boundaries	413 - Aspen Types
Proposed Special Conservation Areas	419 - Mixed Upland Deciduous
▨ SCA - Special Conservation Area	421 - Planted Pines
▩ SCA Removal	423 - Other Upland Conifers
Dedicated Special Conservation Areas	611 - Lowland Deciduous Forest
— Cold Water Streams	612 - Lowland Coniferous Forest
▨ Natural Areas Legally Dedicated	Non-Forest Stands
	Level 3
	622 - Lowland Shrub

