



**Shingleton Forest Management Unit  
Compartment Review Presentation  
Compartment #91 Entry Year: 2013  
Compartment Acreage: 1,592 acres County: Delta**

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**Revision Date:** 8/10/2011

**Stand Examiner:** Adam Petrelius

**Legal Description:** T40N R18W, Sections 21, 22, 23, 24

**RMU (if applicable):** Compartment 91 lies within Garden Thompson Plains Management Area.

**Management Goals:** The main goal of this compartment is to conduct multiple resource management for current and future generations.

**Soil and Topography:** The topography within the compartment is variable and includes some steep ridges in the west. Elevation values peak at 748 feet and drop to 581 at the Lake Michigan shoreline. With the exception of a few small stands, the entire compartment is forested. Forested land is very diverse and contains many cover types including some large oak stands. The two most abundant soils are Rubicon Sand and Tawas Muck. PVE is the most common habitat type.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** State land within this compartment was acquired between 1907 and 2011. The compartment boundary borders private, state land, and some school forest land. The compartment is used mostly by hunters, ORV users, and snowmobile riders.

**Special Management Designations or Considerations:** Two special conservation areas exist for potential old growth.

**Watershed and Fisheries Considerations:** No treatments are prescribed near water, so Fisheries Division has no comments at this time.

**Wildlife Habitat Considerations:** This compartment is contained within the Escanaba/Door Peninsula ecological sub-subsection. The growing season is 140 days. Extreme minimum temperatures are around -35 degrees F. Annual average snowfall is 70 inches. General Land Office (GLO) Surveyor notes show a range of upland forest conditions circa 1850. Some forest stands contained deciduous species such as beech, sugar maple, hemlock, and yellow birch. Others held red, white, and jack pine. In section 23, the pine forest contained interspersed open plains. Comments were made regarding the regenerating forest within burned over and windthrow stands of pine. Aspen, white birch, balsam fir, and pine saplings were found in these situations. Cedar was the dominant forest type in the lowlands; however, tamarack and spruce were also common. Surveyors also found evidence of fire within the cedar stands. Upland conditions within this compartment today are substantially different from those at the time of the original survey. Oak, aspen, and red pine plantation dominate the upland forest types. Lowlands appear to be similar in species composition to the presettlement vegetation, however, the age and structure has changed. Wildlife habitat objectives include maintaining the hard mast resource, promoting a shift toward mixed white pine/aspen stands, increasing structural diversity between early successional stands, and maintaining closed canopy hemlock stands. It can be assumed that common loons (Michigan special concern) and bald eagles (Federal and Michigan threatened) use near by Lake Michigan and that gray wolves (Federal and Michigan endangered)

utilize the landscape within the compartment. However, there are no known occurrences of endangered, threatened, or special concern species within the compartment. Other species of interest include ovenbird, downy woodpecker, gray squirrel, and red fox.

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 0 and 50 feet. The Silurian Manistique and Burnt Bluff Groups subcrop below the glacial drift. The Burnt Bluff is used for stone and was used for flux in iron making at Fayette. The nearest gravel pit is 1.5 miles to the southwest and there appears to be limited gravel potential. There is no commercial oil and gas production in the UP.

**Vehicle Access:** There is good vehicle access throughout the entire compartment. State highway M183 travels along the western boundary.

**Survey Needs:** Most stands bordering private that are being harvested now were also cut last year of entry. Survey work will not be needed.

**Recreational Facilities and Opportunities:** The Cooks Garden Grade snowmobile trail travels north and south through this compartment.

**Fire Protection:** Response time to fire will be fairly fast due to good access and distance from Thompson office. A variety of fuels exist, mostly upland and spring fires would be the concern here.

**Additional Compartment Information:**

- **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**
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	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 +		Unretn Age
Aspen	0	45	0	276	0	85	0	0	0	16	0	0	0	0	0	422
Cedar	0	0	0	0	0	0	10	142	0	41	5	0	0	0	0	198
Hemlock	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	19
Herbaceous Openland	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Jack Pine	0	43	0	10	37	0	0	0	0	0	0	0	0	0	0	90
Lowland Conifers	0	0	24	0	8	0	0	0	0	33	0	0	0	0	0	65
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
Lowland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Marsh	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Mixed Upland Deciduous	0	0	0	19	0	0	0	2	4	0	0	0	0	0	0	25
Natural Mixed Pines	0	0	0	0	0	0	0	16	0	0	0	0	0	0	74	90
Oak	0	0	0	0	0	0	0	0	152	52	0	0	0	0	0	204
Red Pine	0	0	0	29	0	186	0	0	0	0	0	0	0	0	0	215
Sand, Soil	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Tamarack	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Upland Conifers	0	0	13	0	0	8	0	54	34	0	0	0	0	0	0	109
Upland Mixed Forest	0	69	0	0	0	0	0	0	15	0	0	0	0	0	0	84
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White Pine	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	12
<b>Total</b>	<b>41</b>	<b>157</b>	<b>37</b>	<b>334</b>	<b>47</b>	<b>280</b>	<b>10</b>	<b>215</b>	<b>205</b>	<b>169</b>	<b>5</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>1592</b>



## Table 2 – Proposed Treatment Summaries

**Shingleton Mgt. Unit**  
**Year of Entry 2013**

**Compartment 091**  
**Total Compartment Acres: 1592**

### Acres by Treatment Type

Commercial Harvest - 331	Site Prep - 0	Tree Planting - 10	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

### Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	0	0	0	0	0	15		<b>15</b>
<b>Herbaceous Openland</b>	0	0	0	0	0	5		<b>5</b>
<b>Jack Pine</b>	0	0	0	0	0	2		<b>2</b>
<b>Mixed Upland Deciduous</b>	6	0	0	0	0	0		<b>6</b>
<b>Natural Mixed Pines</b>	3	0	0	0	0	0		<b>3</b>
<b>Oak</b>	0	37	0	0	0	0		<b>37</b>
<b>Red Pine</b>	0	0	0	0	186	0		<b>186</b>
<b>Upland Conifers</b>	0	0	0	54	0	0		<b>54</b>
<b>Upland Mixed Forest</b>	10	0	0	0	0	0		<b>10</b>
<b>White Pine</b>	0	0	12	0	0	0		<b>12</b>
<b>Total</b>	<b>19</b>	<b>37</b>	<b>12</b>	<b>54</b>	<b>186</b>	<b>22</b>		<b>331</b>



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	41091012-Cut	43.5	42210 - Natural Red Pine	High Density Pole	48	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 sq. ft. basal area. Do not cut oak. Most of the jack pine should be cut since it is dying.  <u>Specs:</u>  <u>Other Comments:</u>  <u>Next Steps:</u></p>									
13	41091013-Cut	1.6	42220 - Natural Jack Pine	Low Density Pole	30	Harvest	Other - Specify in Comments	3102 - Grass	Cmpt. Review Proposal
<p><u>Prescription</u> Opening maintenance. Cut all trees except hemlock and oak.  <u>Specs:</u>  <u>Other Comments:</u> Do opening maintenance with timbersale commercially.  <u>Next Steps:</u></p>									
16	41091016-Cut	15.6	42110 - Planted Red Pine	High Density Pole	48	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 sq. ft. basal area. Do not cut oak. Most of the jack pine should be cut since it is dying.  <u>Specs:</u>  <u>Other Comments:</u>  <u>Next Steps:</u></p>									
20	41091020-Cut	3.8	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	75	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all species except oak.  <u>Specs:</u>  <u>Other Comments:</u> Protect oak regeneration with timbersale spec. Stand is only 3 acres, so oak, misc. submerchantable trees, and snags will be the only retention.  <u>Next Steps:</u> Acceptable regeneration is any mixture of species currently found onsite. Regeneration walkthrough during next inventory cycle.</p>									
22	41091022-Cut	8.9	42110 - Planted Red Pine	High Density Pole	45	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 sq. ft. basal area. Do not cut oak.  <u>Specs:</u>  <u>Other Comments:</u>  <u>Next Steps:</u></p>									
28	41091028-Cut	118.1	42110 - Planted Red Pine	High Density Pole	48	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Thin stand to 120 sq. ft. basal area. Do not cut oak.  <u>Specs:</u>  <u>Other Comments:</u>  <u>Next Steps:</u></p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
34	41091034-Cut	12.2	42200 - Natural White Pine	High Density Log	80	Harvest	Seed Tree with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Mark red pine and white pine to 30 sq. ft residual basal area. Leave quality seed trees. Do not cut oak.</p> <p><u>Specs:</u></p> <p><u>Other</u> Cut in summer for added scarification and protect existing pine regeneration with timbersale spec. All other species were harvested last year of entry so red pine and white pine should be the only species harvested.</p> <p><u>Comments:</u></p> <p><u>Next</u> Regeneration walkthrough next year of entry. Even though stand is currently a white pine/red pine mixture, other species such as aspen, fir, and red maple will be acceptable regeneration since they are currently present in the subcanopy.</p> <p><u>Steps:</u></p>									
38	41091038-Cut	3.4	42260 - Natural Pine, Mixed Deciduous	High Density Pole	63	Harvest	Clearcut with Reserves	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all species except oak. Leave a few supercanopy red pine or white pine for seed and retention.</p> <p><u>Specs:</u></p> <p><u>Other</u> Cut on bare ground for added scarification.</p> <p><u>Comments:</u></p> <p><u>Next</u> Regeneration walkthrough next year of entry. Acceptable regeneration is any mixture of species currently found onsite.</p> <p><u>Steps:</u></p>									
45	41091045-Cut	15.2	4130 - Aspen	Medium Density Pole	25	Harvest	Other - Specify in Comments	3102 - Grass	Cmpt. Review Proposal
<p><u>Prescription</u> Opening maintenance. Cut all trees except hemlock and oak. Exclude denser aspen clumps along the edges.</p> <p><u>Specs:</u></p> <p><u>Other</u> Add to adjacent timbersale.</p> <p><u>Comments:</u></p> <p><u>Next</u></p> <p><u>Steps:</u></p>									
49	41091049_sm all-Cut	36.6	4123 - Red Oak	High Density Log	75	Harvest	Group Selection	4123 - Red Oak	Cmpt. Review Proposal
<p><u>Prescription</u> Create some gaps in canopy to regenerate red oak.</p> <p><u>Specs:</u></p> <p><u>Other</u> This treatment boundary is a small portion of the larger stand of oak. It was selected because it has very minimal aspen or red maple present from harvest in 1985 and is almost purely red oak. Boundary may change since it was hard to delineate off the photo and should include only those areas that do not have much aspen or red maple.</p> <p><u>Comments:</u></p> <p><u>Next</u> Regeneration walkthrough next year of entry. Check canopy gaps for oak regeneration.</p> <p><u>Steps:</u></p>									
51	41091051-Cut	2.5	4199 - Other Mixed Upland Deciduous	High Density Pole	65	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all species except cedar. Some cedar may be cut along a skid trail connecting the 2 small pieces.</p> <p><u>Specs:</u></p> <p><u>Other</u> Stand may cross the compartment boundary slightly, less than an acre. Paint a few mature aspen along the boundary line for retention.</p> <p><u>Comments:</u></p> <p><u>Next</u> Regeneration walkthrough next year of entry. Acceptable species include any mixture currently found onsite.</p> <p><u>Steps:</u></p>									



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
56	41091056-Cut	9.5	4319 - Mixed Upland Forest	High Density Log	72	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal

Prescription Mark red pine and white pine to cut. Leave small diameter trees and a few large supercanopy trees. Cut all other species except hemlock and oak.

Other  
Comments:

Next Plant Oak.  
Steps:

58	41091058-Cut	54.2	429 - Mixed Upland Conifers	High Density Pole	60	Harvest	Shelter Wood with Reserves	429 - Mixed Upland Conifers	Cmpt. Review Proposal
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Prescription Cut all species except red pine, white pine, oak, hemlock. Red pine and white pine should only be marked in thicker areas if needed for operability.

Other Treatment boundary shares a common border with an SCA for potential old growth. These borders overlap because of differences in imagery used to map these stands. Only retention will be white pine, red pine, oak, submerchantable trees, and snags. Stand is adjacent to a large block of designated old growth and there are plenty of retention trees growing there.

Next Regeneration walkthrough next year of entry. Acceptable regeneration is any mixture of species currently found onsite. Areas of thicker red pine and white pine should be re-mapped next year of entry as individual stands and could have additional harvests done to regenerate those areas to pine.

33	NF_41091033- Cut	5.5	Non-Forested		0	Harvest	Other - Specify in Comments	3102 - Grass	Cmpt. Review Proposal
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Prescription Cut all species in stand except hemlock and oak. Opening maintenance.

Other Add to timbersale and do opening maintenance commercially.  
Comments:

Next  
Steps:

25	NF_41091025- Plant1	10.2	6132 - Mixed Lowland Forest with Cedar		0	Tree Planting	Hand Plant	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Plant red pine with or without trenches.  
Specs:

Other Stand was cut in 2006, burned in 2008, and has not yet been planted.  
Comments:

Next regeneration counts following planting  
Steps:

**Total Treatment  
Acreage Proposed: 340.8**

**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

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**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
<b>41022_OutOfY OE-Cut</b>	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</u> Do not cut any trees within 50 feet of the West Branch Manistique River.								
<u>Comments:</u>								
<u>Next</u> Thin next year of entry.								
<u>Steps:</u>								
<b>41049_OutOfY OE_1-Cut</b>	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</u> Access to stand is too difficult for continuous thinning.								
<u>Comments:</u>								
<u>Next</u> Regeneration walkthrough during next inventory cycle. Acceptable regeneration includes any species mixture currently found onsite.								
<u>Steps:</u>								
<b>41053_OutOfY OE-Cut</b>	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</u> Access to stand is too difficult for continuous thinning.								
<u>Comments:</u>								
<u>Next</u> Regen walkthrough during next inventory cycle. Acceptable regeneration includes any species mixture currently found onsite.								
<u>Steps:</u>								
<b>Total Treatment Acreage Proposed:</b>		<b>50.5</b>						

Stand	Shingleton Mgt. Unit		5 – Forested Stands			Compartment: 091	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
2	4134 - Aspen, Spruce/Fir	High Density Sapling	9.3	26			
3	4319 - Mixed Upland Forest	Medium Density Pole	5.4	70			birch is dying and stand is converting to fir.
4	4123 - Red Oak	High Density Log	37.0	85			Stand was thinned about 20 years ago, then it was set aside for potential old growth in 1997.
5	4130 - Aspen	High Density Pole	16.2	83			steep hill
7	42360 - Upland Cedar	High Density Pole	19.9	80			
8	6120 - Lowland Cedar	High Density Pole	9.7	56			underground creeks present
9	4134 - Aspen, Spruce/Fir	High Density Sapling	23.9	26			
10	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	43.0	5			Stand cut spring 2004, 41-028-03-01. Trenched and planted with 43,000 jack pine. 2007 regen count showed 587 jack pine. 2009 regen count showed 572 jack pine. 6 of 43 acres were not trenched due to residual oak and aspen clones. Even though this stand did not reach the minimum 600 tpa of jack pine to be fully stocked, FTP 1132 will be closed. Where jack pine was planted, the stand has over 600 tpa and the below acceptable count is likely due to the 6 acres of oak/aspen within the stand.
11	4123 - Red Oak	High Density Log	15.1	85			stand was designated as potential old growth in 1997
12	42110 - Planted Red Pine	High Density Pole	43.5	48	141-170		Stand thinned in spring 2004. 41-028-03-01 Sand Pit Pine. Residual basal area from sale cruise was 110.
13	42220 - Natural Jack Pine	Low Density Pole	1.6	30			New stand added. sparse
14	4132 - Aspen, Jack Pine	High Density Pole	6.4	27			
15	4132 - Aspen, Jack Pine	Medium Density Pole	5.7	27			sparse in areas
16	42110 - Planted Red Pine	High Density Pole	15.6	48	111-140		Stand thinned in spring 2006, Sand Pit Pine, 41-028-03-01. Residual basal area from cruise is 100. Some natural red pine exists in the northwest portion of stand.
17	4123 - Red Oak	High Density Log	14.6	73			Stand was cut in 1984. excellent oak regen and recruitment
18	4131 - Aspen, Oak	High Density Pole	19.4	26			stand was cut in 1985. even mix of aspen oak regen. scattered large oak





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4199 - Other Mixed Upland Deciduous	High Density Pole	13.7	26		Stand was cut in 1985 but has some mature aspen remaining.
20	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	3.8	75		
21	4199 - Other Mixed Upland Deciduous	High Density Pole	4.9	26		
22	42110 - Planted Red Pine	High Density Pole	8.9	45	141-170	Stand thinned in spring 2006. Residual basal area from cruise was 120.
23	4131 - Aspen, Oak	High Density Pole	3.3	26		stand was cut in 1985
24	4130 - Aspen	High Density Sapling	5.3	5		Stand cut in spring 2006, 41-028-03-01.
26	4130 - Aspen	High Density Sapling	27.9	26		.NE portion is more open
27	42220 - Natural Jack Pine	High Density Pole	26.0	38		poor stocking..open grow trees
28	42110 - Planted Red Pine	High Density Pole	118.1	48	141-170	stand thinned in spring 2006, 41-028-03-01.
29	4319 - Mixed Upland Forest	High Density Sapling	69.0	7		Management objective last year of entry was for white pine. Stand was cut in spring 2004. Residual basal areas from cruise were red pine - 10, white pine - 10, hemlock - 5, cedar - 8, oak - 2, total of 35 sq. ft.
30	4131 - Aspen, Oak	High Density Sapling	34.9	5		Stand was cut in 2005. TSI was completed in 2006. 13 sq. ft. of oak exist from timbersale cruise. Stand was supposed to get scarified, but that never happened in time. Prior to harvest, it was an even mixture of jack pine and aspen.  regen is mostly aspen but some jp is present..could be called oak because of residual left from harvest. some open areas exist bvt residual oak will fill these areas
31	6120 - Lowland Cedar	High Density Pole	4.8	90		New stand added. stand species thinned in 2004..lots of blow down
32	4131 - Aspen, Oak	High Density Sapling	4.5	5		stand cut in spring 2006, 41-028-03-01  regen is good, 1/2 acre on east side is low..this area was formerly jp.
34	42200 - Natural White Pine	High Density Log	12.2	80	51-80	New stand added. species thinned in 2004...
35	6120 - Lowland Cedar	High Density Pole	20.9	89		size and quality of cedar decreases towards the south

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## Shingleton Mgt. Unit

## 5 – Forested Stands

Compartment: 091  
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	42110 - Planted Red Pine	High Density Pole	29.2	25	1-50	high quality plantation
37	6121 - Tamarack	Medium Density	2.5	30		former treed bog
38	42260 - Natural Pine, Mixed Deciduous	High Density Pole	3.4	63		New stand added.
39	6129 - Mixed Coniferous Lowland Forest	High Density Sapling	8.0	30		former treed bog...scattered mature trees
40	4131 - Aspen, Oak	High Density Pole	62.1	26		Stand cut in 1985.
41	6126 - Lowland Jack Pine	High Density Sapling	10.3	25		
42	429 - Mixed Upland Conifers	High Density Sapling	12.9	16		very mixed stand
43	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	33.4	89		cedar and hemlock too thick to operate in most areas
44	4136 - Aspen, Mixed Conifer	High Density Pole	8.1	25		New stand added.
45	4130 - Aspen	Medium Density Pole	15.2	25		sparse stand
46	42290 - Natural Mixed Pine	High Density Sapling	74.0	Uneven Age	1-50	stand has been scarified.trenched.seeded. and.planted in various areas since it was cut..excellent mixed pine regen..evaluate next year of entry for overstory removal in areas of .thicker pine...regen became established between '2000 and 2008
47	4131 - Aspen, Oak	High Density Pole	4.0	42		
48	42350 - Upland Hemlock	High Density Log	2.4	100		residual hemlock left .from harvest in 1995
49	4123 - Red Oak	High Density Log	137.7	75		aspen/red maple removed in 1985. regen in holes is starting to reach canopy
50	6125 - Lowland Black Spruce, Jack Pine	High Density Sapling	23.9	16		
51	4199 - Other Mixed Upland Deciduous	High Density Pole	2.5	65		
53	4130 - Aspen	High Density Pole	35.8	26		

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## Shingleton Mgt. Unit

## 5 – Forested Stands

Compartment: 091  
Year of Entry: 2013

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
54	6120 - Lowland Cedar	High Density Pole	61.1	62		cedar size varies in stand
55	42290 - Natural Mixed Pine	Low Density Log	12.2	60		other species were cut out of stand in past leaving a sparse canopy of red pine and white pine. Regen is mostly aspen/fir and almost reaching the canopy.
56	4319 - Mixed Upland Forest	High Density Log	9.5	72		
57	4131 - Aspen, Oak	High Density Pole	81.2	40		open pockets and open grown trees in some areas
58	429 - Mixed Upland Conifers	High Density Pole	54.2	60	81-110	very mixed stand . area in the south is starting to convert from aspen to fir
59	6132 - Mixed Lowland Forest with Cedar	High Density Pole	14.8	80		hwd dying and being replaced by fir/cedar
60	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	9.4	30		
61	4134 - Aspen, Spruce/Fir	High Density Sapling	30.4	25		rocky soil, trees are not growing well
63	429 - Mixed Upland Conifers	High Density Pole	8.4	40		even mix of high and low ground. jp on ridges,bs on low ground
64	4133 - Aspen, Mixed Pine	High Density Pole	28.1	28		2 story stand. red pine/white pine/oak over aspen/red maple. aspen/ red maple has now become part of rp/wp/oak canopy
66	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	33.9	70		
67	6120 - Lowland Cedar	High Density Pole	81.1	65		
68	42350 - Upland Hemlock	High Density Log	16.5	102		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	710 - Sand, Soil	6.5	N/A	Unspecified	
6	122 - Road/Parking Lot	6.5	N/A	Unspecified	
25	3102 - Grass	10.2	Yes	Red Pine	Stand was cut in 2006, burned in 2008. Still waiting on trenching and planting of red pine to occur.
33	3102 - Grass	5.5	Yes	Medium (NonForested)	Stand swapped from Forested to Non-Forested.
52	622 - Lowland Shrub	3.1	N/A	Unspecified	
62	623 - Emergent Wetland	8.3	N/A	Unspecified	
65	50 - Water	1.2	N/A	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
2	Unique Site - SCA	41091002	9.3	Potential Old Growth
3	Unique Site - SCA	41091003	5.4	Potential Old Growth
4	Unique Site - SCA	41091004	37.0	Potential Old Growth
5	Unique Site - SCA	41091005	16.2	Potential Old Growth
7	Unique Site - SCA	41091007	19.9	Potential Old Growth
11	Unique Site - SCA	41091011	15.1	Potential Old Growth
59	Unique Site - SCA	41091059	14.8	Potential Old Growth
66	Unique Site - SCA	41091066	33.9	Potential Old Growth
67	Unique Site - SCA	41091067	81.1	Potential Old Growth
68	Unique Site - SCA	41091068	16.5	Potential Old Growth



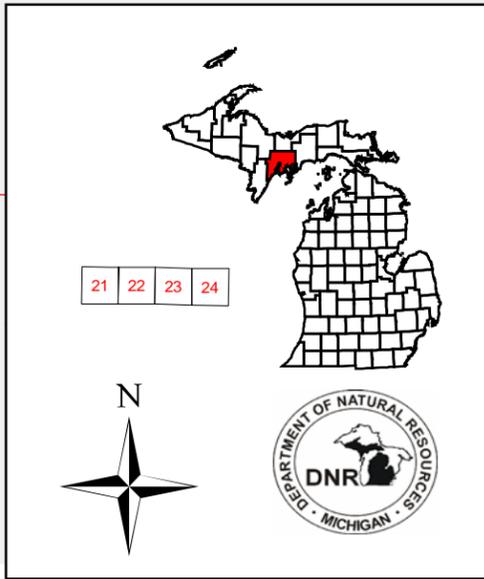
### 8 – DEDICATED CONSERVATION AREA DETAILS

\* 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
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Compartment 91  
 T40N, R18W, Sec. 21-24  
 County: Delta  
 Unit: Shingleton  
 YOE: 2013  
 Acres: 1592 GIS Calculated  
 Stand Examiner: Adam Petrelus  
 Map Revised: 9/15/2011  
 Map Phase: Pre-Review

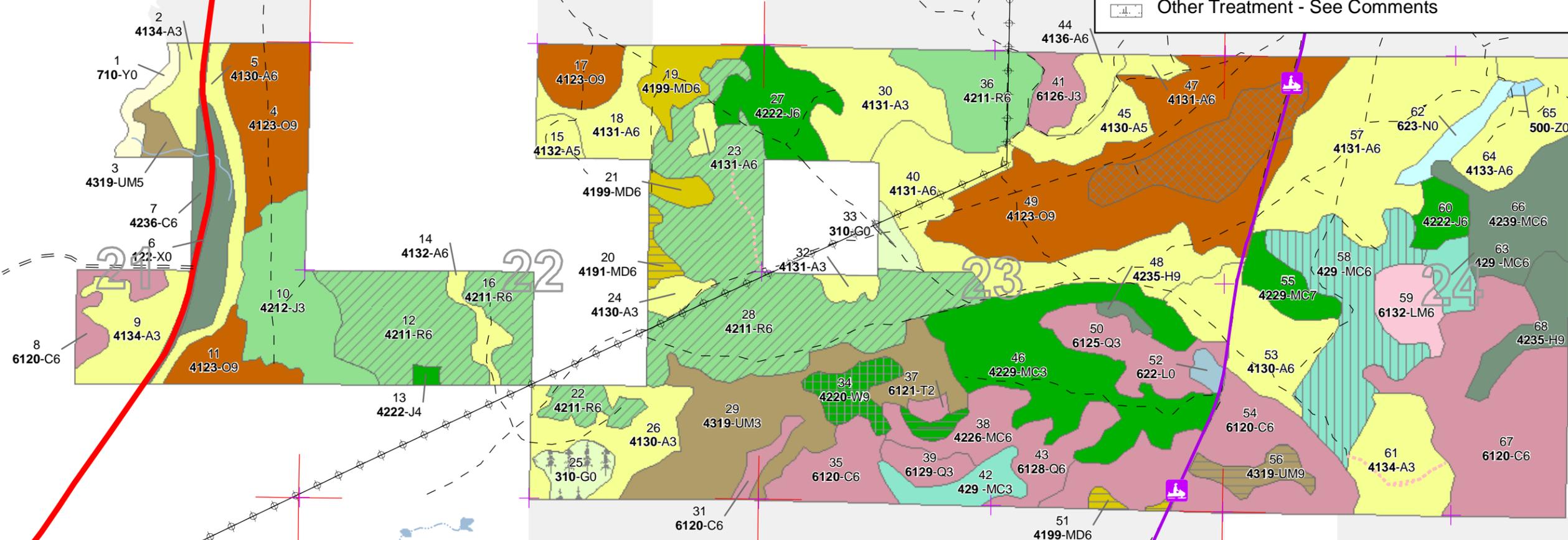


# Cover Type & Treatment Map

## Legend

- Miris Corners
  - Remonumented Section Corners
  - US Highway
  - Highway
  - Gravel Roads
  - Poor Dirt Roads
  - Closed Roads
  - Snowmobile Trails
  - Snowmobile Trail
  - Power
  - Intermittent Stream/Drain
  - Stream
  - Lakes and Rivers
  - State Forest Land
  - Clearcut (w/Reserves, Patch/Strip)
  - Seed Tree (w/Reserves)
  - Shelter Wood (w/Reserves)
  - Thinning (Crown, Low, Systematic)
  - Selection (Group, Single Tree)
  - Planting (tree species)
  - Other Treatment - See Comments
- 
- ### Forest Stands
- Level 3
- 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 423 - Other Upland Conifers
  - 429 - Mixed Upland Conifers
  - 431 - Upland Mixed Forest
  - 612 - Lowland Coniferous Forest
  - 613 - Lowland Mixed Forest
- ### Non-Forest Stands
- Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland
  - 710 - Sand, Soil

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



86°32'0"W      86°31'0"W      86°30'0"W      86°29'0"W      86°28'0"W

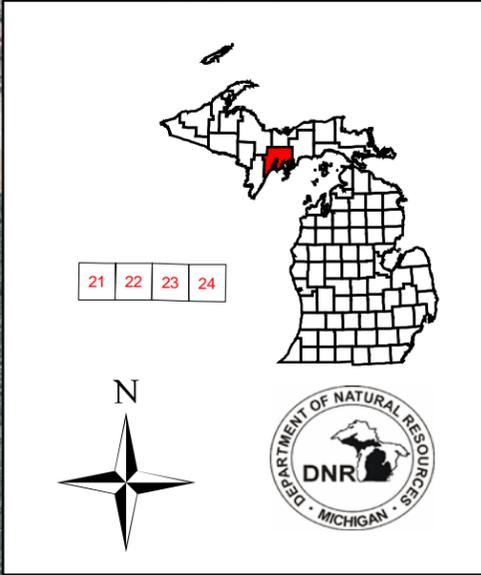
45°52'0"N

45°51'0"N

45°52'0"N

45°51'0"N

Compartment 91  
 T40N, R18W, Sec. 21-24  
 County: Delta  
 Unit: Shingleton  
 YOE: 2013  
 Acres: 1592 GIS Calculated  
 Stand Examiner: Adam Petrelus  
 Map Revised: 9/15/2011  
 Map Phase: Pre-Review

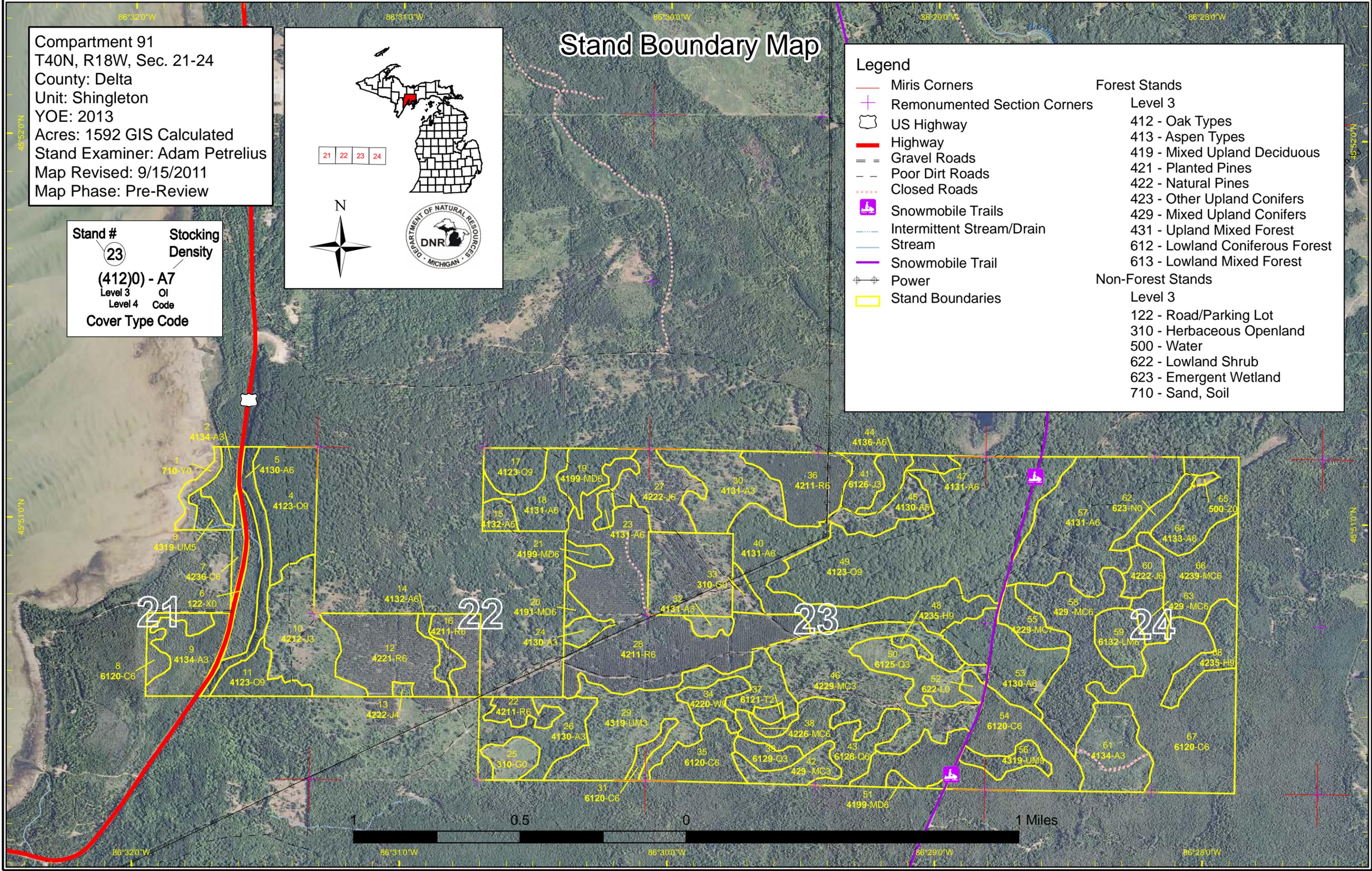


# Stand Boundary Map

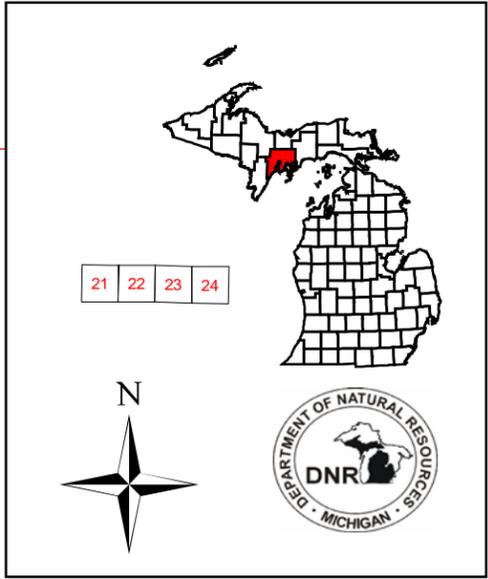
## Legend

- |      |                              |                                 |
|------|------------------------------|---------------------------------|
| —+—  | Miris Corners                | Forest Stands                   |
| +—+— | Remonumented Section Corners | Level 3                         |
| ⬢    | US Highway                   | 412 - Oak Types                 |
| —    | Highway                      | 413 - Aspen Types               |
| ==   | Gravel Roads                 | 419 - Mixed Upland Deciduous    |
| - -  | Poor Dirt Roads              | 421 - Planted Pines             |
| ⋯    | Closed Roads                 | 422 - Natural Pines             |
| ⚡    | Snowmobile Trails            | 423 - Other Upland Conifers     |
| —    | Intermittent Stream/Drain    | 429 - Mixed Upland Conifers     |
| —    | Stream                       | 431 - Upland Mixed Forest       |
| —    | Snowmobile Trail             | 612 - Lowland Coniferous Forest |
| ⚡    | Power                        | 613 - Lowland Mixed Forest      |
| ⬢    | Stand Boundaries             | Non-Forest Stands               |
|      |                              | Level 3                         |
|      |                              | 122 - Road/Parking Lot          |
|      |                              | 310 - Herbaceous Openland       |
|      |                              | 500 - Water                     |
|      |                              | 622 - Lowland Shrub             |
|      |                              | 623 - Emergent Wetland          |
|      |                              | 710 - Sand, Soil                |

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



Compartment 91  
 T40N, R18W, Sec. 21-24  
 County: Delta  
 Unit: Shingleton  
 YOE: 2013  
 Acres: 1592 GIS Calculated  
 Stand Examiner: Adam Petrelus  
 Map Revised: 9/15/2011  
 Map Phase: Pre-Review



# Dedicated & Proposed Special Conservation Area Map

## Legend

- Miris Corners
- + Remonumented Section Corners
- Stand Boundaries
- Proposed Special Conservation Areas
- ⋯ SCA - Special Conservation Area
- ▨ SCA Removal

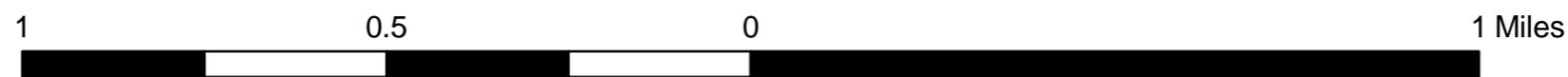
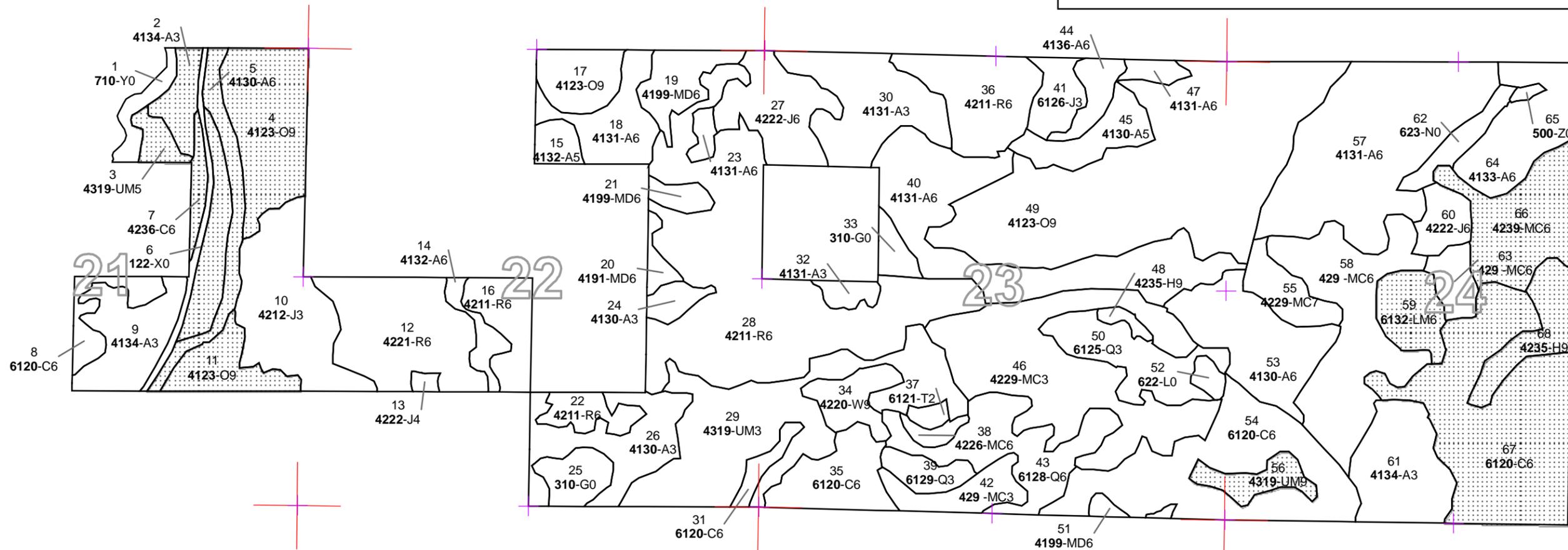
## Forest Stands

- Level 3
- 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 423 - Other Upland Conifers
  - 429 - Mixed Upland Conifers
  - 431 - Upland Mixed Forest
  - 612 - Lowland Coniferous Forest
  - 613 - Lowland Mixed Forest

## Non-Forest Stands

- Level 3
- 122 - Road/Parking Lot
  - 310 - Herbaceous Openland
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland
  - 710 - Sand, Soil

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



86°32'0"W      86°31'0"W      86°30'0"W      86°29'0"W      86°28'0"W

45°52'0"N

45°51'0"N

45°52'0"N

45°51'0"N