

# CADILLAC FOREST MANAGEMENT UNIT



## COMPARTMENT REVIEW PRESENTATION

### COMPARTMENT # 010 ENTRY YEAR: 2014

County: Lake

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**Revision Date:** 10/08/2012 11:52 AM

**Stand Examiner:** Michael Lesinski, Forester

**Legal Description:** T20N, R12W, Sections 30, 31.  
T20N, R13W, Sections 25, 26, 35, 36.  
T19N, R13W, Sections 1, 2, 11, 12.  
T19N, R12W, Section 6.

**Management Goals:** Mixed Use.

**Soil and Topography:** Compartment soils range from excessively and somewhat excessively drained Montcalm and Grayling sand to poorly drained Tawas muck. Likewise, compartment topography ranges from rolling hills to flat outwash to bog and swamp.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** The ownership in the northern portions of the compartment is primarily contiguous blocks of State owned land. To the south, there are several blocks of privately owned recreational lands. The majority of the private development is centered around Little Syers and Stewart lakes, along with development along old M-63. In general, the compartment has a mix of timber types and a wide variety of recreational opportunities.

**Unique, Natural Features (include only non-site specific and non-sensitive information):** This compartment contains some moraine ridges, few kettle lakes, and somewhat excessively drained sand. There is potential for dry prairie plants in grassy openings. Additionally, there is potential for the Eastern Massasauga Rattlesnake and the Wood Turtle along Syers Creek. The compartment has been known to have Bald Eagles nesting north of Little Syers Lake, and the Common Loon in the lake itself.

**Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):** One concern in the Archeological Site Listing (not impacted by proposed treatments).

**Special Management Designations or Considerations:** Special consideration should be given to stands that influence the compartment's riparian zones (Little Syers Lake, Syers Creek, etc.). Aside from the riparian zones, areas in and around this compartment show signs of oak decline and/or oak wilt. Oak stands within this compartment should be monitored for mortality, and management activity should be adjusted accordingly.

**Watershed and Fisheries Considerations:** Syers Creek and several tributaries of Syers Creek flow through Compartment 10, and Syers Lake is found in Compartment 10. Syers Creek is a tributary of the Little Manistee River. The Little Manistee River is the sole source of steelhead eggs for Michigan winter run steelhead, which are stocked in many rivers throughout Michigan and several other Great Lakes states. Therefore, it and its tributaries are deserving of the utmost protection. Syers Creek is a Designated Trout

Stream, with populations of brook, brown, and rainbow (steelhead) trout. Syers Creek was surveyed by Fisheries Division in 2001 (just upstream from M-37). The unnamed tributary in stands 82 and 69 was also surveyed in 2001 and also found to contain populations of brook, brown, and rainbow (steelhead) trout. Therefore, along Syers Creek and its tributaries, in the future we recommend managing for species other than young aspen, in order to avoid problems with beavers. Also, appropriate buffer strips should be maintained along the creek during future timber operations (M. Tonello, 9/25/12)

**Wildlife Habitat Considerations:** Major wildlife management concerns are to regenerate oak as it becomes older. The quality of the oak varies throughout the various soil types in this compartment. In order to maintain the diverse habitats that this compartment provides for numerous wildlife species, management should center on regeneration and retention of mature, deciduous oak or mixed oak stands. The loss of future mast production, and the loss of associated ground vegetation, such as blueberry, as these oak stands convert to white pine and red maple will have significant impacts on wildlife species that currently use this area. Featured species guidance will be considered for American woodcock, beaver, black bear, mallard, pileated woodpecker, red-headed woodpecker, ruffed grouse, snowshoe hare, turkey, white-tailed deer, and wood duck. (E. Victory 9/2012)

**Mineral Resource and Development Concerns and/or Restrictions:** Surface sediments in this compartment consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured till on the east side. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation that is quarried for gypsum in other areas of the State. Gravel pits are found in Sections 2, 11 & 26. Gravel potential in the compartment is considered good. This compartment is located in an area sparsely drilled for oil and gas. The nearest good production is Peacock Field located two miles to the southwest. Peacock Field has produced over 1.6 million BO from the Devonian Traverse Limestone. None of the compartment is currently under lease, but there may be potential in this area.

**Vehicle Access:** A forest road access plan is detailed on the compartment map. Identified are state and county roads as well as forest roads and trails under the jurisdiction of the DNR. Also indicated are forest roads and trails under the jurisdiction of the DNR that are proposed for abandonment. These roads were determined to be in excess of the access needs in the area, are a threat to the resources, or are a concern environmentally.

**Survey Needs:** None known at this time.

**Recreational Facilities and Opportunities:** Motorized recreational facilities within this compartment include: A dual use portion of snowmobile trail #35, which is also known as the Little Manistee ORV route during non-winter use; the Little Manistee motorcycle trail-which is under a Directors Order for motorcycle use only, and therefore should be kept narrow, the Michigan Cross country cycle Trail (MCCCT) parallels the western side of the compartment, and a dual use motorsport/pathway trailhead is located off 7 Mile Rd. Recent improvements to the dual use snowmobile trail and route include construction of 4 bridges, providing safe travel over East Twin Creek, West Twin Creek, Syers Creek, and the Little Manistee River. For the non-motorized user, the Pine Valley Pathway is centrally located within the compartment. This pathway is made up of 3 interconnected loops, totaling 8.2 miles in length. All these developed recreational amenities receive heavy use along with disperse camping near the Little Manistee River. Proposed timber management activities should include trail protection specifications to reduce impacts, as well as serve as an example of how sound timber harvesting methods can co-exist, and often improve recreation and wildlife experiences for future generations. (T.M.N. 8-28-12)

**Fire Protection:** The majority of this compartment has access from county roads and forest two tracks.

There are few structures and residences, however, existing structures are located among hazardous fuels and have poor access for fire equipment. Portions of this compartment have great potential for a large scale wildfire incident. Pine fuel types are continuous in these locations with few natural or manmade barriers existing. The ORV route and trail within the compartment would be a concern during a wildfire or a prescribed burn. There are large numbers of recreational users during dry portions of the year which increase the likelihood of a large scale event. (BET 8-1-12)

**Additional Compartment Information:**

**The following 9 Inventory reports from are attached:**

- ◆ Table 1 - Cover Type by Age Class
- ◆ Table 2 - Treatment Type Summary
- ◆ Table 3 – Treatments with No Limiting Factors
- ◆ Table 4 – Treatments with Limiting Factors
- ◆ Table 5 – Out of YOE Treatments (when applicable)
- ◆ Tables 6 & 7- Forested and Nonforested stands
- ◆ Tables 8 & 9 – Proposed and Dedicated Special Conservation Areas

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

- ◆ Base feature information, stand numbers, cover types
- ◆ Proposed treatments
- ◆ Suggested potential and current SCA's



	Age Class													Total	
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneven Age
Aspen	0	119	131	70	57	0	0	0	0	0	0	0	0	0	376
Cropland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Jack Pine	65	261	60	136	70	0	0	0	0	0	0	0	0	0	590
Low-Density Trees	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Lowland Conifers	0	0	0	9	0	0	0	0	0	0	0	0	0	102	111
Lowland Deciduous	0	0	0	249	0	0	0	0	0	0	0	0	0	0	249
Lowland Shrub	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Marsh	85	0	0	0	0	0	0	0	0	0	0	0	0	0	85
Mixed Upland Deciduous	114	112	96	15	46	0	0	0	0	0	0	0	0	0	383
Natural Mixed Pines	0	17	0	0	88	0	0	0	0	0	0	0	0	0	105
Northern Hardwood	44	22	0	0	0	0	0	0	0	0	0	0	0	0	67
Oak	76	25	27	0	0	23	272	218	339	140	0	0	0	0	1120
Planted Mixed Pines	0	0	0	96	0	0	0	0	0	0	0	0	0	0	96
Red Pine	0	49	96	25	0	0	0	0	0	0	0	0	0	0	170
Upland Mixed Forest	0	0	12	0	0	0	76	0	0	0	0	0	0	0	88
Urban	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Water	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
White Pine	0	0	24	0	0	0	0	0	0	0	0	0	0	0	24
<b>Total</b>	<b>454</b>	<b>605</b>	<b>446</b>	<b>599</b>	<b>261</b>	<b>23</b>	<b>348</b>	<b>218</b>	<b>339</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>3534</b>



## Table 2 – Proposed Treatment Summaries

**Cadillac Mgt. Unit**  
**Year of Entry 2014**

**Compartment 010**  
**Total Compartment Acres: 3534**

### Acres by Treatment Type

Commercial Harvest - 574	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	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>
<b>Aspen</b>	52	0	0	0	0	0	52
<b>Jack Pine</b>	61	0	0	0	0	0	61
<b>Oak</b>	64	0	273	22	0	0	359
<b>Planted Mixed Pines</b>	0	0	0	0	77	0	77
<b>Red Pine</b>	0	0	0	0	25	0	25
<b>Total</b>	177	0	273	22	102	0	574



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	63010001-Cut	13.6	42120 - Planted Jack Pine	High Density Pole	46	81-110	Harvest	Clearcut with Reserves	42221 - Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest. Reserve approximately 10 BA of jack pine for seed source / retention. Due to problems with oak decline, harvest all mature pin or black oak.</p> <p><u>Specs:</u></p> <p>Retention: Residual stand BA. Acceptable regeneration is a mix of pine/oak/other deciduous species. If regeneration is poor, re-plant to jack pine.</p> <p><u>Other</u> <u>Comments:</u></p> <p><u>Next</u> <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2013</p>										
2	63010002-Cut	58.6	4126 - White, Black, N. Pin Oak	Medium Density Log	83	51-80	Harvest	Seed Tree with Reserves	4126 - White, Black, N. Pin Oak	Cmpt. Review Proposal
<p><u>Prescription</u> Harvest all pin / black oak. Leave a 10 to 20 BA mix of white oak and scattered mixed pine.</p> <p><u>Specs:</u></p> <p>Retention: Residual stand BA. Acceptable regeneration: Oak/mixed deciduous/pine mix. If regeneration is poor, plant to jack pine.</p> <p><u>Other</u> <u>Comments:</u> Protect (green ring) some trees along the ORV and motorcycle trails to maintain trail placement and integrity. Limit skidder crossings on motorcycle trail to protect trail bed.</p> <p><u>Next</u> <u>Steps:</u></p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2013</p>										
9	63010009-Cut	29.1	4125 - Black, N. Pin Oak	High Density Log	96	81-110	Harvest	Seed Tree with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Harvest to a BA of 20 to 30 square feet, leaving white oak where applicable. Focus harvest on area south of ORV trail.</p> <p><u>Specs:</u></p> <p>Retention: Residual stand BA. Acceptable regen: Oak/upland deciduous mix.</p> <p><u>Other</u> <u>Comments:</u> Protect (green ring) some trees along the ORV and motorcycle trails to ensure trail placement and integrity. Limit the amount of skidder crossings on the trail to protect the trail bed.</p> <p><u>Next</u> <u>Steps:</u> Periodic post-harvest RX burns to set back red maple regeneration.</p> <p><u>Proposed</u> <u>Start Date:</u> 10/01/2013</p>										
12	63010012-Cut	31.3	4125 - Black, N. Pin Oak	Medium Density Pole	83	1-50	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Cut all black/pin oak. Leave a BA of 10 to 20 square feet of other represented species. Islands of small brushy material may be left where no black or pin oak exist. Require chipping to deal with the removal of heavy red maple understory.</p> <p><u>Specs:</u></p> <p>Retention: Residual BA. Acceptable regeneration: Oak/mixed deciduous blend. Plant to red pine if stand regeneration is poor.</p> <p><u>Other</u> <u>Comments:</u> Stand may be harvested prior to 2014 YOY due to large pockets of oak decline. Dead timber may be removed if still marketable. Protect (green ring) some trees along Pine Valley Pathway and the ORV and motorcycle trails. Limit the amount of skidder crossings on the trails to protect trail bed integrity.</p> <p><u>Next</u> <u>Steps:</u> Roller chop and replant to red pine.</p> <p><u>Proposed</u> <u>Start Date:</u> 12/05/2012</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	63010019-Cut	14.0	4125 - Black, N. Pin Oak	High Density Log	76	81-110	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Reduce oak BA to 10 to 20 square feet. Favor leaving white oak where applicable. Clear cut aspen clone on east end of stand. Apply grouse <u>Specs:</u> specifications (1 to 2 logs per acre) in the aspen clone.  Retention: Residual stand BA. Acceptable regeneration: Blended oak/mixed upland deciduous stand.  <u>Other</u> <u>Comments:</u> Buffer wildlife opening in SE corner. Protect (green ring) some trees along Pine Valley Pathway. An island of trees may be left north of the pathway if desired.  <u>Next</u> <u>Steps:</u> Monitor regeneration to evaluate need for post harvest RX burn. Burn stand if regeneration is heavy to red maple.  <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
21	63010021-Cut	23.5	4125 - Black, N. Pin Oak	High Density Log	79	111-140	Harvest	Seed Tree with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Harvest to a BA of 10 to 20 square feet. Favor leaving white oak where applicable. <u>Specs:</u> Retention: Residual stand BA. Acceptable regeneration: Blend of oak and other mixed deciduous species.  <u>Other</u> <u>Comments:</u> Protect (green ring) some trees along the Pine Valley Pathway, ORV, and motorcycle trails to ensure trail placement and integrity. Limit the amount of skidder crossings on the trail to protect the trail beds.  <u>Next</u> <u>Steps:</u>  <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
23	63010023-Cut	6.1	42110 - Planted Red Pine	High Density Log	38	200+	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Third row thin the planted red pine. Remove miscellaneous white pine, red maple, and declining pin oak as needed. <u>Specs:</u>  <u>Other</u> <u>Comments:</u> Protect the Pine Valley Pathway and wildlife openings.  <u>Next</u> <u>Steps:</u>  <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
24	63010024-Cut	31.9	4130 - Aspen	High Density Pole	44	141-170	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest aspen. Leave scattered oak where applicable. Apply grouse specifications (1 to 2) logs per acre in timber sale specs. <u>Specs:</u> Retention: Scattered oak and buffers along openings and trails. Acceptable alternate regeneration: Aspen/oak/mixed deciduous blend.  <u>Other</u> <u>Comments:</u> Protect Pine Valley Pathway. Buffer ORV trails and wildlife openings.  <u>Next</u> <u>Steps:</u>  <u>Proposed</u> <u>Start Date:</u> 10/01/2013										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
27	63010027-Cut	18.5	42110 - Planted Red Pine	High Density Log	35	171-200	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Third row thin planted red pine. <u>Specs:</u> <u>Other</u> Protect pine valley pathway. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
28	63010028-Cut	38.3	42140 - Planted Mixed Pine	High Density Pole	38	141-170	Harvest	Crown Thinning	42141 - Planted Mixed Pine, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Third row thin red pine stands. In areas that are planted white pine, reduce BA by approximately 50%. Expand aspen clones where applicable. <u>Specs:</u> Retention: Residual stand BA. <u>Other</u> Protect planted wildlife openings. Through timber sale specs, close the southern two-track (which is rutted and overgrown) at the western end of <u>Comments:</u> the planted wildlife opening. <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
32	63010032-Cut	58.6	4125 - Black, N. Pin Oak	High Density Log	67	111-140	Harvest	Seed Tree with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Reduce BA to a 10 to 20 square feet mix of represented species. Leave some scattered mixed pine seedlings. Expand aspen clones where <u>Specs:</u> applicable. Retention: Residual stand BA. Acceptable alternate regen: Blended mixed upland deciduous and oak stand. <u>Other</u> <u>Comments:</u> <u>Next</u> Periodic post harvest RX burns to reduce red maple competition. <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2013										
39	63010039-Cut	18.5	4125 - Black, N. Pin Oak	Medium Density Log	86	1-50	Harvest	Clearcut with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Harvest all black/pin oak. Leave scattered pine and healthy white oak where applicable. Harvest dead oak if viable for commercial products <u>Specs:</u> (including firewood). Retention: Residual stand BA. Acceptable alternate regen: Blended oak/mixed deciduous stand. <u>Other</u> May be harvested prior to 2014 YOE due to oak decline. Protect ORV and motorcycle trails. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 12/05/2012										





Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	63010040-Cut	22.1	4126 - White, Black, N. Pin Oak	High Density Log	85	111-140	Harvest	Seed Tree with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Limit harvest to area south of the two track that divides the stand. In that area, reduce stand BA to a 20 to 30 square feet. Favor leaving white oak where applicable. Expand aspen clones where applicable.</p> <p><u>Specs:</u></p> <p>Retention: Residual stand BA. Acceptable alternate regen: Blended oak/mixed upland deciduous stand.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Periodic post harvest RX burns to reduce red maple competition.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
41	63010041-Cut	21.9	4126 - White, Black, N. Pin Oak	High Density Log	63	141-170	Harvest	Shelterwood	4125 - Black, N. Pin Oak	Cmpt. Review Proposal
<p><u>Prescription</u> Limit harvest to western 1/3 of stand. In that area, reduce stand BA to a 30 to 40 square feet oak mix. Favor leaving white oak where possible.</p> <p><u>Specs:</u> Harvest exception: Reduce stand density to approximately 50% of crown cover in area where dispersed camping occurs (southern ridge, surrounded by Syers Lake).</p> <p>Retention: Unharvested acreage. Acceptable alternate regeneration: Upland deciduous mix.</p> <p><u>Other Comments:</u> Protect Pine Valley Pathway. Implement proper BMP's for low areas.</p> <p><u>Next Steps:</u> Periodic post harvest RX burns to reduce red maple competition.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
43	63010043-Cut	47.2	42120 - Planted Jack Pine	High Density Pole	48	141-170	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest. Reserve approximately 10 BA mix of pine and oak as a seed source. Harvest all black/pin oak if oak decline is present.</p> <p><u>Specs:</u></p> <p>Retention: Residual stand BA.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Replant to jack pine.</p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
48	63010048-Cut	39.1	42140 - Planted Mixed Pine	High Density Pole	34	171-200	Harvest	Systematic Thinning	42140 - Planted Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Third row thin areas planted to red pine. Reduce BA by 50% in areas planted to white pine.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Protect ORV and single track trails. MNFI data (1993) shows an eagle nest in stand 37 (which may impact NE corner of stand). If nest still exists, apply eagle specs to impacted area as needed.</p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
68	63010068-Cut	20.5	4130 - Aspen	High Density Pole	44	111-140	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Final harvest. Leave scattered oak where applicable. Buffer wet areas as needed.

Specs:

Retention: Residual oak. Acceptable alternate regeneration: Aspen/mixed deciduous blend.

Other Protect (green ring) some trees along the motorcycle trail to ensure trail placement and integrity. Limit the amount of skidder crossings on the  
Comments: trail to protect the trail bed.

Next

Steps:

Proposed

Start Date: 10/01/2013

74	63010074-Cut	28.1	4126 - White, Black, N. Pin Oak	High Density Log	82	141-170	Harvest	Seed Tree with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
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Prescription Reduce stand BA to 20 to 30 square feet. Favor leaving white oak where applicable.

Specs:

Retention: Residual BA. Acceptable alternate regeneration: Mixed upland deciduous stand.

Other Consider creating timber sale spec to high stump all red maple (hopefully reducing stump sprouting).

Comments:

Next

Periodic post harvest RX burns to reduce red maple competition.

Steps:

Proposed

Start Date: 10/01/2013

79	63010079-Cut	42.8	4126 - White, Black, N. Pin Oak	High Density Log	78	111-140	Harvest	Seed Tree with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
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Prescription Harvest area south of two track that divides stand. Reduce stand BA to 20 to 30 square feet. Leave a representative mix of species, but favor  
Specs: leaving white oak where possible.

Retention: Residual stand BA. Acceptable alternate regen: Blended oak/mixed upland deciduous stand.

Other

Comments:

Next

Evaluate for a post harvest RX burn to reduce red maple competition.

Steps:

Proposed

Start Date: 10/01/2013

**Total Treatment  
Acreage Proposed: 563.6**

**Table 4 -- Treatments Prescribed with a Limiting Factor**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Error

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

**Total Treatment Acreage Proposed: 0**

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

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	5.2	Unspecified				Harvest	Unspecified	Unspecified	Cmpt. Review Proposal - Incomplete
<u>Prescription Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u>									
	3.5	Unspecified				Harvest	Unspecified	Unspecified	Cmpt. Review Proposal - Incomplete
<u>Prescription Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u>									
	0.1	Unspecified				Harvest	Unspecified	Unspecified	Cmpt. Review Proposal - Incomplete
<u>Prescription Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u>									
	0.0	Unspecified				Harvest	Unspecified	Unspecified	Cmpt. Review Proposal - Incomplete
<u>Prescription Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u>									

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

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
63086083-Cut	10.2	4123 - Red Oak	High Density Log	80		Harvest	Shelter Wood with Reserves	4124 - Red with White Oak	Cmpt. Review Proposal

Prescription Mark red and white oak in groups reducing basal area down to an average of 30 sq.ft.(range from 20-50).

Specs:

Other This is a natural continuation of stand 1 in Comp 79 (also prescribed).

Comments:

Next Follow harvest with roller chopping of red maple in gaps from previous harvest. Goal is to decrease red maple and cause enough scarification with harvest to create a seedbed for adjacent pine to seed in, as well as oak. Stump sprout oak is not expected, but would be welcome. Regen survey per work instructions.

Proposed  
Start Date: 10/01/2013

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**Total Treatment  
Acreage Proposed: 19.0**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42120 - Planted Jack Pine	High Density Pole	13.6	46	81-110	Some storm damage present in stand. Overstory pin oak is showing signs of decline.
2	4126 - White, Black, N. Pin Oak	Medium Density Log	63.1	83	51-80	Previously thinned stand. Shows signs of decline. Located in an area that is known to have oak decline / oak wilt concerns.
3	42220 - Natural Jack Pine	High Density Sapling	123.9	12	1-50	Some scattered super canopy pin oak, which shows signs of decline (several are dead).
4	4119 - Mixed Northern Hardwoods	Medium Density	22.5	11	1-50	Previous seedtree/shelterwood. Regeneration is a mix of maple and oak.
6	42110 - Planted Red Pine	High Density Pole	23.8	15	81-110	Smaller timber -- approximately 1 stick tall.
7	4199 - Other Mixed Upland Deciduous	High Density Pole	61.5	11	1-50	Stand previously treated with shelterwood harvest. Regeneration is mainly a maple aspen mix.
8	4125 - Black, N. Pin Oak	Low Density Sapling	27.2	7		Harvested in 2005.
9	4125 - Black, N. Pin Oak	High Density Log	39.2	96	81-110	Lower quality oak. Pine valley pathway and little manistee trails through stand.
10	4126 - White, Black, N. Pin Oak	High Density Log	10.2	89	111-140	Small stand bordering 7 year old regen. Pine valley pathway goes through stand. Stand appears to be in good shape. May want to hold for age class diversity.
11	4126 - White, Black, N. Pin Oak	Medium Density Pole	46.0	71	51-80	Stand highly variable in species composition and age class. Portions of the stand have been cut at different time periods. Scattered clones of aspen.
12	4125 - Black, N. Pin Oak	Medium Density Pole	34.2	83	1-50	Previous oak shelterwood. Regeneration is red maple. Oak overstory showing signs of decline.
13	4130 - Aspen	High Density Pole	8.1	26	81-110	Small stand. Not ready for commercial harvest.
14	4130 - Aspen	High Density Pole	6.9	26	51-80	Not ready for commercial harvest.
15	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	25.3	10		Scattered overstory white pine. Pine valley pathway passes through stand. Planted rows of white pine along pathway.
16	4130 - Aspen	High Density Pole	31.6	18	51-80	Stand not ready for commercial harvest.
17	42221 - Natural Jack Pine, Mixed Deciduous	Low Density Sapling	22.5	6		Stand clear cut in 2006 - 2007



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4125 - Black, N. Pin Oak	High Density Log	14.0	76	81-110	Pine valley pathway through stand. May want to hold this stand for age class diversity.
21	4125 - Black, N. Pin Oak	High Density Log	23.5	79	111-140	Lower quality oak. Some clones of older aspen. Pine valley pathway runs through stand.
22	42110 - Planted Red Pine	High Density Pole	37.5	24	111-140	1 to 2 sticks tall. Not ready for commercial thinning.
23	42110 - Planted Red Pine	High Density Log	6.1	38	200+	
24	4130 - Aspen	High Density Pole	36.4	44	141-170	
25	4126 - White, Black, N. Pin Oak	High Density Log	75.7	83	1-50	Shelterwood harvest approximately 10 years ago. Some larger openings that are filling in with an oak/maple mix.
27	42110 - Planted Red Pine	High Density Log	18.5	35	171-200	Variable stand density.
28	42140 - Planted Mixed Pine	High Density Pole	56.7	38	141-170	North half of stand is red pine and the south is white pine.
30	4199 - Other Mixed Upland Deciduous	High Density Pole	46.2	41	111-140	Hold 10 years.
31	4130 - Aspen	Medium Density	11.9	11		
32	4125 - Black, N. Pin Oak	High Density Log	58.6	67	111-140	Quality varies with terrain. Aspen is very old and found in small clones. Stand contains a very small amount of natural red pine.
33	42120 - Planted Jack Pine	High Density Pole	7.4	46	81-110	Stand could be commercially harvested, but non-regenerated clear cut across road. Stand will hold until next YOЕ.
34	4126 - White, Black, N. Pin Oak	High Density Pole	37.3	61	51-80	Previously thinned stand. Hold for 10 years.
36	42110 - Planted Red Pine	High Density Pole	45.9	21	141-170	21 year old planted red pine. 1 to 2 sticks tall. Not ready for commercial thinning.
37	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	54.4	26	81-110	Stand is of mixed age and composition.
39	4125 - Black, N. Pin Oak	Medium Density Log	18.5	86	1-50	Previous shelterwood harvest. Remaining overstory oak has areas that are dead / declining.
40	4126 - White, Black, N. Pin Oak	High Density Log	63.5	85	111-140	Older oak stand. Quality and BA vary with topography. Pine Valley Pathway runs through stand.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	4126 - White, Black, N. Pin Oak	High Density Log	86.4	63	141-170	Variable in age and composition. Portion of stand is popular dispersed camping spot. Pine valley pathway passes through stand.
43	42120 - Planted Jack Pine	High Density Pole	48.8	48	141-170	Planted jack pine with oak logs. Stand ready for commercial harvest.
44	4126 - White, Black, N. Pin Oak	High Density Log	101.1	90	111-140	Better quality oak. Pine valley pathway through stand.
46	4130 - Aspen	High Density Pole	13.5	31	111-140	31 year old aspen stand. Not ready for commercial harvest.
47	4199 - Other Mixed Upland Deciduous	Low Density Pole	55.3	8	1-50	Previous shelterwood harvest -- last YOE. Heavy red maple regen. 10 to 30 BA oak overstory.
48	42140 - Planted Mixed Pine	High Density Pole	39.1	34	171-200	Stand is ready for thinning.
49	4130 - Aspen	High Density Pole	7.0	25	81-110	25 year old aspen stand. Small diameter -- not ready for commercial harvest.
51	4122 - Oak, Pine	Low Density Sapling	49.1	4		4 year old natural regen. Previous to last harvest, stand was planted jack pine.
52	4130 - Aspen	Medium Density	53.0	13		13 year old aspen regen. Small openings throughout stand. Diameter and density variable.
53	4116 - Mixed N. Hardwood - Aspen	Low Density Sapling	44.5	3		Previous CC -- around 25% canopy closure.
54	42100 - Planted White Pine	Medium Density Pole	24.2	21	141-170	21 year old white pine planting. 1 to 2 stick trees. Not ready for commercial thinning.
55	4199 - Other Mixed Upland Deciduous	High Density Sapling	27.5	22		Even aged stand. Clearcut 22 years ago.
56	4131 - Aspen, Oak	High Density Sapling	22.5	14		
57	42250 - Pine, Oak	Medium Density	16.7	16	1-50	Natural jack pine and oak regen. Several canopy gaps.
58	42110 - Planted Red Pine	High Density Pole	12.7	25	141-170	Planted red pine. Frost pocket in northern part of stand.
59	4310 - Pine, Oak Mix	High Density Pole	12.4	28	81-110	Planted red pine with areas heavy to mixed deciduous.
60	4131 - Aspen, Oak	High Density Pole	56.0	35	141-170	Mixed composition and age class. Patchy openings in stand.



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## Cadillac Mgt. Unit

## 5 – Forested Stands

Compartment: 010

Year of Entry: 2014



Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42120 - Planted Jack Pine	High Density Pole	17.0	20	51-80	20 year old planted jack pine.
4125 - Black, N. Pin Oak	Low Density Log	45.5	88	1-50	Previous shelterwood harvest.
4126 - White, Black, N. Pin Oak	High Density Log	15.5	74	51-80	Borderline on harvest. Hold for age class diversity.
4126 - White, Black, N. Pin Oak	High Density Log	89.9	64	51-80	Fairly steep topography towards Stewart Lake. Illegal ORV trail in stand. Scattered aspen clones
42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	29.9	36	81-110	36 year old planted jack pine. Stem quality and density better towards the road. Some older jack pine towards east end of stand. Several canopy openings in stand.
42120 - Planted Jack Pine	High Density Pole	47.3	15	51-80	Young planted jack pine stand. Narrow strip of older trees along north edge of stand.
4130 - Aspen	High Density Pole	20.5	44	111-140	Ready for commercial harvest.
6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	101.6	Uneven Age	81-110	Variable age class and stocking. Mix of high and low ground, but mainly low.
4199 - Other Mixed Upland Deciduous	High Density Sapling	24.8	17		Spotty aspen clones. More aspen to the north. Varied age classes -- older to the north.
4130 - Aspen	High Density Pole	60.2	26	171-200	Not ready for commercial harvest.
42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	105.7	37	81-110	Not ready for commercial harvest.
42221 - Natural Jack Pine, Mixed Deciduous	Low Density Sapling	42.0	6		6 year old regeneration. Less than 10 BA of scattered pin oak logs.
4126 - White, Black, N. Pin Oak	High Density Log	28.1	82	141-170	
4124 - Red with White Oak	High Density Log	22.6	59	111-140	Nicer quality oak.
4191 - Mixed Upland Deciduous with Conifer	High Density Pole	13.9	27	51-80	Mixed aspen / pine stand. Aspen heavier towards west end of stand.
6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	249.0	36	51-80	Stand highly variable in age class and species mix. Has been previously harvested. Stand ranges from openings with cattails to 100% canopy closure.
4126 - White, Black, N. Pin Oak	High Density Log	105.1	78	111-140	

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## Cadillac Mgt. Unit

## 5 – Forested Stands

Compartment: 010  
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
80	4310 - Pine, Oak Mix	High Density Pole	75.7	61	111-140	Jack pine heavier to the south. Numerous canopy gaps. Stand variable in age and diameter.
82	4199 - Other Mixed Upland Deciduous	High Density Pole	15.1	36	81-110	Timber younger and poorer quality to the south.
83	6124 - Lowland Spruce- Fir	Low Density Pole	9.2	31	1-50	Lowland conifer bog.
84	4130 - Aspen	High Density Pole	48.9	26	111-140	Pole sized aspen. Not ready for harvest. Stem diameter gets smaller, and the stand contains more maple towards the SW corner.
85	4126 - White, Black, N. Pin Oak	High Density Log	13.7	71	111-140	Can hold 10 more years.
86	42110 - Planted Red Pine	Medium Density Pole	25.2	16	1-50	Numerous openings in stand.
87	42120 - Planted Jack Pine	High Density Pole	18.3	23	51-80	Not ready for commercial harvest.
88	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	34.8	14		
90	4121 - Oak, Aspen	High Density Pole	26.8	27	51-80	Timber larger and older to the east. Sand opening in stand.
91	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	58.8	5		Stand contains some scattered white oak, jack pine, and cherry in the overstory.
92	4125 - Black, N. Pin Oak	Medium Density	25.5	19	1-50	CC 19 years ago.
93	42120 - Planted Jack Pine	High Density Sapling	54.8	15		Not ready for commercial harvest.
94	42250 - Pine, Oak	Medium Density Pole	88.4	48	81-110	Shows evidence of being row planted, but looks like it was partially harvested. Canopy is approximately 75% closed. The oak in the stand is poor quality.
96	42120 - Planted Jack Pine	High Density Pole	24.4	22	81-110	1 to 2 stick planted jack pine.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	11 - Low Intensity Urban	1.0	No	Unspecified	Little Manistee ORV trail parking lot.
18	2113 - Forage Crops	2.2	Yes	High (NonForested)	Planted wildlife opening.
20	2113 - Forage Crops	1.5	Yes	Medium (NonForested)	Planted wildlife opening.
26	2113 - Forage Crops	1.9	Yes	Medium (NonForested)	Planted wildlife opening. Currently planted to rye.
29	2113 - Forage Crops	1.5	Yes	Unspecified	
35	2113 - Forage Crops	2.9	Yes	Unspecified	Planted wildlife opening.
38	2113 - Forage Crops	3.0	Yes	Unspecified	Planted wildlife opening.
42	6223 - Inundated Shrub Swamp	17.4	No	Unspecified	
45	6230 - Cattail	85.5	No	Unspecified	
50	50 - Water	9.2	No	Unspecified	
62	2113 - Forage Crops	1.2	Yes	Unspecified	Planted wildlife opening.
77	2113 - Forage Crops	9.9	Yes	Unspecified	Planted wildlife opening.
81	2113 - Forage Crops	2.2	Yes	Unspecified	Managed wildlife opening. Planted to rye.
89	3301 - Low Density Deciduous Tree	13.8	Natural Regen	Unspecified	
95	2113 - Forage Crops	1.0	Yes	Unspecified	Planted wildlife opening.



### 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.

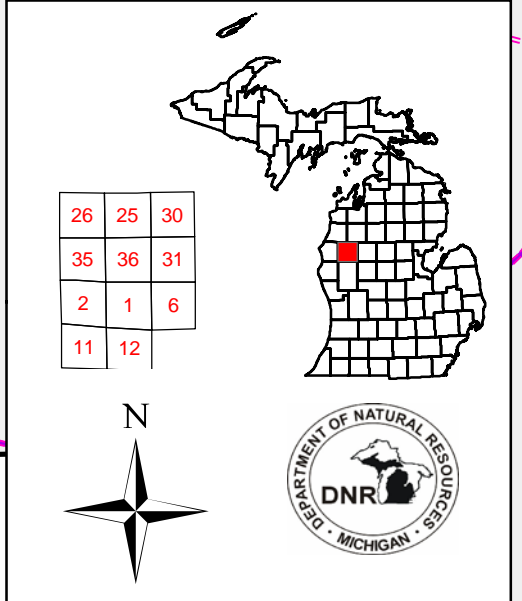
ERA = Ecological Reference Area  
 HCVA = High Conservation Value Area  
 SCA = Special Conservation Area

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.

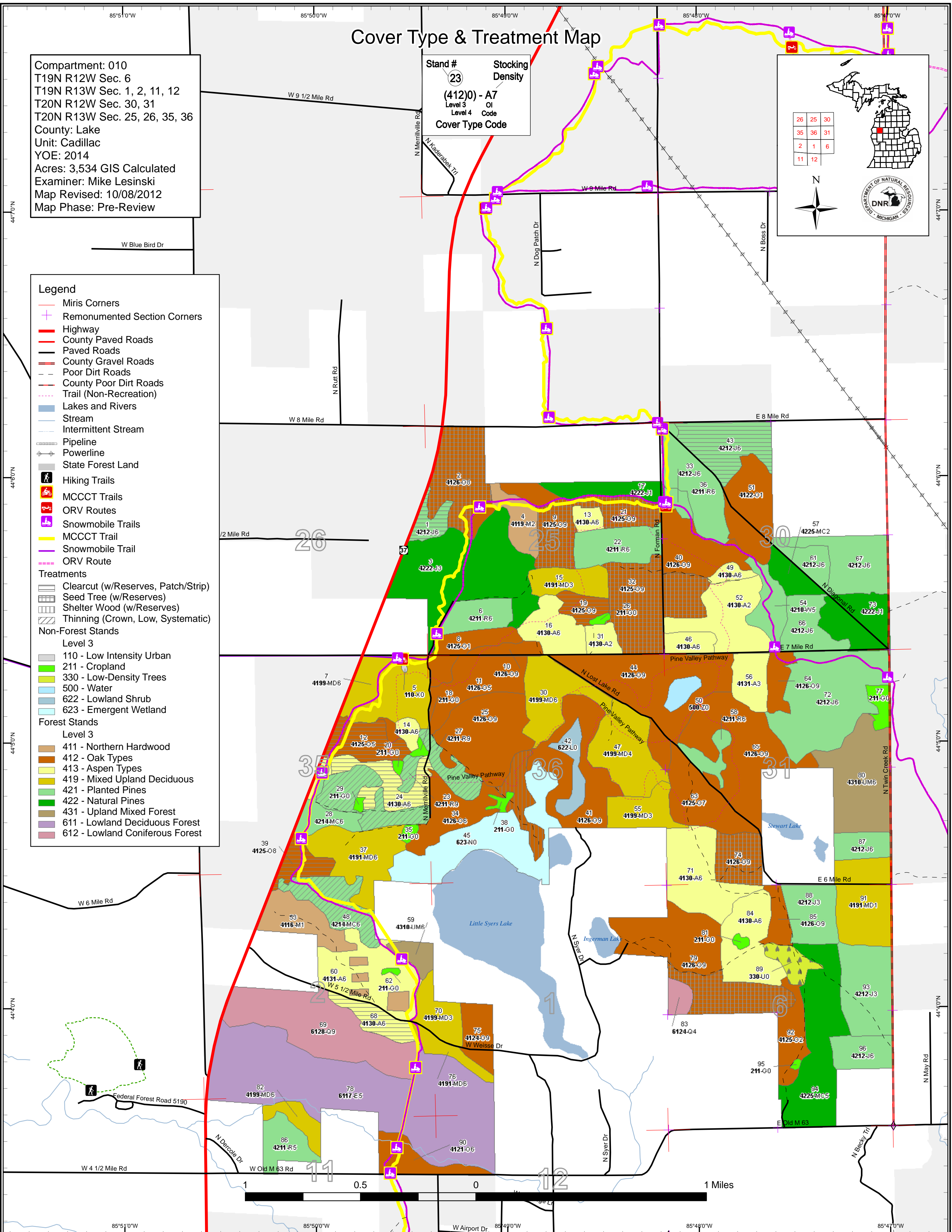
# Cover Type & Treatment Map

Compartment: 010  
 T19N R12W Sec. 6  
 T19N R13W Sec. 1, 2, 11, 12  
 T20N R12W Sec. 30, 31  
 T20N R13W Sec. 25, 26, 35, 36  
 County: Lake  
 Unit: Cadillac  
 YOE: 2014  
 Acres: 3,534 GIS Calculated  
 Examiner: Mike Lesinski  
 Map Revised: 10/08/2012  
 Map Phase: Pre-Review

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



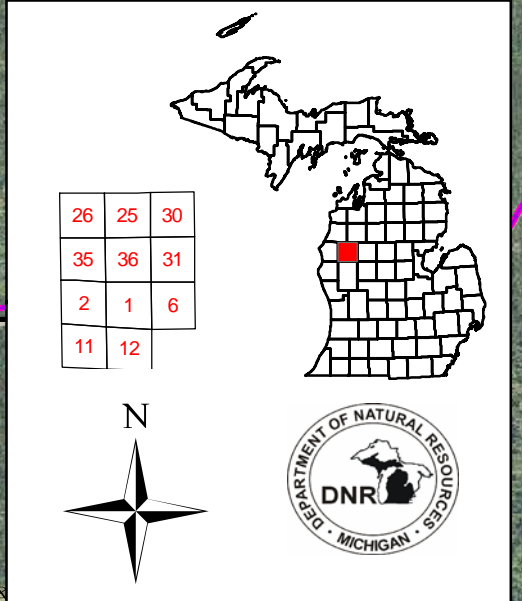
- Legend**
- Miris Corners
  - Remonumented Section Corners
  - Highway
  - County Paved Roads
  - Paved Roads
  - County Gravel Roads
  - Poor Dirt Roads
  - County Poor Dirt Roads
  - Trail (Non-Recreation)
  - Lakes and Rivers
  - Stream
  - Intermittent Stream
  - Pipeline
  - Powerline
  - State Forest Land
  - Hiking Trails
  - MCCCT Trails
  - ORV Routes
  - Snowmobile Trails
  - MCCCT Trail
  - Snowmobile Trail
  - ORV Route
- Treatments**
- Clearcut (w/Reserves, Patch/Strip)
  - Seed Tree (w/Reserves)
  - Shelter Wood (w/Reserves)
  - Thinning (Crown, Low, Systematic)
- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
  - 211 - Cropland
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 431 - Upland Mixed Forest
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest



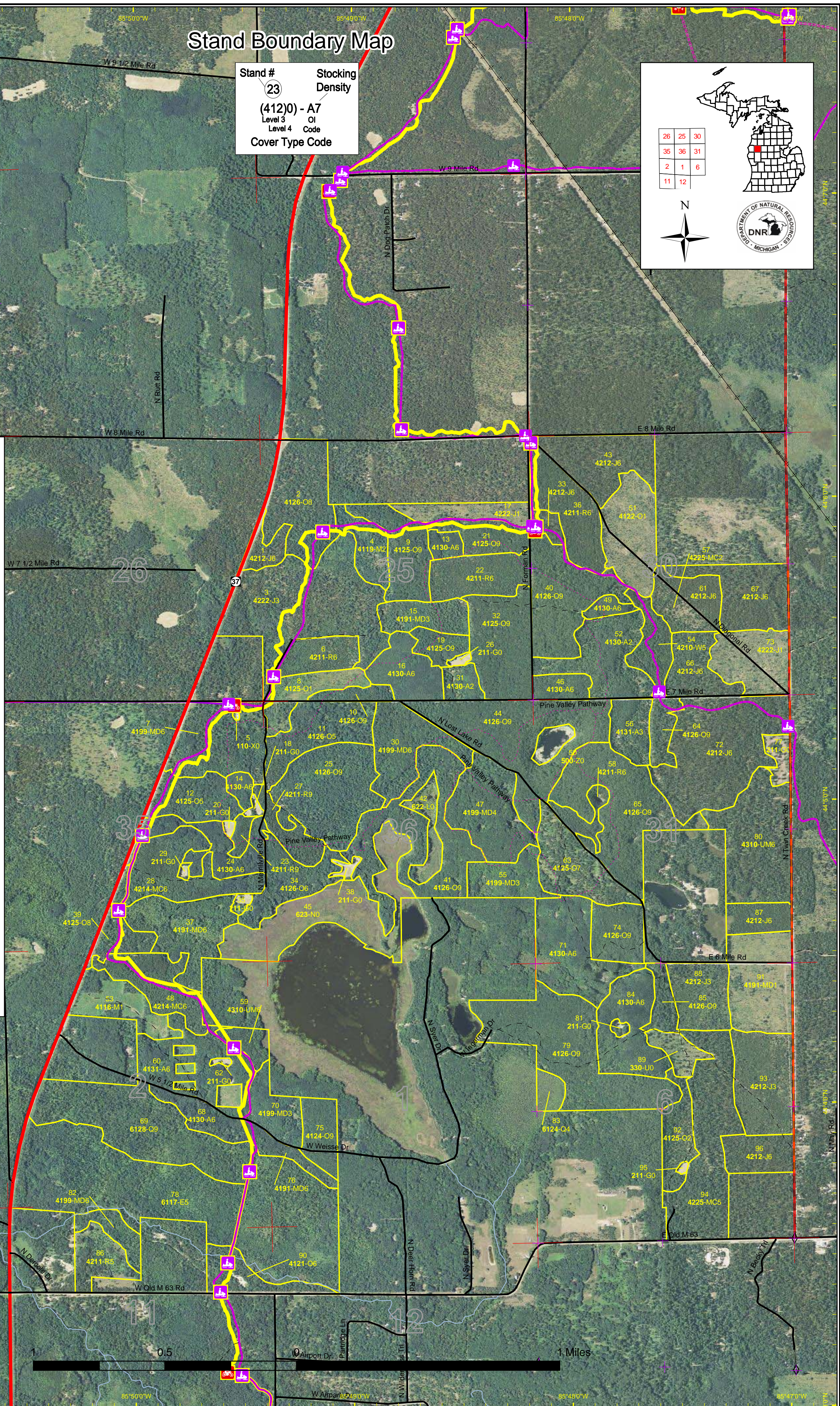
# Stand Boundary Map

Compartment: 010  
 T19N R12W Sec. 6  
 T19N R13W Sec. 1, 2, 11, 12  
 T20N R12W Sec. 30, 31  
 T20N R13W Sec. 25, 26, 35, 36  
 County: Lake  
 Unit: Cadillac  
 YOE: 2014  
 Acres: 3,534 GIS Calculated  
 Examiner: Mike Lesinski  
 Map Revised: 10/08/2012  
 Map Phase: Pre-Review

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



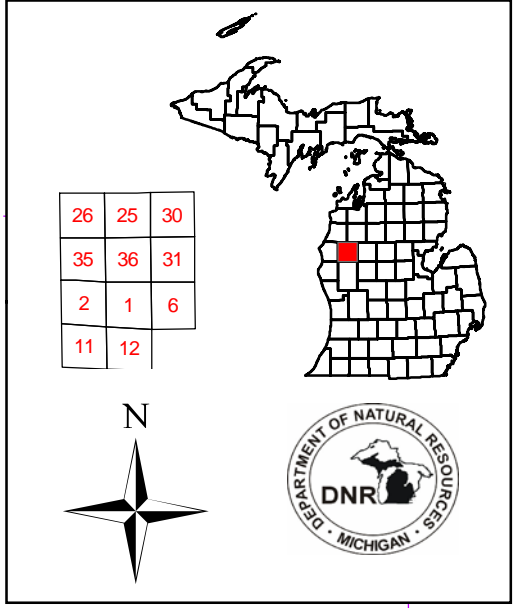
- Legend**
- DNR Survey Corner
  - Field Survey Corner
  - Miris Corners
  - Remonumented Section Corners
  - Highway
  - County Paved Roads
  - Paved Roads
  - County Gravel Roads
  - Poor Dirt Roads
  - County Poor Dirt Roads
  - Trail (Non-Recreation)
  - Hiking Trails
  - MCCCT Trails
  - ORV Routes
  - Snowmobile Trails
  - MCCCT Trail
  - Snowmobile Trail
  - ORV Route
  - Stream
  - Intermittent Stream
  - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
  - 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 431 - Upland Mixed Forest
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3
- 110 - Low Intensity Urban
  - 211 - Cropland
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland



# Dedicated & Proposed Special Conservation Area Map

Compartment: 010  
 T19N R12W Sec. 6  
 T19N R13W Sec. 1, 2, 11, 12  
 T20N R12W Sec. 30, 31  
 T20N R13W Sec. 25, 26, 35, 36  
 County: Lake  
 Unit: Cadillac  
 YOE: 2014  
 Acres: 3,534 GIS Calculated  
 Examiner: Mike Lesinski  
 Map Revised: 10/08/2012  
 Map Phase: Pre-Review

Stand #  
 23  
 (4120) - 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
- Cold Water Streams
- Forest Stands
- Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Stands
- Level 3
- 110 - Low Intensity Urban
- 211 - Cropland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

