

# CADILLAC FOREST MANAGEMENT UNIT



## COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 105 ENTRY YEAR: 2014

County: Missaukee

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**Revision Date: 10/09/2012 2:19 PM**

**Stand Examiner:** Jim Malloy, Forester

**Legal Description:** T21N R5W, Sections 19, 20, and 21

**Management Goals:** Maintain cover types and age class diversity. Manage for a variety of cover types and wildlife species.

**Soil and Topography:** Sections 19 and 20 are flat and contain some wet swampy areas. Section 21 is gently rolling and is all upland. Soil series consist of Rubicon sand, Montcalm-Graycalm complex, Roscommon mucky sand, and Iosco loamy sand.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** Sections 20 and 21 are solid State ownership. Section 19 is interspersed with private ownership consisting of farms and residences. Lands listed for acquisition are in section 19 E ½ SE.

**Unique, Natural Features:** Potential for secretive locust in the bog and marsh cover types. There is potential for Red Shouldered Hawk and Goshawk in the northern hardwood cover types.

**Archeological, Historical, and Cultural Features:** Several old railway grades traverse the compartment.

**Special Management Designations or Considerations:** Oak mortality from previous years of drought and gypsy moth has been reduced by timber sales and salvage harvests. Oak wilt may cause problems for this compartment if/when it is identified in the area.

**Watershed and Fisheries Considerations:** There are no surface waters in sections 20 and 21 of this compartment. The headwaters of Cranberry Creek flow through section 19. Cranberry Creek is classified as a warm transitional stream and should be protected with the standard Best Management Practice setbacks recommended in the Forest Management Guidelines. (R. O'Neal 10/12)

**Wildlife Habitat Considerations:** This compartment provides a good mix of timber types and mixed age classes providing habitat for numerous upland game and non-game species. There has been a large amount of oak die-off in recent years and there has been little success in regenerating the oak type. There has been a large increase in red/white pine types at the expense of oak types. Management efforts should continue to support maintaining early successional habitat types and age class diversity with improved efforts to regenerate the oak component for wildlife species. Featured species guidance will be considered for American bittern, American woodcock, beaver, black bear, eastern massasauga rattlesnake, mallard, pileated woodpecker, red-headed woodpecker, ruffed grouse, snowshoe hare, white-tailed deer, and wood duck. (E. Victory 9/2012)

**Mineral Resource and Development Concerns and/or Restrictions:** The Great Lakes Pipeline runs north/south through section 20. No wells within the compartment. Surface sediments consist of ice-contact outwash sand and gravel and coarse-textured glacial till. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw is quarried for clay/shale in other parts of the State. A gravel pit is located in Section 19 and potential is considered good especially the upland areas. The compartment is located one mile northeast of Cranberry Lake Field. The field is a Stray Sandstone gas storage area (7.7 Bcf) and a Richfield secondary recovery operation (1.7 MBO). All State lands are lease for oil & gas development.

**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. Proposed new roads or roads recommended for substantial improvement are noted below.

**Survey Needs:** No know survey needs at this time. There is a possible trespass in NW of section 19 to be investigated during timber sale preparation (this is noted in the management comments for the stand).

**Recreational Facilities and Opportunities:** Recreational Facility Considerations: There are no developed recreation facilities within this compartment however, dispersed hunting is popular in the area. (T.M.N. 8-30-12)

**Fire Protection:** Accessible by county road, forest road, and pipeline. The northwest portion of the compartment is lowland and may hinder suppression equipment use. (BET 08-01-12)

#### **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

**Table 1 – Total Acres by Cover Type and Age Class**



	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	211	157	226	103	96	85	43	5	0	0	0	0	0	0	926
Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Herbaceous Openland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Jack Pine	0	6	0	0	0	0	6	0	0	0	0	0	0	0	12
Low-Density Trees	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Aspen/Balsam Poplar	23	27	0	0	0	8	4	13	0	0	0	0	0	0	76
Lowland Conifers	0	0	0	0	0	0	0	12	0	0	0	0	0	7	19
Lowland Deciduous	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10
Lowland Shrub	46	0	0	0	0	0	0	0	0	0	0	0	0	0	46
Marsh	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	19	0	0	0	0	26	45
Natural Mixed Pines	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8
Northern Hardwood	0	4	0	0	0	0	0	0	0	0	8	0	0	17	30
Oak	0	0	0	0	0	0	0	0	89	0	0	0	0	32	121
Paper Birch	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Red Pine	0	0	0	0	4	75	0	14	0	0	0	0	0	0	93
Treed Bog	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Upland Mixed Forest	0	0	0	0	0	0	0	17	0	0	0	0	0	0	17
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Water	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19
<b>Total</b>	<b>374</b>	<b>202</b>	<b>226</b>	<b>103</b>	<b>110</b>	<b>168</b>	<b>52</b>	<b>60</b>	<b>116</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>92</b>	<b>1513</b>



## Table 2 – Proposed Treatment Summaries

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

**Compartment 105**  
**Total Compartment Acres: 1513**

### Acres by Treatment Type

Commercial Harvest - 272	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

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen</b>	135	0	0	0	0	0	135
<b>Northern Hardwood</b>	0	8	0	0	0	0	8
<b>Oak</b>	0	0	32	0	0	0	32
<b>Red Pine</b>	14	66	0	0	0	0	79
<b>Upland Mixed Forest</b>	0	17	0	0	0	0	17
<b>Total</b>	<b>149</b>	<b>91</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>272</b>



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	63105004-Cut	19.3	42110 - Planted Red Pine	High Density Log	56	141-170	Harvest	Single Tree Selection	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin pine to a residual BA of 100-110.										
<u>Specs:</u>										
<u>Other</u> Mark to cut and group this sale with the hardwood sale to the south to minimize road use on seasonal road. Check for trespass along east side of										
<u>Comments:</u> stand during prep.										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
7	63105007-Cut	8.4	4119 - Mixed Northern Hardwoods	High Density Log	102	81-110	Harvest	Single Tree Selection	4111 - S.Maple, Hard Mast Association	Cmpt. Review Proposal
<u>Prescription</u> Thin stand according to the complete marker to a residual BA of 70-80. Concentrate cut trees on beech and ash due to forest health issues with										
<u>Specs:</u> these species.										
<u>Other</u> Harvest with stand to the north (pine) to minimize road use on seasonal road. Check for trespass along east edge of the stand. Southeast corner										
<u>Comments:</u> is marked with a blue carsonite.										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
18	63105018-Cut	42.5	4130 - Aspen	High Density Pole	60		Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<u>Prescription</u> Final harvest aspen and mark 10 BA of oak for mast and diversity to leave. 2" spec on cut. Leave scattered pine for diversity.										
<u>Specs:</u>										
<u>Other</u> Retention of this stand will be in the form of a 50' buffer along the high water mark of the pond. Avoid wet areas throughout the stand and buffer										
<u>Comments:</u> along stream in SE of stand.										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
34	63105034-Cut	10.1	4130 - Aspen	High Density Pole	47		Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest 2" spec. Cut all aspen, maple, balsam. Cut as much of the stand as possible commercially.										
<u>Specs:</u>										
<u>Other</u> No retention due to wet conditions and to provide for a greater stem density for woodcock habitat. Frozen or dry spec due to wet soils. Pipeline										
<u>Comments:</u> will need to be crossed to access stand.										
<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
42	63105042-Cut	18.3	42110 - Planted Red Pine	High Density Pole	55	171-200	Harvest	Single Tree Selection	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin pine. residual ba 110-120										
<u>Specs:</u>										
<u>Other</u> Second thinning of this stand.										
<u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
56	63105056-Cut	17.1	42110 - Planted Red Pine	High Density Log	56	141-170	Harvest	Single Tree Selection	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin pine. residual ba 110-120										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
58	63105058-Cut	36.9	4131 - Aspen, Oak	High Density Pole	55		Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<u>Prescription</u> Final harvest, 2" spec on sale, leave 10 BA of oak and 10 BA of pine for diversity within the stand.										
<u>Specs:</u>										
<u>Other</u> Place a buffer for retention along the road and to help minimize visual impacts.										
<u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										
63	63105063-Cut	26.5	4130 - Aspen	High Density Pole	47		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Final harvest stand. retention will be in the form of buffers along scattered wet areas of the stand.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> <u>Steps:</u>										
<u>Proposed</u> <u>Start Date:</u> 10/01/2013										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
72	63105072-Cut	11.0	42110 - Planted Red Pine	High Density Log	56	141-170	Harvest	Single Tree Selection	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin stand to a residual BA of 100-110.										
<u>Specs:</u>										
<u>Other</u> Stand was thinned last entry and adjacent jack pine strips were clearcut also. Protect planted red pine in adjacent strips during harvest.										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
75	63105075-Cut	13.7	42110 - Planted Red Pine	Medium Density Log	70	141-170	Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Final harvest.										
<u>Specs:</u>										
<u>Other</u> No retention due to the stand being replanted to red pine following harvest.										
<u>Comments:</u>										
<u>Next</u> Trench and plant red pine in straight rows following harvest. Use TMS specs to accomplish site prep and adequate regeneration.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
79	63105079-Cut	19.5	4130 - Aspen	High Density Pole	55		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clear cut and leave a buffer along northern edge of stand for retention.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
81	63105081-Cut	16.8	4310 - Pine, Oak Mix	Medium Density Log	70	81-110	Harvest	Group Selection	4310 - Pine, Oak Mix	Cmpt. Review Proposal
<u>Prescription</u> Thin pine and oak to 50-80 BA. Remove all maple and aspen. Expand aspen where possible to create two aged stand with a mix of Pine Oak and Aspen.										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
93	63105093-Cut	32.3	4126 - White, Black, N. Pin Oak	Medium Density Log	82	81-110	Harvest	Seed Tree	4126 - White, Black, N. Pin Oak	Cmpt. Review Proposal
<u>Prescription</u> Mark 30 Ba of oak to leave concentrating on lower quality stems with higher mast production. Cut all maple and aspen. Encourage aspen regeneration where possible.										
<u>Specs:</u>										
<u>Other</u> Acceptable mix of oak, maple and aspen following harvest. Plant pine in openings if needed.										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										

**Table 3 -- Treatments Prescribed  
with No 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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Total Treatment  
Acreage Proposed: 272.2

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

Next Steps: 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**

Stand	Cadillac Mgt. Unit		5 – Forested Stands			Compartment: 105	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
1	4130 - Aspen	High Density Pole	2.9	31			
3	4130 - Aspen	High Density Pole	1.1	30			
4	42110 - Planted Red Pine	High Density Log	19.3	56	141-170		
6	4130 - Aspen	High Density Sapling	3.2	17			
7	4119 - Mixed Northern Hardwoods	High Density Log	8.4	102	81-110		No regen. heavy to raspberry in spots.
8	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	4.3	71			
9	4130 - Aspen	High Density Sapling	2.9	32			
10	4112 - Maple, Beech, Cherry Association	High Density Log	17.2	Uneven Age	81-110		Thinned hdwds in 1995; hasn't responded to thinning yet. Pure hemlock inclusion made into separate Stand 8.
11	4140 - Other Upland Deciduous	High Density Sapling	7.0	17			
12	4130 - Aspen	High Density Sapling	14.3	28			Low land spot in stand. Same as St. 9 (old St. 16).
15	6112 - Lowland Aspen	High Density Sapling	27.4	16			Old Farmers Aspen Sale in 1996.
17	6112 - Lowland Aspen	High Density Pole	4.9	74			Low and wet. No good access.
18	4130 - Aspen	High Density Pole	42.5	60			
22	6112 - Lowland Aspen	Medium Density Log	4.0	63			habitat cut less than 5 acres. Too wet for harvest.
23	6112 - Lowland Aspen	High Density Log	7.9	70			South end of previous St. 22 not treated because too wet. Swamp BT Aspen 60' tall.
24	4130 - Aspen	High Density Sapling	2.0	28			Treated as potrtion of stand 5 in compartment 104 to the south
25	42110 - Planted Red Pine	High Density Pole	3.9	46	111-140		This stand should be managed as part of the adjacent stand in compartment 104.
26	4130 - Aspen	Medium Density	22.3	16			Has a cedar inclusion at edge of this clear cut. Aspen regen patchy in spots.



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## Cadillac Mgt. Unit

## 5 – Forested Stands

Compartment: 105  
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	10.4	40		
30	4130 - Aspen	High Density Sapling	25.9	30		
31	6112 - Lowland Aspen	Medium Density	23.1	8		Final harvested by Leon Low in 2005.
32	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	7.7	74		Very wet, lowland - flowing.
33	6131 - Hemlock, White Pine, Maple, Birch	Medium Density Log	10.2	Uneven Age		Wet!
34	4130 - Aspen	High Density Pole	10.1	47		aspen with a balsam fir understory
37	4130 - Aspen	High Density Log	5.1	75		Wet
38	4130 - Aspen	High Density Sapling	11.5	8		Final harvested in 2005 by Leon Low. Sale # not specified.
39	4130 - Aspen	High Density Pole	35.7	43		Aspen is holding well. Will last until next rotation.
40	4130 - Aspen	High Density Pole	15.3	45		Hold until next YOE.
41	4199 - Other Mixed Upland Deciduous	High Density Log	24.7	Uneven Age	81-110	Aspen is falling apart. Diverse stand with a mix of species with a small wetland in the middle.
42	42110 - Planted Red Pine	High Density Pole	18.3	55	171-200	pine plantation that was cut 2 entries ago.
43	4130 - Aspen	High Density Sapling	11.7	28		A few super canopy white pine left from cut.
44	6129 - Mixed Coniferous Lowland Forest	High Density Log	7.0	Uneven Age		White pine is super canopy, cedar and hemlock stumps present. Wet
45	4130 - Aspen	High Density Sapling	8.6	28		
47	4130 - Aspen	High Density Pole	8.1	42		Previous inventory suggested holding for 1 more YOE
48	4130 - Aspen	High Density Sapling	16.0	16		
49	4199 - Other Mixed Upland Deciduous	High Density Log	1.6	Uneven Age	51-80	Transition stand on south end of St. 47.

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## Cadillac Mgt. Unit

## 5 – Forested Stands

Compartment: 105  
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
50	4130 - Aspen	High Density Pole	28.5	55		Diameters vary more oak on west side, pine to the north.
51	4130 - Aspen	High Density Sapling	3.5	16		
52	6112 - Lowland Aspen	High Density Pole	8.3	50		Wet.
56	42110 - Planted Red Pine	High Density Log	17.1	56	141-170	Thinned with Sale #63-025-04
58	4131 - Aspen, Oak	High Density Pole	36.9	55		
59	4130 - Aspen	High Density Pole	10.0	38		Same as 63.
61	42220 - Natural Jack Pine	High Density Pole	5.5	65	111-140	Includes small wet area through the middle of the stand.
63	4130 - Aspen	High Density Pole	26.5	47		
64	4130 - Aspen	High Density Sapling	31.2	28		Thinned with Sale #63-025-04. BA swings prior to thinning: 190, 190, 180 sq. ft./A.
65	4130 - Aspen	High Density Pole	11.1	38		Same as St. 63-N.
67	4130 - Aspen	High Density Sapling	12.0	8		Final harvest completed with Sale #63-012-04.
68	4123 - Red Oak	Medium Density Log	28.2	Uneven Age		Stand was cut in 1996 per previous inventory. Aspen understory with little oak regen.
69	4130 - Aspen	High Density Sapling	18.7	28		
70	4130 - Aspen	High Density Sapling	56.9	7		Final harvest aspen. Treated with Sale #12-04. Some residual oak left.
71	42120 - Planted Jack Pine	Low Density Sapling	6.4	17		Recent jack pine strip clear cut.
72	42110 - Planted Red Pine	High Density Log	11.0	56	141-170	Thinning completed with Sale #25-04. BA swings before thinning: 190, 190, 180 sq. ft./A. Year of origin 1956.
73	4130 - Aspen	High Density Pole	14.1	38		
74	4126 - White, Black, N. Pin Oak	High Density Log	13.3	83		

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## Cadillac Mgt. Unit

## 5 – Forested Stands

Compartment: 105  
Year of Entry: 2014

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	42110 - Planted Red Pine	Medium Density Log	13.7	70	141-170	Plantation has been thinned twice. Some red pine seedlings in open spots.
76	4130 - Aspen	High Density Sapling	16.2	7		Treated with Sale #63-040-04-01.
77	4130 - Aspen	High Density Sapling	24.2	28		
78	4130 - Aspen	High Density Sapling	4.3	7		Final harvest with Sale #63-040-04
79	4130 - Aspen	High Density Pole	19.5	55		Diameters vary.
80	4130 - Aspen	Medium Density	35.0	30		Pine left from cut.
81	4310 - Pine, Oak Mix	Medium Density Log	16.8	70	81-110	Red pine overtopping aspen and red maple
82	4130 - Aspen	High Density Sapling	41.5	18		Old Possum Run Sale cut 94-95. Scattered overstory oaks.
83	4131 - Aspen, Oak	High Density Sapling	15.4	6		Final harvest with Sale #32-04. Year of origin 2006. Cut all but oak and pine. Uncut areas merged into adjacent stands.
84	42260 - Natural Pine, Mixed Deciduous	High Density Log	8.0	80	111-140	
85	4110 - Sugar Maple Association	Low Density Sapling	4.4	16		
86	4131 - Aspen, Oak	High Density Sapling	35.8	6		Treated with Sale #63-032-04-01.
87	4130 - Aspen	High Density Pole	34.8	28		
88	4126 - White, Black, N. Pin Oak	Medium Density Log	35.7	80	51-80	Has had oak salvage/firewood sales in spots. Old Stand 90 and 92 combined to make this stand.
89	4130 - Aspen	Medium Density	14.4	17		Two Horse Sale. Did not come back to pure aspen. Patchy in spots. Scattered overstory oaks, heavy epicormic branching.
90	4130 - Aspen	High Density Pole	31.5	28		
91	42210 - Natural Red Pine	Low Density Pole	9.5	52	141-170	
92	4130 - Aspen	High Density Sapling	22.1	17		Last cut was Two Horse Sale in 1995. Aspen is growing well.

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## Cadillac Mgt. Unit

## 5 – Forested Stands

Compartment: 105  
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
93	4126 - White, Black, N. Pin Oak	Medium Density Log	32.3	82	81-110	Has had dead oak salvaged in spots. Poor quality overall.
94	4130 - Aspen	High Density Pole	25.2	28		
95	4126 - White, Black, N. Pin Oak	High Density Log	8.1	88	51-80	Salvage cut Sale #159802 Daniel Sherman. poor quality oaks. Low volume and lower quality on remaining trees.
96	4131 - Aspen, Oak	High Density Sapling	15.6	9		Sale #10-04 complete.
97	4130 - Aspen	High Density Sapling	13.8	8		Final harvest with Sale #10-04.
98	4131 - Aspen, Oak	High Density Sapling	29.9	8		Few scattered red pine left following sale too.
99	4126 - White, Black, N. Pin Oak	Medium Density Log	3.7	Uneven Age	51-80	leave asan island of oak retention.
100	4130 - Aspen	Medium Density Pole	14.0	28		
101	4139 - Aspen, Mixed Deciduous	High Density Pole	10.3	28		transitioning into a full pole sized stand.
102	4199 - Other Mixed Upland Deciduous	High Density Log	18.8	82	51-80	poor quality oaks with an aspen component aspen heavier to the north.
103	4130 - Aspen	High Density Sapling	18.1	17		Stand is regenerating to aspen with a maple and oak component, Some scattered pole/log sized oak throughout.
104	4130 - Aspen	High Density Sapling	15.9	10		Final harvest. Leave red pine and oak. Sale #10-04.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	6225 - Bog	2.8	No	Unspecified	Leather leaf bog. with scattered pole tamarack.
5	622 - Lowland Shrub	1.9	No	Unspecified	seasonally wet vernal pond.
13	50 - Water	18.9	No	Unspecified	beaver flooding
14	622 - Lowland Shrub	10.0	No	Unspecified	Cattail swamp (with elm and alder).
16	3104 - Degraded	2.7	No	Unspecified	opening with areas of barren sand.
19	622 - Lowland Shrub	4.6	No	Unspecified	First of the Non-Forested that was in the wrong category after Jason's fix. Treed bog/swamp with beaver dam. Cattails and brush, standing water.
20	122 - Road/Parking Lot	3.8	No	Unspecified	Young Road, stony corners rd, paved.
21	6224 - Treed Bog	8.2	No	Unspecified	Like St. 19 but less water, more grass. Still a treed bog.
28	623 - Emergent Wetland	22.2	No	Unspecified	Like St. 15 but less brush and woody, more grass/sedge/cattails. Open water also.
29	622 - Lowland Shrub	4.5	N/A	Unspecified	
35	3105 - Mixed Upland Herbaceous	20.3	Yes	Unspecified	Pipeline with some low spots/ponds.
36	622 - Lowland Shrub	1.1	No	Unspecified	Wet bog area with fir and cedar scattered. Mostly dead swamp trees with varied brush.
46	6220 - Alder/willow	1.9	No	Unspecified	V Type wetland.
53	3301 - Low Density Deciduous Tree	1.5	No	Unspecified	Open G with scattered oak and B.C.
54	6223 - Inundated Shrub Swamp	14.2	No	Unspecified	V type bog, leather leaf and cattails. Islands with trees on them.
55	6229 - Mixed lowland shrub	5.1	No	Unspecified	
57	6220 - Alder/willow	2.7	No	Unspecified	Wet L type.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
60	122 - Road/Parking Lot	8.4	No	Unspecified	S. Long Rd., paved.
62	3101 - Poverty Grass, Cladonia	0.5	No	Unspecified	Old landing area and hunting camp, Level 4 Call on field sheet.
66	3101 - Poverty Grass, Cladonia	3.8	No	Unspecified	Open G type - part was used for landing when pine was thinned. Level 4 call on field sheet.



### 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
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### 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.

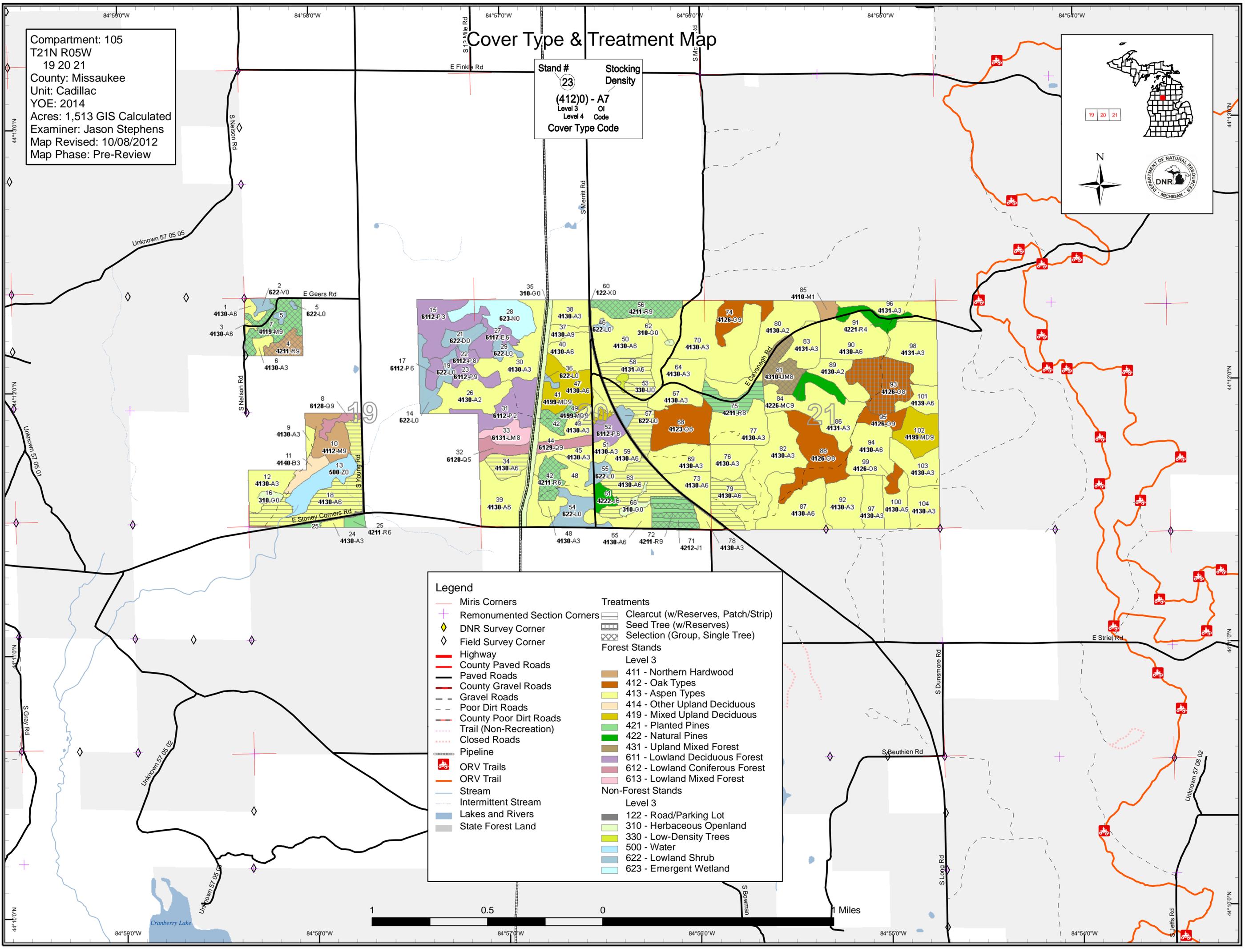
ERA = Ecological Reference Area  
HCVA = High Conservation Value Area  
SCA = Special Conservation Area

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: 105  
 T21N R05W  
 19 20 21  
 County: Missaukee  
 Unit: Cadillac  
 YOY: 2014  
 Acres: 1,513 GIS Calculated  
 Examiner: Jason Stephens  
 Map Revised: 10/08/2012  
 Map Phase: Pre-Review

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



**Legend**

— Miris Corners	▭ Clearcut (w/Reserves, Patch/Strip)
⊕ Remonumented Section Corners	▭ Seed Tree (w/Reserves)
◆ DNR Survey Corner	▭ Selection (Group, Single Tree)
◇ Field Survey Corner	
— Highway	<b>Forest Stands</b>
— County Paved Roads	Level 3
— County Gravel Roads	411 - Northern Hardwood
— Gravel Roads	412 - Oak Types
— Poor Dirt Roads	413 - Aspen Types
— County Poor Dirt Roads	414 - Other Upland Deciduous
— Trail (Non-Recreation)	419 - Mixed Upland Deciduous
— Closed Roads	421 - Planted Pines
— Pipeline	422 - Natural Pines
ORV Trails	431 - Upland Mixed Forest
ORV Trail	611 - Lowland Deciduous Forest
Stream	612 - Lowland Coniferous Forest
Intermittent Stream	613 - Lowland Mixed Forest
Lakes and Rivers	<b>Non-Forest Stands</b>
State Forest Land	Level 3
	122 - Road/Parking Lot
	310 - Herbaceous Openland
	330 - Low-Density Trees
	500 - Water
	622 - Lowland Shrub
	623 - Emergent Wetland

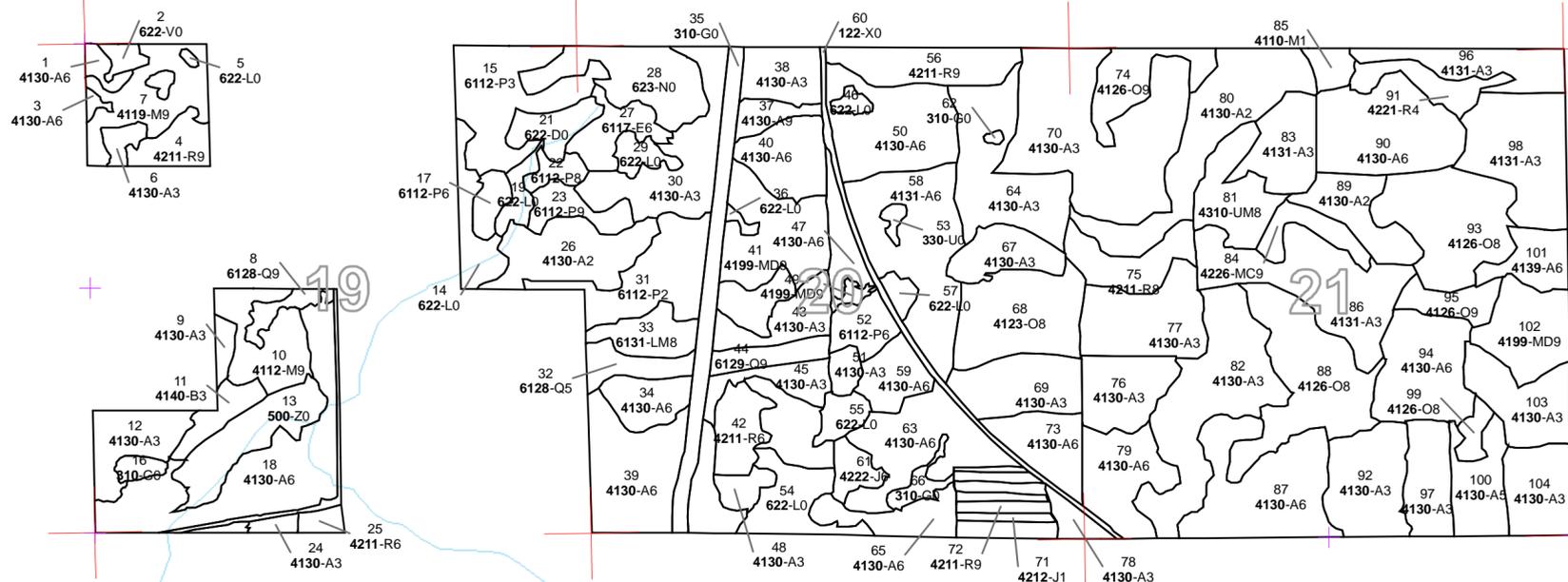
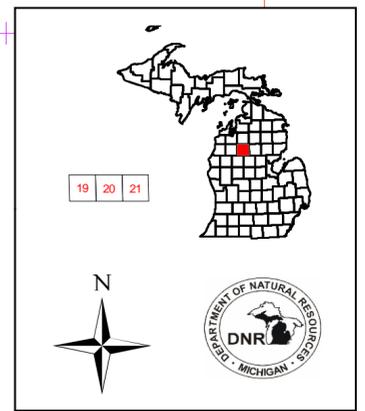




# Dedicated & Proposed Special Conservation Area Map

Compartment: 105  
 T21N R05W  
 19 20 21  
 County: Missaukee  
 Unit: Cadillac  
 YOE: 2014  
 Acres: 1,513 GIS Calculated  
 Examiner: Jason Stephens  
 Map Revised: 10/08/2012  
 Map Phase: Pre-Review

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



**Legend**

— Miris Corners	Forest Stands
+ Remonumented Section Corners	Level 3
Proposed Special Conservation Areas	411 - Northern Hardwood
SCA - Special Conservation Area	412 - Oak Types
SCA Removal	413 - Aspen Types
Dedicated Special Conservation Areas	414 - Other Upland Deciduous
— Cold Water Streams	419 - Mixed Upland Deciduous
□ Stand Boundaries	421 - Planted Pines
	422 - Natural Pines
	431 - Upland Mixed Forest
	611 - Lowland Deciduous Forest
	612 - Lowland Coniferous Forest
	613 - Lowland Mixed Forest
	Non-Forest Stands
	Level 3
	122 - Road/Parking Lot
	310 - Herbaceous Openland
	330 - Low-Density Trees
	500 - Water
	622 - Lowland Shrub
	623 - Emergent Wetland

