CADILLAC FOREST MANAGEMENT UNIT

COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 117 ENTRY YEAR: 2013

Compartment Acreage (GIS Acres): 2276 County: Missaukee

Revision Date: 10/07/2011 10:18 AM

Stand Examiner: Steven Eisele, Forest Technician

Legal Description: T24N, R7W, Sections 20, 21, 28, 29, 32, 33

Management Goals: Maintain species and age class diversity.

Soil and Topography: Mostly Rubicon and Kalkaska sands. Terrain is rolling and hilly.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Mix of State and private parcels. Snowmobile trail runs north/south through compartment. Most residences in area are full time.

Unique, Natural Features (include only non-site specific and non-sensitive information): Potential for Red shouldered and Goshawks.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None Known

Special Management Designations or Considerations: None Known

Watershed and Fisheries Considerations: No Fisheries comments at this time.

Wildlife Habitat Considerations: Priority Wildlife Species: Those species associated with a mixed upland forest. Species include coyote, fox, bear, bobcat and raptors.
Habitat Objectives: Fifty percent of this compartment falls within the Highplains Ecosystem, Grayling Outwash Plain Subsection, LTA 5111. Soils are deep, excessively drained, acidic soil. The other half of the compartment is in the Cadillac Subsection, LTA 3111 and 5149. Soils are deep, excessively drained, sands with low fertility. Historically, the area was composed of a matrix of dry-mesic, conifer forest and mixed lowland forests. The wildlife habitat objective is to maintain species and age-class diversity and to maintain and regenerate the oak component. (AH 09/29/11)

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of an end moraine of coarse-textured till. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Mississippian Michigan formation and Bayport Limestone and the Pennsylvanian Grand River and Saginaw Formations. These formations are quarried for gypsum, limestone and clay/shale in other parts of the State. A gravel pit is located one mile to the northwest of the compartment and potential is considered good. This area is sparsely explored for oil and gas. Cannon Creek Field is located two miles to the northeast. The Field produced gas from the Devonian Traverse Limestone and oil from the Detroit River Sour Zone. The Encana well is located 2 miles to the north and all state lands are currently leased.

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 at this time.

Recreational Facilities and Opportunities: The Lake City Spur of the MissKal Snowmobile Trail passes through the compartment. Area provides for snowmobiling, hunting, color touring and camping. 9-01-2011 BET

Fire Protection: Access for wildfire suppression equipment is provided by local road system and forest roads. Urban Interface could be a concern near the private property holdings. 9-01-2011 BET

Additional Compartment Information: None Known

The following parcels are recommended for acquisition if they become available for sale: None Known

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
  - **Cover Type by Age Class**
  - **Cover Type by Management Objective**
  - **Compartment Volume Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand numbers, cover types**
  - **Proposed treatments**
  - **Proposed road access system**
  - **Suggested potential old growth**

Table 1 – Total Acres by Cover Type and Age Class

Cadillac Mgt. Unit **Compartment 117 Year of Entry 2013**

Steven Eisele : Examiner

Age Class

	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	0	19	119	55	0	9	31	0	0	0	0	0	0	0	0	**232**
Herbaceous Openland	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Jack Pine	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	**7**
Lowland Aspen/Balsam Poplar	0	0	117	0	0	0	0	0	0	0	0	0	0	0	0	**117**
Lowland Deciduous	0	0	0	0	0	0	7	0	0	8	0	0	0	0	0	**15**
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	**4**
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Mixed Upland Deciduous	0	0	0	0	0	0	11	0	18	0	41	0	0	0	37	**106**
Northern Hardwood	0	0	0	0	0	0	0	51	1381	107	0	0	0	0	0	**1539**
Oak	0	0	0	0	0	2	0	0	0	0	0	0	0	0	23	**24**
Planted Mixed Pines	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	**29**
Red Pine	0	0	45	8	0	0	40	0	0	0	0	0	0	0	0	**93**
Tamarack	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	**7**
Treed Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Urban	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Water	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8**
White Pine	0	0	0	0	0	0	68	0	0	0	0	0	0	0	0	**68**
Total	**34**	**48**	**281**	**62**	**0**	**11**	**164**	**51**	**1398**	**115**	**51**	**2**	**0**	**0**	**60**	**2276**

Table 2 – Proposed Treatment Summaries

Cadillac Mgt. Unit
Year of Entry 2013

Compartment 117
Total Compartment Acres: 2276

Acres by Treatment Type

Commercial Harvest - 956	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 60	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
Aspen	28	0	0	0	0	0	**28**
Jack Pine	7	0	0	0	0	0	**7**
Mixed Upland Deciduous	0	36	0	0	0	0	**36**
Northern Hardwood	0	757	0	0	0	0	**757**
Oak	0	20	0	0	0	0	**20**
Red Pine	0	40	0	0	0	0	**40**
White Pine	0	0	0	0	68	0	**68**
Total	**35**	**853**	**0**	**0**	**68**	**0**	**956**

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	63117012-Cut	36.0	4199 - Other Mixed Upland Deciduous	High Density Log	90	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Remove ash, beech and log size oak down to about 70 basal area. Shortwood only, no chipping.

Other Comments: Snowmobile trail

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14	63117014-Cut	10.7	4131 - Aspen, Oak	High Density Pole	55	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Mark some mast oak to leave, also leave smaller oak with spec. (6"). Buffer or spec snowmobile trail.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	63117018-Cut	17.1	4130 - Aspen	Medium Density Pole	50	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Leave oak

Other Comments: Still healthy and growing well, will hold if needed, average around 50 years old.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	63117019-Cut	57.4	4110 - Sugar Maple Association	High Density Pole	70	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Remove beech and ash, mark some log size basswood. Create some holes. Target about 70 basal area. Shortwood only, no chipping.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	63117020-Cut	39.8	42110 - Planted Red Pine	High Density Pole	56	Harvest	Single Tree Selection	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Do a second thin, remove defect. Down to about 120 basal area.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22	63117022-Cut	7.1	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	50	Harvest	Clearcut	42121 - Planted Jack Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Final harvest, natural regen.

Other Comments: Jack pine is falling apart, hardwoods are moving in underneath.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
25	63117025-Cut	20.1	4123 - Red Oak	High Density Log	90	Harvest	Single Tree Selection	4123 - Red Oak	Cmpt. Review Proposal

Prescription Specs: Sort of an overstory removal, but mark to cut, leaving some oak, around 30 basal area.

Other Comments: Good density of regen from previous treatments.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
37	63117037-Cut	50.0	4119 - Mixed Northern Hardwoods	High Density Pole	75	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Just remove ash, beech and ironwood. Could just spec it. Basal area is only around 80 now.

Other Comments: Has been treated in the past but the ash and beech are decaying.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	63117038-Cut	17.3	4116 - Mixed N. Hardwood - Aspen	High Density Log	70	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Remove all aspen and ironwood, mark the rest down to around 70 basal area.

Other Comments: Stand is heavy to black cherry

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	63117040-Cut	14.8	4116 - Mixed N. Hardwood - Aspen	High Density Log	80	Harvest	Single Tree Selection	4116 - Mixed N. Hardwood - Aspen	Cmpt. Review Proposal

Prescription Specs: Do a select cut down to around 70 basal area. Create some holes.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45	63117045-Cut	38.3	4111 - S.Maple, Hard Mast Association	High Density Log	75	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Remove all aspen, ironwood and ash. Do it as a spec.

Other Comments: Has been treated in the past.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	63117053-Cut	447.2	4110 - Sugar Maple Association	High Density Log	78	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Do a selection cut. Remove all ash, mark the rest down to about 80 basal area, make some holes for regen.

Other Comments: Actual sale area will vary from map. Old sale boundaries are hard to follow. Try to follow old paint lines.

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
54	63117054-Cut	37.8	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	50	Harvest	Systematic Thinning	42101 - Planted White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Take two rows leave two rows. Logger will have to "create" rows. Some areas are curvy and hilly

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
55	63117055-Cut	125.7	4111 - S.Maple, Hard Mast Association	High Density Log	76	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Do a slection cut, mark down to about 70 basal area. Take all aspen and ironwood.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
58	63117058-Cut	30.0	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	50	Harvest	Systematic Thinning	42101 - Planted White Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Take twe rows leave two rows. Logger will have to create rows. Some areas are hilly and curvy.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
8	63117008-Burn	59.8	4119 - Mixed Northern Hardwoods	High Density Pole	70	Prescribed Burn	Unspecified	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Try a burn or even herbicide to knock back the beech and ironwood regen

Other Comments:

Next Steps:

Total Treatment Acreage Proposed: 1009.1

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
26	63117026-Cut	6.5	4119 - Mixed Northern Hardwoods	High Density Pole	80	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: If done, mark down to about 70 but it is hilly, small acreage and has the snowmobile trail.

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason: 4D: Low volume (small acreage)

Total Treatment Acreage Proposed: 6.5

Data updated before 10:00 AM

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
63102_OutOfYOE_1-Cut	7.2				Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Final harvest plant to red pine

Other Comments:

Next Steps: Write FTP

Total Treatment Acreage Proposed: **7.2**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4199 - Other Mixed Upland Deciduous	High Density Log	37.0	Uneven Age	51-80	treated last year of entry all the white ash in recently treated stands are dead beech and iron wood regen
2	4111 - S.Maple, Hard Mast Association	High Density Log	49.9	70	51-80	not quite there yet treat next year of entry
3	4130 - Aspen	High Density Sapling	33.3	18		
5	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	7.8	80	81-110	low wet areas along m 66
7	4131 - Aspen, Oak	High Density Pole	9.0	45		
8	4119 - Mixed Northern Hardwoods	High Density Pole	60.2	70	51-80	treated last year of entry
9	4130 - Aspen	High Density Pole	17.6	26		
10	4139 - Aspen, Mixed Deciduous	High Density Sapling	5.8	6		New stand added. recent clearcut not planted look up cut records
11	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Sapling	29.0	6		recently planted to red pine look up cut records
12	4199 - Other Mixed Upland Deciduous	High Density Log	40.8	90	81-110	has been treated now log size oak/maple over maple beech sprouts
13	4123 - Red Oak	Medium Density Pole	1.7	45	51-80	Stand swapped from Non-Forested to Forested. maybe an old homested couple of apple trees
14	4131 - Aspen, Oak	High Density Pole	10.7	55		snowmobile trail merged 13
15	4199 - Other Mixed Upland Deciduous	High Density Log	10.8	50	51-80	New stand added.
16	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	1.2	27	81-110	
17	4123 - Red Oak	Medium Density Log	2.4	Uneven Age	1-50	log size oak over maple sprouts
18	4130 - Aspen	Medium Density Pole	17.1	50		could cut or leave healthy still growing if cut leave oak
19	4110 - Sugar Maple Association	High Density Pole	57.8	70	81-110	nice pole size overall
20	42110 - Planted Red Pine	High Density Pole	39.8	56	141-170	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	6132 - Mixed Lowland Forest with Cedar	Medium Density Log	2.5	95	81-110	Stand swapped from Non-Forested to Forested. low wet area
22	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	7.1	50	51-80	look up plant records
23	4130 - Aspen	High Density Pole	8.7	18		
24	4139 - Aspen, Mixed Deciduous	High Density Sapling	15.7	17		look up cut records
25	4123 - Red Oak	High Density Log	20.1	Uneven Age	51-80	look up cut records
26	4119 - Mixed Northern Hardwoods	High Density Pole	6.5	80	81-110	snowmobile trail
27	42110 - Planted Red Pine	High Density Pole	6.3	26	141-170	
28	6132 - Mixed Lowland Forest with Cedar	High Density Pole	1.9	100	81-110	wet
32	4199 - Other Mixed Upland Deciduous	High Density Pole	17.7	70	81-110	New stand added. unique same as 36 elm 2
33	4130 - Aspen	Medium Density	5.3	6		Stand swapped from Non-Forested to Forested. treated last year of entry some open areas
36	4134 - Aspen, Spruce/Fir	High Density Pole	37.1	25		
37	4119 - Mixed Northern Hardwoods	High Density Pole	50.0	75	81-110	leave it to develop? has been treated once needs private line established
38	4116 - Mixed N. Hardwood - Aspen	High Density Log	17.3	70	81-110	
39	4130 - Aspen	High Density Sapling	7.5	6		treated last year of entry
40	4116 - Mixed N. Hardwood - Aspen	High Density Log	14.8	80	81-110	New stand added.
41	4110 - Sugar Maple Association	High Density Log	95.2	75	51-80	treated last year of entry
42	6121 - Tamarack	High Density Pole	7.5	95	111-140	wet areas
43	6112 - Lowland Aspen	High Density Sapling	116.5	18		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
45	4111 - S.Maple, Hard Mast Association	High Density Log	38.3	75	81-110	New stand added.
46	4110 - Sugar Maple Association	High Density Log	56.5	78	51-80	treated last year of entry
47	4110 - Sugar Maple Association	High Density Log	305.0	75	51-80	treated two tmes back developing into logs treat next year of entry
48	4139 - Aspen, Mixed Deciduous	High Density Sapling	26.9	16		New stand added.
49	42111 - Planted Red Pine, Mixed Deciduous	Medium Density	45.3	16		planted to red pine various degrees of success
50	4130 - Aspen	High Density Log	2.9	50		this is a retention island within pine plantation
51	4110 - Sugar Maple Association	High Density Log	85.9	85	81-110	treated two yoe back developing into logs select cut logs next year of entry
52	4110 - Sugar Maple Association	High Density Log	23.9	75	51-80	New stand added. has been treated
53	4110 - Sugar Maple Association	High Density Log	447.2	78	81-110	
54	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	37.8	50	81-110	
55	4111 - S.Maple, Hard Mast Association	High Density Log	125.7	76	81-110	
56	4130 - Aspen	High Density Sapling	28.3	18		
57	4111 - S.Maple, Hard Mast Association	High Density Pole	53.5	75	51-80	treated last year of entry
58	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	30.0	50	111-140	
59	4139 - Aspen, Mixed Deciduous	High Density Pole	6.3	18		
60	4112 - Maple, Beech, Cherry Association	High Density Pole	50.9	65	81-110	lower quality
61	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.3	50		Stand swapped from Non-Forested to Forested. wet

6 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	11 - Low Intensity Urban	10.5	Yes	Unspecified	m-66
6	3102 - Grass	1.6	No	Unspecified	old landing
29	6239 - Mixed Emergent Wetland	2.3	No	Unspecified	flowing stream dead standing snags
30	50 - Water	7.8	No	Unspecified	dead standing snags
31	3105 - Mixed Upland Herbaceous	6.1	No	Unspecified	west end could be planted to rye
34	3102 - Grass	1.9	No	Low (NonForested)	
35	6224 - Treed Bog	3.0	No	Unspecified	dead standing snags
44	3105 - Mixed Upland Herbaceous	1.0	No	Unspecified	old landing

Data updated before 10:00 AM

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.

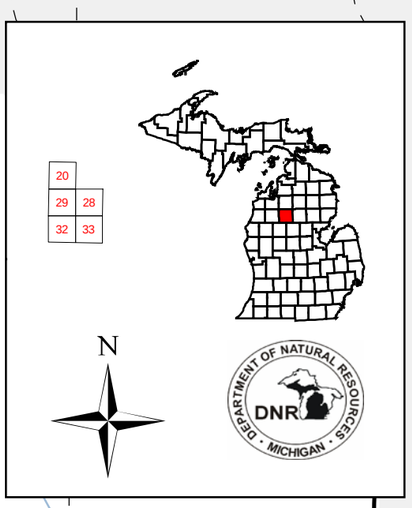
ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

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 117
T24N, R07W, Sec. 20,21,28,29,32,33
County: Missaukee
Unit: Cadillac
YOE: 2013
Acres: 2,276 GIS Calculated
Stand Examiner: Steve Eisele
Map Revised: 10/6/2011
Map Phase: Pre-Review

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



Legend

- Miris Corners
- Remonumented Section Corners
- State Highway
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Snowmobile Trails
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Prescribed Burn

Forest Stands
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3

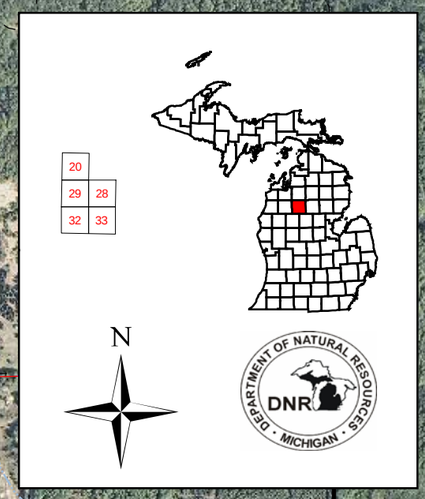
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

1 0.5 0 1 Miles

Stand Boundary Map

Compartment 117
T24N, R07W, Sec. 20,21,28,29,32,33
County: Missaukee
Unit: Cadillac
YOE: 2013
Acres: 2,276 GIS Calculated
Stand Examiner: Steve Eisele
Map Revised: 9/12/2011
Map Phase: Pre-Review

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



Legend
- Miris Corners
- Remonumented Section Corners
- State Highway
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Snowmobile Trails
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands
Level 3
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

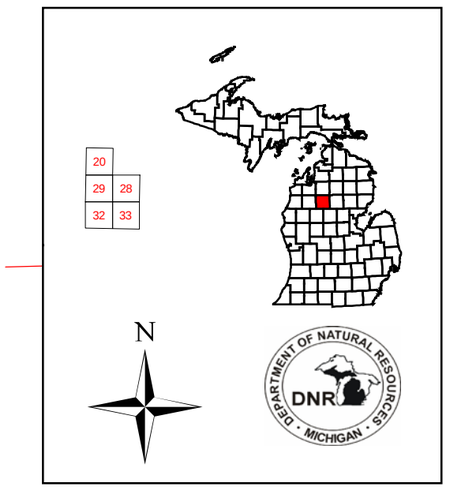
Non-Forest Stands
Level 3
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

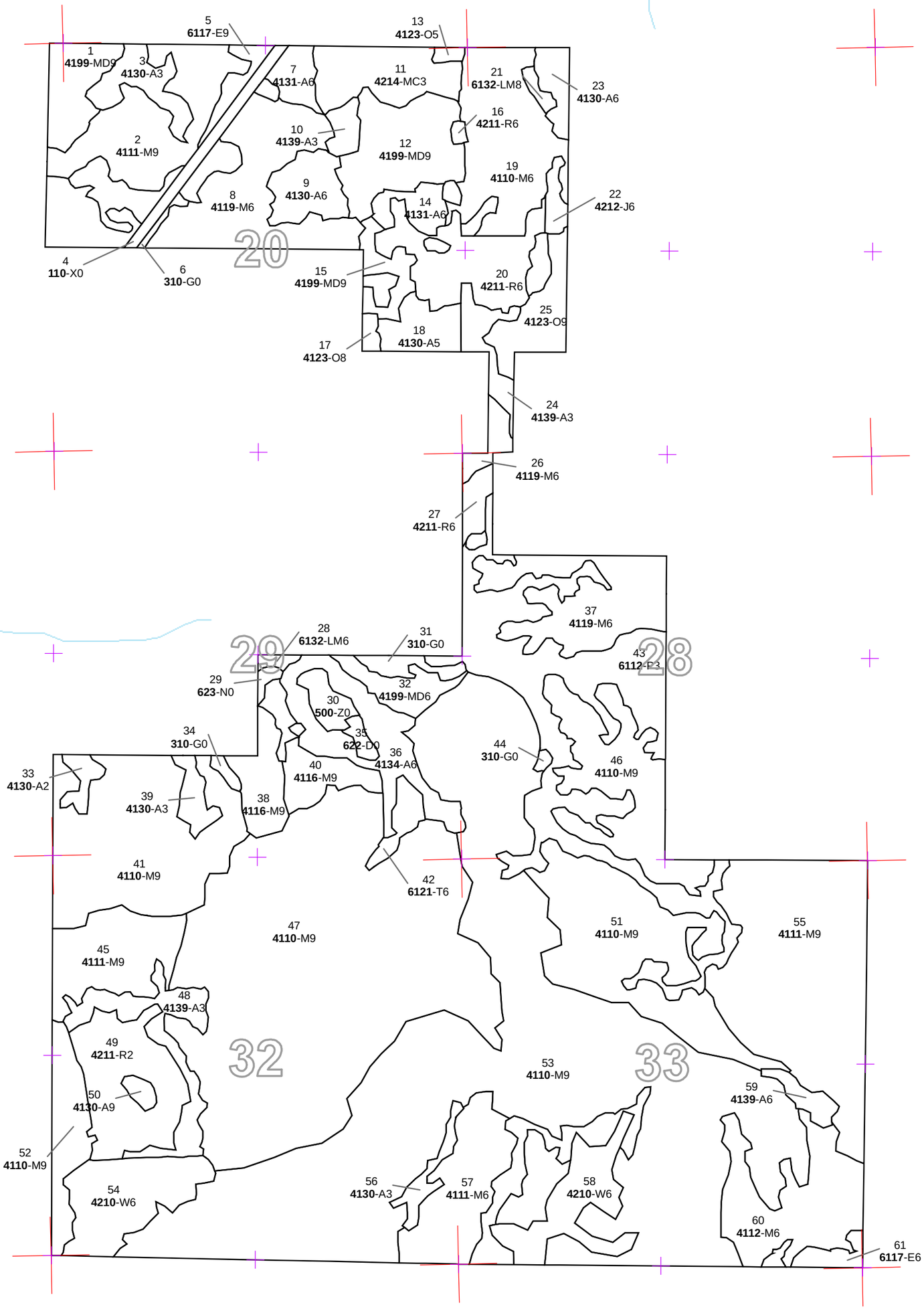
1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 117
T24N, R07W, Sec. 20,21,28,29,32,33
County: Missaukee
Unit: Cadillac
YOE: 2013
Acres: 2,276 GIS Calculated
Stand Examiner: Steve Eisele
Map Revised: 9/12/2011
Map Phase: Pre-Review

Stand # 23
Stocking Density
(412)0) - A7
Level 3 Ol
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
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest
  - 613 - Lowland Mixed Forest

Non-Forest Stands
- Level 3
  - 110 - Low Intensity Urban
  - 310 - Herbaceous Openland
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland

1 0.5 0 1 Miles

85°12'0"W 85°11'0"W 85°10'0"W 85°9'0"W 85°8'0"W
44°29'0"N 44°28'0"N 44°27'0"N 44°26'0"N 44°25'0"N