



Compartment Review Presentation

Cadillac Forest Management Unit

Compartment 137

Entry Year 2015

Acreage: 1,274

County Wexford

Management Area: Manistee River Valley

Revision Date: 08/19/2013

Stand Examiner: Jim Malloy

Legal Description:

T24N, R9W Sections 7-9, 16, and 21

Identified Planning Goals:

This compartment is bound by the Manistee River on the north and has several tributary streams running through it, including Manton Creek. The primary emphasis along the Manistee River and its immediate vicinity will be to preserve the associated visual aesthetics and recreational values. Those areas beyond the view of the river will be managed for dispersed recreation, wildlife, and timber. Major management emphasis on these setback areas will be on intolerant timber types.

Soil and topography:

Soil series found in the compartment include Rubicon-Montcalm-Graycalm, Tawas-Croswell-Lupton, and Nester-Kawkawlin-Manistee. Terrain is generally flat to slightly rolling. Very steep primary and secondary river bluffs follow the corridor along the Manistee River. Tributary streams are typically in narrow steep ravines.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Surrounding land ownership is a mix of state and private land. Private land is dispersed throughout the area but concentrated to the south. The private lands are a mix of fallow agricultural fields and small woodlots. Development pressure on private lands in this area is high due to the proximity to the major travel corridor. The town of Manton is four miles south of the compartment boundary. There is a relatively undeveloped corridor along the Manistee River. The north end of the recent US-131 construction abuts the east side of this compartment. Twenty-six acres (along the east boundary of the compartment) that were previously inventoried as State Forest Land are actually Department of Transportation owned (as part of the US-131 right-of-way). The forty acre parcel in the SWNE of Sec. 7 has been acquired since the last inventory of this compartment. It was purchased in 1995.

Desirable land for acquisition: Sec. 7, SESE & ENESW; Sec. 8, SWSE.

Unique Natural Features:

The Manistee River winds along the northern boundary of this Compartment. Manton Creek, and several smaller unnamed tributaries of the Manistee flow through the northern portion of this compartment. Michigan Natural Features Inventory lists the potential for occurrences of wood turtles, great blue heron rookeries, red-shouldered hawks, goshawks and massasauga rattlesnakes.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Maintain the aesthetics integrity along the Manistee River and the major travel corridors through the Compartment. Preserve water quality through the implementation of Best Management Practices. The Manistee River is being reviewed for classification as a Natural River. Management proposals will follow the guidelines for this designation.

Watershed and Fisheries Considerations:

The Manistee River, Manton Creek, and several unnamed tributaries flow through Compartment 137. All are Designated Trout Streams. Manton Creek is a very high quality tributary to the Manistee River, with naturally reproducing populations of brook and brown trout. Manton Creek is also on the "Trout Streams Vulnerable to Beaver Damming" list. Therefore, future management of the riparian zone near Manton creek should be to manage for tree species other than aspen. (M. Tonello, 8/27/13)

Wildlife Habitat Considerations:

This compartment is in the Highplains Ecosystem, Grayling Outwash Plains Subsection, LTA 5211. Soils are characterized by deep, excessively drained, acidic sands. Historic vegetation included the entire spectrum of conifer dominated forests. Wildlife habitat objectives are to continue to maintain species and age-class diversity across the compartment, to promote

within-stand structural diversity, and to encourage lowland conifers and mast-producing species. Featured species of special interest include bear, deer, woodcock, ruffed grouse, and snowshoe hare. (E. Victory, 8/21/13).

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured glacial till, glacial outwash sand and gravel and postglacial alluvium and end moraine of coarse-textured till. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift are the Mississippian Michigan and Marshall Formations. The Michigan is quarried for gypsum and the Marshall was previously used as a building stone elsewhere in the State. A gravel pit is located in section 16 and potential is considered to be good. This area lies seven miles southeast of the prolific Silurian Guelph (Niagaran) reef trend. There does not appear to be any potential for reefs in this area. Sections 16 and 21 are currently leased for oil and gas development. (T. Hoane, 3/6/2013).

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 closure. 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.

Recreational Facilities and Opportunities:

The Michigan Cross country cycle trail & snowmobile trail #6 are located along the county road in this compartment. There is heavy use of state lands for hunting, fishing, berry and mushroom picking in this compartment. Dispersed camping is also common within this compartment. (T.M.N. 7/10/13).

Fire Protection:

With the county roads and highway system, access within the compartment is good. Limiting factor for response to a wildfire would be inaccurate directions from the reporting parties, due to the Manistee River and US131 freeway. There are some private parcels and the abundance of recreational opportunities that cause most wildfires. Fuel types lend themselves to large fire potential. The railroad crosses the compartment limiting the response of wildfire equipment. Fire response time would be short being that Manton Field Office is close to the compartment. (B. Tower, 2013).

Additional Compartment Information:

The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

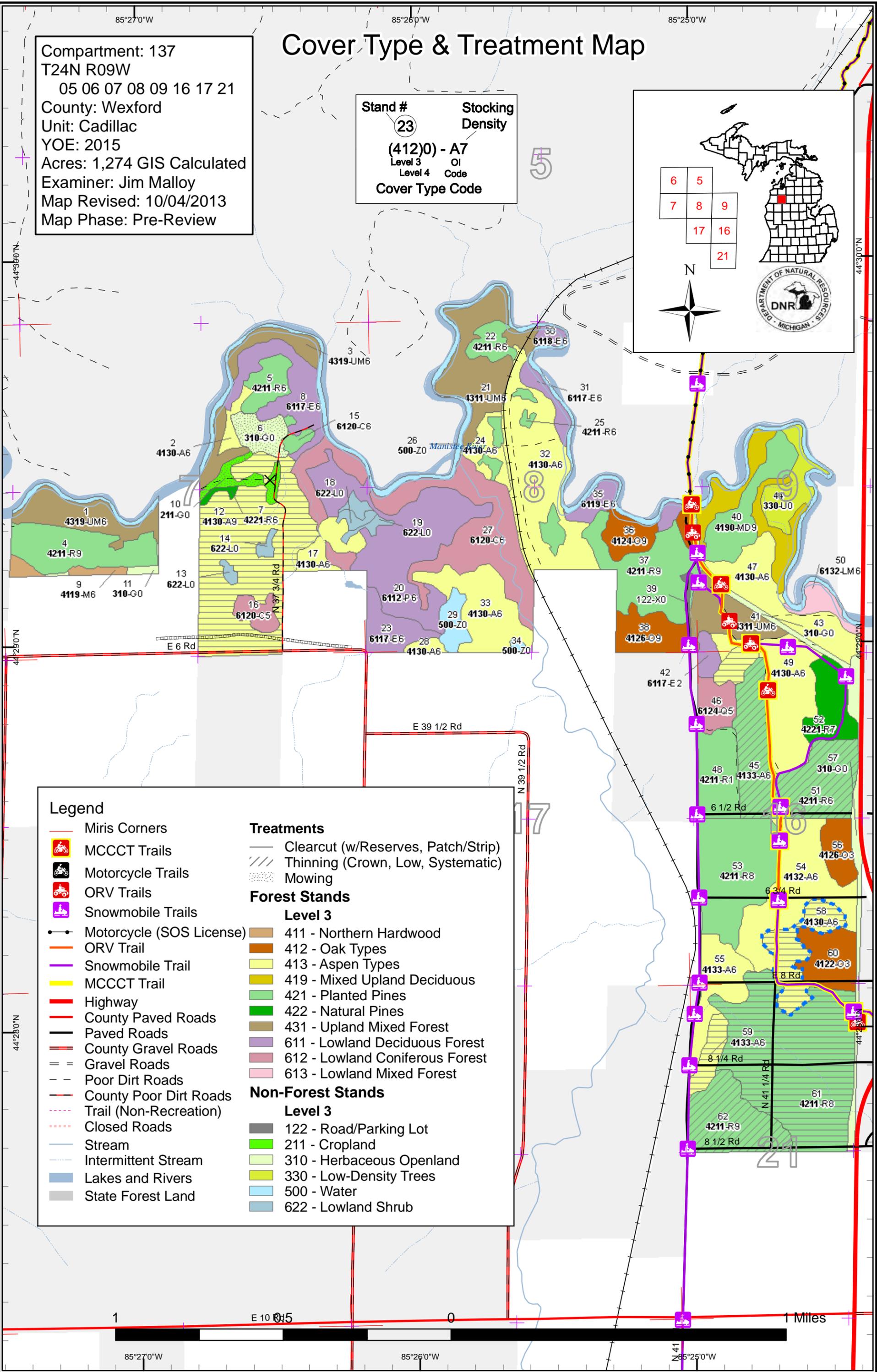
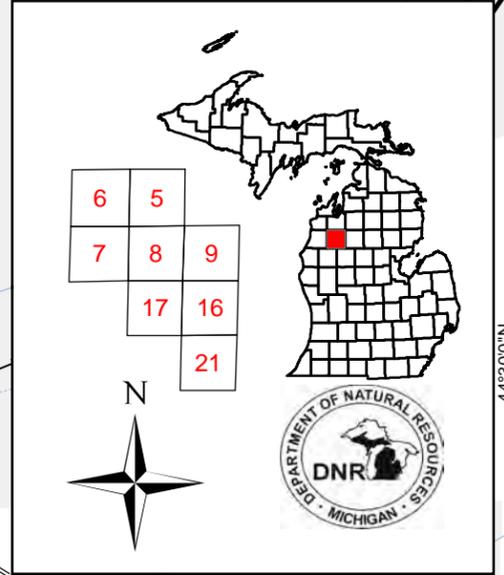
The following information is displayed, where pertinent, on the attached compartment maps:

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatment Map

Compartment: 137
 T24N R09W
 05 06 07 08 09 16 17 21
 County: Wexford
 Unit: Cadillac
 YOE: 2015
 Acres: 1,274 GIS Calculated
 Examiner: Jim Malloy
 Map Revised: 10/04/2013
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- MCCCT Trails
- Motorcycle Trails
- ORV Trails
- Snowmobile Trails
- Motorcycle (SOS License)
- ORV Trail
- Snowmobile Trail
- MCCCT Trail
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Mowing

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
 - 613 - Lowland Mixed Forest

Non-Forest Stands

- ### Level 3
- 122 - Road/Parking Lot
 - 211 - Cropland
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub

1 E 10 1/2 0 1 Miles

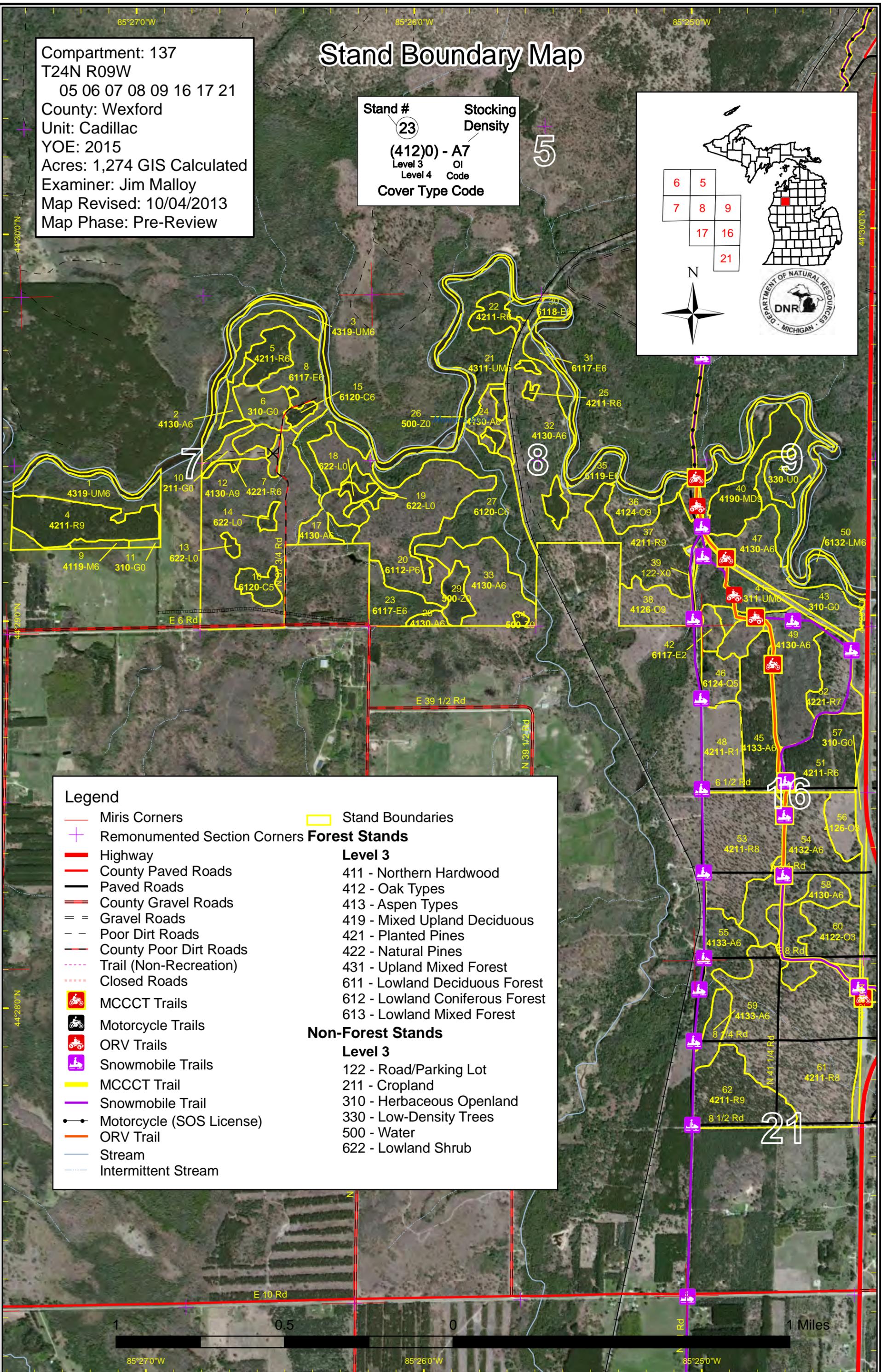
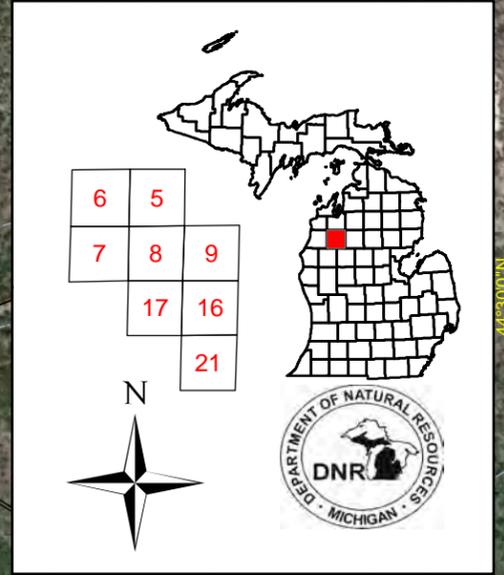
85°27'0"W 85°26'0"W 85°25'0"W

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Stand Boundary Map

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

5



Legend

- Miris Corners
- Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- MCCCT Trails
- Motorcycle Trails
- ORV Trails
- Snowmobile Trails
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- ORV Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

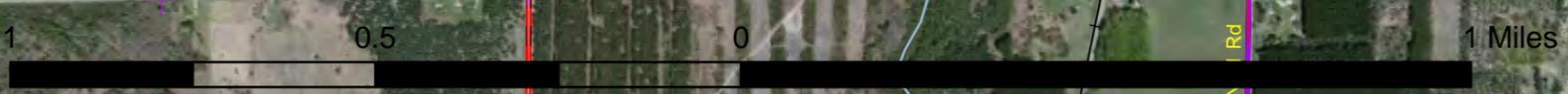
Level 3

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- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
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- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

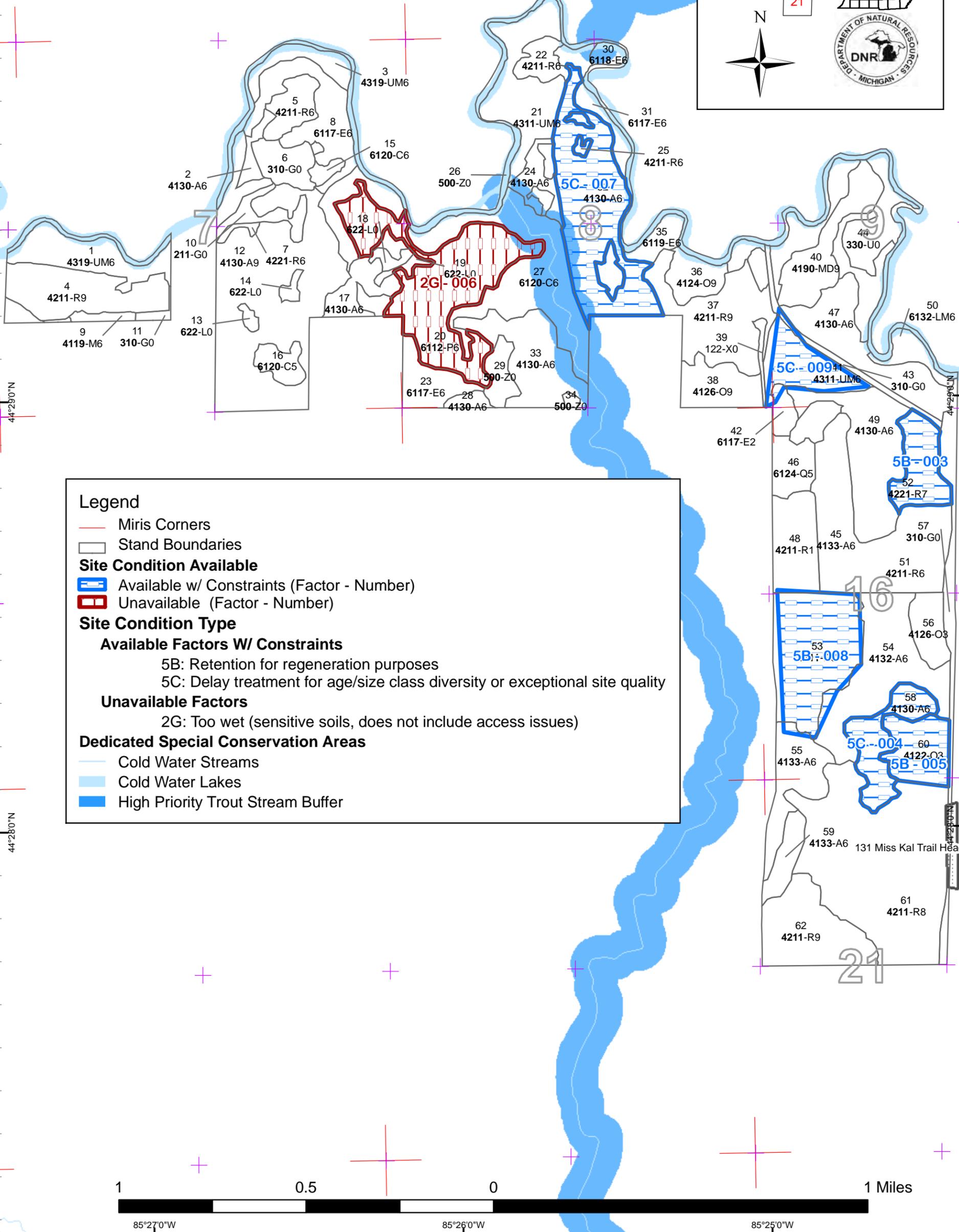
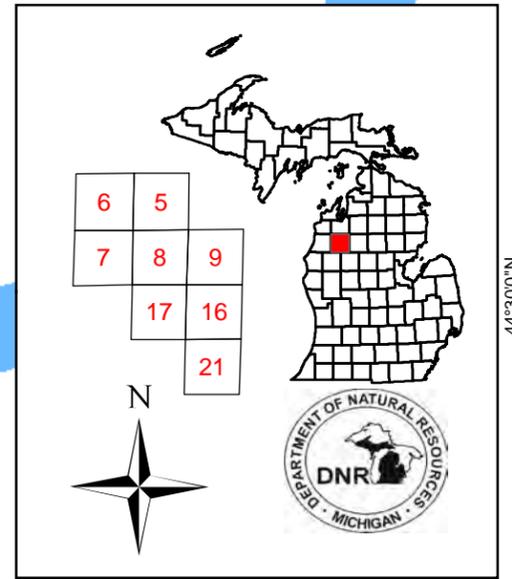
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 Map Revised: 10/04/2013
 Map Phase: Pre-Review

Special Conservation Areas & Site Conditions Map

Stand # **23** Stocking Density **5**
(412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- Stand Boundaries

Site Condition Available

- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Site Condition Type

Available Factors W/ Constraints

- 5B: Retention for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality

Unavailable Factors

- 2G: Too wet (sensitive soils, does not include access issues)

Dedicated Special Conservation Areas

- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer



Report 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	0	44	45	21	135	121	0	0	0	0	0	0	0	0	366
Cedar	0	0	0	0	0	0	0	0	0	7	64	0	0	0	71
Cropland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Herbaceous Openland	38	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Low-Density Trees	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Lowland Aspen/Balsam Poplar	0	0	0	0	0	62	0	0	0	0	0	0	0	0	62
Lowland Conifers	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
Lowland Deciduous	5	0	25	0	12	6	13	0	0	0	0	0	0	0	62
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Mixed Upland Deciduous	0	0	0	0	0	0	0	22	0	0	0	0	0	0	22
Northern Hardwood	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
Oak	0	0	11	0	0	0	28	0	18	0	0	0	0	0	57
Red Pine	20	0	0	0	0	166	13	0	195	0	0	0	0	0	394
Upland Mixed Forest	0	0	35	0	0	0	20	0	0	21	16	0	0	0	92
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	52	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Total	149	44	116	21	147	356	84	28	213	28	87	0	0	0	1274



Report 2 – Proposed Treatment Summaries

Cadillac Mgt. Unit
Year of Entry 2015

Compartment 137
Total Compartment Acres: 1,274

Acres by Treatment Type

Commercial Harvest - 312 Tree Planting - 100 Other - 0
 Habitat Cut - 0 Opening Maintenance - 18

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen Types	121	0	0	0	0	0	121
Planted Pines	100	0	0	0	91	0	191
Total	221	0	0	0	91	0	312



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	63137012-Cut	86.2	4130 - Aspen	High Density Log	57		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription Final harvest stand. Retention in the form of buffers along the three wet islands and 1-2 chain buffer along the wildlife opening to the north.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

45	63137045-Cut	6.1	4133 - Aspen, Mixed Pine	High Density Pole	56	111-140	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription final harvest leave oaks manage for a mix of white pine and aspen.

Specs:

Other

Protect ORV/Snowmobile trail during harvesting

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

51	63137051-Cut	58.5	42110 - Planted Red Pine	High Density Pole	57	171-200	Harvest	Low Thinning	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Thin pine to a residual BA of 100-110

Specs:

Other

Protect ORV/Snowmobile trail during harvesting

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014

59	63137059-Cut	8.6	4133 - Aspen, Mixed Pine	High Density Pole	54		Harvest	Clearcut	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
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Prescription Final harvest stand and allow aspen to expand into adjacent stands. Leave all white pine under 4"

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2014



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
61	63137061-Cut	100.1	42110 - Planted Red Pine	Medium Density Log	87	51-80	Harvest	Clearcut with Reserves	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Final harvest. Leave all oak less than 6" dbh										
<u>Specs:</u>										
<u>Other</u> Protect ORV/Snowmobile trail during harvesting										
<u>Comments:</u>										
<u>Next</u> Trench and replant to red pine.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
62	63137062-Cut	32.1	42110 - Planted Red Pine	High Density Log	87	111-140	Harvest	Low Thinning	4211 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin pine to a residual BA of 80. Leave all oak.										
<u>Specs:</u>										
<u>Other</u> Final harvest next entry and replant to red pine.										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
6	NF_63137006- NonFor	10.5	3102 - Grass				Non-Forest Management	Mowing	31021 - Cool Season Grass	Cmpt. Review Proposal
<u>Prescription</u> Opening maintenance including disking, seeding, mowing and fertilizing										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										
10	NF_63137010- NonFor	7.4	2113 - Forage Crops				Non-Forest Management	Mowing	31021 - Cool Season Grass	Cmpt. Review Proposal
<u>Prescription</u> Opening maintenance including disking, seeding, mowing and fertilizing										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										

**Total Treatment
Acreage Proposed: 309.5**

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	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
58	63137058-Cut	20.3	4130 - Aspen	High Density Pole	51	51-80	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription Final harvest stand. Add grouse and hare spec to final sale.

Specs:

Other Protect ORV/Snowmobile trail during harvesting.

Comment:

Next Steps:

Proposed Start Date: 10/01/2014

Limiting Factor 5C: Delay treatment for age/size class diversity or exceptional site quality

**Total Treatment
Acreage Proposed: 20.3**

Report 5 – Site Conditions

Cadillac Mgt. Unit
 Jim Malloy : Examiner

Compartment 137
 Year of Entry 2015

Dominant Site Conditions

	No	5C	5B	2G
Aspen	286	78	2	
Cedar	71			
Lowland Aspen/Balsam Poplar				62
Lowland Conifers	10			
Lowland Deciduous	61	1		
Lowland Mixed Forest	7			
Mixed Upland Deciduous	22			
Northern Hardwood	5			
Oak	39		18	
Red Pine	335		59	
Upland Mixed Forest	76	16		
Total Forested Acres	914	94	79	62
Relative Percent				

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
003	Available	5B: Retention for regeneration purposes	18				
Comments: Pine over Oak							
004	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20				
Comments:							
005	Available	5B: Retention for regeneration purposes	18				
Comments:							

Report 5 – Site Conditions

Cadillac Mgt. Unit
Jim Malloy : Examiner

Compartment 137
Year of Entry 2015

006	Not Available	2G: Too wet (sensitive soils, does not include access issues)	63	2D: Portable Bridge Needed (Dept. bridge will be adequate)
Comments:				
007	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	57	
Comments: Only aspen of this age east of RR				
008	Available	5B: Retention for regeneration purposes	44	
Comments: Was underplanted 2012				
009	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17	
Comments:				



Report 6 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
131 Miss Kal Trail Head	Concentrated Recreation Area	Trail Head	SCA	
Comments				
ORV and Snowmobile trail head				



Report 7 – 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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4319 - Mixed Upland Forest	High Density Pole	21.5	94		Stand occurs on the bluff face of the Manistee River. Senic and diverse.
2	4130 - Aspen	High Density Pole	4.1	45		Aspen stand on top of bluff overlooking Manistee River
3	4319 - Mixed Upland Forest	High Density Pole	16.0	102	51-80	
4	42110 - Planted Red Pine	High Density Log	30.1	59		Consumers Stand
5	42110 - Planted Red Pine	High Density Pole	13.3	59	111-140	Stands are growing slowly. Thinned last entry
7	42210 - Natural Red Pine	High Density Pole	1.4	59	81-110	Small stand of natural/planted pine along edge of managed wildlife opening.
8	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	25.4	27		seasonaly wet wuth hummoky areas.
9	4119 - Mixed Northern Hardwoods	High Density Pole	5.2	78		
12	4130 - Aspen	High Density Log	86.2	57		Stand is a mix of aspen with pockets of pine and scattered oak and maple.
15	6120 - Lowland Cedar	High Density Pole	14.9	104		Stand is mix of cedar and aspen along the edges of the creek and bluff face of the Manistee River, along with balsam fir.
16	6120 - Lowland Cedar	Medium Density Pole	6.8	96		Stand is a mix of cedar and some hemlock with a scattering of aspen. Wet area within larger aspen stand.
17	4130 - Aspen	High Density Pole	10.8	47		Stand borders private land along the southern edge and contains some drainages.
20	6112 - Lowland Aspen	High Density Pole	62.5	59		Stand is located in the middle of a confluence of small streams and wetlands. Portable bridge would be needed to harvest.
21	4311 - Pine, Aspen Mix	High Density Pole	34.7	27		Stand is a mix of aspen clones and scattered pockets of red pine and white pine.
22	42110 - Planted Red Pine	High Density Pole	7.5	61	141-170	Small stand of planted red pine thinned last entry. RR needs to be crossed to access.
23	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	13.2	65	51-80	Small ash component is dead/dying due to EAB, wet stand with some areas of high ground.
24	4130 - Aspen	High Density Pole	8.3	28		Just converting to pole class



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	42110 - Planted Red Pine	High Density Pole	5.4	61	111-140	Various small areas of planted red pine. Treated with a thinning last entry.
27	6120 - Lowland Cedar	High Density Pole	49.5	106		Stan occurs along the edges of Manton Creek and the south edge of the Manistee River
28	4130 - Aspen	High Density Pole	2.7	42		
30	6118 - Lowland Deciduous with Cedar	High Density Pole	3.1	48	51-80	Stand occurs on floodplain of the river. small acreage and limited access.
31	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	6.0	57		
32	4130 - Aspen	High Density Pole	57.2	48		
33	4130 - Aspen	High Density Pole	29.4	42		ASpen stand with scattered white pine towards the northern portion of the stand.
35	6119 - Mixed Lowland Deciduous Forest	High Density Pole	9.2	41		Pockets of lowland hardwood that occur just above the level of the river. flood seasonaly. Ash is dying/dead due to EAB
36	4124 - Red with White Oak	High Density Log	12.8	64		Stand occurs along the top of the river bluff.
37	42110 - Planted Red Pine	High Density Log	62.6	59		Consumers Pine
38	4126 - White, Black, N. Pin Oak	High Density Log	15.4	68		
40	4190 - Mixed Upland Deciduous with Cedar	High Density Log	22.5	72	51-80	Mostly occurs on floodplains jsut a few feet above the river. Floods seasonaly.
41	4311 - Pine, Aspen Mix	High Density Pole	19.7	67	51-80	
42	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density	4.8	7		
45	4133 - Aspen, Mixed Pine	High Density Pole	6.1	56	111-140	stand is a mix of white pine and aspen. mostly pole/log.
46	6124 - Lowland Spruce-Fir	Medium Density Pole	10.5	62		Wet stand with a wet hole along 41 rd. Stand was left following previous cuts in the area. Allow to progress naturaly. Mix of Balsam, spruce white pine and paper birch. A few scattered aspen.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	4130 - Aspen	High Density Pole	31.0	43		Stand is along the northern edge of the old ORV trail.
48	42110 - Planted Red Pine	Low Density Sapling	20.2	4		
49	4130 - Aspen	High Density Pole	37.0	28		Aspen stand just transitioning into pole class. a few scattered log red pine.
50	6132 - Mixed Lowland Forest with Cedar	High Density Pole	6.7	105		Stand occurs along the floodplain of the manistee river. Adjacent to US131 to the east.
51	42110 - Planted Red Pine	High Density Pole	58.5	57	171-200	
52	42210 - Natural Red Pine	Low Density Log	17.5	87	1-50	Stand was thinned last entry. 30-40 ba of red pine was left to seed in and understory of oak and aspen.
53	42110 - Planted Red Pine	Medium Density Log	45.5	87	1-50	Old red pine plantation with a new 4yo planting of white pine.
54	4132 - Aspen, Jack Pine	High Density Pole	44.1	15		A mix of aspen age classes with scattered overstory jack and red pine.
55	4133 - Aspen, Mixed Pine	High Density Pole	20.6	35		pole sized aspen with scattered pine and heavier to pine along 41 Rd.
56	4126 - White, Black, N. Pin Oak	High Density Sapling	10.5	22		Stand is the result of a red pine final harvest to release the residual oak understory. Oak is doing well, a few islands of pine were left following harvest.
58	4130 - Aspen	High Density Pole	20.3	51	51-80	Stand is a mix of various aspen clones and scattered overstory pines.
59	4133 - Aspen, Mixed Pine	High Density Pole	8.6	54		Aspen stand along edge of 41 Rd.
60	4122 - Oak, Pine	High Density Sapling	18.0	85		Stand is a mix of regenerating oak and a small overstory of oak and pine.
61	42110 - Planted Red Pine	Medium Density Log	100.1	87	51-80	Was supposed to regenerate naturally but no evidence of regen. Final harvest and plant to red pine.
62	42110 - Planted Red Pine	High Density Log	32.1	87	111-140	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	3102 - Grass	10.5	No	Unspecified	
10	2113 - Forage Crops	7.4	Yes	High	
11	310 - Herbaceous Openland	1.9	No	Unspecified	Check for possible trespass from landowner to the south.
13	6220 - Alder/willow	1.5	Unspecified	Unspecified	
14	6220 - Alder/willow	1.9	Unspecified	Unspecified	
18	6229 - Mixed lowland shrub	2.5	No	Unspecified	
19	622 - Lowland Shrub	4.4	Unspecified	Unspecified	
26	50 - Water	43.7	No	Unspecified	Manistee River
29	50 - Water	7.3	Unspecified	Unspecified	
34	50 - Water	0.9	Unspecified	Unspecified	
39	122 - Road/Parking Lot	1.8	No	Unspecified	41 Rd
43	3104 - Degraded	6.5	No	Unspecified	Old ORV trail and portion of current ORV trail to the Manistee River.
44	330 - Low-Density Trees	14.9	Unspecified	Unspecified	
57	310 - Herbaceous Openland	18.8	Unspecified	Unspecified	ROW along US 131 including the current and past ORV/Snowmobile Trailheads.