



ESCANABA FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 098 ENTRY YEAR: 2011

Compartment Acreage: 956 County: Delta

Revised: August 3, 2009

Stand Examiner: Dan Racine, Forester, FMFM; Bill Rollo and Craig Albright, Wildlife Division

Legal Description: T43N R22W Sections 20, 29, and 32

Management Goals: This compartment consists of a mix of lowland and upland cover types. The majority of the lowland cover type is represented by Cedar. The other lowland forest community represented within this compartment is a lowland hardwood cover type consisting mostly of Red Maple and Black Ash with several other minor component species. The majority of the upland cover type is Aspen and Northern Hardwood stands with a mix of several minor component species. The proposed treatments within the Northern Hardwoods are selection harvests that focus on improving the existing stand quality, maintaining the species diversity, and creating an opportunity for regeneration. The treatments within the Aspen are intended to harvest the mature species and regenerate the existing stand. There are no Special Conservation Areas within this compartment.

Soil and Topography: The topography within this compartment is nearly level. The major soils complexes within this compartment consist of Carbondale and Cathro soils within the lowland cover types and Trenary soils within the upland cover types.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is located within a 6 by 6 mile block of state forest land in north Delta County. This block of land contains private land consisting of secondary and primary residences.

Unique, Natural Features: None known.

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations: N/A

Wildlife Habitat Considerations: This compartment contains uplands of aspen and northern hardwoods and wetter areas dominated by lowland coniferous forest, predominately cedar. Most of the aspen is young and will be allowed to mature to rotation age, and much of the hardwood acreage was treated last decade. Prescriptions this entry year mainly involve selection harvest of hardwood stands that are less than 11 acres in size. Three forest openings will be prescribed for maintenance/herbaceous planting as a possible cooperative project with a sportsperson organization.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured till. There is insufficient data to determine the glacial drift thickness. The Ordovician Trenton Group underlies the glacial drift. The Trenton is quarried for stone and may overlap Precambrian aged rocks which may have metallic and nonmetallic mineral potential. Part of this area was previously

leased for metallic exploration, but not currently. Gravel pits are located in the area and potential appears to be good. No economic oil and gas production has been found in the UP.

Vehicle Access: Access off of Highway M-35 in the Northeast portion. County Road 432 crosses this compartment. The north section can be reached by vehicle via the Engineer Road and the southern portion can be reached on the Section 32 Road. Both of these forest roads originate off County Road 432.

Survey Needs: Approximately ½ mile of line work.

Recreational Facilities and Opportunities: No facilities. Hunting is the primary recreational use.

Fire Protection: There are very little hazard fuels within this compartment. Vehicle access and water sources could pose a problem for fire protection.

Additional Compartment Information:

****** Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

- Cover Type by Age Class**
- Cover Type by Management Objective**
- Compartment Volume Summary**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**

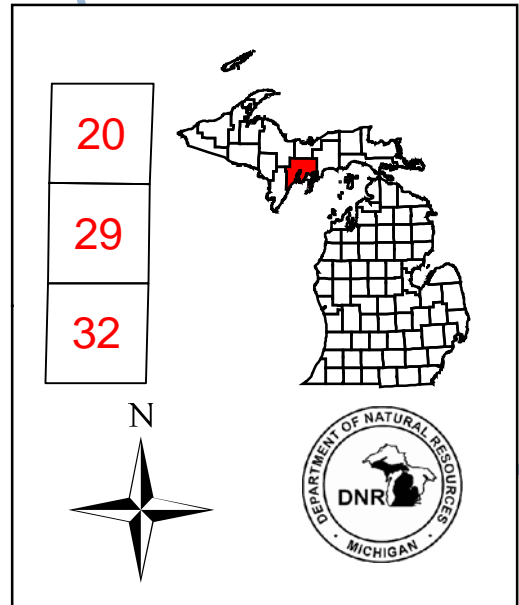
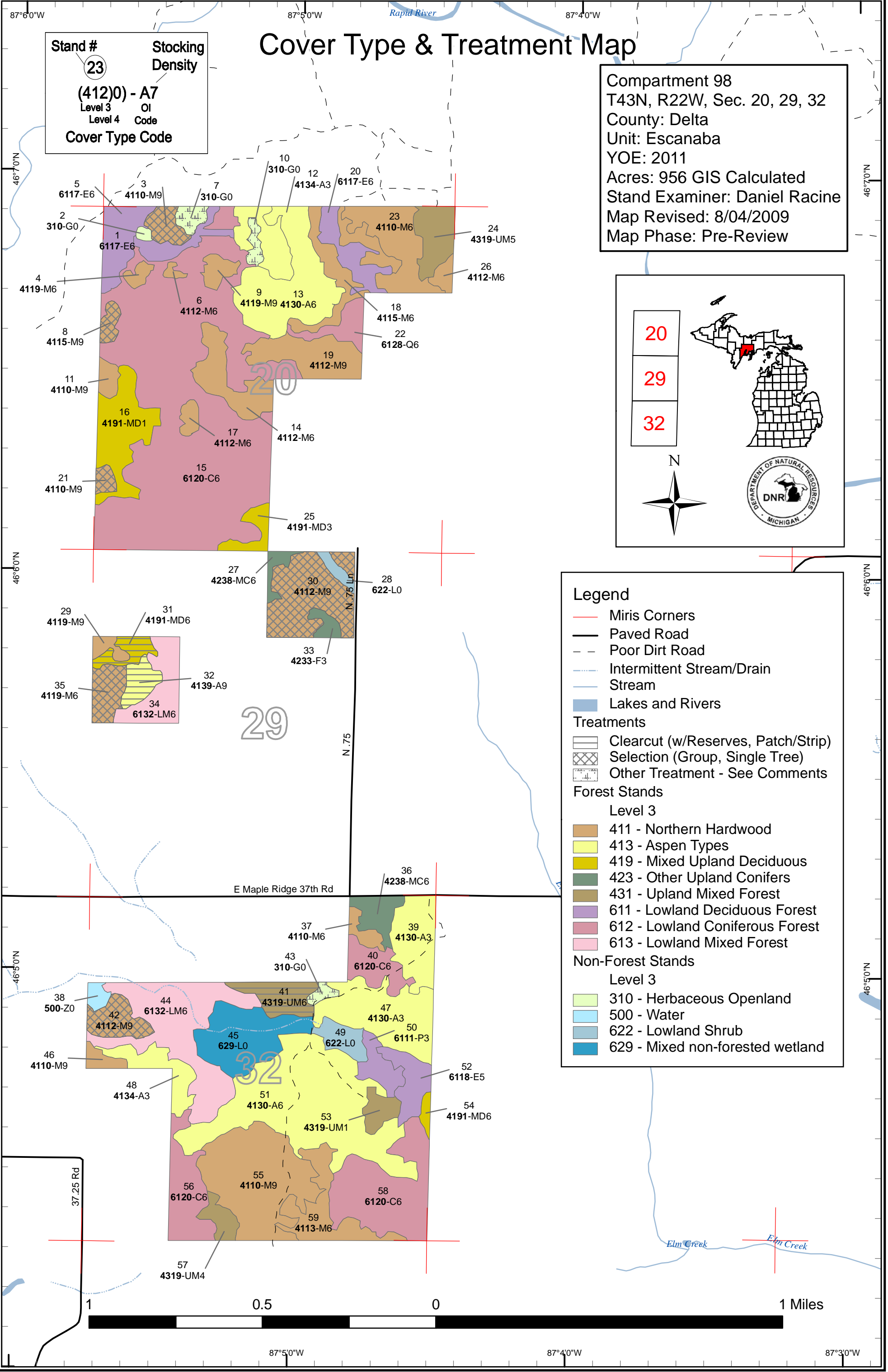
****** The following information is displayed on the attached compartment maps:**

- Base feature information, stand numbers, cover types**
- Proposed treatments**
- Proposed road access system**
- Suggested potential old growth**

Cover Type & Treatment Map

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

Compartment 98
 T43N, R22W, Sec. 20, 29, 32
 County: Delta
 Unit: Escanaba
 YOE: 2011
 Acres: 956 GIS Calculated
 Stand Examiner: Daniel Racine
 Map Revised: 8/04/2009
 Map Phase: Pre-Review



Legend

- Miris Corners
- Paved Road
- Poor Dirt Road
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)
- Other Treatment - See Comments

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 629 - Mixed non-forested wetland

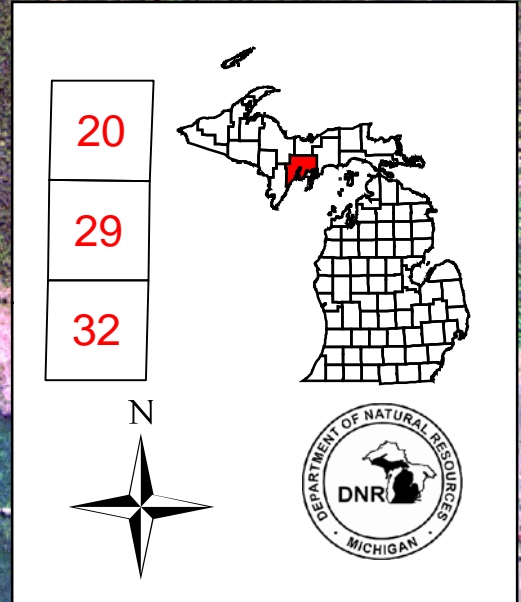


87°60'W 87°50'W 87°40'W 46°70'N 46°60'N 46°50'N 46°40'N

Stand Boundary Map

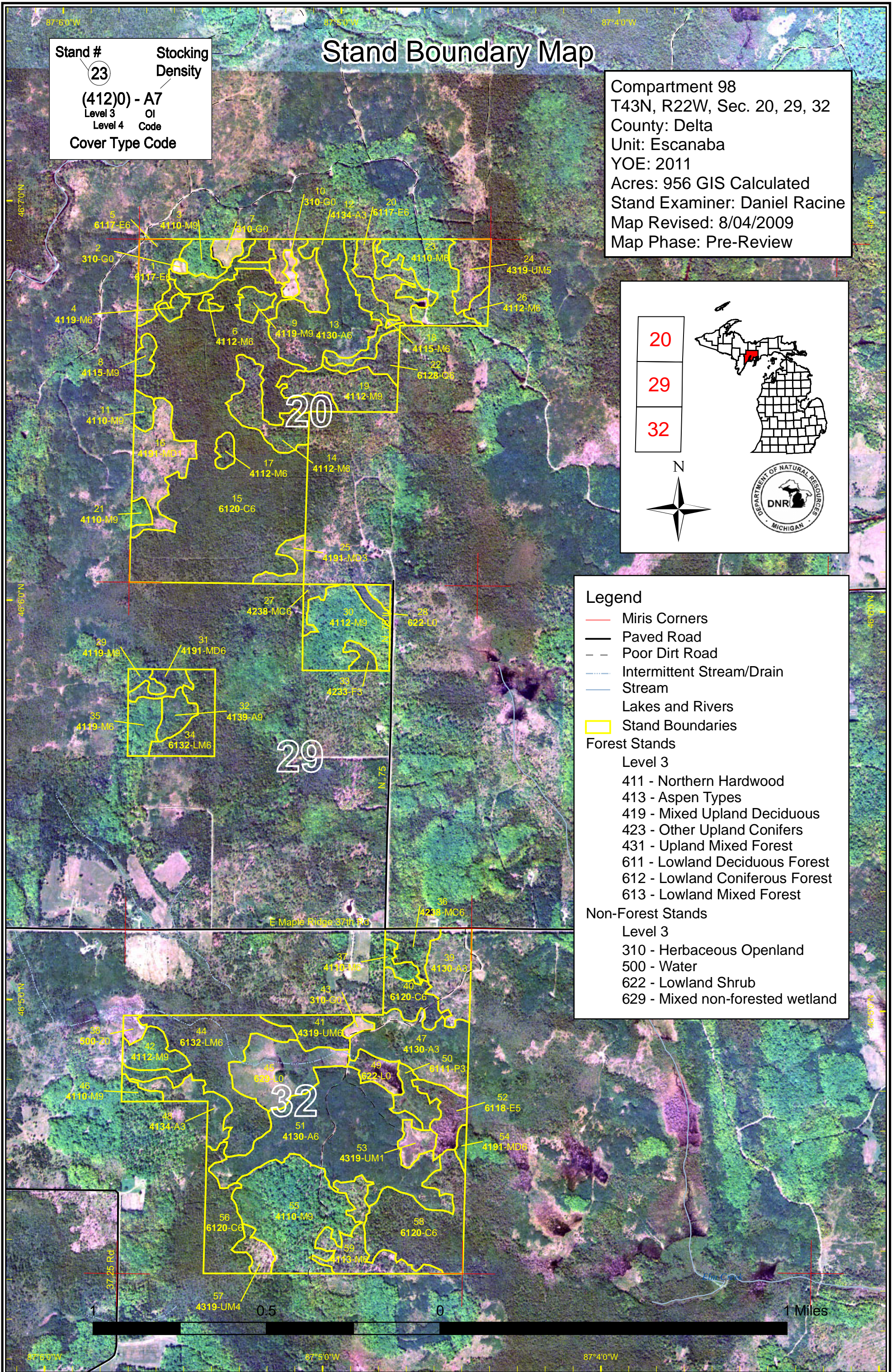
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Legend

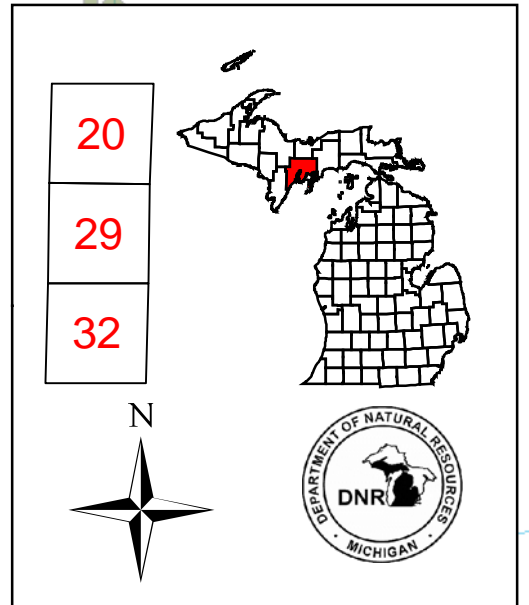
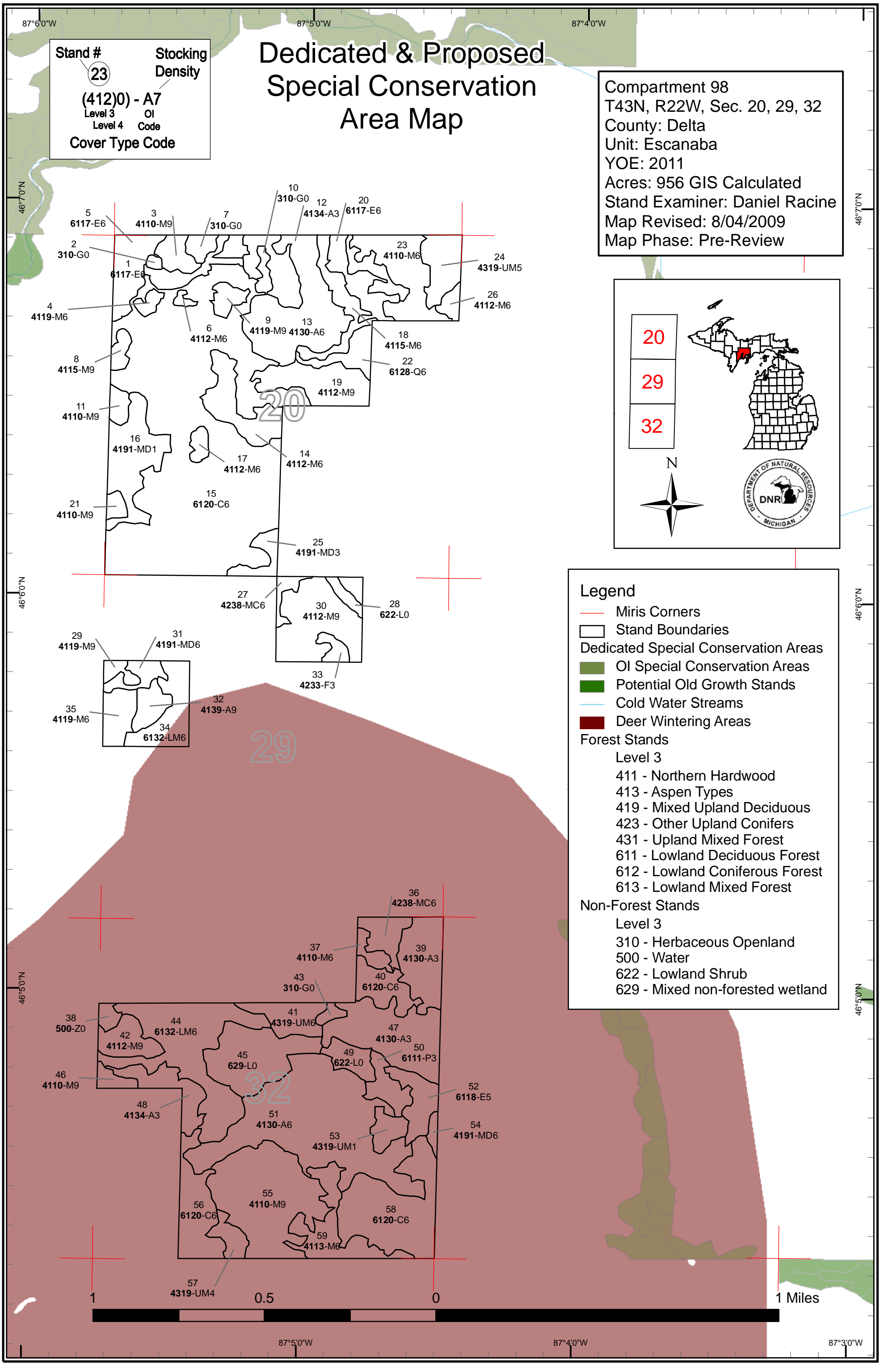
- Miris Corners
 - Paved Road
 - Poor Dirt Road
 - Intermittent Stream/Drain
 - Stream
 - Lakes and Rivers
 - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
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- Non-Forest Stands**
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Dedicated & Proposed Special Conservation Area Map

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

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Legend

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas
- OI Special Conservation Areas
- Potential Old Growth Stands
- Cold Water Streams
- Deer Wintering Areas

Forest Stands

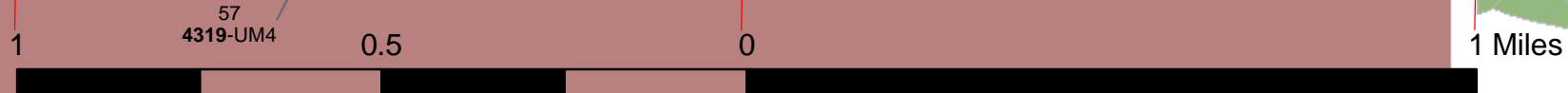
Level 3

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Non-Forest Stands

Level 3

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Escanaba Mgt. Unit

Covertypes, Acres, and Age summary
(Level 3 Cover Type)

Compartment 098 Year of Entry 2011

Report Date: 08/04/2009



	Age Class															Total
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen Types	0	19	24	113	39	0	7	0	0	0	0	0	0	0	0	201
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Lowland Coniferous Forest	0	0	0	0	0	0	0	0	0	0	225	8	39	0	0	272
Lowland Deciduous Forest	0	0	0	8	21	0	0	11	10	0	0	0	0	0	0	51
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	46	0	16	0	0	0	62
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Mixed non-forested wetland	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Mixed Upland Deciduous	0	0	30	0	0	0	7	0	0	0	0	0	0	0	0	37
Northern Hardwood	0	0	0	0	0	0	0	4	228	3	0	0	0	0	0	235
Other Upland Conifers	0	0	0	0	0	6	8	0	0	0	0	0	0	0	0	15
Upland Mixed Forest	0	0	0	6	0	0	11	0	5	0	12	0	0	0	0	34
Water	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	49	19	54	126	60	6	33	15	244	49	237	23	39	0	0	956

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
3 33098003-Cut	6.1	4110 - Sugar Maple Association	High Density Log	78	Harvest	Single Tree Selection	Sugar Maple Association

Rev Cmnt: This stand consists of primarily sugar maple with a minor component of other hardwood species. All plots were consistent above 120 BA.

Rev Spec: Treatment=> Single tree selection retaining approximately 80 BA. Create regeneration openings throughout the stand and retain species diversity. Improve existing stand quality and manage for sawlogs with the existing stand.
Long term MO=> Continue to move stand to uneven-aged management and create a regeneration mix of any northern hardwood species.
Retention=> Follow in-stand retention guide for maintaining wildlife trees and species diversity.

Next Steps: Natural regeneration of any northern hardwood species. Monitor the next treatment period for regeneration success.

8 33098008-Cut	3.3	4115 - Y.Birch, Hemlock NH	High Density Log	78	Harvest	Single Tree Selection	Y.Birch, Hemlock NH
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Rev Cmnt: There is some super canopy trees here that are older. The BA varies here from 140 to 100.

Rev Spec: Treatment=> Single tree harvest this stand retaining approximately 70 BA. Maintain the species diversity. Create regeneration openings throughout.
Long term MO=> Create opportunities for and enhance existing stand regeneration.
Retention=> Retain the species diversity and leave some spruce for seed trees and leave the cedar. Opportunities for super canopy yellow birch and red maple wildlife trees.

Next Steps: Monitor the regeneration next treatment period. Acceptable regeneration mix of any of the overstory northern hardwood species.

21 33098021-Cut	2.6	4110 - Sugar Maple Association	High Density Log	78	Harvest	Single Tree Selection	Sugar Maple Association
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Rev Cmnt: The vast majority of this stand is sugar maple. Other species present are cedar, white birch, yellow birch. BA range of 150 and 120.

Rev Spec: Treatment=> Single tree harvest this stand retaining approximately 80 BA. Create regeneration openings throughout. Maintain the species diversity.
Long Term MO=> Enhance the existing stand quality. Create opportunities for northern hardwood regeneration.
Retention=> Maintain some wildlife den trees and snags.

Next Steps: Monitor the success of any regeneration the next treatment period. Acceptable regeneration mix of any of the overstory northern hardwood species.

30 33098030-Cut	30.9	4112 - Maple, Beech, Cherry Association	High Density Log	78	Harvest	Single Tree Selection	Maple, Beech, Cherry Association
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Rev Cmnt: The BA is consistent at 120 or above. The piece to the north of the non forest wetland includes a black ash, aspen, red and sugar maple and mixed conifer species.

Rev Spec: Treatment=> Single tree harvest retaining approximately 80 BA. Maintain species diversity. Create regeneration openings throughout. Mark around the small piece with black ash in it.
Long Term MO=> Improve the existing stand quality and create northern hardwood regeneration opportunities.
Retention=> Retain species diversity and maintain some wildlife trees following the in-stand retention guidelines.

Next Steps: Monitor regeneration success next treatment period. Acceptable regeneration mix of any of the overstory species.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
41 33098041-Cut	11.1	4319 - Mixed Upland Forest	High Density Pole	55	Harvest	Clearcut with Reserves	Mixed Upland Forest

Rev
Cmnt: Wildlife can mark some birch trees for a seed source. This stand consists of a 50/50 mix of deciduous/conifer. There is some black ash along the edge.

Rev
Spec Treatment=> Harvest all species but leave a retention patch where the cedar volumes are higher and some white spruce for seed trees. Leave the submerchantable spruce and balsam fir.
Long term MO=> Stand regeneration of aspen, other mixed upland species and conifer.
Retention=> Retention patch consisting of an area with higher cedar volumes. Leave some spruce for seed trees and may leave some white birch.

Next
Steps: Monitor the success of regeneration next treatment period. Acceptable regeneration mix of aspen, conifers, and other overstory upland deciduous species.

7 NF_33098007-NonFor	3.6	Unspecified		0	Non-Forest Management	Other - Specify	Cool Season Grass
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Rev
Cmnt: Part of this opening is in the compartment 91, stand 413. When planted, include this 0.9 acres.

Rev
Spec Make available to local sportsmen clubs if they wish to plant a wildlife mix onto state lands. Yearly maintenance of this opening following planting (mowing, top-dressing with fertilizer, frost-seeding) may be required.

Next
Steps: Create an "Out of YOE" Treatment for Comp. 91, stand 413.

10 NF_33098010-NonFor	2.7	Unspecified		0	Non-Forest Management	Other - Specify	Cool Season Grass
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Rev
Cmnt: Appears to be a constructed opening from teh 1990's.

Rev
Spec Make available to local sportsmen club if they wish to plant a wildlife mix on state land. Yearly maintenance (mowing, top-dressing with fertilizer, frost seeding) may be required.

Next
Steps:

43 NF_33098043-NonFor	2.0	Unspecified		0	Non-Forest Management	Other - Specify	Cool Season Grass
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Rev
Cmnt:

Rev
Spec Make available to a local sportsmen club if they wish to plant a wildlife mix onto state land. Yearly maintenance (mowing, top-dressing with fertilizer, frost-seeding) may be required.

Next
Steps:

**Total Treatment
Acreage Proposed: 62.3**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**



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Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
32 33098032-Cut	6.7	4139 - Aspen, Mixed Deciduous	High Density Log	50	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous

Limiting Factor and Comment: 2A: Adjacent landowner denies access
Landowner changed hands. Gain permission from landowner prior to setting up the sale.

Rev Cmnt: This stand consists of aspen, maple, and birch along with some cedar. This stand was broken out from stand 35 with more aspen within stand 32.

Rev Spec: Treatment=> Harvest all species with the exception of a retention patch. The retention patch should include a component of cedar and will be along the east side.
Long term MO=> Regenerating the existing overstory species.
Retention=> Leave some potential wildlife trees and a retention patch of approximately 5-10%.

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration mix of aspen, conifers, and overstory upland deciduous species.

No Treatment Reason: Landowner changed hands. Gain permission from landowner prior to setting up the sale.

31 33098031-Cut	5.6	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	50	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Conifer
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Limiting Factor and Comment: 2A: Adjacent landowner denies access
Landowner changed hands. Get access prior to setting up the sale.

Rev Cmnt: The majority species are aspen, balsam, and white birch with a red maple component. Cedar, balsam present as well.

Rev Spec: Treatment=> Harvest all species with the exception of submerchantable spruce and fir and a reserve patch where the cedar component is heaviest.
Long term MO=> Aspen and mix of conifer and other deciduous species.

Next Steps: Monitor regeneration the next treatment period. Acceptable regeneration of mix of aspen, conifers, and mixed upland deciduous.

No Treatment Reason: Landowner changed hands. Get access prior to setting up the sale.

42 33098042-Cut	10.0	4112 - Maple, Beech, Cherry Association	High Density Log	78	Harvest	Single Tree Selection	Maple, Beech, Cherry Association
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Limiting Factor and Comment: 2A: Adjacent landowner denies access
If the owner of the property is able to give permission the sale will be set up.

Rev Cmnt: Medium density pole and some saplings. Basal area swings of 140, 120, 100. Spruce and balsam on the southern edge.

Rev Spec: Treatment=> Single tree harvest retaining approximately 75BA. Maintain the species diversity. Create regeneration openings throughout.
Long term MO=> Create opportunities for regeneration. Enhance the existing stand quality.
Retention=> Leave some wildlife trees and follow in stand retention guides.

Next Steps: Monitor success of regeneration the next treatment period. Acceptable regeneration mix of the overstory northern hardwood species.

No Treatment Reason: If the owner of the property is able to give permission the sale will be set up.

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**



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Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
35 33098035-Cut	9.0	4119 - Mixed Northern Hardwoods	High Density Pole	78	Harvest	Single Tree Selection	Mixed Northern Hardwoods

Limiting Factor and Comment: 2A: Adjacent landowner denies access
Landowner has changed. Get permission prior to setting up the sale.

Rev Cmnt: This stand is from 70-120 BA. This stand could wait but harvest now with the other stands within this forty. The majority of the stand is sugar maple with other northern hardwoods and balsam fir.

Rev Spec: Treatment=> Single tree harvest retaining approximatley 70BA. Maintain the species diversity. Create regeneration openings throughout.
Long term MO=> Enhance the existing stand quality and try to achieve regeneration.
Retention=> Maintain some wildlife trees.

Next Steps: Monitor the regeneration next treatment period and gain permission from private landowner. Acceptable regeneration mix of any of the northern hardwood overstory species.

No Treatment Reason: Landowner has changed. Get permission prior to setting up the sale.

**Total Treatment
Acreage Proposed: 31.2**



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.

Inventory Method: IFMAP

Stand	SCA Name	Acres	Comments



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.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.