



Compartment Review Presentation

Baraga Forest Management Unit

Compartment 54

Entry Year 2016

Acreage: 869

County Houghton

Management Area: Central Houghton

Revision Date: 04/09/2014

Stand Examiner: John Turunen

Legal Description:

HOUGHTON COUNTY, ELM RIVER TOWNSHIP
T52N, R36W, Sections 32, 33
T51N, R36W, Section 5

Identified Planning Goals:

The Central Houghton management area is on dissected moraines in Central Houghton County. The state forest covers 46,908 acres and is in scattered blocks. The management area is dominated by the northern hardwoods, aspen and lowland conifer cover types. Other attributes that played a role in the definition of this management area include:

- Dominated by the mesic northern forest natural community;
 - High-range in site quality;
 - Provides multiple benefits including forest products and dispersed recreational activities; and
 - Provides a variety of fish and wildlife habitats.
- This management area contains one of the western Upper Peninsula Grouse Enhanced Management Systems areas. This area plan will emphasize balanced age classes of aspen for timber production which will have habitat benefits for ruffed grouse. The boundaries of Grouse Enhanced Management Systems areas will be delineated and an operational plan will be developed during this planning period by the local biologist in collaboration with the Forest Resources Division unit manager and integrated into the plan through the revision process.
- The management priority for this area is the production of high-quality timber products, particularly hardwood sawlogs and veneer while maintaining habitat qualities for wildlife species dependent on the northern hardwood communities in this area.

Soil and topography:

Graveraet (loam), Misery (fine sandy loam), Kalkaska (sand), Munising (loamy fine sand), Skanee (fine sandy loam), Gay (mucky sandy loam), AuGres (sand), Roscommon (sand), Tawas (muck), Cathro (muck). The terrain is level to slightly rolling.

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

Most of the state land is in one block. Much of the adjacent land is owned by industry, the rest is owned by small private owners. Land use is primarily for forestry.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

No water resources are within the current compartment boundaries.

Wildlife Habitat Considerations:

Stimulation of hard- and soft-mast-producing species is desirable when commercial treatments are scheduled. This compartment has good bear habitat.

Mineral Resource and Development Concerns and/or Restrictions

Compartment 54: Sections 31 - 33, T52N-R36W, Houghton Co
Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and coarse-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Precambrian Jacobsville Sandstone and the Portage Lake Volcanics subcrop below the glacial drift. The Jacobsville was previously used as a building stone and the Portage Lake was mined for copper in Section 30. The nearest gravel pit is located just to the north and potential appears to be

good. Abandoned copper mines and crushed basalt piles are located just to the north. Part of this Compartment was previously leased for metallic development. There is no economic oil and gas production in the UP.

Vehicle Access:

Access is good in the compartment, some is winter road.

Survey Needs:

Survey work is in progress.

Recreational Facilities and Opportunities:

Access is good to most of the compartment. There is some hunting. Use of the State owned railroad grade is high. The Nicholls snowmobile trail and the Alston to Winona snowmobile trail are in the compartment area.

Fire Protection:

Wildfire occurrence here is rare.

Additional Compartment Information:

A special use permit was issued in 1987 to Michigan Tech for an acid rain study. This is not intended to be a long term use of the state forests.

A land exchange consolidated ownership. Two forties were transferred in the exchange.

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: 54
 T51N R36W Sec. 4
 T52N R36W Sec. 32, 33
 County: Houghton
 Unit: Baraga
 YOE: 2016
 Acres: 869 GIS Calculated
 Examiner: John Turunen
 Map Revised: 05/20/2014
 Map Phase: Pre-Review

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

Legend

- DNR Survey Corners
- Miris Corners
- State Highway
- Highway
- Paved Roads
- Poor Dirt Roads
- Powerline
- Stream
- Intermittent Stream
- Snowmobile Trails
- Snowmobile Trail
- Lakes and Rivers

Treatments

- Selection (Group, Single Tree)

Forest Stands

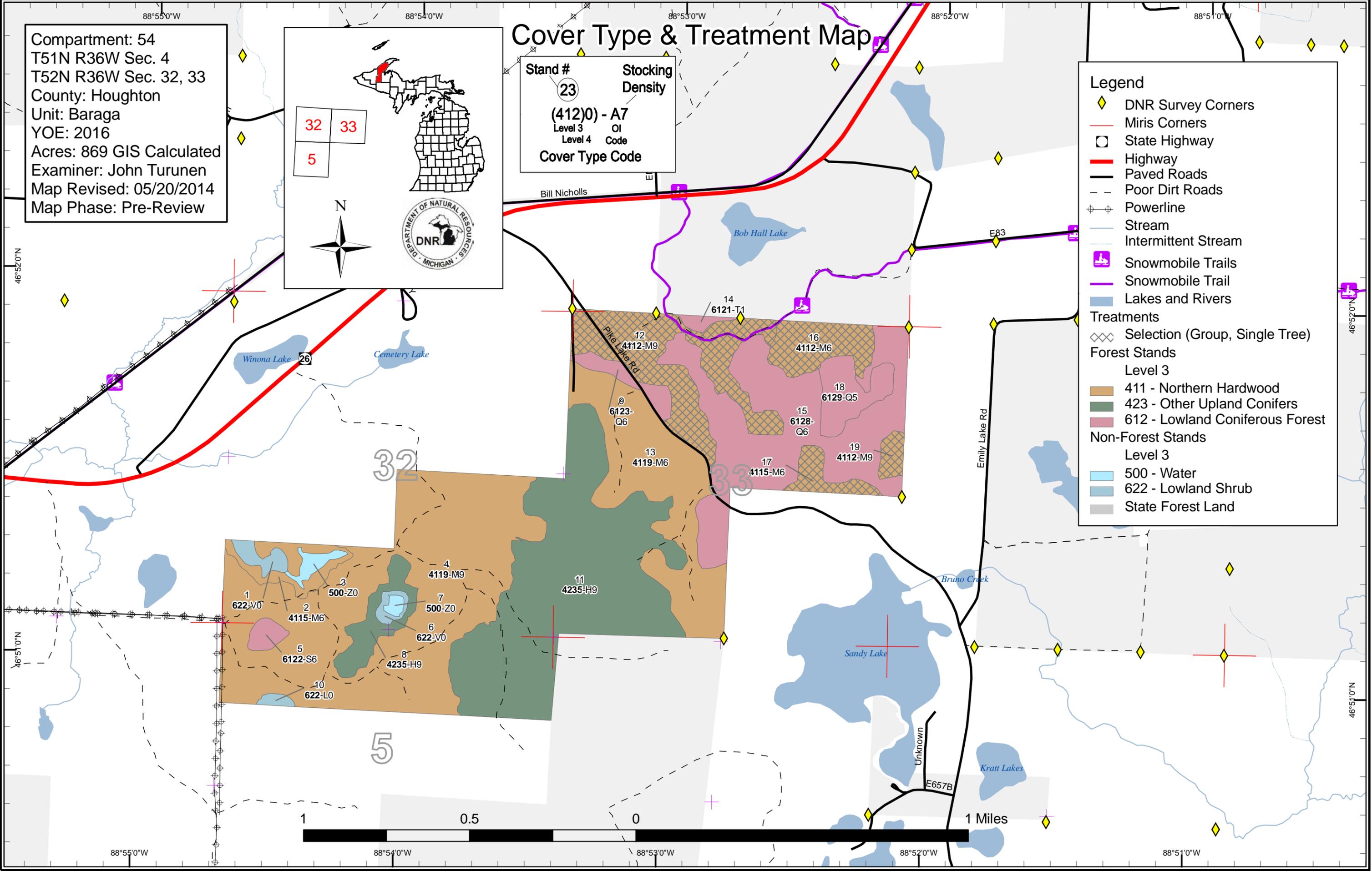
Level 3

- 411 - Northern Hardwood
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 500 - Water
- 622 - Lowland Shrub
- State Forest Land



Stand Boundary Map

Compartment: 54
 T51N R36W Sec. 4
 T52N R36W Sec. 32, 33
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 Unit: Baraga
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 Acres: 869 GIS Calculated
 Examiner: John Turunen
 Map Revised: 05/20/2014
 Map Phase: Pre-Review

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

Legend

- ◆ DNR Survey Corners
- Miris Corners
- State Highway
- Highway
- Paved Roads
- - - Poor Dirt Roads
- ⊕ Powerline
- Stream
- Intermittent Stream
- ⊕ Snowmobile Trails
- Snowmobile Trail
- Stand Boundaries

Forest Stands

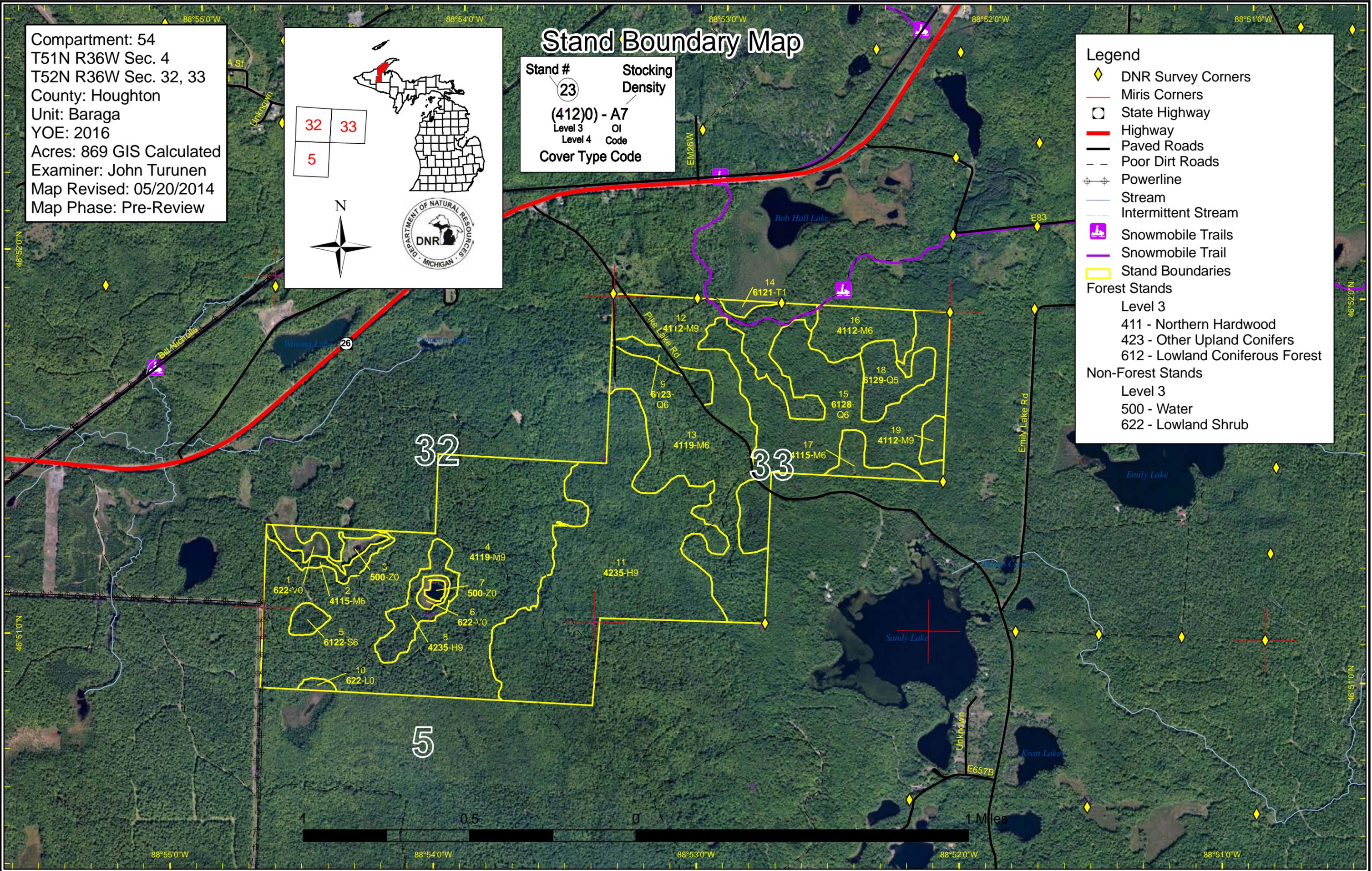
Level 3

- 411 - Northern Hardwood
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest

Non-Forest Stands

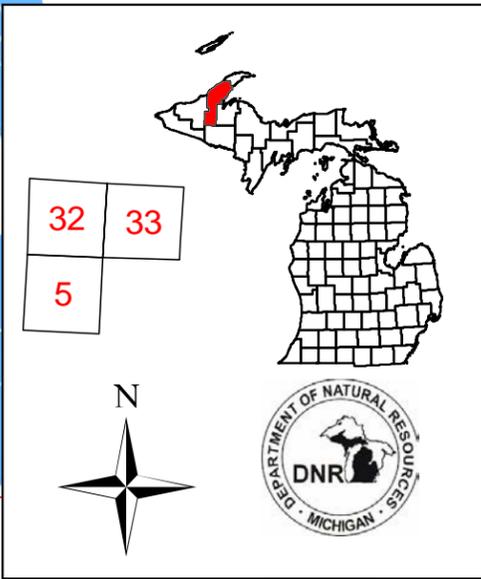
Level 3

- 500 - Water
- 622 - Lowland Shrub

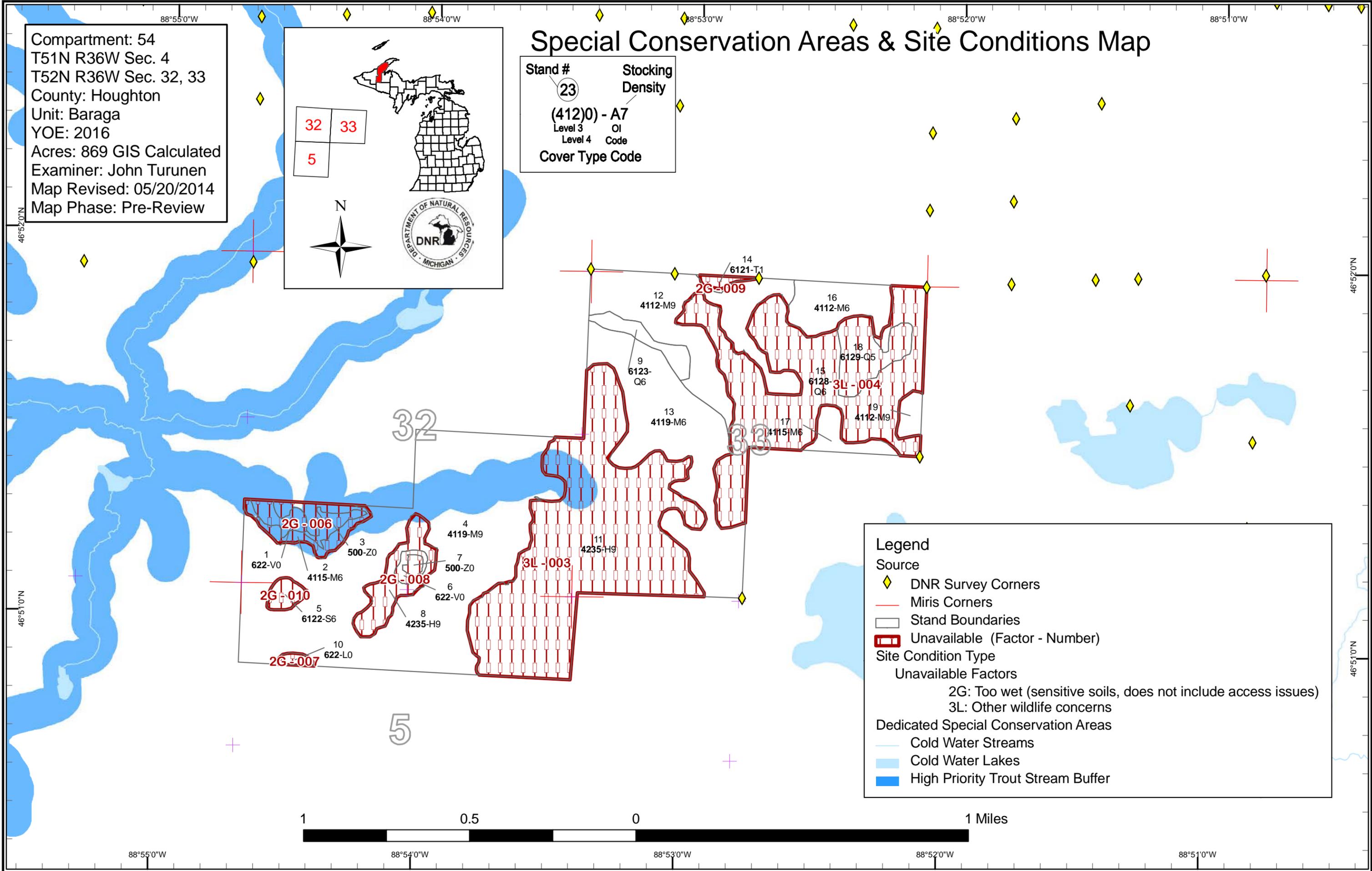


Special Conservation Areas & Site Conditions Map

Compartment: 54
 T51N R36W Sec. 4
 T52N R36W Sec. 32, 33
 County: Houghton
 Unit: Baraga
 YOE: 2016
 Acres: 869 GIS Calculated
 Examiner: John Turunen
 Map Revised: 05/20/2014
 Map Phase: Pre-Review



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



Legend

Source

- ◆ DNR Survey Corners
- Miris Corners
- Stand Boundaries
- ▨ Unavailable (Factor - Number)

Site Condition Type

Unavailable Factors

- 2G: Too wet (sensitive soils, does not include access issues)
- 3L: Other wildlife concerns

Dedicated Special Conservation Areas

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



88°55'0"W 88°54'0"W 88°53'0"W 88°52'0"W 88°51'0"W

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
Bog	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	211	211
Lowland Conifers	0	0	0	0	0	10	0	0	0	21	0	0	0	128	159
Lowland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	473	473
Tamarack	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	17	0	0	0	3	10	0	0	5	21	0	0	0	813	869



Report 2 – Proposed Treatment Summaries

Baraga Mgt. Unit
Year of Entry 2016

Compartment 054
Total Compartment Acres: 869

Acres by Treatment Type

Commercial Harvest - 115	Tree Planting - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Northern Hardwood	0	115	0	0	0	0	0	115
Total	0	115	0	0	0	0	0	115



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	11054012-Cut	72.9	4112 - Maple, Beech, Cherry Association	High Density Log	99	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
<u>Prescription</u> Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, black cherry, white pine and cedar where present. Oak should be released <u>Specs:</u> on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". <u>Other</u> Leave 4" base of snow on snowmobile trail if logged during the snowmobile season. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
16	11054016-Cut	25.7	4112 - Maple, Beech, Cherry Association	High Density Pole	99	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
<u>Prescription</u> Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, black cherry, white pine and cedar where present. Oak should be released <u>Specs:</u> on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". <u>Other</u> Leave 4" base of snow on snowmobile trail if logged during the snowmobile season. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2017										
17	11054017-Cut	10.9	4115 - Y.Birch, Hemlock NH	High Density Pole	99	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
<u>Prescription</u> Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, black cherry, white pine and cedar where present. Oak should be released <u>Specs:</u> on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". <u>Other</u> Leave 4" base of snow on snowmobile trail if logged during the snowmobile season. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
19	11054019-Cut	5.8	4112 - Maple, Beech, Cherry Association	High Density Log	99	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
<u>Prescription</u> Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, black cherry, white pine and cedar where present. Oak should be released <u>Specs:</u> on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". <u>Other</u> Leave 4" base of snow on snowmobile trail if logged during the snowmobile season. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										

**Total Treatment
Acreage Proposed: 115.3**



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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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#Type! #Type!

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

Total Treatment
Acreage Proposed: 0.0

Report 5 – Site Conditions

Baraga Mgt. Unit
John Turunen : Examiner

Compartment 054
Year of Entry 2016



Availability for Management

Total Acres	Acres			Dominant Site Conditions		
	Available	Not Available		No	3L	2G
210		210	Hemlock		192	18
158	10	148	Lowland Conifers	10	148	
5		5	Lowland Spruce/Fir			5
471	456	14	Northern Hardwood	456		14
3	0	2	Tamarack	0		2
847	467	381	Total Forested Acres	467	340	40
	55%	45%	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	Not Available	3L: Other wildlife concerns	193				
Comments: WLD does not allow harvest of this forest type.							
004	Not Available	3L: Other wildlife concerns	149				
Comments: WLD does allow harvesting of this forest type.							
006	Not Available	2G: Too wet (sensitive soils, does not include access issues)	25	3L: Other wildlife concerns			
Comments:							

Report 5 – Site Conditions

Baraga Mgt. Unit
John Turunen : Examiner

Compartment 054
Year of Entry 2016



007	Not Available	2G: Too wet (sensitive soils, does not include access issues)	2	
Comments:				
008	Not Available	2G: Too wet (sensitive soils, does not include access issues)	23	3K: Rare or unique landforms
Comments:				
009	Not Available	2G: Too wet (sensitive soils, does not include access issues)	3	
Comments:				
010	Not Available	2G: Too wet (sensitive soils, does not include access issues)	5	
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
Comments				



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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.

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Baraga Mgt. Unit

Report 8 – Forested Stands

Compartment: 054
Year of Entry: 2016

Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
4115 - Y.Birch, Hemlock NH	High Density Pole	14.6	Uneven Age	111-140	Rmz
4119 - Mixed Northern Hardwoods	High Density Log	246.0	Uneven Age	81-110	part of Half Nelson Hdwds., completed 6-20-97
6122 - Black Spruce	High Density Pole	5.3	88		wet
42350 - Upland Hemlock	High Density Log	18.6	Uneven Age	81-110	RMZ
6123 - Lowland Fir	High Density Pole	9.7	53		
42350 - Upland Hemlock	High Density Log	192.7	Uneven Age	111-140	cutting restrainsts for Hemlock and Cedar
4112 - Maple, Beech, Cherry Association	High Density Log	72.9	Uneven Age	111-140	may need to exclude finger from sale
4119 - Mixed Northern Hardwoods	High Density Pole	97.2	Uneven Age	81-110	was treated in 1997
6121 - Tamarack	Low Density Sapling	2.9	46		
6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	128.3	Uneven Age		
4112 - Maple, Beech, Cherry Association	High Density Pole	25.7	Uneven Age	81-110	was treated in 2006, cut with adjacent stand to north in 2018
4115 - Y.Birch, Hemlock NH	High Density Pole	10.9	Uneven Age	81-110	
6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	21.0	94		wet
4112 - Maple, Beech, Cherry Association	High Density Log	5.8	Uneven Age	111-140	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6225 - Bog	5.9	No	Unspecified	
3	50 - Water	4.6	No	Unspecified	
6	6225 - Bog	2.9	No	Unspecified	
7	50 - Water	1.8	No	Unspecified	
10	622 - Lowland Shrub	2.1	Unspecified	Unspecified	sparse trees, lowland