



**Baraga Forest Management Unit
Compartment Review Presentation
Compartment #46 Entry Year: 2014
Compartment Acreage: 1236 County: Houghton**

Revision Date: 7/18/2012

Stand Examiner: Fred Hansen, John Turunen

Legal Description: T51N R36W Sec 23, 24, 25

Identified Planning Goals ('Management Area' or 'RMU', if applicable): Central Houghton

Management Goals: To maintain a healthy; sustainable forest with special consideration to wildlife habitat, fisheries habitat, and recreational needs.

Soil and Topography: The compartment has level terrain with steep slopes adjacent to streams and the West Branch Otter River. Soils are Munising fine sandy loam, Yalmer sand, Liminga sand, Alcona loamy fine sand, Graveraet loam, Ocqueoc fine sand, and Kalkaska sand.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Adjacent lands to the east are small private; there is state land to the north with the remaining adjacent lands being owned by forest industry.

Unique, Natural Features: The West Branch of the Otter River runs through the southern part of the compartment.

Archeological, Historical, and Cultural Features: None listed.

Special Management Designations or Considerations: None listed.

Watershed and Fisheries Considerations: Lake 15 Creek and the West Branch Otter River and their tributaries are all high quality trout streams. Adequate buffers should be maintained.

Wildlife Habitat Considerations: Compartment 46 is found in the Central Houghton Management Area on dissected Moraines in Central Houghton County. The dominant forest community is mesic northern forest. This management area represents almost 15% of the western Upper Peninsula State Forest hemlock resource and is one of the few management areas where the species reliably regenerates and recruits. Increasing the structural and compositional diversity of the northern hardwoods with a particular emphasis on increasing

the hemlock component is of very important. This hemlock resource is particularly important Blackburnian Warbler utilize these mature upland coniferous and mixed coniferous-deciduous forests.

The following have been identified, as featured species for the Central Houghton management area: Blackburnian Warbler, Pileated Woodpecker, and Northern Goshawk.

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of coarse textured glacial till. There is insufficient data to determine the glacial drift thickness except for Section 36 that has between 50 and 100 feet of glacial drift. The Precambrian Jacobsville Sandstone subcrops below the glacial drift and was previously used as a building stone. The nearest gravel pit is located one mile to the south and potential appears to be good. Abandoned copper mines and crushed basalt piles are located six miles to the northwest and have been leased again recently. The compartment has not been leased before. There is no economic oil and gas production in the UP.

Vehicle Access: The Pike Lake Road borders the north of the compartment. The remaining road access is from logging roads, some of which cross private.

Survey Needs: Survey work will be needed to facilitate timber harvest activities.

Recreational Facilities and Opportunities: There are no developed recreational facilities.

Fire Protection: This is not a fire prone area.

Additional Compartment Information:

The following stands are proposed to be changed in the SCA layer:

- 2: Unique Site SCA. Lake Fifteen Creek corridor, add as a riparian influence zone.
- 5: SCA Removal. This is not a unique site.
- 7: Unique Site SCA. Tributary of the Otter River, add as a riparian influence zone.
- 9: SCA Removal. Remove the NW portion of the stand from the SCA. This was added to IFMAP when it was being developed and does not represent anything.
- 10: SCA Removal. Not a unique site, remove from the SCA layer.
- 12: Unique Site SCA. Lake Fifteen Creek corridor, add as a riparian influence zone.
- 13: SCA Removal. Not a unique site, remove from the SCA layer.
- 14: Unique Site SCA. Previously coded as SC8, suggesting keeping it as an SCA. The stand has Type 2 Old Growth characteristics.
- 16: Unique Site SCA. Previously coded as SC8, suggesting keeping it as an SCA. The stand has Type 2 Old Growth characteristics.
- 17: Unique Site SCA. Previously coded as SC8, suggesting keeping it as an SCA. The stand has Type 2 Old Growth characteristics.
- 20: Unique Site SCA. Previously coded as SC8, suggesting keeping it as an SCA. The stand has Type 2 Old Growth characteristics.

➤ **The following reports from the Inventory are attached:**

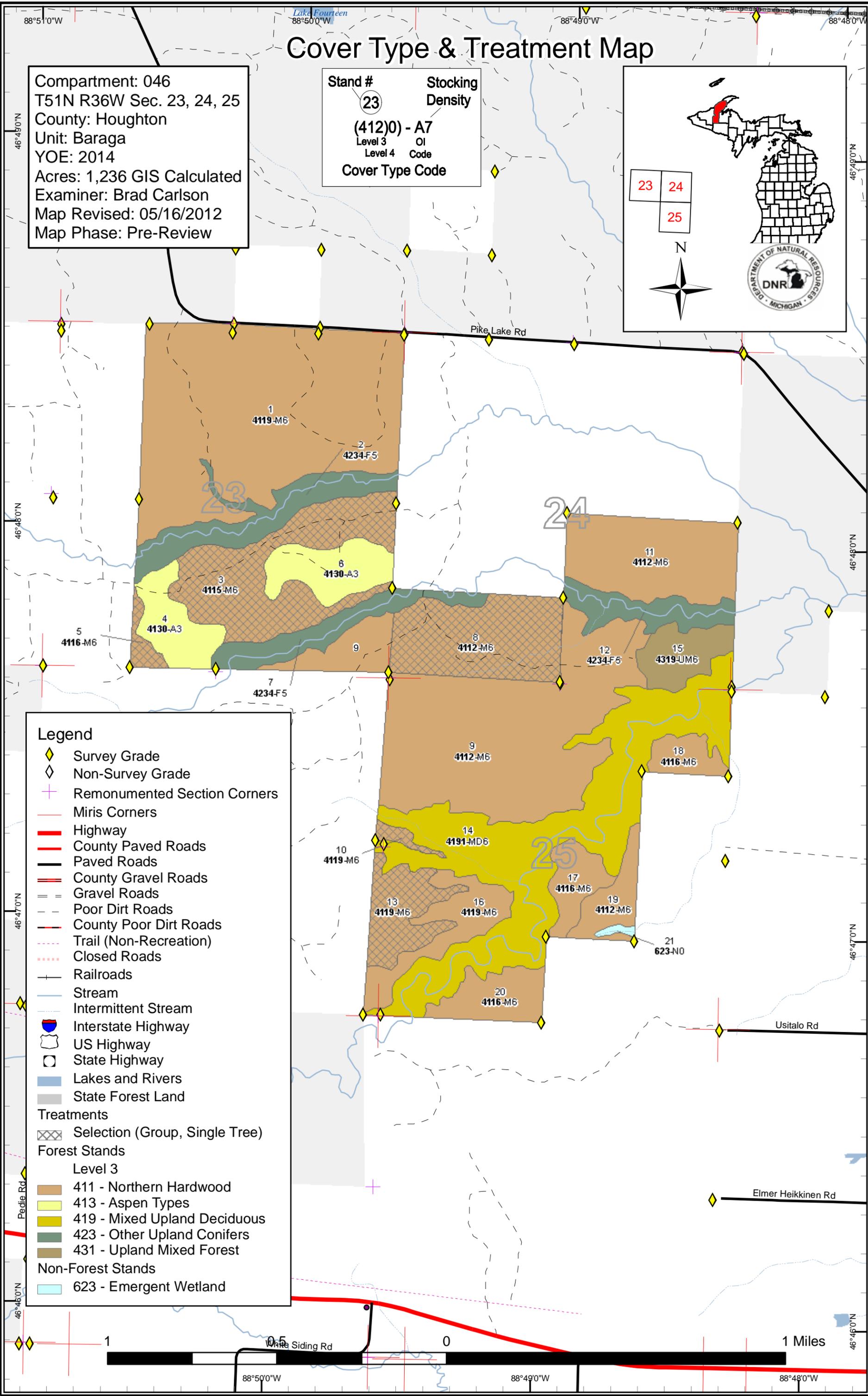
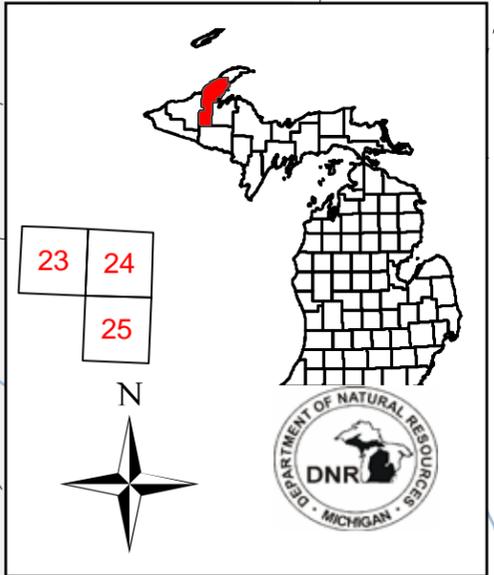
- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summary**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**
- ◆ **Stand Details (Forested and Nonforested)**
- ◆ **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand boundaries, cover types, and numbers**
 - ◆ **Proposed treatments**
 - ◆ **Details on the road access system**

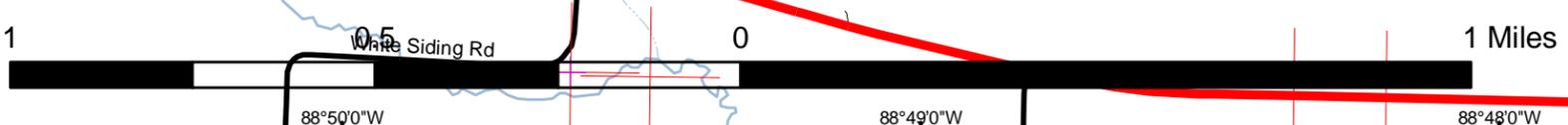
Cover Type & Treatment Map

Compartment: 046
 T51N R36W Sec. 23, 24, 25
 County: Houghton
 Unit: Baraga
 YOE: 2014
 Acres: 1,236 GIS Calculated
 Examiner: Brad Carlson
 Map Revised: 05/16/2012
 Map Phase: Pre-Review

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



- Legend**
- ◆ Survey Grade
 - ◇ Non-Survey Grade
 - ⊕ Remonumented Section Corners
 - ⊕ Miris Corners
 - Highway
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Trail (Non-Recreation)
 - Closed Roads
 - Railroads
 - Stream
 - Intermittent Stream
 - Interstate Highway
 - US Highway
 - State Highway
 - Lakes and Rivers
 - State Forest Land
 - Treatments**
 - ▨ Selection (Group, Single Tree)
 - Forest Stands**
 - Level 3**
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - Non-Forest Stands**
 - 623 - Emergent Wetland



Compartment: 046
 T51N R35W Sec. 19, 30
 T51N R36W Sec. 13, 14, 23-26
 County: Houghton
 Unit: Baraga
 YOE: 2014
 Acres: 1,236 GIS Calculated
 Examiner: Brad Carlson
 Map Revised: 04/16/2012
 Map Phase: Pre-Review

Stand Boundary Map

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

14

23

24

19

25

30

Legend

- ◆ Survey Grade
- ◇ Non-Survey Grade
- ⊕ Remonumented Section Corners
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Lakes and Rivers
- Stream
- Intermittent Stream
- Stand Boundaries

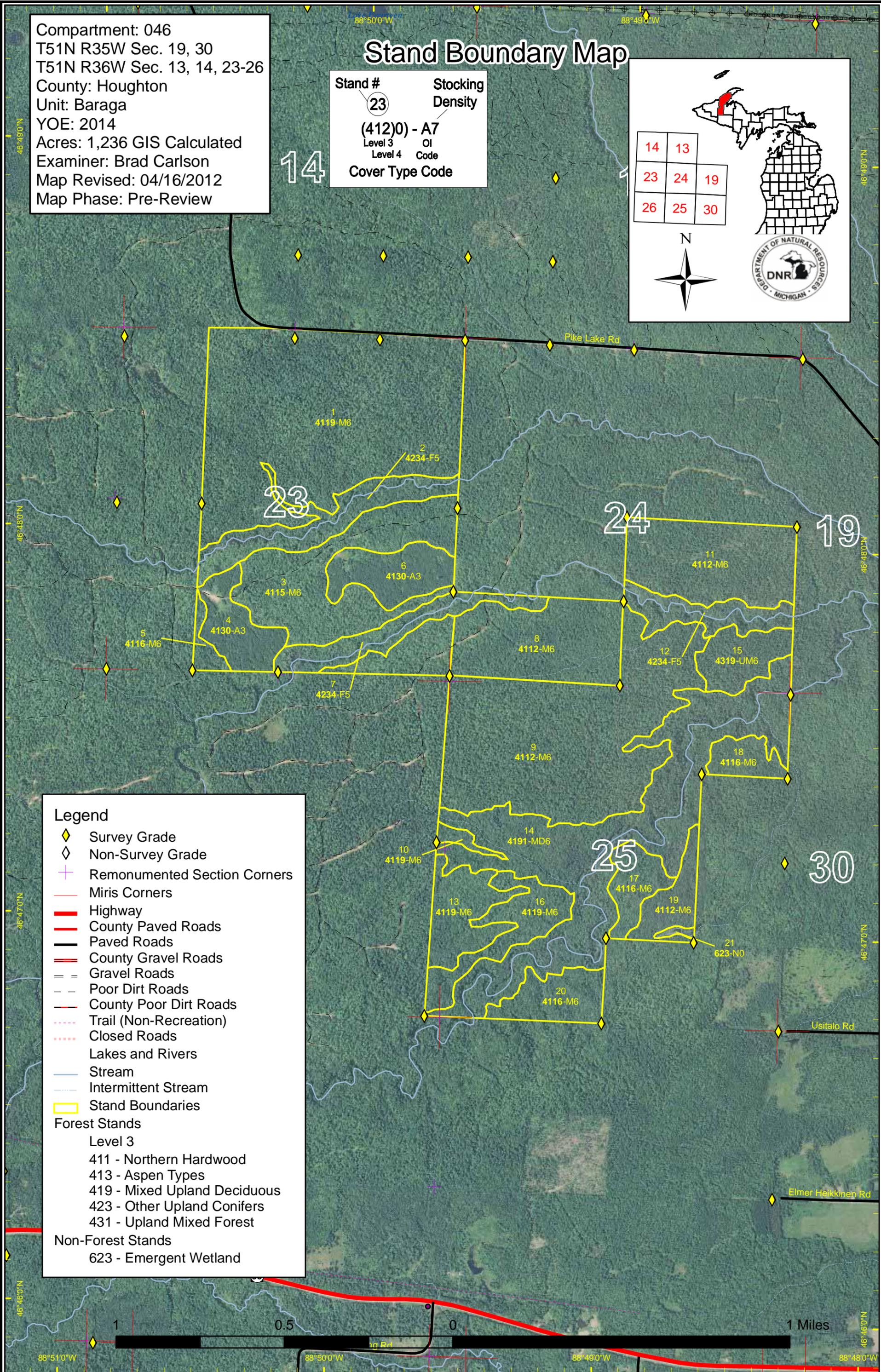
Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest

Non-Forest Stands

- 623 - Emergent Wetland



88°51'0"W

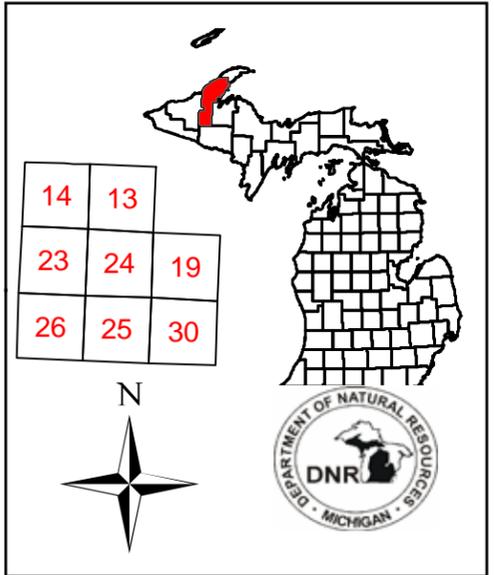
Dedicated & Proposed Special Conservation Area Map

88°48'0"W

46°50'0"N

Compartment: 046
 T51N R35W Sec. 19, 30
 T51N R36W Sec. 13, 14, 23-26
 County: Houghton
 Unit: Baraga
 YOE: 2014
 Acres: 1,236 GIS Calculated
 Examiner: Brad Carlson
 Map Revised: 04/16/2012
 Map Phase: Pre-Review

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



- Legend**
- + Remonumented Section Corners
 - Miris 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
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - Non-Forest Stands
 - 623 - Emergent Wetland

46°49'0"N

46°48'0"N

46°47'0"N

46°49'0"N

46°48'0"N

46°47'0"N

88°50'0"W

88°49'0"W

88°48'0"W

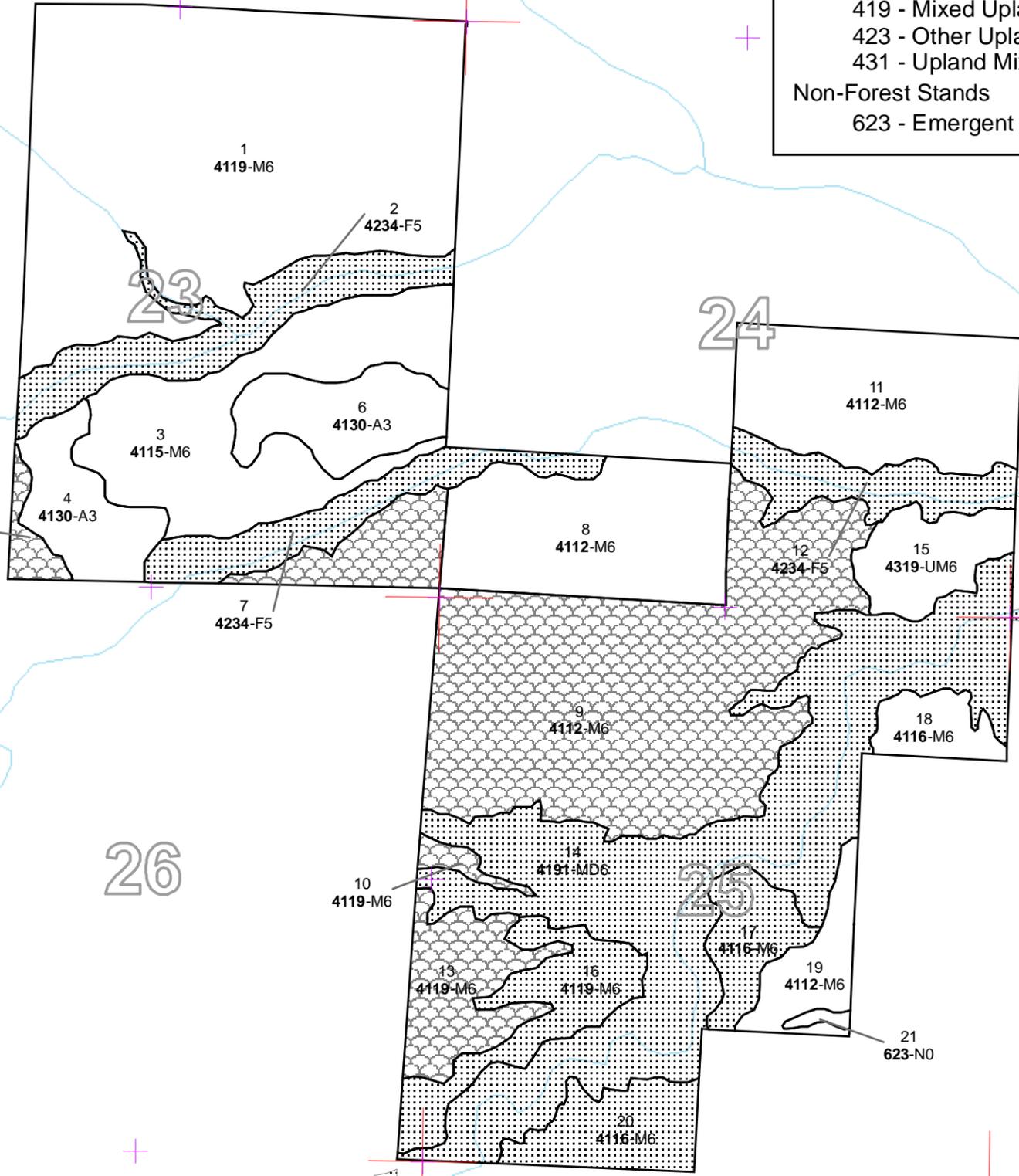


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen	0	62	0	0	0	0	0	0	0	0	0	0	0	0	62
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	188	188
Northern Hardwood	0	0	0	20	0	0	0	0	0	74	0	0	0	763	857
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25
Upland Spruce/Fir	0	0	0	0	0	0	75	0	0	0	0	0	0	26	102
Total	2	62	0	20	0	0	75	0	0	74	0	0	0	1003	1236



Table 2 – Proposed Treatment Summaries

Baraga Mgt. Unit
Year of Entry 2014

Compartment 046
Total Compartment Acres: 1236

Acres by Treatment Type

Commercial Harvest - 206	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Northern Hardwood	0	206	0	0	0	0	0	206
Total	0	206	0	0	0	0	0	206



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	11046003-Cut	88.2	4115 - Y.Birch, Hemlock NH	High Density Pole	99	81-110	Harvest	Single Tree Selection	4114 - Beech, Hemlock	Cmpt. Review Proposal

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar, and mass producing black cherry where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

8	11046008-Cut	73.3	4112 - Maple, Beech, Cherry Association	High Density Pole	99	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar, and mass producing black cherry where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

10	11046010_Edt -Cut	4.3	4119 - Mixed Northern Hardwoods	High Density Pole	99	111-140	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
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Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar, and mass producing black cherry where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

13	11046013-Cut	33.8	4119 - Mixed Northern Hardwoods	High Density Pole	99	111-140	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
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Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar, and mass producing black cherry where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

Total Treatment Acreage Proposed: 199.6

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5 11046005-Cut	6.7	4116 - Mixed N. Hardwood - Aspen	High Density Pole	99		Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar, and mass producing black cherry where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Other Comment:

Next Steps:

Proposed Start Date: 10/01/2013

Limiting Factor and No. Treatment Reason 3J: Water quality / BMPs (stream, river, or lake)
Not a unique site, remove from SCA layer and prescribe for treatment with limiting factor - May be TOO WET.

Total Treatment Acreage Proposed: 6.7

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comments:

Next
Steps:

Proposed
Start Date: #Error

**Total Treatment
Acreage Proposed: 0**

S t a n d	Baraga Mgt. Unit		5 – Forested Stands			Compartment: 046	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
1	4119 - Mixed Northern Hardwoods	High Density Pole	248.2	Uneven Age	81-110		
2	42340 - Upland Spruce/Fir	Medium Density Pole	43.8	64			
3	4115 - Y.Birch, Hemlock NH	High Density Pole	88.2	Uneven Age	81-110		
4	4130 - Aspen	High Density Sapling	28.7	18			
5	4116 - Mixed N. Hardwood - Aspen	High Density Pole	6.7	Uneven Age			
6	4130 - Aspen	High Density Sapling	32.9	18			
7	42340 - Upland Spruce/Fir	Medium Density Pole	31.5	64			
8	4112 - Maple, Beech, Cherry Association	High Density Pole	73.2	Uneven Age	111-140		
9	4112 - Maple, Beech, Cherry Association	High Density Pole	213.4	Uneven Age	81-110		
10	4119 - Mixed Northern Hardwoods	High Density Pole	4.3	Uneven Age	111-140		
11	4112 - Maple, Beech, Cherry Association	High Density Pole	74.1	99	81-110		
12	42340 - Upland Spruce/Fir	Medium Density Pole	26.5	Uneven Age			
13	4119 - Mixed Northern Hardwoods	High Density Pole	33.8	Uneven Age	111-140		
14	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	188.0	Uneven Age	111-140		
15	4319 - Mixed Upland Forest	High Density Pole	25.1	Uneven Age			
16	4119 - Mixed Northern Hardwoods	High Density Pole	34.2	Uneven Age			SCA
17	4116 - Mixed N. Hardwood - Aspen	High Density Pole	19.9	Uneven Age			
18	4116 - Mixed N. Hardwood - Aspen	High Density Pole	14.5	Uneven Age	111-140		



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Baraga Mgt. Unit

5 – Forested Stands

Compartment: 046
Year of Entry: 2014



S t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4112 - Maple, Beech, Cherry Association	High Density Pole	19.8	34	81-110	
20	4116 - Mixed N. Hardwood - Aspen	High Density Pole	27.0	Uneven Age	111-140	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
21	6239 - Mixed Emergent Wetland	1.7	No	Unspecified	



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
2	Unique Site - SCA	11046002	43.8	Lake Fifteen Creek corridor add to SCA Layer as Riparian influence zone.
5	SCA Removal	11046005	6.7	Not a unique site, remove from SCA layer and prescribe for treatment with limiting factor - May be TOO WET.
7	Unique Site - SCA	11046007	31.5	Tributary to Otter River corridor add to SCA Layer as Riparian influence zone.
9	SCA Removal	11046009	213.4	remove NW portion of stand from SCA, it was a test area last time.
10	SCA Removal	11046010_Edt	4.3	Remove from SCA and prescribe for treatment.
12	Unique Site - SCA	11046012	26.5	Stand was previously coded "Stand Condition 8 - Potential Old Growth". Due to its unique rugged topography with steep slopes it is recommended that this stand remain as an SCA - riparian influence zone.
13	SCA Removal	11046013	33.8	Remove from SCA and prescribe for treatment.
14	Unique Site - SCA	11046014	188.0	Stand was previously coded "Stand Condition 8 - Potential Old Growth". Due to its unique rugged topography with steep slopes it is recommended that this stand remain as an SCA - Type 2 Old Growth
16	Unique Site - SCA	11046016	34.2	Stand was previously coded "Stand Condition 8 - Potential Old Growth". Due to its unique rugged topography with steep slopes it is recommended that this stand remain as an SCA - Type 2 Old Growth
17	Unique Site - SCA	11046017	19.9	Stand was previously coded "Stand Condition 8 - Potential Old Growth". Due to its unique rugged topography with steep slopes it is recommended that this stand remain as an SCA - Type 2 Old Growth
20	Unique Site - SCA	11046020	27.0	Stand was previously coded "Stand Condition 8 - Potential Old Growth". Due to its unique rugged topography with steep slopes it is recommended that this stand remain as an SCA - Type 2 Old Growth



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.