

Compartment Review Presentation

Baraga Forest Management Unit

Compartment 43
Entry Year 2016

Acreage: 1,220

County Houghton

Management Area: Central Houghton

Revision Date: 04/09/2014

Stand Examiner: Jason Mittlestat

Legal Description:

HOUGHTON COUNTY, LAIRD TOWNSHIP T51N, R35W, Sections 14, 15, 22, 23

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:

Kalkaska (sand), Alcona (loamy fine sand), Munising (loamy fine sand), Yalmer (sand), Graveraet (loam), Assinins (sand), Skanee (fine loamy sand), AuGres (sand), Roscommon (mucky sand), Waiska (sand), Sturgeon (silt loam), Anaheim (silt loam), Pelkie (fine sand), Halfaday (sand). Terrain is level to rolling.

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

The state owned land is contiguous, but there are small private holdings. The land to the north and northwest is state owned. All of the remainder surrounding ownership is small private. Adjacent ownerships are managed for forestry, hunting or recreation.

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:

The West branch of the Otter River is a trout stream.

Wildlife Habitat Considerations:

Spruce-fir stands in the southern end of the compartment are useful travel corridors for deer, bears, and furbearers. Maintenance of a portion of these stands in mature conifers during the present treatment period is desirable.

Mineral Resource and Development Concerns and/or Restrictions

Compartment 43: Sections 14, 15, 22 & 23, T51N-R35W, Houghton Co

Surface sediments consist of lacustrine (lake) sand and gravel and coarse-textured glacial till. The glacial drift thickness varies between 10 and 50 feet. The Precambrian Jacobsville Sandstone subcrops below the glacial drift and the Silurian Bois Blanc Formation outcrops. The Jacobsville was previously used as a building stone and the Bois Blanc is quarried for stone two miles to the northeast. The nearest gravel pit is located near Hazel to the south and potential appears to be good.

Abandoned copper mines and crushed basalt piles are located ten miles to the northwest. This Township has not been leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

The Hazel Swamp Road provides access to the compartment. There have been beaver problems at the south end of this road in the past.

Survey Needs:

Survey work is in progress.

Recreational Facilities and Opportunities:

The Hazel Swamp Road is a snowmobile trail and an ORV connector route. The trail also runs though the compartment along the power line right away. The area is also used for hunting, fishing, and trapping.

Fire Protection:

This area has not seen much wildfire activity historically.

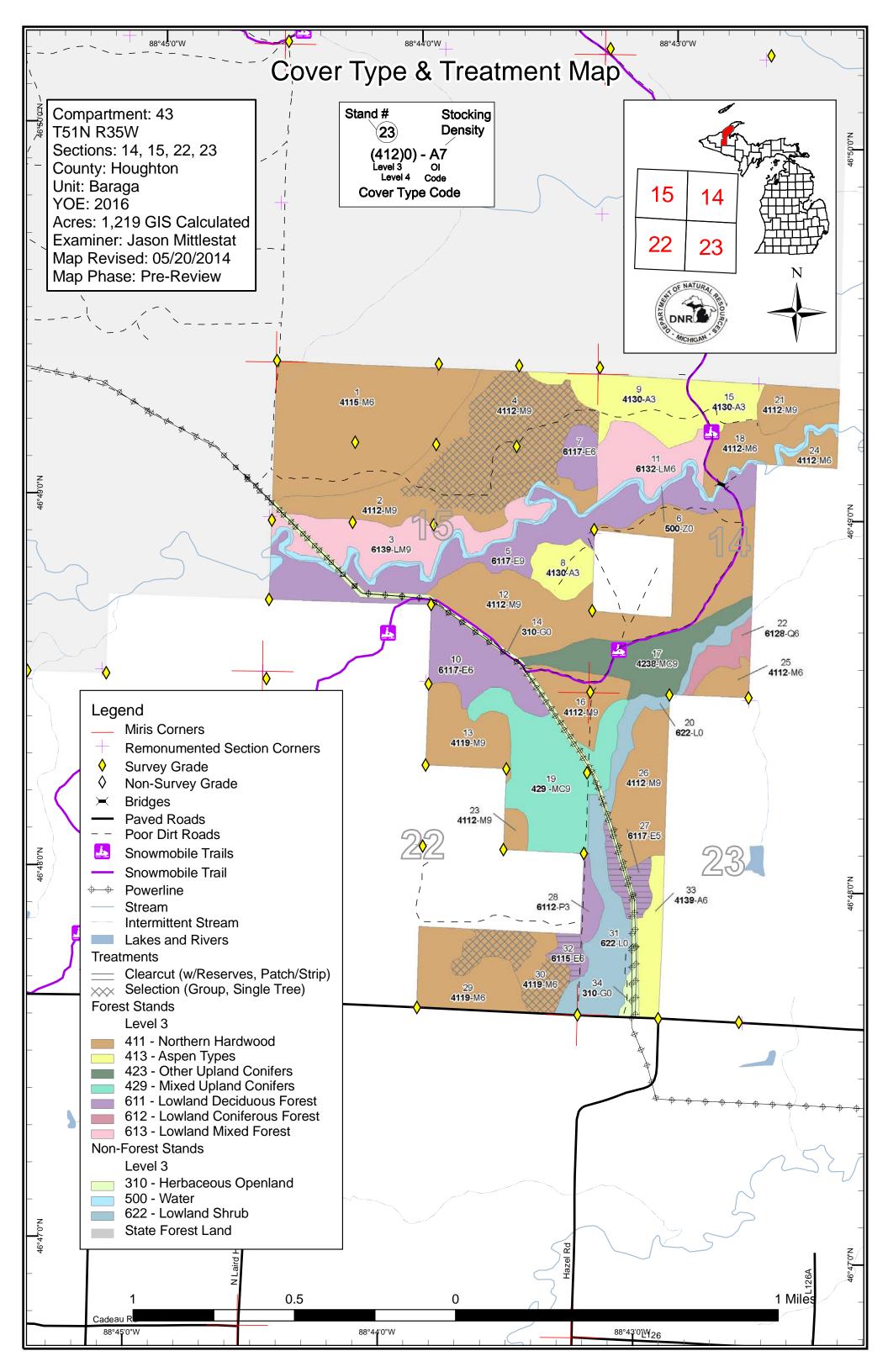
Additional Compartment Information:

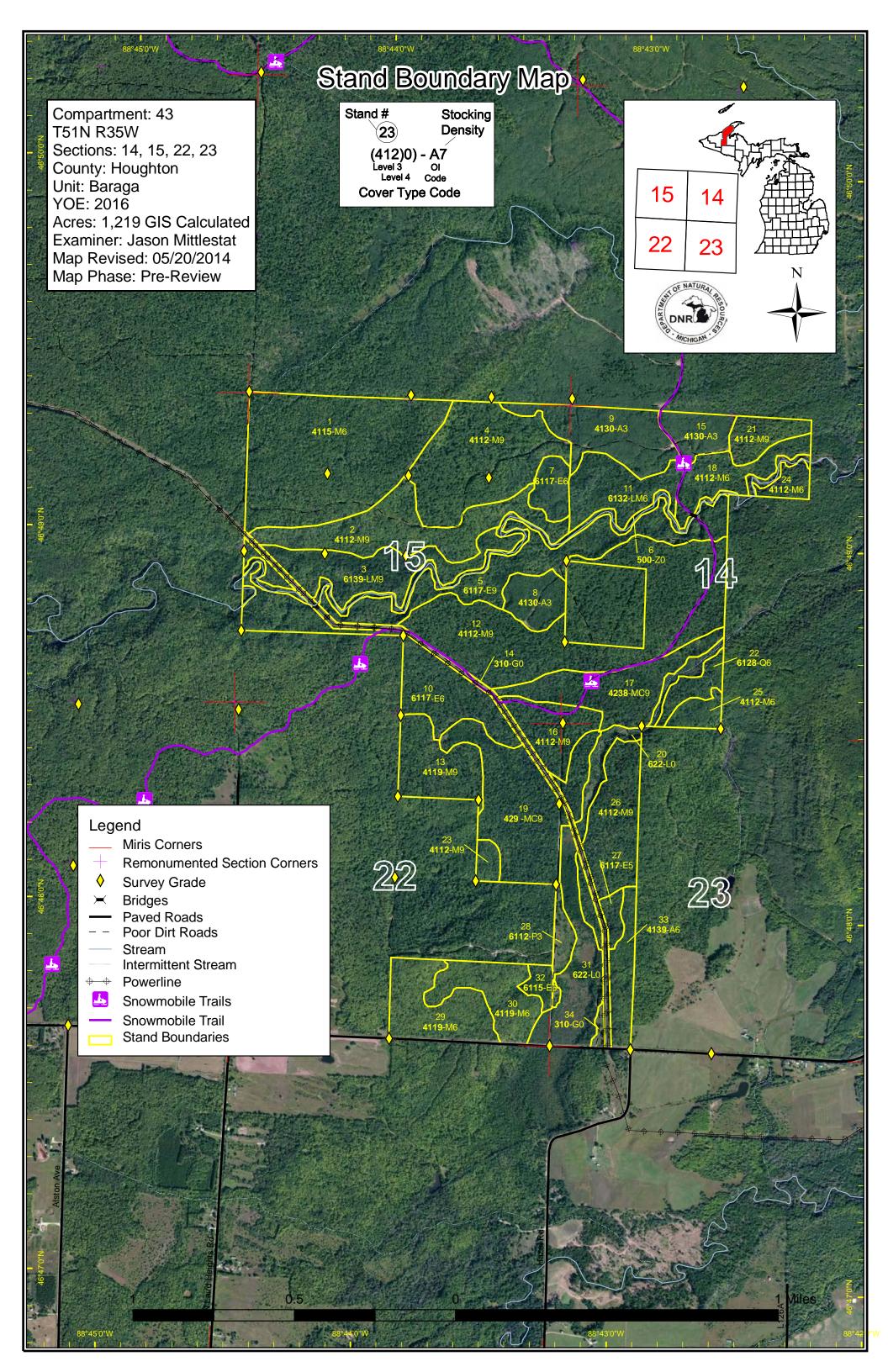
The following reports from the Inventory are attached:

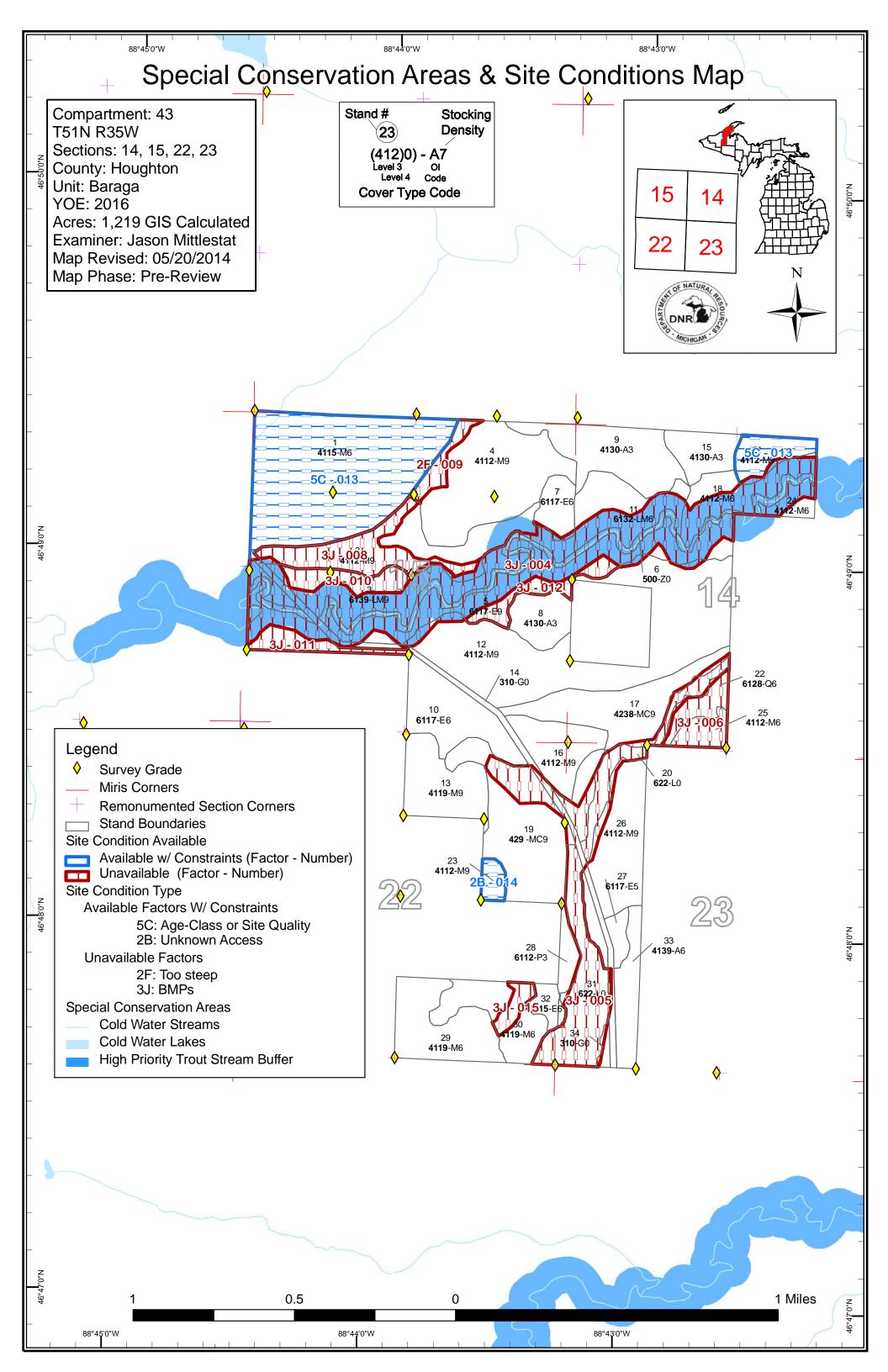
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Compartment 043 Year of Entry 2016

Baraga Mgt. Unit

Jason Mittlestat : Examiner



Age Class																
		6.9	0.79	Parts /	S. S.	D. P. C.	\$5.05	, 00°, 00°, 00°, 00°, 00°, 00°, 00°, 00	4a, /	80 G	85.00	SOL TO	70,70	× 02, 35	No. No. No.	, or
Aspen	0	17	42	18	19	0	0	0	0	0	0	0	0	0	96	
Herbaceous Openland	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	
Lowland Aspen/Balsam Poplar	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	
Lowland Conifers	0	0	0	0	0	0	11	0	0	0	0	0	0	0	11	
Lowland Deciduous	0	0	0	0	0	11	50	6	0	85	0	0	0	0	152	
Lowland Mixed Forest	0	0	0	0	0	0	32	0	50	0	0	0	0	0	82	
Lowland Shrub	59	0	0	0	0	0	0	0	0	0	0	0	0	0	59	
Northern Hardwood	0	0	0	0	39	0	9	0	0	0	0	0	0	585	634	
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	119	119	
Water	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	
Total	124	17	42	18	59	11	102	6	50	85	0	0	0	704	1219	



Report 2 – Proposed Treatment Summaries

Baraga Mgt. Unit Year of Entry 2016

Compartment 043
Total Compartment Acres: 1,220

Acres by Treatment Type

Commercial Harvest - 134 Tree Planting - 0

Lowland Deciduous Forest

Northern Hardwood

Other - 0

Habitat Cut - 0

Opening Maintenance - 0

Total

17

117

0

0

0

0

134

Compartment: 043 Baraga Mgt. Unit Report 3 -- Treatments Prescribed Year of Entry 2016 with No Limiting Factor s t а **Treatment** CoverType Size BA **Treatment Treatment Cover Type** Acres Approval n Method Objective d Name **Density** Age Range Type Status 22.8 4112 - Maple, 4112 - Maple, High 111-140 Cmpt. Review 2 11043002-Cut 99 Harvest Single Tree Beech, Cherry Density Log Selection Beech, Cherry Proposal Association Association Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar 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 Specs: Complete Marker". Winter cut only for deer. Other_ Acreage will vary due to Topography. Treatment shape will be adjusted in an attempt to better follow terrain. Comments: Leave 4" base of snow on the snowmobile trail and restrict hauling from monday to thursday during daylight hours. <u>Next</u> Steps: **Proposed** Start Date: 10/01/2015 11043004-Cut 68.7 Cmpt. Review 4112 - Maple, High 99 111-140 Harvest Single Tree 4112 - Maple, Beech, Cherry **Density Log** Selection Beech, Cherry Proposal Association Association Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar where present. Oak should be released on 3 sides to Specs: 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". Winter cut only for deer. Other Leave 4" base of snow on the snowmobile trail and restrict hauling from monday to thursday during daylight hours. Comments: <u>Next</u> Steps: <u>Proposed</u> Start Date: 10/01/2015 27 11043027-Cut 11.2 6117 - Lowland Medium 55 51-80 Harvest Clearcut with 6117 - Lowland Cmpt. Review Deciduous, Mixed Density Deciduous, Mixed Reserves Proposal Coniferous Pole Coniferous aspen and black cherry per acre. Retention for this stand will be less than 3% and will consist of reserve tree species. Winter cut only for deer. Other_ Comments:

Prescription Harvest all species down to 2 inches DBH except yellow birch, red oak, hemlock, white pine, elm and cedar if present. Leave tree mark 1-3 large Specs:

<u>Next</u> Regeneration survey as per work instructions.

Steps:

Proposed

Start Date: 10/01/2015

30 11043030-Cut 11.1 4119 - Mixed High 111-140 Harvest Single Tree 4119 - Mixed Cmpt. Review Selection Northern Hardwoods Density Northern Hardwoods Proposal Pole

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, black cherry, white pine and cedar 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 Specs: in "The Complete Marker". There are pockets of top dieback. If these areas are discovered to be of substantial acreage they should be

salvaged by clearcut with reserves: reserving pine, oak, cedar and hemlock if present. Winter cut only for deer.

Other Comments:

<u>Next</u> Steps:

Proposed

Start Date: 10/01/2015

Year of Entry 2016 with No Limiting Factor s t а **Treatment** Acres CoverType Size BA **Treatment Treatment Cover Type** Approval n **Density** Method Objective **Status** d Name Age Range Type 4119 - Mixed 30 11043030-14.3 High 99 111-140 Harvest Single Tree 4119 - Mixed Cmpt. Review Cut small Northern Hardwoods Density Selection Northern Hardwoods Proposal Pole

Report 3 -- Treatments Prescribed

Specs:

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, black cherry, white pine and cedar 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". There are pockets of top dieback. If these areas are discovered to be of substantial acreage they should be salvaged by clearcut with reserves: reserving pine, oak, cedar and hemlock if present. Winter cut only for deer.

Compartment: 043

Other

Comments: Next

Steps:

Proposed

10/01/2015 Start Date:

70 32 11043032-Cut 6.1 6115 - Lowland Ash High 1-50 Harvest Clearcut with 6115 - Lowland Ash Cmpt. Review Density Reserves Proposal Pole

Specs:

Prescription Harvest all species down to 2 inches DBH except yellow birch, red oak, hemlock, white pine, elm and cedar if present. Retention for this stand will be less than 3% and will consist of reserve tree species. This is because the stand is an ash stand that is being cut to reduce EAB potential. Winter cut only for deer.

Other_

Comments:

<u>Next</u>

Regeneration survey as per work instructions.

Baraga Mgt. Unit

Steps:

Proposed

Start Date: 10/01/2015

Total Treatment

134.2 Acreage Proposed:

Baraga Mgt. Unit Report 4 -- Treatments Prescribed with Compartment: 043 a Site Condition s Year of Entry 2016 t а **Treatment** Acres CoverType Size Stand ВА **Treatment Treatment Cover Type Approval** n Method Objective Status Name Range Density Age Type #Type! #Type! **Prescription** Specs: Other Comment: <u>Next</u> Steps: **Proposed** #Type! Start Date:

Total Treatment

Limiting Factor

Acreage Proposed: 0.0

Report 5 – Site Conditions

Baraga Mgt. Unit

Jason Mittlestat : Examiner

Compartment 043 Year of Entry 2016



Availability for Management

Total	Acres	Acres	Do	mina	nt Site	Cond	ditions	6
Acres	Available	Not Available		No	5C	3J	2F	2B
96	96		Aspen	96				
9	8	0	Lowland Aspen/Balsam Poplar	8		0		
11		11	Lowland Conifers			11		
152	71	81	Lowland Deciduous	71		81		
82	17	66	Lowland Mixed Forest	17		66		
633	537	96	Northern Hardwood	387	144	88	8	6
119	100	19	Upland Conifers	100		19		
1,103	830	273	Total Forested Acres	680	144	265	8	6
	75%	25%	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.

	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
Not Available	3J: Water quality / BMPs (stream, river, or lake)	182				
Not Available	3J: Water quality / BMPs (stream, river, or lake)	87				
omments:						
Not Available	3J: Water quality / BMPs (stream, river, or lake)	19	2B: Unknown if access through adjacent landowner(s) is possible			
	all a hillside to a trib to the O	tter Rive	r and only access is across	private property.		
	all a hillside to a trib to the O	tter Rive	r and only access is across	private property.		
01	omments: tter River Not Available omments: Not Available	Not Available 3J: Water quality / BMPs (stream, river, or lake) omments: tter River Not Available 3J: Water quality / BMPs (stream, river, or lake) omments: Not Available 3J: Water quality / BMPs (stream, river, or lake) omments:	Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Omments: Not Available 3J: Water quality / BMPs (stream, river, or lake) Omments:	Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: water quality / BMPs (stream, river, or lake)	Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) 19 2B: Unknown if access through adjacent landowner(s) is possible	Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake) Not Available 3J: Water quality / BMPs (stream, river, or lake)

Report 5 – Site Conditions

Baraga Mgt. Unit

Jason Mittlestat : Examiner

Compartment 043 Year of Entry 2016



800	Not Available	3J: Water quality / BMPs (stream, river, or lake)	31	
	omments: teep slopes to Ott	er River		
009	Not Available	2F: Too steep	8	
C	omments:			
010	Not Available	3J: Water quality / BMPs (stream, river, or lake)	15	
	omments: tter River Bottoml	and - riparian area protection		
011	Not Available	3J: Water quality / BMPs (stream, river, or lake)	11	
	omments: tter River riparian	area protection		
012	Not Available	3J: Water quality / BMPs (stream, river, or lake)	13	
	omments: tter River riparian	protection		
013	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	145	
	omments: old to treat in 202	6		

Report 5 – Site Conditions

Baraga Mgt. Unit

Jason Mittlestat : Examiner

Compartment 043
Year of Entry 2016



014	Available	2B: Unknown if access through adjacent landowner(s) is possible	6	
	omments: mall acreage pvt	access only.		
015	Not Available	3J: Water quality / BMPs (stream, river, or lake)	6	

Baraga Mgt. Unit Compartment: 043

Year of Entry: 2016



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				

Baraga Mgt. Unit Compartment: 043
Year of Entry 2016



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.

Conservation	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical r sites of cultural and historical significance that may occur upon to bottomlands. They include thousands of Native American settlen and British outposts, nineteenth century logging camps, mines at the Great Lakes, there are shipwrecks and other remains docum be identified by Natural heritage data from the State Historic Prethis compartment will be implemented in such a manner as to mathe sensitive nature of this information, no further detail about local	errestrial areas and Great Lakes nents and burial sites, as well as French and homesteads. Beneath the waters of tenting the maritime trade. Such sites may servation Office. Proposed treatments in taintain the integrity of these sites. Due to
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from see conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildl and Waterfowl Production Areas, deer wintering complexes in lo openings and savannas. Habitat areas are distinct from critical h endangered or threatened species (such as Kirtland's warbler or general in nature, are not primarily associated with threatened or covered by species recovery plans that are developed in cooperation.	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more r endangered species, and are not
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effects as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well

s t	Barag	a Mgt. Unit		Report 8 –	Forested	Stands Compartment: 043 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4115 - Y.Birch, Hemlock NH	High Density Pole	130.2	Uneven Age	81-110	The stand has very inconsistent stocking across it. The areas that had aspen removed in the 1998 entry should probably have been managed for aspen, the remaining hardwoods in these areas are displaying top dieback. These areas are interspersed throughout the stand so are very difficult to type out.
2	4112 - Maple, Beech, Cherry Association	High Density Log	62.0	Uneven Age	111-140	Stand is a hillside.
3	6139 - Mixed Lowland Forest	High Density Log	50.1	80	81-110	Otter River bottomlands.
4	4112 - Maple, Beech, Cherry Association	High Density Log	76.7	Uneven Age	111-140	
5	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	85.3	90	81-110	Otter River bottomlands.
7	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	12.6	60	1-50	Low ground with very poor quality black ash poles. Most of the timber has dead tops.
8	4130 - Aspen	High Density Sapling	18.0	30		Cut in 1984.
9	4130 - Aspen	High Density Sapling	42.0	22		
10	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	37.1	60	81-110	
11	6132 - Mixed Lowland Forest with Cedar	High Density Pole	32.3	60	111-140	Otter River bottomlands.
12	4112 - Maple, Beech, Cherry Association	High Density Log	128.5	Uneven Age	81-110	
13	4119 - Mixed Northern Hardwoods	High Density Log	33.5	Uneven Age	81-110	
15	4130 - Aspen	High Density Sapling	17.0	15		
16	4112 - Maple, Beech, Cherry Association	High Density Log	26.1	Uneven Age	81-110	
17	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Log	44.8	Uneven Age	171-200	
18	4112 - Maple, Beech, Cherry Association	High Density Pole	26.1	Uneven Age	81-110	Otter River bottomland.
19	429 - Mixed Upland Conifers	High Density Log	74.5	Uneven Age	171-200	

s t	Barag	a Mgt. Unit		Report 8 –	Forested	Stands Compartment: 043 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4112 - Maple, Beech, Cherry Association	High Density Log	15.3	Uneven Age	111-140	
22	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	11.1	60	81-110	
23	4112 - Maple, Beech, Cherry Association	High Density Log	5.7	Uneven Age	141-170	
24	4112 - Maple, Beech, Cherry Association	High Density Pole	8.2	Uneven Age	111-140	Otter River Bottomland.
25	4112 - Maple, Beech, Cherry Association	High Density Pole	9.2	60	141-170	
26	4112 - Maple, Beech, Cherry Association	High Density Log	41.2	Uneven Age	81-110	
27	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	11.2	55	51-80	Stand is falling apart, Most of the spruce is budworm killed and the black ash tops are dead.
28	6112 - Lowland Aspen	High Density Sapling	8.7	5		
29	4119 - Mixed Northern Hardwoods	High Density Pole	39.4	41	51-80	
30	4119 - Mixed Northern Hardwoods	High Density Pole	31.5	Uneven Age	111-140	
32	6115 - Lowland Ash	High Density Pole	6.1	70	1-50	
33	4139 - Aspen, Mixed Deciduous	High Density Pole	19.3	45	51-80	

Compartment: 043 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	50 - Water	30.2	No	Unspecified	Otter River
14	3102 - Grass	23.8	No	Unspecified	Powerline ROW
20	6229 - Mixed lowland shrub	17.3	No	Unspecified	Drainage with tagalder.
31	6229 - Mixed lowland shrub	41.7	No	Unspecified	Drainage with tagalder.
34	3102 - Grass	2.5	No	Unspecified	Grass opening along powerline ROW