

Revision Date: 7/14/2010

Stand Examiner: Jason Mittlestat

Legal Description: Baraga County, Arvon Township Marquette County, Powell Township T52N R30W Section 12, 13, 16, 26, 35 T51N R30W Section 1 T52N R29W Section 7, 16, 17, 18

RMU (if applicable):

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

Soil and Topography: Much of the compartment is level to rolling. There is an area of steep slopes and exposed bedrock to the south. Soils are Carbondale and Tacoosh mucks in the lowlands. Uplands are Rubicon, Croswell, Kinross, Assinins, and Kalkaska sands; Yalmer, Burt Variant, Munising, Skanee, and Keweenaw loamy sands; Peshekee cobbly silt loam; and rock outcrop.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The surrounding lands are primarily industrial timber land.

Unique, Natural Features: Mouth of the Huron River and the confluence of the East and West Branches of the Huron River and adjoining falls.

Archeological, Historical, and Cultural Features: None identified.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations: The compartment adjoins Lake Superior. The Huron River and Little Huron River flow though the compartment as does Chinks Creek. These water bodies are popular with fishermen. Both the Huron and Little Huron Rivers are trout streams. There is a need to upgrade the crossing on Chinks Creek in T51N R30W Sec 1.

Wildlife Habitat Considerations: This compartment provides valuable wildlife habitat to grouse, deer, bear, furbearers, woodland raptors and neo tropical migrant song birds. Moose are of particular importance in this area and frequent this compartment. Accordingly management activities which conserve deep shade adjacent to aquatic feedings sites is desired for thermal regulation of moose during the summer. This compartment is within the Western extension of the Huron Mountains Deer Yarding complex. This yard is critically important to wintering deer from Southeastern Baraga and much of Marquette County. Maintenance and expansion of long lived conifer species such as eastern hemlock, northern white cedar, and white pine are of primary importance. The Huron Mountains represent one of the largest remaining functional hemlock dominated forest expanses in the upper Great Lakes region. Silvicultural practices which promote thermal cover habitat should be emphasized here. Maintenance of wildlife movement corridors particularly along riparian influence zones is a wildlife emphasis. Along with improvement of within stand structural and species composition of hardwood associations through promotion of conifer species such as eastern hemlock. Maintenance of aspen acreage within this compartment for early forest wildlife species

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consists of coarse-textured glacial till, and glacial outwash sand & gravel and postglacial alluvium sometimes thin to discontinuous over bedrock, with an ancient shoreline in this area. The Glacial Drift thickness varies between 0 and 50 feet. The Precambrian Jacobsville Sandstone and Archean granite gneiss subcrop below the glacial drift. There is not a current economic use for the Jacobsville, but it was used as a building stone in the past. The nearest gravel pits are located in Section 20. There is no economic oil and gas production in the UP.

Vehicle Access: Access from the west in Baraga County is by county road. Access to the lands east of the Huron River is by an extensive logging road system though industry and small private ownerships.

Survey Needs: Survey work will be needed in conjunction with most proposed timber harvest activities in the compartment.

Recreational Facilities and Opportunities: The land at the mouth of the Huron River is heavily used for camping and picnicking. A developed campground is available at Big Ericks where the East and West Branches of the Huron River meet.

Fire Protection: The jack pine types near the mouth of the Huron River present a fire risk. Development of private recreational properties to the South and West, combined with the popular day use in the beach area make this an area of concern for wild fire potential. The eastern part of the compartment borders several bald rock outcrops of the Huron Mountains which are prone to lightening strikes as well.

Additional Compartment Information: There is heavy deer browse throughout the compartment. This will require attention during silvicultural operations.

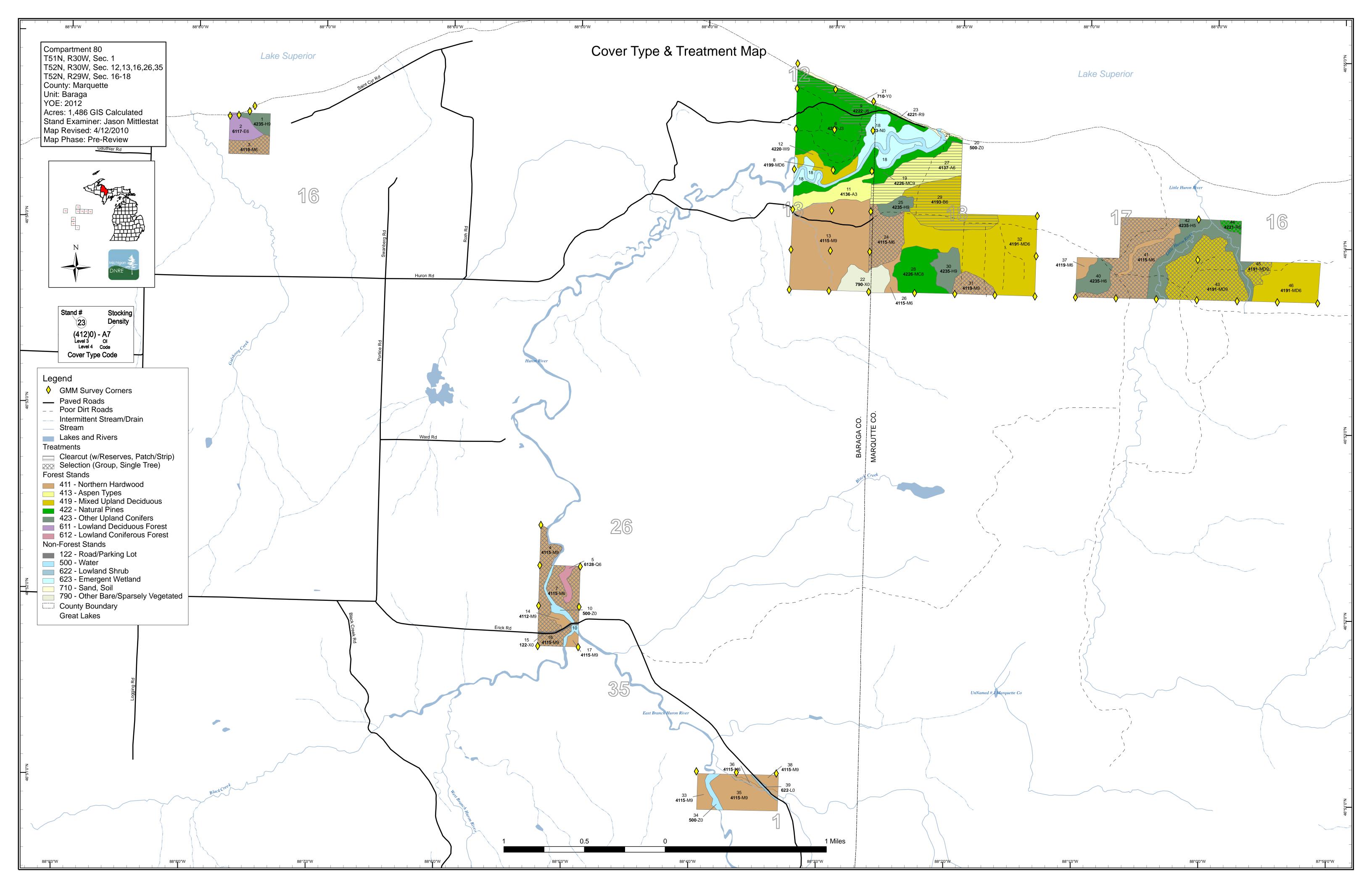
There are several stands that are proposed to be removed from Stand Condition 8 in this compartment. Stands to remove from SCA:

9, 24, 26, 27, 29, 31, 32

Keeping in SCA, stands: 18, 21, 25, 31, 42

- > The following 5 reports from the Operations Inventory System (OIPC) are attached:
 - 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, where pertinent, on the attached compartment maps:
 - Base feature information, stand numbers, cover types
 - Proposed treatments
 - Proposed road access system
 - Suggested potential old growth



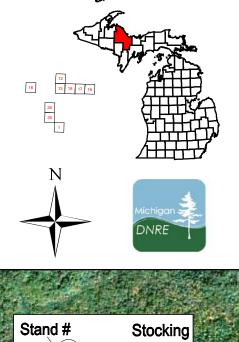
Compartment 80 T51N, R30W, Sec. 1 T52N, R30W, Sec. 12,13,16,26,35 T52N, R29W, Sec. 16-18 County: Marquette Unit: Baraga YOE: 2012 Acres: 1,486 GIS Calculated Stand Examiner: Jason Mittlestat Map Revised: 4/12/2010 Map Phase: Pre-Review

I I I 88°9'0"W

ا <mark>88°8</mark>80"W

88°7'0"W

88°6'0"W



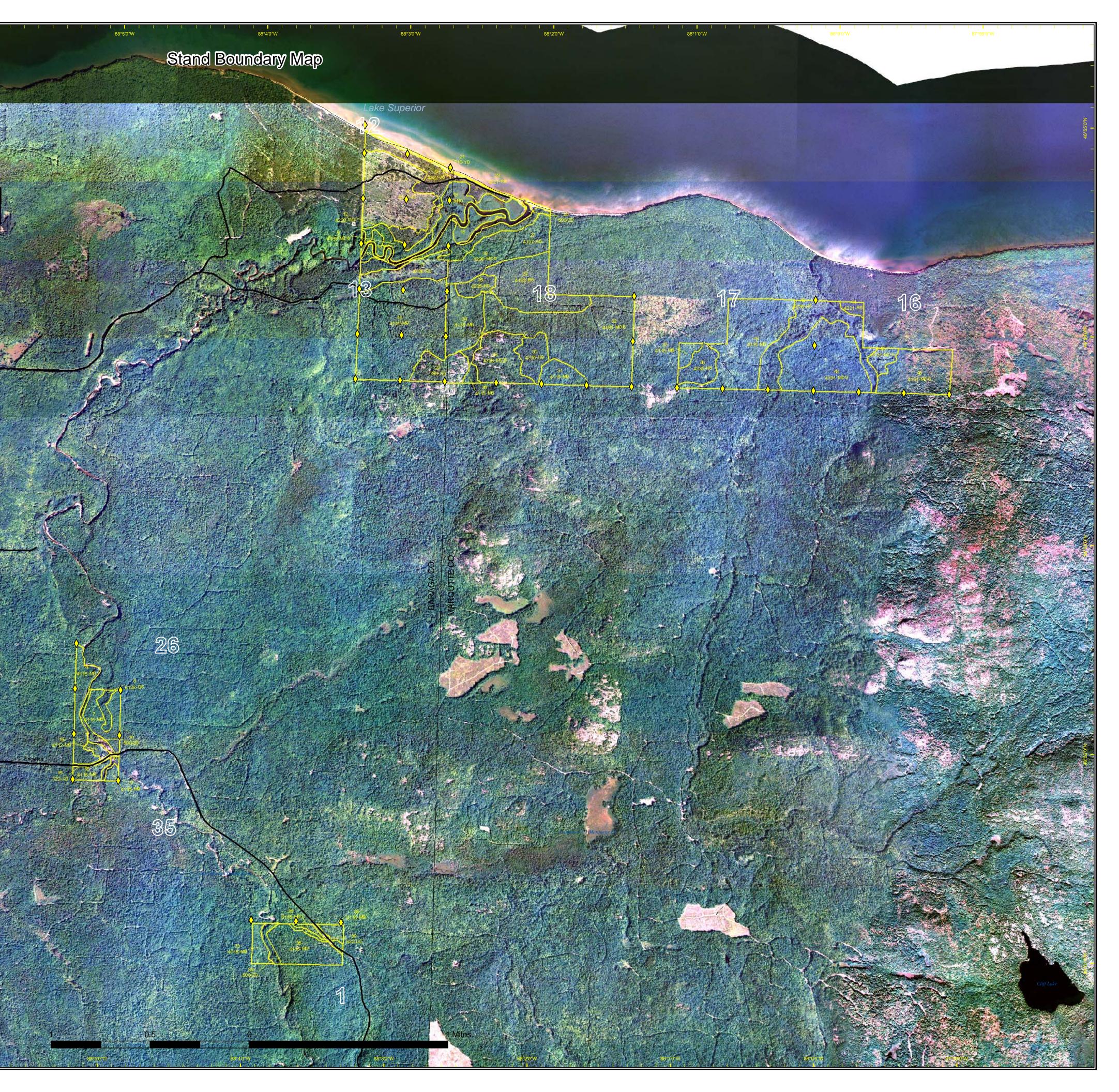
Density (23) (412)0) Level 3 Level 4 Code Cover Type Code

Cash-

Legend

GMM Survey Corners County Boundary Paved Roads
 Poor Dirt Roads Stand Boundaries Forest Stands Level 3 411 - Northern Hardwood 413 - Aspen Types 419 - Mixed Upland Deciduous 422 - Natural Pines
423 - Other Upland Conifers
611 - Lowland Deciduous Forest 612 - Lowland Coniferous Forest Non-Forest Stands Level 3 122 - Road/Parking Lot 500 - Water 622 - Lowland Shrub 623 - Emergent Wetland 710 - Sand, Soil 790 - Other Bare/Sparsely Vegetated

Skanee Rd



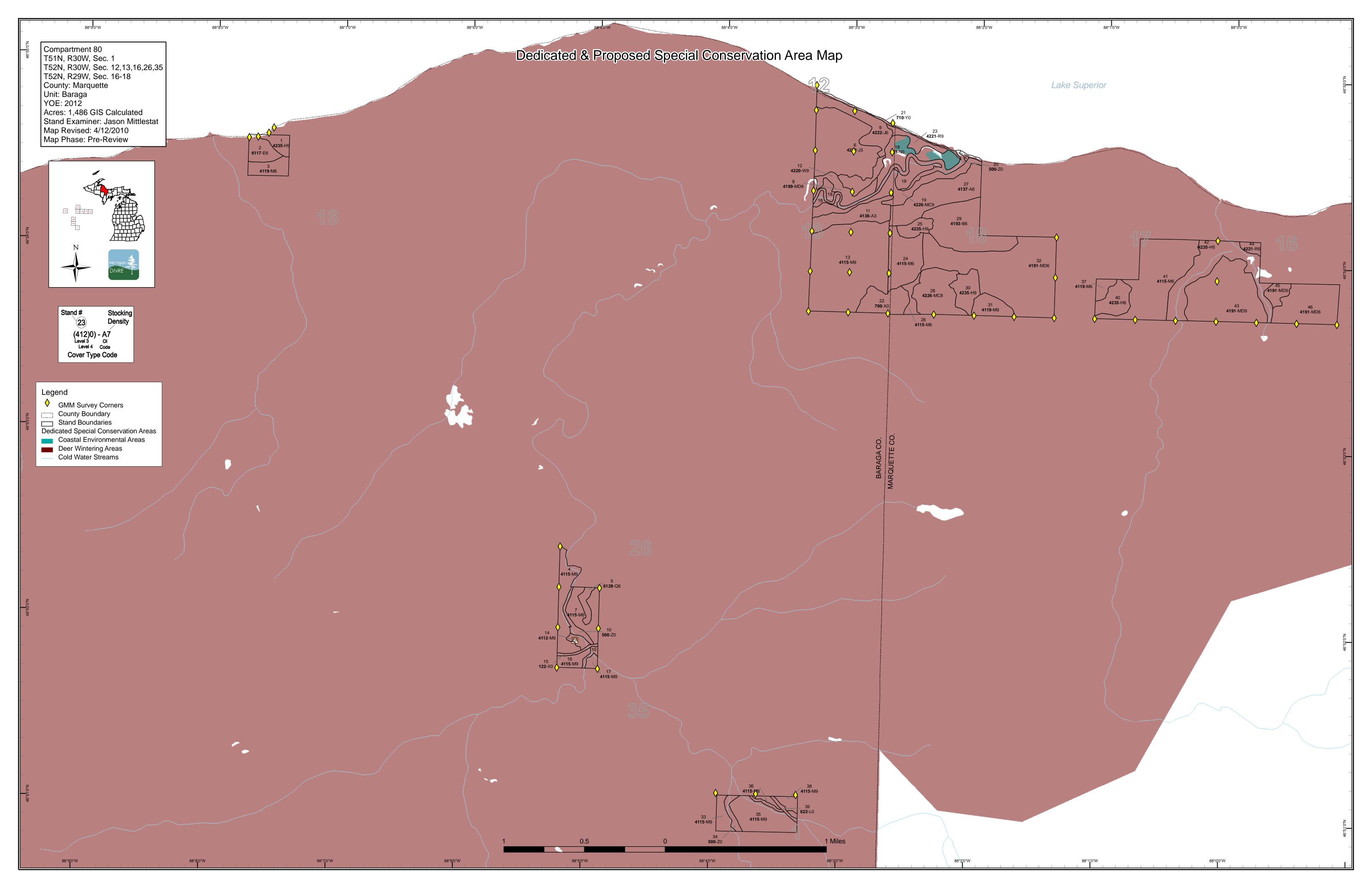


Table 1 – Total Acres by Cover Type and Age Class

Baraga Mgt. Unit

(Level 3 Cover Type)

Compartment 080 Year of Entry 2012



							Age	Class									
	(¢	/														b ²
Aspen Types	0	0	32	0	0	0	0	0	0	60	0	0	0	0	0	92	
Emergent Wetland	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	
Lowland Coniferous Forest	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7	
Lowland Deciduous Forest	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	16	
Lowland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
Mixed Upland Deciduous	0	0	0	0	0	156	0	17	0	69	0	0	0	0	162	405	
Natural Pines	0	0	0	86	0	0	0	30	0	5	0	0	24	0	81	227	
Northern Hardwood	0	0	0	0	0	7	26	124	0	0	0	0	0	0	318	475	
Other Bare/Sparsely Vegetated	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	
Other Upland Conifers	0	0	0	0	0	0	0	21	0	0	0	0	0	0	108	129	
Road/Parking Lot	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Sand, Soil	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Water	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	
Total	135	0	32	86	0	163	26	215	0	135	0	0	24	0	670	1486	



Table 2 – Proposed Treatment Summaries

•	Baraga Mgt. Uni Year of Entry 2012	it										Compartment Total Compartment Acres:	
					Acres	s by T	reatm	ent Ty	ре				
	Commercial Harvest -	498 Site I	Prep - 0		Т	ree Pl	anting	- 0		Preso	cribed Burn - 0	Other - 0	
	Habitat Cut - 0	Oper	ning Maintena	ance - 0	Т	ree Se	eeding	- 0		Pesti	cide - 0		
					Cov	er Typ	be by l	Harves	t Meth	od			
	As	spen		60	0 0		00 0 0	ood	ining of the second		Se Contraction of the second		
		ack Pine		30	0	0	0	0	0	30			
	Mi	ixed Upland De	eciduous	0	105	0	0	0	0	105			
	No	orthern Hardwo	bod	0	227	0	0	0	0	227			
	Pa	aper Birch		69	0	0	0	0	0	69			
	Re	ed Pine		0	5	0	0	0	0	5			
			Total	160	338	0	0	0	0	498			

S t		Bara	aga Mgt. Unit			its Prescribed Ig Factor	•	artment: 080 of Entry 2012	
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 1 of 3
3	11080003-Cut	15.2	4119 - Mixed Northern Hardwoods	High Density Pole	67	Harvest	Single Tree Selection	Mixed Northern Hardwoods	1
<u>Preso</u> Spec		70-90 sq ba	a. Favor oak, white pir	ne, and hemlock wh	ere presen	t. Refer to the "Co	mplete Marker" for furthe	er marking guideli	nes.
<u>Othe</u> Com	<u>nents:</u>								
<u>Next</u> Steps		to underpla	ant hemlock and white	pine.					
4	11080004-Cut	29.9	4115 - Y.Birch, Hemlock NH	High Density Log	99	Harvest	Single Tree Selection	Y.Birch, Hemlock	NH
Preso Spec	•	70-90 sq ba	a. Favor oak, white pir	ne, and hemlock wh	ere presen	t. Refer to the "Co	mplete Marker" for furthe	er marking guideli	nes.
<u>Othe</u> Com							g western edge. Mark th pec for shortwood only.	hough hemlock pa	atches, will
<u>Next</u> Steps	<u>S:</u>								
7	11080007-Cut	25.8	4115 - Y.Birch, Hemlock NH	High Density Pole	56	Harvest	Single Tree Selection	Y.Birch, Hemlock	NH
Preso Spec		70-90 sq ba	a. Favor oak, white pir	ne, and hemlock wh	ere presen	it. Refer to the "Co	mplete Marker" for furthe	er marking guideli	nes.
<u>Other</u> Com	_ Deer bro ments:	owse. Acrea	age will be reduced du	ue to ash pockets.					
<u>Next</u> Steps	<u>S:</u>								
9	11080009-Cut	30.5	42220 - Natural Jack Pine	High Density Pole	65	Harvest	Clearcut with Reserves	Natural Jack Pi	ne
Preso Spec		with reserv	ves. Reserve red and	white pine.					
<u>Othe</u> Com			ne. Some scruffy whi ast until the jack pine			ne jack pine is looki	ng rough and falling apa	rt. Cut to edge of	beach. Sale
<u>Next</u> Steps		or regenera ter harvest		eration following sc	arification.	Hand plant red pi	ne along the road, east li	ne and beach line	e for visual
16	11080016-Cut	9.3	4115 - Y.Birch, Hemlock NH	High Density Log	99	Harvest	Single Tree Selection	Y.Birch, Hemlock	NH
Preso Spec		70-90 sq ba	a. Favor oak, white pir	ne, and hemlock wh	ere presen	nt. Refer to the "Co	mplete Marker" for furthe	er marking guideli	nes.
<u>Othe</u> Com	<u>-</u> Heavy d ments:	eer browse.	. Was cut aprx 20 yea	ars ago.					
<u>Next</u> Steps	<u>s:</u>								
24	11080024-Cut	41.8	4115 - Y.Birch, Hemlock NH	High Density Pole	99	Harvest	Single Tree Selection	Y.Birch, Hemlock	NH
Preso Spec			a. Favor oak, white pir ave lower BA's depen				mplete Marker" for furthe	er marking guideli	nes. Areas
<u>Othe</u> Com	<u> </u>	eer browse.	. A few pockets of pa	aper birch, residual	BA's will be	e lower in areas.			
<u>Next</u> Steps		to underpla	ant hemlock and white	pine.					

S t			Bar	aga Mgt. Unit		reatment o Limiting	s Prescribed g Factor		artment: 080 of Entry 2012	
a n d	Treatn Nan		Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 2 of 3
27	1108002	27-Cut	60.4	4137 - Aspen, Birch	High Density Pole	e 83	Harvest	Clearcut with Reserves	Aspen, Birch	
Pres Spec		Clearcut,	reserve re	ed pine, white pine, ce	dar, hemlock and c	oak.				
<u>Othe</u> Com	er iments:									
<u>Next</u> Step										
29	1108002	29-Cut	69.4	4193 - Birch, Aspen	High Density Pole	e 83	Harvest	Clearcut with Reserves	Birch, Aspen	
<u>Pres</u> Spec		Clearcut,	reserve re	ed pine, white pine, ce	dar, hemlock and c	bak.				
<u>Othe</u> Com	er iments:									
<u>Next</u> Step										
31	1108003	31-Cut	17.1	4119 - Mixed Northern Hardwoods	High Density Log	99	Harvest	Single Tree Selection	Mixed Northern Hardwoods	
Pres Spec		/lark to 7	70-90 sq ba	a. Favor oak, white pir	ie, and hemlock wh	nere present.	. Refer to the "Co	omplete Marker" for furth	er marking guidelir	ies.
<u>Othe</u> Com	e <u>r</u> T Iments:	reatmer	nt area will	vary with topography.						
<u>Next</u> Step										
41	1108004	41-Cut	87.9	4115 - Y.Birch, Hemlock NH	High Density Pole	e 60	Harvest	Single Tree Selection	Y.Birch, Hemlock	NH
Pres Spec		/lark to 5	50-70 sq ba	a. Favor oak, white pir	e, and hemlock wh	nere present.	. Refer to the "Co	mplete Marker" for furth	er marking guidelir	nes.
<u>Othe</u> Com		leavy de prowse.	er browse	. There is a drainage t	hought the stand th	hat will need	removed from the	e AOI. Mark down to 50	sq ft BA due to he	avy deer
<u>Next</u> Step										
43	1108004	43-Cut	95.3	4191 - Mixed Upland Deciduous with Conifer	High Density Log	99	Harvest	Single Tree Selection	Mixed Upland Deciduous with Conifer	
Pres Spec		/lark to 7	'0 sq ba. F	avor oak, white pine, a	and hemlock where	e present. R	efer to the "Comp	lete Marker" for further r	narking guidelines	
<u>Othe</u> Com				. The southern end of ger entry period (30yrs		a lot harder	last time. Some	hemlock patches, mark t	to favor hemlock re	egeneration.
<u>Next</u> Step		Vildlife: t	to underpla	ant hemlock and white	pine.					

Baraga Mgt. Unit

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 080 Year of Entry 2012



t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	DNRE Page 3 of 3
45	11080045-Cut	10.2	4191 - Mixed Upland Deciduous with Conifer	High Density Log	99	Harvest	Single Tree Selection	Mixed Upland Deciduous with Conifer	I
<u>Pres</u> Spec		70 sq ba.	Favor oak, white pine,	and hemlock where	present.	Refer to the "Comp	olete Marker" for further m	narking guidelines	
<u>Othe</u> Com			e. Acreage could vary or longer entry cycle (3		pice in su	rrounding stand. Ma	ark around hemlock areas	s to favor hemlock	ζ.

Next Wildlife: to underplant hemlock and white pine. Steps:

Total Treatment Acreage Proposed: 492.8

s

S t		Bai	raga Mgt. Unit		eatment _imiting	s Prescribed wi Factor	Comp	Compartment: 080 Year of Entry 2012		
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Page 1 of 1	
44	11080044-Cut	5.2	42210 - Natural Red Pine	High Density Pole	80	Harvest	Single Tree Selection	Natural Red Pi	ne	
<u>Next</u> Steps	No acce ment:									
	ng Factor and No ment Reason	_	Neighbor cked by pvt land.							
A	Total Treatmer creage Propose	-	5.2							

S t	Barag	a Mgt. Unit			rested Stand	Michian 3
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42350 - Upland Hemlock	High Density Log	9.8	Uneven Age	141-170	Heavy Deer Browse
2	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	15.8	60	51-80	Old beach swail along Huron Bay. Wet ground.
3	4119 - Mixed Northern Hardwoods	High Density Pole	15.2	67	141-170	
4	4115 - Y.Birch, Hemlock NH	High Density Log	29.9	Uneven Age	81-110	Deer Browse
5	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	7.0	60	51-80	Old river channel. Heavy deer browse.
6	42220 - Natural Jack Pine	High Density Sapling	86.2	21		
7	4115 - Y.Birch, Hemlock NH	High Density Pole	25.8	56	111-140	Deer Browse
8	4199 - Other Mixed Upland Deciduous	High Density Pole	17.1	60	81-110	Birch / red maple bench near the Huron River.
9	42220 - Natural Jack Pine	High Density Pole	30.5	65	81-110	
11	4136 - Aspen, Mixed Conifer	High Density Sapling	31.8	12		
12	42200 - Natural White Pine	High Density Log	13.8	110	81-110	Natural red pine.
13	4115 - Y.Birch, Hemlock NH	High Density Log	152.7	Uneven Age	111-140	Heavy Deer Browse
14	4112 - Maple, Beech, Cherry Association	High Density Log	4.6	Uneven Age	51-80	Big Ericks SFCG
16	4115 - Y.Birch, Hemlock NH	High Density Log	9.3	Uneven Age	81-110	Heavy Deer Browse.
17	4115 - Y.Birch, Hemlock NH	High Density Log	3.5	Uneven Age	111-140	Stand is between branches of the Huron River and cannot be reached for management.
19	42260 - Natural Pine, Mixed Deciduous	High Density Log	36.5	Uneven Age	111-140	Mixed pine with hardwoods. Hardwood regeneration is heavly browsed.
23	42210 - Natural Red Pine	High Density Log	10.4	110	81-110	Mouth of Huron River
24	4115 - Y.Birch, Hemlock NH	High Density Pole	41.8	Uneven Age	141-170	Heavy Deer Browse.

S t	Baraga	a Mgt. Unit			rested Stand	Mandalan 23
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	42350 - Upland Hemlock	High Density Log	11.8	Uneven Age	200+	Deer Browse
26	4115 - Y.Birch, Hemlock NH	High Density Pole	7.7	60	141-170	Ravine between rock bluffs.
27	4137 - Aspen, Birch	High Density Pole	60.4	83	111-140	
28	42260 - Natural Pine, Mixed Deciduous	Medium Density Log	44.2	Uneven Age	51-80	Rock Bluff
29	4193 - Birch, Aspen	High Density Pole	69.4	83	111-140	
30	42350 - Upland Hemlock	High Density Log	21.1	60	171-200	
31	4119 - Mixed Northern Hardwoods	High Density Log	17.1	Uneven Age	141-170	
32	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	156.0	40	81-110	Heavy Deer Browse.
33	4115 - Y.Birch, Hemlock NH	High Density Log	10.6	Uneven Age	111-140	Slopes to river. Not operable.
35	4115 - Y.Birch, Hemlock NH	High Density Log	42.5	Uneven Age	51-80	
36	4115 - Y.Birch, Hemlock NH	High Density Pole	3.5	60	81-110	Chinks Creek
37	4119 - Mixed Northern Hardwoods	High Density Pole	7.3	40	51-80	Deer Browse
38	4115 - Y.Birch, Hemlock NH	High Density Log	6.0	Uneven Age	51-80	
40	42350 - Upland Hemlock	High Density Pole	21.2	Uneven Age	51-80	
41	4115 - Y.Birch, Hemlock NH	High Density Pole	97.2	60	171-200	Heavy Deer Browse
42	42350 - Upland Hemlock	Medium Density Pole	65.4	Uneven Age	51-80	Little Huron river buffer. Potential SCA, water quality protection.
43	4191 - Mixed Upland Deciduous with Conifer	High Density Log	95.3	Uneven Age	111-140	Heavy Deer Browse
44	42210 - Natural Red Pine	High Density Pole	5.2	80	200+	

S t	Baraga	a Mgt. Unit			ested Stands Method: IFMAP	Compartment: 080 Year of Entry: 2012	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
45	4191 - Mixed Upland Deciduous with Conifer	High Density Log	10.2	Uneven Age	111-140	Heavy Deer Browse.	
46	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	56.9	Uneven Age	51-80		

Baraga Mgt. Unit

6 – Nonforested Stands Ir

Compartment: 080 Year of Entry: 2012



Stand	Cover Type	Acres	Gen Cmts:
10	50 - Water	9.6	
15	122 - Road/Parking Lot	2.5	
18	623 - Emergent Wetland	55.6	
20	50 - Water	23.2	
21	710 - Sand, Soil	8.3	
22	790 - Other Bare/Sparsely Vegetate	27.2	
34	50 - Water	6.0	east branch huron river
39	622 - Lowland Shrub	2.5	



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 initiatlves (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Inventory Method: IFMAP	AP
-------------------------	----

Stand	SCA Type	SCA Name	Acres	Comments



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.

Conservatio Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area	
HCVA	Coastal Environmental Areas	The public designation process is defined by Part 323, Shorelands Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the Michigan Department of Environmental Quality (DEQ). This is an inactive program with no new areas currently under consideration by the DEQ.		
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	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.		
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 database as stand condition 8 as potential old growth (POG). A identified through the Operations Inventory (OI)/Compartment Re Entry 2008 and forward, potential old growth is managed for the through the Biodiversity Conservation Planning Process (BCPP) objective (as an ERA, HCVA, or other type of SCA) and is release designation; or 2) it is released from the potential old growth des process.	Approximately 310,000 acres have been eview process. For stands in Year of identified objective until it is: 1) vetted and given a specific designation and ed from the potential old growth	