Report 1 – Compartment Review Presentation

Baraga Forest Management Unit

Compartment 74
Entry Year 2015
Acreage: 1,251
County Keweenaw
Management Area: Central Keweenaw

Revision Date: 07/17/2013

Stand Examiner: Jason Mittlestat

Legal Description:

T55N, R31W, Section 18, 20 Houghton County, Torch Lake Township
T56N, R31W, Section 5, 28, 33, 34 Keweenaw County, Sherman Township
T57N, R31W, Section 32, 33 Keweenaw County, Sherman Township

Identified Planning Goals:

Central Keweenaw (4.7)
To maintain a healthy; sustainable forest with special consideration to wildlife habitat, fisheries habitat, and recreational needs while protecting the watersheds for Thayer's Lake, Rice Lake, Little Rice Lake, Traverse River and Lake Superior.

Soil and topography:

The terrain is level to rolling. The lands around Lake Superior is a dune-swale complex. Soils are: Lupton, Tawas, Tawas-Deford complex, Croswell-Au Gres complex, Garlic-Alcona complex, Munising-Skanee complex, Skanee-Gay complex, Croswell, Au Gres, Deford muck, Croswell-Au Gres sands, Au Gres-Kinross complex, Deer Park sand, Dawson-Kinross complex, Cathro, Dawson, Greenwood, Loxley, Rubicon-Croswell complex, Au Gres-Deford-Croswell comples, Munising-Abbaye-Yalmer complex.

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

The compartment is surrounded by large industrial land owners and small private owners. The land use is predominantly for timber with the exception of the lands around Rice Lake which have several seasonal cottages and a few year round residence.

Unique, Natural Features:

Dune-Swale complex and Lake Superior Shoreline.

Archeological, Historical, and Cultural Features:

None Identified.

Special Management Designations or Considerations:

None Identified.

Watershed and Fisheries Considerations:

There are water access sites on Thayer's and Rice Lakes. Traverse River, Camp Creek, Finns Creek and Tobacco River flows through this compartment. The rivers and creeks listed here are all native brook trout streams.

Wildlife Habitat Considerations:

This compartment is found in the Central Keweenaw Management Area. This area is mostly on Beach Ridge and Dunes in northern Houghton and southern Keweenaw Counties. The dominant Natural Community is mesic northern forest. Major forest cover types include Upland Spruce-fir, Lowland Brush, and Paper Birch. The most significant wildlife management issues in the management area are: hard and soft mast; habitat fragmentation; mature forest (upland deciduous, especially aspen and mixed forest with little understory); course woody debris; and deer wintering complexes.
In addition the protection of thermal cover in the 5 Mile Point Deeryard is considered a high priority.

The following have been identified, as featured species for the Central Keweenaw Management Area:
Black Bear, Northern Goshawk, and White-Tailed Deer.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and gravel and coarse-textured glacial till in T57N-R31W. The glacial drift thickness varies between 10 and 50 feet in Keweenaw Co. and 50 to 100 feet in Houghton Co. The Precambrian Jacobsville Sandstone subcrops below the glacial drift in all areas. The Jacobsville was previously used as a building stone. There are not any nearby gravel pits and potential may be limited on State lands. Abandoned copper mines,

containing some silver, are located to the west. None of the Compartment was previously leased but other State land in T57N-R31W was previously leased for copper exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Access to the Thayer's Lake parcel is by a woods road. The Gay-Lake Linden road provides access to the Traverse River parcel. There is an access road to the Rice Lake access site as well as a county road passing through state land south of Rice Lake and Little Rice Lake. There is no formal access to the Lake Superior Parcel.

Survey Needs:

Survey corners are needed around Rice Lake.

Recreational Facilities and Opportunities:

There is a snowmobile trail that crosses the Traverse River and Lake Superior parcels. There are access site on Thayer's and Rice Lakes

Fire Protection:

This is not a fire prone area. The Rice Lake, jack pine area is near the compartment.

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**

Report 2 – Total Acres by Cover Type and Age Class

Baraga Mgt. Unit **Compartment 074 Year of Entry 2015**

Brad Carlson : Examiner

Age Class

	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	Total
Aspen	4	103	0	0	0	0	0	0	0	0	0	0	0	0	**107**
Cedar	0	0	0	0	0	0	0	0	0	0	50	4	0	47	**102**
Herbaceous Openland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Lowland Conifers	0	0	0	0	0	16	20	15	0	0	124	0	0	44	**218**
Lowland Deciduous	7	0	0	0	0	0	0	0	0	9	0	0	0	0	**16**
Lowland Mixed Forest	0	0	12	0	0	0	0	0	0	0	0	0	0	0	**12**
Lowland Shrub	62	0	0	0	0	0	0	0	0	0	0	0	0	0	**62**
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	13	80	0	0	0	**93**
Marsh	30	0	0	0	0	0	0	0	0	0	0	0	0	0	**30**
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	26	**26**
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	19	**19**
Red Pine	0	0	0	0	0	0	0	0	0	40	0	0	0	0	**40**
Sand, Soil	42	0	0	0	0	0	0	0	0	0	0	0	0	0	**42**
Tamarack	0	0	0	0	0	0	0	0	0	0	157	0	0	0	**157**
Upland Conifers	0	0	0	0	0	0	0	0	0	15	0	0	0	0	**15**
Upland Spruce/Fir	0	0	0	0	38	0	8	0	0	12	58	0	0	0	**117**
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Water	181	0	0	0	0	0	0	0	0	0	0	0	0	0	**181**
White Pine	0	0	0	0	0	0	0	0	0	8	0	0	0	0	**8**
Total	**331**	**103**	**12**	**0**	**38**	**16**	**28**	**15**	**0**	**98**	**469**	**4**	**0**	**136**	**1251**

Report 3 – Proposed Treatment Summaries

Baraga Mgt. Unit
Year of Entry 2015

Compartment 074
Total Compartment Acres: 1251

Acres by Treatment Type

Commercial Harvest - 162 | 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
Lowland Coniferous Forest	66	0	0	0	0	0	**66**
Natural Pines	6	0	0	0	40	0	**46**
Northern Hardwood	0	12	0	0	0	0	**12**
Other Upland Conifers	37	0	0	0	0	0	**37**
Total	**109**	**12**	**0**	**0**	**40**	**0**	**162**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	11074021-Cut	10.8	6124 - Lowland Spruce-Fir	High Density Pole	65		Harvest	Clearcut with Reserves	6124 - Lowland Spruce-Fir	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except white pine and cedar. Also reserve hemlock if present.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Also, retain some large diameter aspen in clumps. This will most likely be encompassed in the riparian buffer. Factor Limit for small acreage/volume and negotiate with GMO logger when and if they return to clearcut the rest of the land accessible from the Fox Road.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
25	11074025-Cut	6.7	6129 - Mixed Coniferous Lowland Forest	High Density Pole	79		Harvest	Clearcut with Reserves	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except hemlock, yellow birch, white pine and cedar.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Also, retain some large diameter aspen in clumps. This will most likely be encompassed in the riparian buffer. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
26	11074026-Cut	3.5	42340 - Upland Spruce/Fir	High Density Pole	91	1-50	Harvest	Clearcut with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except hemlock, yellow birch, white pine and cedar.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Also, retain some large diameter aspen in clumps. This will most likely be encompassed in the riparian buffer. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
27	11074027-Cut	12.4	6122 - Black Spruce	High Density Pole	92		Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except hemlock, yellow birch, white pine and cedar.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Also, retain some large diameter aspen in clumps. This will most likely be encompassed in the riparian buffer. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28	11074028-Cut	12.4	4112 - Maple, Beech, Cherry Association	High Density Log	91	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 50-70 sqft of BA. Favor oak, hemlock, white pine and cedar where present. Follow all guidelines set forth in "The Complete Marker".

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	11074030-Cut	33.9	42340 - Upland Spruce/Fir	High Density Pole	103	1-50	Harvest	Clearcut with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except hemlock, yellow birch, white pine and cedar. Also, reserve oak and hemlock if present.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Also, retain some large diameter aspen in clumps. This will most likely be encompassed in the riparian buffer. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32	11074032_Deer_Yard-Cut	7.2	6120 - Lowland Cedar	High Density Pole	105	81-110	Harvest	Clearcut with Reserves	6120 - Lowland Cedar	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except hemlock, yellow birch, white pine and cedar. Also reserve red oak if present. Winter harvest only.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.
Access to this stand is questionable and treament may need to be cancelled for this reason.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32	11074032_West-Cut	28.5	6120 - Lowland Cedar	High Density Pole	105	81-110	Harvest	Clearcut with Reserves	6120 - Lowland Cedar	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except hemlock, yellow birch, white pine and cedar.. Also reserve red oak if present. Winter harvest only.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species. Snowmobile trail will possibly be affected by the harvest of this stand, see cutting specs.

Next Steps: Check for adequate regeneration within 5 years of harvest completion.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	11074049-Cut	6.2	42200 - Natural White Pine	High Density Log	93	111-140	Harvest	Clearcut with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 4.6 inches DBH except white pine and Pine. Also, reserve red oak and cedar if present. Selectively marked white pine and red pine to a residual BA of 60-80.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
51	11074051-Cut	22.9	42210 - Natural Red Pine	High Density Log	93	200+	Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal

Prescription Specs: Selectively thin red pine and white pine down to a residual BA of 80-100.

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Access to stand is from the west on private coming from little rice lake road.

Next Steps:

Proposed Start Date: 10/01/2014

Total Treatment Acreage Proposed: 144.6

Report 5 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	11074053-Cut	17.3	42210 - Natural Red Pine	High Density Log	93	111-140	Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal

Prescription Specs: Selectively thin red pine and white pine down to an average residual BA of 80 sqft. To mimic a fire prone ecosystem retain the largest diameter/thickest bark trees in the stand. Also residual trees shall be left in patches and harvested tree shall be removed in patches. This will require the placement of one 1/4 acre sized opening per acre and one large 1-2 acre sized opening per stand. This stand should be summer harvested only to encourage natural regeneration.

Other Comment: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type.

Next Steps:

Proposed Start Date: 10/01/2014

Limiting Factor: 1A: Federal/State/Local Law

Total Treatment Acreage Proposed: 17.3

Data updated yesterday after 6:00 PM

Report 6 – Out of YOE – Treatments Prescribed with No Limiting Factor

Year of Entry: 2015

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

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date: #Type!

Total Treatment Acreage Proposed: **0**

Data updated yesterday after 6:00 PM

LEMARBEM

Report 7 – Site Conditions

Baraga Mgt. Unit

Jason Mittlestat : Examiner

Compartment 074

Year of Entry 2015

Dominant Site Conditions

	No	5D	3J	3G	2G	1C	1A
Aspen	107						
Cedar	37		3		59		3
Lowland Conifers	17			16	111	8	65
Lowland Deciduous	7				9		
Lowland Mixed Forest					12		
Lowland Spruce/Fir	13	8					73
Mixed Upland Deciduous	25			1			
Northern Hardwood	19						
Red Pine	23						17
Tamarack		26					131
Upland Conifers							15
Upland Spruce/Fir	38				15	26	38
White Pine	6			2			
Total Forested Acres	292	34	3	18	207	34	342
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**	**1A: Federal/State/Local Law**	277				
	Comments: ERA						
006	**Not Available**	**3G: Other Influence zones - See comments**	16				
	Comments: Lake Buffer.						

007	**Not Available**	**3G: Other Influence zones - See comments**	2		

Comments:
Buffer stand to Rice Lake.

008	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	117		

Comments:
Thayers Lake

009	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	52		

Comments:
Tag Alder buffer of Thayers lake

010	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	3		

Comments:

011	**Not Available**	**3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)**	1		

Comments:
County Road.

012	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	29	3J: Water quality / BMPs (stream, river, or lake)	

Comments:

013	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	44	3J: Water quality / BMPs (stream, river, or lake)

Comments:

014	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	12	3J: Water quality / BMPs (stream, river, or lake)

Comments:

015	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	9	3J: Water quality / BMPs (stream, river, or lake)

Comments:

016	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	7	3J: Water quality / BMPs (stream, river, or lake)

Comments:

017	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	11	3J: Water quality / BMPs (stream, river, or lake)

Comments:

018	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	12	5D: Unproductive Forest Land

Comments:
Old Beaver Flooding

019	**Not Available**	**3G: Other Influence zones - See comments**	1		

Comments:
County ROW. Small acerage

021	**Not Available**	**1A: Federal/State/Local Law**	116		

Comments:
ERA

022	**Not Available**	**1C: Other dept or div proc/practices**	21		

Comments:
ERA - working to remove from ERA layer so the stand can be treated. Currently is mapped as an ERA but should not have been included because of the habatat type in the area.

023	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	2	3J: Water quality / BMPs (stream, river, or lake)	

Comments:

024	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	22	3J: Water quality / BMPs (stream, river, or lake)	

Comments:

025	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	7	3J: Water quality / BMPs (stream, river, or lake)	

Comments:

026	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	1

Comments:

027	**Not Available**	**3D: Recreational / Scenic values**	2

Comments:

Rice Lake Boat Access Site.

029	**Not Available**	**1C: Other dept or div proc/practices**	59

Comments:

Traverse river, Fisheries Division Requires a 300 foot buffer.

030	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	13

Comments:

Beaver Activity.

032	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	3

Comments:

033	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	57

Comments:

034	**Not Available**	**5D: Unproductive Forest Land**	36	2G: Too wet (sensitive soils, does not include access issues)	3H: Deer Wintering Areas
Comments:					
035	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	3		
Comments:					
036	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	8		
Comments:					
037	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	15		
Comments:					

Report 8 – 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
Rice Lake	Concentrated Recreation Area	Boat Access Site	**SCA**	
Comments				
Thayers Lake	Concentrated Recreation Area	Boat Access Site	**SCA**	
Comments				
Hungarian Falls	Concentrated Recreation Area	Trail Head	**SCA**	
Comments				
Traverse River	Habitat Areas or Corridors	Habitat Corridor	**SCA**	
Comments				

Report 9 – 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 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	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	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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6139 - Mixed Lowland Forest	Medium Density	12.4	22		
2	4139 - Aspen, Mixed Deciduous	Medium Density	40.9	17		Cut in 2006, part of "Thayer Birch".
3	6120 - Lowland Cedar	High Density Pole	29.3	Uneven Age	111-140	
5	4191 - Mixed Upland Deciduous with Conifer	High Density Log	1.0	Uneven Age	81-110	Stand is left for senic values along the Gay-Mohawk Road, Small acerage.
6	6129 - Mixed Coniferous Lowland Forest	High Density Pole	43.6	Uneven Age	111-140	
7	4130 - Aspen	High Density Sapling	62.3	14		cut in 1999. 40' tall aspen, some aspen is 4" already
10	6120 - Lowland Cedar	High Density Pole	12.0	103		wet,wet, wet
11	4112 - Maple, Beech, Cherry Association	High Density Log	3.5	Uneven Age	111-140	factor limit/ too small
12	4112 - Maple, Beech, Cherry Association	High Density Log	3.2	Uneven Age	111-140	factor limit/ too small
15	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density	9.0	99	1-50	wet
16	4137 - Aspen, Birch	Medium Density	4.1	7		
17	6120 - Lowland Cedar	High Density Pole	6.7	Uneven Age	81-110	Stand is Wet.
18	4199 - Other Mixed Upland Deciduous	High Density Pole	25.4	Uneven Age		Do not treat, There are many wet swail through stand and it is adjacent to Thayers Lake.
19	6120 - Lowland Cedar	High Density Pole	11.2	Uneven Age	81-110	Stand is Wet.
20	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density	7.2	7		Cut in 2006 with "Thayer Birch"
21	6124 - Lowland Spruce-Fir	High Density Pole	19.6	65		Line are in but no corners found, GMO has clearcut their side of the line. Quite a bit of beaver activity is the middle of the stand.
23	42340 - Upland Spruce/Fir	High Density Pole	8.5	65		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	6129 - Mixed Coniferous Lowland Forest	High Density Pole	15.1	79		Prescribe a 3 chain area along the Hardwood stand for even aged treatment reserving cedar and hemlock.
26	42340 - Upland Spruce/Fir	High Density Pole	12.2	91	1-50	Some Ridge/Swail complex. Blowdown areas give this stand an appearance of being all aged. Do not harvest within 300 of the traverse river as directed by fish division.
27	6122 - Black Spruce	High Density Pole	13.5	92		Talk to Fish Div and buffer AOI appropriatly.
28	4112 - Maple, Beech, Cherry Association	High Density Log	12.4	Uneven Age	111-140	adj Hdwd is market to cut on PVT.
30	42340 - Upland Spruce/Fir	High Density Pole	57.7	103	1-50	Ridge/swail complex. Area are mature. lots of blowdownhas given it an all aged structure. Snowmobilw trail through stand.
31	6120 - Lowland Cedar	High Density Pole	3.9	115		
32	6120 - Lowland Cedar	High Density Pole	38.5	105	81-110	
33	6121 - Tamarack	Low Density Sapling	75.7	107		Stand is in an ERA and SCA.
34	6122 - Black Spruce	High Density Pole	79.7	105		Stand is in an ERA.
35	6129 - Mixed Coniferous Lowland Forest	High Density Sapling	123.9	105		
37	42320 - Upland Spruce	Medium Density Pole	38.2	49		Stand is a part of an ERA. Ridges are upland and have timber on them. May have been cut in 1964 (according to OI).
39	6121 - Tamarack	Low Density Sapling	81.7	105		Stand is part of an ERA.
40	429 - Mixed Upland Conifers	High Density Pole	14.9	97	51-80	ERA, Birch is poor quality. Lake influence. Lots of blowdown.
44	6127 - Lowland Pine	High Density Pole	15.6	58	51-80	Lots of leather leaf
48	42200 - Natural White Pine	Medium Density Pole	1.5	93	1-50	
49	42200 - Natural White Pine	High Density Log	6.2	93	111-140	
51	42210 - Natural Red Pine	High Density Log	22.9	93	200+	

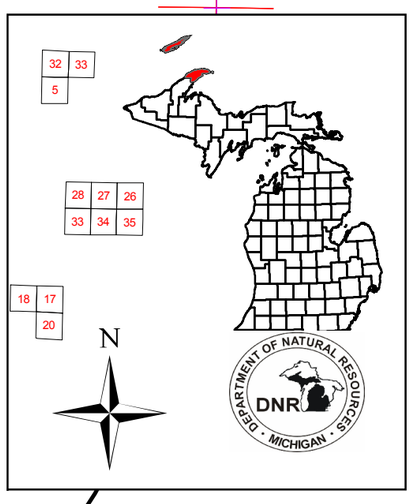
Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
53	42210 - Natural Red Pine	High Density Log	17.3	93	111-140	ERA take out

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	122 - Road/Parking Lot	0.6	No	Unspecified	
8	6220 - Alder/willow	52.0	No	Unspecified	
9	50 - Water	116.6	No	Unspecified	
13	6220 - Alder/willow	3.3	No	Unspecified	
14	3102 - Grass	0.7	No	Unspecified	
22	50 - Water	19.2	No	Unspecified	
24	122 - Road/Parking Lot	2.6	No	Unspecified	
29	50 - Water	28.4	No	Unspecified	
36	50 - Water	2.4	No	Unspecified	
38	50 - Water	12.9	No	Unspecified	
41	50 - Water	1.6	No	Unspecified	
42	710 - Sand, Soil	41.9	No	Unspecified	
43	629 - Mixed non-forested wetland	6.7	No	Unspecified	
45	6239 - Mixed Emergent Wetland	0.6	No	Unspecified	
46	122 - Road/Parking Lot	1.5	No	Unspecified	
47	6239 - Mixed Emergent Wetland	2.4	No	Unspecified	
50	6239 - Mixed Emergent Wetland	21.8	No	Unspecified	
52	6239 - Mixed Emergent Wetland	4.7	No	Unspecified	

Cover Type & Treatment Map

Compartment: 074
T55N R31W
17 18 20
T56N R31W
05 26 27 28 33 34 35
T57N R31W
32 33
County: Keweenaw
Unit: Baraga
YOE: 2015
Acres: 1,251 GIS Calculated
Examiner: Jason Mittlestat
Map Revised: 05/22/2013
Map Phase: Pre-Review

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



88°17'0"W · 88°16'0"W · 88°15'0"W · 88°14'0"W · 88°13'0"W · 88°12'0"W
47°13'0"N · 47°12'0"N · 47°11'0"N · 47°10'0"N · 47°9'0"N

28 · 33 · 34 · 18 · 20

21 6124-Q6 · 22 500-Z0 · 23 4234-F6 · 24 122-X0 · 25 6129-Q6 · 26 4234-F6 · 27 6122-S6 · 28 4112-M9 · 29 500-Z0 · 30 4234-F6 · 31 6120-C6 · 32 6120-C6 · 33 6121-T1 · 34 6122-S6 · 35 6129-Q3 · 36 500-Z0 · 37 4232-F5 · 38 500-Z0 · 39 6121-T1 · 40 429-MC6 · 41 500-Z0 · 42 710-Y0 · 43 629-L0 · 44 6127-Q6 · 45 623-N0 · 46 122-X0 · 47 623-N0 · 48 4220-W5 · 49 4220-W9 · 50 623-N0 · 51 4221-R9 · 52 623-N0 · 53 4221-R9

Gay Lake Linden Rd · Coal Dock Rd · Gay Park Rd · Coal Dock Ext Rd · Traverse Bay Rd · Coal Dock Rd · S46A · S23EA · S23C · S23EA · Rice Lake Rd · Little Traverse Rd · Mink Farm Rd · Louis Point Rd · Rice Lake BAS · T26D · Unknown · Unknown · Unknown

Deer Lake · Rice Lake · Little Rice Lake

Legend

- DNR Survey Corners
- Miris Corners
- Snowmobile Trails
- Snowmobile Trail
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Pipeline
- Powerline
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

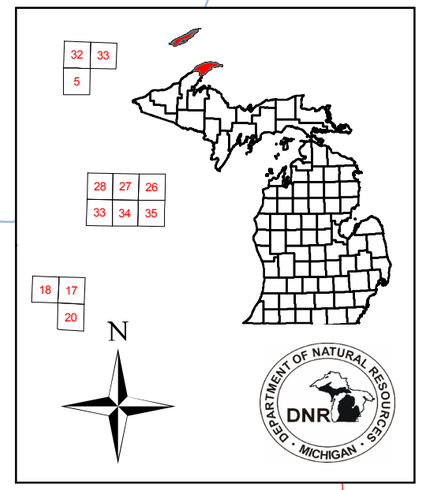
- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland
- 710 - Sand, Soil

1 · 0.5 · 0 · 1 Miles

Cover Type & Treatment Map

Compartment: 074
T55N R31W
17 18 20
T56N R31W
05 26 27 28 33 34 35
T57N R31W
32 33
County: Keweenaw
Unit: Baraga
YOE: 2015
Acres: 1,251 GIS Calculated
Examiner: Jason Mittlestat
Map Revised: 05/22/2013
Map Phase: Pre-Review

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



Legend
- DNR Survey Corners
- Miris Corners
- Snowmobile Trails
- Snowmobile Trail
- Paved Roads
- Poor Dirt Roads
- Stream
- Intermittent Stream
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Thayer Lake
Copper City Camp Rd
Mohawk Gay Rd
Thayers Lake Rd

32
33
5

1 6139-LM2
2 4139-A2
3 6120-C6
4 122-X0
5 4191-MD9
6 6129-Q6
7 4130-A3
8 622-L0
9 500-Z0
10 6120-C6
11 4112-M9
12 4112-M9
13 622-L0
14 310-G0
15 6117-E2
16 4137-A2
17 6120-C6
18 4199-MD6
19 6120-C6
20 6117-E2

1 0.5 0 1 Miles

88°17'0"W 88°16'0"W 88°15'0"W 88°14'0"W 88°13'0"W
47°18'0"N 47°17'0"N

Stand Boundary Map

Compartment: 074
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17 18 20
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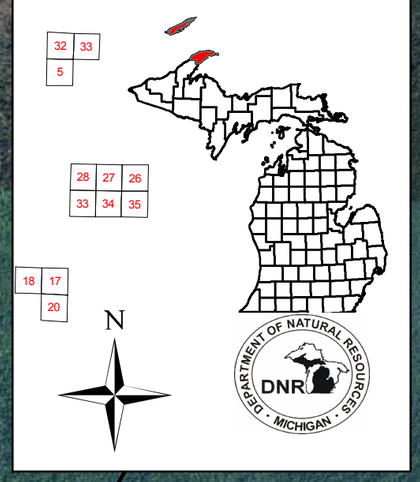

28
33
34
18
20

Legend
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1 0.5 0 1 Miles

88°17'0"W 88°16'0"W 88°15'0"W 88°14'0"W 88°13'0"W 88°12'0"W
47°13'0"N 47°12'0"N 47°11'0"N 47°10'0"N 47°9'0"N

Stand Boundary Map

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Stocking Density

(412)0) - A7
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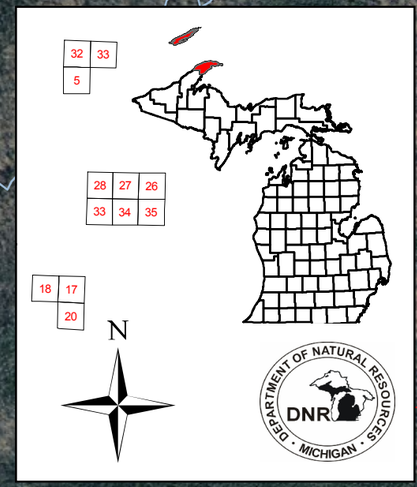

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Non-Forest Stands

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1 Miles

32

33

5

Thayer Lake

Thayers Lake Rd

Copper City Camp Rd

Mohawk Gay Rd

Hebard Rd

1 0.5 0

88°17'0"W 88°16'0"W 88°15'0"W 88°14'0"W 88°13'0"W

47°18'0"N 47°17'0"N

Special Conservation Areas & Site Conditions Map

Compartment: 074
T55N R31W
17 18 20
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T57N R31W
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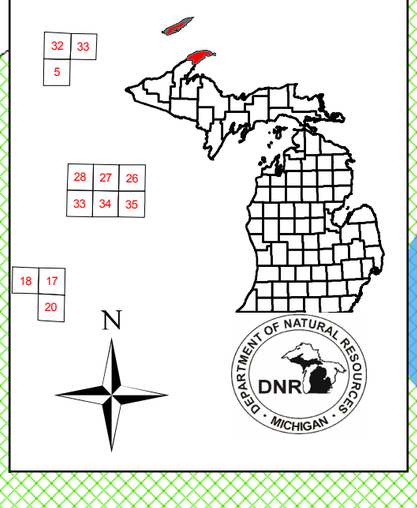

Legend
- Miris Corners
- Stand Boundaries

Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Reviewable SCAs
- Proposed SCA
- SCA Removal

Dedicated Special Conservation Areas
- Ecological Reference Areas
- High Priority Trout Stream Buffer
- Cold Water Streams

Deer Winter Range
- Obligate winter range
- Obligate winter range- needs verification

Forest Stands
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Non-Forest Stands
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28 29 33 34 19 20
2G - 030
Traverse River
1C - 029
2G - 036
2G - 032
Traverse River
2G - 037
2G - 033
1A - 021
3J - 035
5D - 034
1A - 003
2G - 025
3G - 006
Rice Lake
3D - 027
2G - 023
2G - 024
1C - 022

1 0.5 0 1 Miles

88°17'0"W 88°16'0"W 88°15'0"W 88°14'0"W 88°13'0"W 88°12'0"W
47°13'0"N 47°12'0"N 47°11'0"N 47°10'0"N 47°9'0"N

Special Conservation Areas & Site Conditions Map

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T55N R31W
17 18 20
T56N R31W
05 26 27 28 33 34 35
T57N R31W
32 33
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Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

88°18'0"W 88°17'0"W 88°16'0"W 88°15'0"W 88°14'0"W 88°13'0"W
47°18'0"N 47°17'0"N

32 33 5 28 27 26 33 34 35 18 17 20
N
DEPARTMENT OF NATURAL RESOURCES · MICHIGAN · DNR

32 33 5

2G - 014
2G - 016
2G - 015
2G - 012
2G - 017
2G - 008
2G - 009
2G - 010
Thayers Lake
2G - 013
2G - 018
3E - 011
3G - 019

Legend
- Miris Corners
- Stand Boundaries

Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Reviewable SCAs
- Proposed SCA
- SCA Removal

High Priority Trout Stream Buffer
- High Priority Trout Stream Buffer

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47°17'0"N