Report 1 – Compartment Review Presentation

Baraga Forest Management Unit

Compartment 49
Entry Year 2015
Acreage: 1,475
County Houghton
Management Area: Central Houghton

Revision Date: 07/17/2013

Stand Examiner: Jason Mittlestat

Legal Description:

Houghton County, Laird Township.
T51N, R36W, Sections 9, 15 and 16

Identified Planning Goals:

Central Houghton (4.6)
To maintain a healthy; sustainable forest with special consideration to wildlife habitat, fisheries habitat, and recreational needs.

Soil and topography:

The terrain is level to rolling. Soils are Munising loamy fine sand, Kalkaska sand, Yalmer sand, Au Gres sand, Roscommon sand, Halfaday sands, Laminga fine sand, Gay muck, Lupton, Cathro muck and Dawson Loxley peats.

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

The compartment adjoins other state forest lands, one large industrial land owner and one small owner. The land use is predominantly for timber.

Unique, Natural Features:

None Identified.

Archeological, Historical, and Cultural Features:

The Otter Siding Road was a logging railroad grade.

Special Management Designations or Considerations:

None Identified.

Watershed and Fisheries Considerations:

The West Branch of the Otter River is a high quality trout stream. Recent stream improvement and bank stabilization projects have been accomplished downstream of the Otter Siding Road in the adjacent compartment to the south. Best Management pratices should be observed when harvesting.

Wildlife Habitat Considerations:

Compartment 49 is found in the Central Houghton Management Area on Dissected Moraines in Central Houghton County. The major forest cover types include Northern Hardwoods, Aspen, and Mixed Lowland Conifer. Some of the most significant wildlife management issues in the management area are: mesic conifers; mature forest; habitat fragmentation; course woody debris; and retention or development of large living and dead standing trees (for cavities). This management area represents almost 15% of the WUP State Forest hemlock resource and is one of the few MAs where the species reliably regenerates and recruits.

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, thinning to the northwest. The glacial drift thickness varies between 10 and 50 feet. The Precambrian Jacobsville Sandstone and the Portage Lake Volcanics subcrop below the glacial drift. The Jacobsville was previously used as a building stone and the Volcanics may have copper potential. The closest gravel pit is located six miles to the north, but potential should be good in areas of drift. Abandoned copper mines, containing some silver, are located to the north and to the southwest. Section 8 was previously leased for copper exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Access is from the Otter Siding Road with runs the entire length of the compartment connecting the Pike Lake Road to M-

38. There are also several forest roads in varying conditions throughout the compartment.

Survey Needs:

None needed.

Recreational Facilities and Opportunities:

The hunting opportunities in this compartment are excellent for big and small game hunting alike.

Fire Protection:

This is not a fire prone area.

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 049 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	10	100	0	0	0	0	134	0	0	0	0	0	0	0	**244**
Bog	9	0	0	0	0	0	0	0	0	0	0	0	0	0	**9**
Cedar	0	0	0	0	0	0	0	0	34	0	0	0	0	0	**34**
Hemlock	0	0	0	0	0	0	0	0	0	0	14	0	0	15	**29**
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
Lowland Conifers	0	0	0	0	0	31	0	90	47	0	5	0	0	0	**173**
Lowland Deciduous	0	0	0	0	0	0	0	3	0	0	0	0	0	0	**3**
Lowland Mixed Forest	0	0	0	0	0	0	52	0	0	0	0	0	0	0	**52**
Lowland Spruce/Fir	0	0	0	0	0	0	0	6	43	0	17	0	0	0	**66**
Marsh	57	0	0	0	0	0	0	0	0	0	0	0	0	0	**57**
Northern Hardwood	0	0	0	0	0	0	0	10	0	0	0	0	0	721	**731**
Tamarack	0	0	0	0	0	0	0	14	0	0	0	0	0	0	**14**
Upland Conifers	0	0	0	0	0	0	0	0	0	0	4	0	0	0	**4**
Upland Mixed Forest	0	0	0	0	6	0	0	0	0	0	0	0	0	15	**21**
Upland Spruce/Fir	0	0	0	0	3	0	4	11	0	0	0	0	0	0	**17**
Water	14	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Total	**97**	**100**	**0**	**0**	**9**	**31**	**190**	**134**	**124**	**0**	**41**	**0**	**0**	**751**	**1476**

Report 3 – Proposed Treatment Summaries

Baraga Mgt. Unit
Year of Entry 2015

Compartment 049
Total Compartment Acres: 1476

Acres by Treatment Type

Commercial Harvest - 324	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
Aspen Types	134	0	0	0	0	0	**134**
Northern Hardwood	0	157	0	0	0	0	**157**
Other Upland Conifers	17	0	0	0	0	0	**17**
Upland Mixed Forest	0	15	0	0	0	0	**15**
Total	**151**	**172**	**0**	**0**	**0**	**0**	**324**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	11049001-Cut	17.7	4115 - Y.Birch, Hemlock NH	High Density Log	91	81-110	Harvest	Single Tree Selection	4115 - Y.Birch, Hemlock NH	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 70-90 sqft of BA. Do not harvest oak, hemlock, black cherry, white pine and cedar. 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".

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and 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
5	11049005-Cut	71.5	4112 - Maple, Beech, Cherry Association	High Density Log	91	81-110	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 70-90 sqft of BA. Do not harvest oak, hemlock, black cherry, aspen, 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".

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and 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
11	11049011-Cut	15.2	4319 - Mixed Upland Forest	High Density Pole	81	111-140	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 70-90 sqft of BA. Do not harvest oak, black cherry, hemlock, white pine and cedar. 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".

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and 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
16	11049016-Cut	3.7	42340 - Upland Spruce/Fir	High Density Pole	62		Harvest	Clearcut	42340 - Upland Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 2 inches DBH except white pine, black cherry or hemlock if present.

Other Comments: Retention will be greater than 3% and will include some large diameter aspen in clumps. If foundations are found buffer one tree length or more to get the retention to equal 3% or greater.

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
22	11049022-Cut	27.9	4134 - Aspen, Spruce/Fir	High Density Pole	62		Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 4.6 inches DBH except black cherry, hemlock and white pine. Also reserve red oak 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.

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
29	11049029-Cut	72.3	4136 - Aspen, Mixed Conifer	High Density Pole	65		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 4.6 inches DBH except hemlock, black cherry, yellow birch,cedar and white pine. Also reserve red oak 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. Check for adequate regeneration within 5 years of harvest completion.

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
31	11049031-Cut	12.7	4112 - Maple, Beech, Cherry Association	High Density Pole	93	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 70-90 sqft of BA. Do not harvest large diameter aspen, oak, hemlock, white pine and cedar. Favor black cherry. 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".

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and 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
33	11049033-Cut	5.8	4119 - Mixed Northern Hardwoods	High Density Pole	64	81-110	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 50-70 sqft of BA expecting to re-enter this stand on a 30 year rotation. Do not harvest oak, aspen, hemlock, white pine and cedar. 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 and 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
36	11049036-Cut	33.7	4136 - Aspen, Mixed Conifer	High Density Pole	62		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 4.6 inches DBH except hemlock, yellow birch, black cherry and white pine. Also reserve red oak and cedar 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.
The treament area may extent south into adjacent compartment to include a small area that may exist there, possibly 1-2 acres

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
39	11049039-Cut	49.6	4112 - Maple, Beech, Cherry Association	High Density Pole	83	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Selectively thin hardwoods to 70-90 sqft of BA. Do not harvest oak, large diamter aspen, hemlock, white pine and cedar. Favor black cherry. 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".

Other Comments: Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and 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
42	11049042-Cut	2.7	42340 - Upland Spruce/Fir	Medium Density Pole	42		Harvest	Clearcut with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 4.6 inches DBH except black cherry, paper birch and white pine. Also reserve red oak, hemlock and cedar if present.

Other Comments: Retention for this stand will be greater than 3% and will consist of reserve tree species.
The treament area may extent south into adjacent compartment to include a small area that may exist there, possibly 1-2 acres

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
44	11049044-Cut	11.0	42340 - Upland Spruce/Fir	High Density Pole	76		Harvest	Clearcut with Reserves	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Harvest all species down to 4.6 inches DBH except hemlock black cherry, tamarack and white pine. Also reserve red oak and cedar 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.
The treament area may extent south into adjacent compartment to include a small area that may exist there, possibly 1-2 acres.

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

Proposed Start Date: 10/01/2014

Total Treatment Acreage Proposed: 323.7

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
			#Type!							

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Type!

Limiting Factor

Total Treatment Acreage Proposed: 0

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 049

Year of Entry 2015

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5D	5C	3J	3A	2G
244	244		**Aspen**	244					
34		34	**Cedar**						34
29		29	**Hemlock**					29	
173	5	168	**Lowland Conifers**			5	15		152
3	3		**Lowland Deciduous**	3					
52		52	**Lowland Mixed Forest**				52		
66	5	61	**Lowland Spruce/Fir**	5			17		44
730	730		**Northern Hardwood**	720		10			
14		14	**Tamarack**		14				
4	4		**Upland Conifers**	4					
21	21		**Upland Mixed Forest**	21					
17	17		**Upland Spruce/Fir**	17					
1,388	1,031	357	Total Forested Acres	1,016	14	15	85	29	230
	74%	26%	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**	**3J: Water quality / BMPs (stream, river, or lake)**	15	2G: Too wet (sensitive soils, does not include access issues)			
Comments:							
004	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	17	2G: Too wet (sensitive soils, does not include access issues)			
Comments:							

Report 7 – Site Conditions

Baraga Mgt. Unit | **Compartment 049**

Jason Mittlestat : Examiner | **Year of Entry 2015**

005	**Not Available**	**5D: Unproductive Forest Land**	14	2G: Too wet (sensitive soils, does not include access issues)	

Comments:

006	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	5		

Comments:

Thin through this stand in 2025 with adjacent hdwds stand.

007	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	89		

Comments:

010	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	38		

Comments:

011	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	27		

Comments:

012	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	34		

Comments:

013	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	54	

Comments:

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

Comments:
water

015	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	9	

Comments:
lake 15

016	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	17	

Comments:
non forested beaver flooding.

017	**Not Available**	**3A: Potential old growth / biodiversity**	14	

Comments:
Solid hemlock stand. We do not mangage stand like this as directed by our WLD staff.

018	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	52	2G: Too wet (sensitive soils, does not include access issues)

Comments:

Report 7 – Site Conditions

Baraga Mgt. Unit | **Compartment 049**

Jason Mittlestat : Examiner | **Year of Entry 2015**

019	**Not Available**	**3A: Potential old growth / biodiversity**	15		

Comments:
Solid hemlock stand. We do not manage stand like this as directed by our WLD staff.

020	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	10	2E: Road needed	

Comments:

021	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	5	5C: Delay treatment for age/size class diversity or exceptional site quality	

Comments:

022	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	3	5D: Unproductive Forest Land	

Comments:

023	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	21		

Comments:
Old beaver flooding.

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

Comments:

Report 7 – Site Conditions

Baraga Mgt. Unit | **Compartment 049**

Jason Mittlestat : Examiner | **Year of Entry 2015**

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

Comments:
water.

026	**Not Available**	**3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)**	7

Comments:
powerline.

033	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	6

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
Pike Lake Flooding WLD	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 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.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4115 - Y.Birch, Hemlock NH	High Density Log	25.4	Uneven Age	81-110	Selection harvested in 1995 with "Otter Aspen" (11-003-95-01). South 1/3 of stand in not ready due to high hemlock residual BA and should be excluded from treatment area, also some areas along clearcut edge are not ready due to aspen removal and should also be exlcluded from the treatment area.
2	6122 - Black Spruce	High Density Pole	3.9	86		
4	4319 - Mixed Upland Forest	High Density Sapling	6.2	41	1-50	West perimeter of stand is plantation White Spruce.
5	4112 - Maple, Beech, Cherry Association	High Density Log	71.5	Uneven Age	81-110	Selection harvested in 1995 with "Otter Siding Hardwoods" (11-009-95-01). It is ready for another treatment.
6	4112 - Maple, Beech, Cherry Association	High Density Log	4.0	Uneven Age	81-110	Select harvested in 2005 with "Pits Hardwoods" (11-014-05-01). Harvest again next rotation in 2025.
7	6129 - Mixed Coniferous Lowland Forest	Low Density Sapling	3.2	56		
8	4112 - Maple, Beech, Cherry Association	High Density Log	2.9	Uneven Age	51-80	Selection harvested last rotation with "Pits Hdwds" (11-014-05-01). Stand should be ready for another treatment in 2025.
9	4130 - Aspen	High Density Sapling	35.5	16		Clearcut in 1997 with "Otter Siding Aspen" (11-003-95-01).
10	6122 - Black Spruce	High Density Pole	38.4	81		Stand has very wet ground.
11	4319 - Mixed Upland Forest	High Density Pole	15.2	Uneven Age	111-140	Select harvest with adjacent stand to the west. Acreage may be reduce due to thick hemlock edge being left out of the treatment area.
12	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	26.7	81		Stand is a growing in treed bog.
14	4119 - Mixed Northern Hardwoods	High Density Pole	10.0	70	111-140	Even aged M6, No record of any management by the state. Possible pasture origin. Factor limit for "Other Departmental procedure" and select harvest next rotation with "Pits Hardwoods".
15	4112 - Maple, Beech, Cherry Association	High Density Log	21.1	Uneven Age	51-80	Select harvested in 1995 with "Otter Siding Aspen" (11-003-95-01). Stand had aspen removed and Basal area has not recovered enough for another entry.
16	42340 - Upland Spruce/Fir	High Density Pole	3.7	62		
17	4130 - Aspen	High Density Sapling	9.2	15		Clearcut in 1997 with "Popple Dropple" (11-006-95-01).

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4130 - Aspen	High Density Sapling	50.7	15		Clearcut in 1997 with "Popple Dropple" (11-006-95-01).
19	6120 - Lowland Cedar	High Density Pole	33.5	83	51-80	Wet ground, transitions into treed bog to the east.
20	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	5.0	84		Stand has some operable ground, look at next rotation to do a species removal and set up with adjacent hardwood stands (Pits Hardwoods).
21	6122 - Black Spruce	Low Density Sapling	1.0	84		
22	4134 - Aspen, Spruce/Fir	High Density Pole	27.9	62		Aspen is of poor quality. Spruce budworm is present in the stand.
23	4112 - Maple, Beech, Cherry Association	High Density Log	83.3	Uneven Age	81-110	Selection harvested in 2005 with "Pits Hardwoods" (11-014-05-01). Treat again in 2025.
24	6139 - Mixed Lowland Forest	Low Density Pole	52.3	62		
27	42350 - Upland Hemlock	High Density Log	14.8	Uneven Age	141-170	Excluded from "Pine Marten Hardwoods" last rotation because it contained a significant BA of hemlock in both the overstory and understory.
29	4136 - Aspen, Mixed Conifer	High Density Pole	72.3	65		Some large diameter aspen are present but in poor shape.
30	4115 - Y.Birch, Hemlock NH	High Density Log	54.3	Uneven Age	51-80	Secection harvested in 2005 with "Pine Marten Hardwoods" (11-013-05-01). Treat again in 2025.
31	4112 - Maple, Beech, Cherry Association	High Density Pole	12.7	Uneven Age	111-140	Stand edges are very heavy to balsam and aspen.
32	6122 - Black Spruce	High Density Pole	17.2	101		Ripaian Cooridor to small pond.
33	4119 - Mixed Northern Hardwoods	High Density Pole	5.8	Uneven Age	81-110	Poor quality stand, bud worm is present in the spruce/fir. Selections harvest down to 50-70 BA and manage on a 30 year rotation.
35	6129 - Mixed Coniferous Lowland Forest	High Density Pole	15.4	85		Stand is a Riparian buffer to small pond.
36	4136 - Aspen, Mixed Conifer	High Density Pole	33.7	62		Health of stand is poor. Aspen is in poor shape and bud work is in the spruce/fir.
37	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	53.6	72		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	5.2	101		
39	4112 - Maple, Beech, Cherry Association	High Density Pole	49.6	Uneven Age	111-140	Stand edges are heavy to aspen and balsam.
41	6121 - Tamarack	Medium Density	13.6	72		Treed bog in the process of converting.
42	42340 - Upland Spruce/Fir	Medium Density Pole	2.7	42		Stand has bud worm present. Should include with adjacent stands to salvage the spruce/fir. Could leave cherry if WLD desires.
43	4130 - Aspen	High Density Sapling	4.9	15		Cut in 1998 with "Lopi's Legacy"
44	42340 - Upland Spruce/Fir	High Density Pole	11.0	76		Stand is the transition from and M6 to an S6. Final Harvest and reserve white pine, cedar and hemlock.
46	429 - Mixed Upland Conifers	High Density Log	4.5	102	111-140	Stand was excluded from adjacent Hdwds sale last rotation, but should be select harvested next rotation to open up some of the White Pine and encourage regeneration.
47	6122 - Black Spruce	High Density Pole	5.8	72		Wet ground and small acreage. A good stand to leave for diversity.
48	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	3.2	74	51-80	Wet Ground.
49	4119 - Mixed Northern Hardwoods	High Density Log	339.1	Uneven Age	81-110	Selection harvested of from 2007-2012 with two different sales. The north part was "Salt Block Hdwds" (11-015-05-01) and the south part was "Redd Finn Hdwds" (11-016-05-01). Stand will be ready for another treatment in 2025.
51	4112 - Maple, Beech, Cherry Association	High Density Log	40.4	Uneven Age	81-110	Selection harvested last rotation with "Salt Block Hdwds" (11-015-05-01). Stand will be ready for another treatment in 2025.
52	6129 - Mixed Coniferous Lowland Forest	High Density Pole	36.4	72		Wet ground, trees are stunted.
53	4130 - Aspen	High Density Sapling	9.8	3		Clear cut in 2010 with "Redd Finn Hdwds" (11-016-05-01).
55	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	27.3	55		
57	4115 - Y.Birch, Hemlock NH	High Density Log	10.7	Uneven Age	81-110	Selection harvested in 2008 with "Redd Finn Hdwds" (11-016-05-01). Stand should be ready for another treatment in 2025.
58	42350 - Upland Hemlock	High Density Log	13.8	102	171-200	Leave for diversity, Stand is unique.

Report 11 – Nonforested Stands

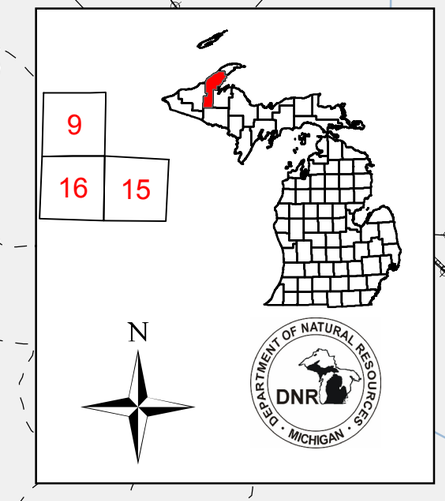
Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	6233 - Wet Meadow	2.2	No	Unspecified	
13	3102 - Grass	6.8	No	Unspecified	Powerline ROW.
25	6233 - Wet Meadow	20.7	No	Unspecified	Old beaver flooding.
26	50 - Water	1.6	No	Unspecified	
28	50 - Water	2.2	No	Unspecified	
34	50 - Water	1.5	No	Unspecified	
40	6233 - Wet Meadow	2.1	No	Unspecified	
45	50 - Water	8.5	No	Unspecified	Lake Fifteen.
50	6233 - Wet Meadow	15.7	No	Unspecified	
54	6230 - Cattail	16.8	No	Unspecified	Old beaver flooding.
56	6225 - Bog	9.4	No	Unspecified	

Data updated yesterday after 6:00 PM

Cover Type & Treatment Map

Compartment: 049
T51N R36W
08 09 10 11 14 15 16 17 21 22 23
County: Houghton
Unit: Baraga
YOE: 2015
Acres: 1,476 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
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Lakes and Rivers
- Pipeline
- Powerline
- State Forest Land

Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

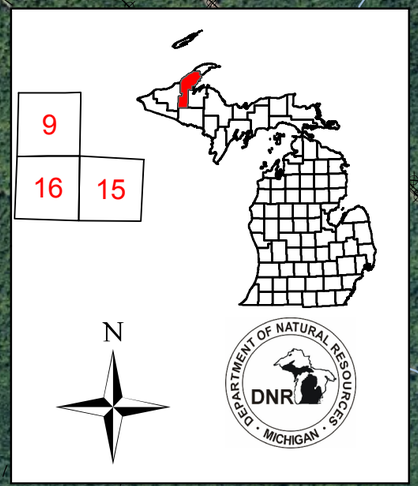
Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

Kratt Lakes
Horseshoe Lake
Bohmier Lake
Lake Fifteen
Otter Siding Rd
E657C
Pike Lake
Pike Lake Rd
16
15
1 0 0.5 1 Miles
88°54'0"W
88°53'0"W
88°52'0"W
88°51'0"W
88°50'0"W
46°50'0"N
46°49'0"N

Stand Boundary Map

Compartment: 049
T51N R36W
08 09 10 11 14 15 16 17 21 22 23
County: Houghton
Unit: Baraga
YOE: 2015
Acres: 1,476 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
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Stream
- Intermittent Stream
- Pipeline
- Powerline
- Stand Boundaries

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

Clear Lake Access Rd
Otter Siding Rd
Pike Lake
E657C
Horseshoe Lake
Bohmier Lake
Pike Lake

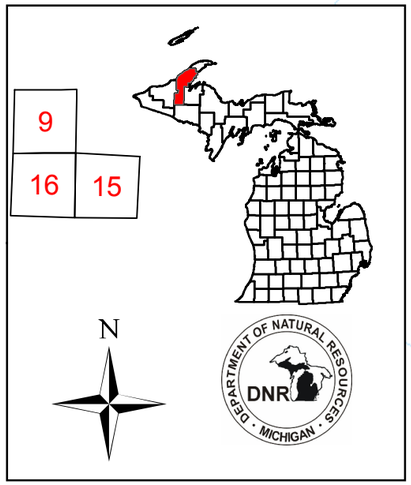
1 0.5 0 1 Miles

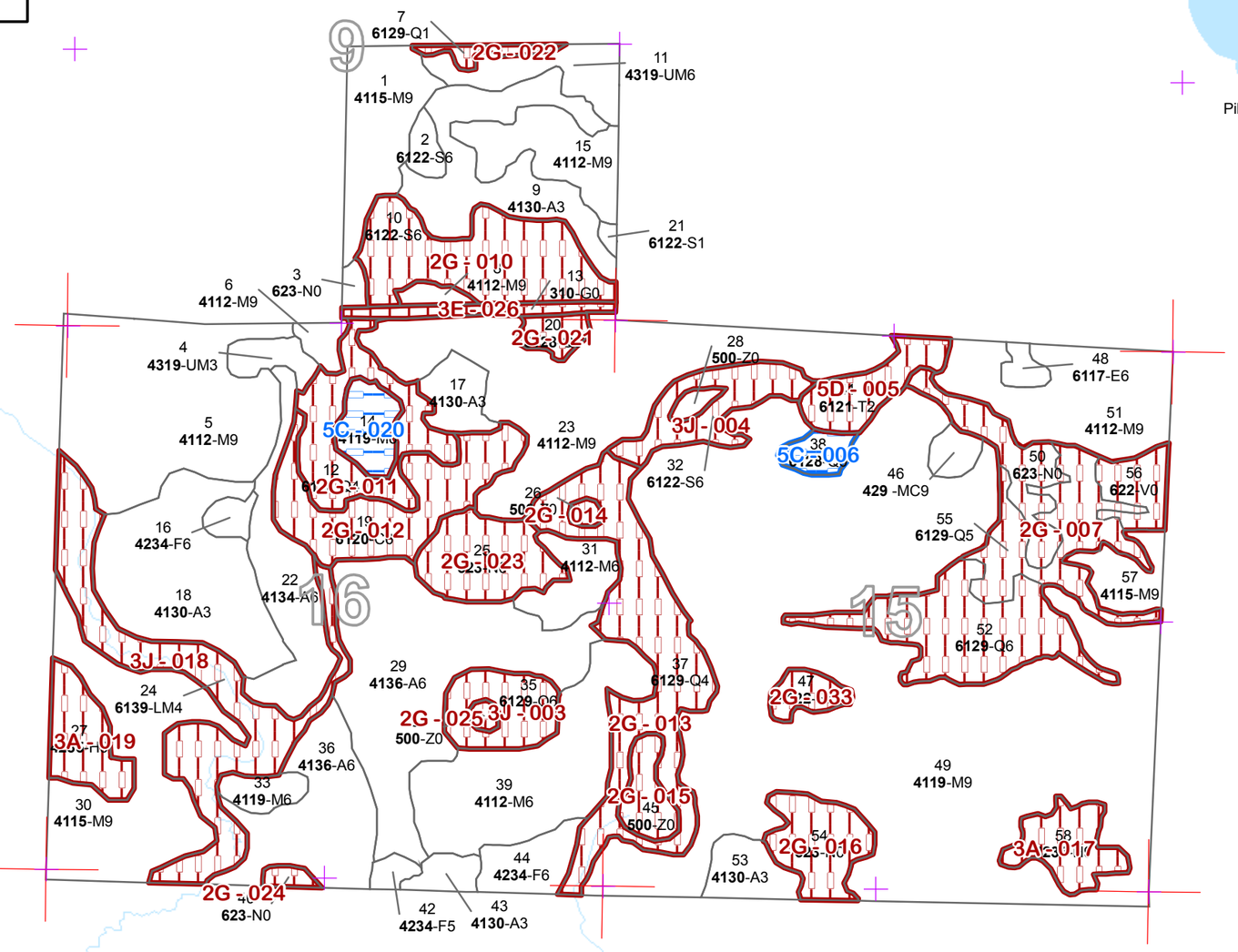
88°54'0"W 88°53'0"W 88°52'0"W 88°51'0"W 88°50'0"W
46°50'0"N

Special Conservation Areas & Site Conditions Map

Compartment: 049
T51N R36W
08 09 10 11 14 15 16 17 21 22 23
County: Houghton
Unit: Baraga
YOE: 2015
Acres: 1,476 GIS Calculated
Examiner: Jason Mittlestat
Map Revised: 05/22/2013
Map Phase: Pre-Review

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





Legend
- Miris Corners
- Stand Boundaries

Reviewable SCAs
- Proposed SCA
- SCA Removal

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

Dedicated Special Conservation Areas
- Cold Water Streams

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland

1 0.5 0 1 Miles

88°54'0"W 88°53'0"W 88°52'0"W 88°51'0"W 88°50'0"W
46°50'0"N 46°49'0"N