



Compartment Review Presentation

Baraga Forest Management Unit

Compartment 11035

Entry Year 2019

Acreage: 1,681

County Houghton

Management Area: Central Houghton

Revision Date: 2017-05-17

Stand Examiner: Fred Hansen

Legal Description:

Portage Township
T53N, R35W, Sections 24-26, 35-36

Identified Planning Goals:

To maintain a healthy sustainable forest with special consideration to wildlife and fisheries habitat.

Soil and topography:

This is a rolling area bisected with streams and drainages. There are some steep slopes and ridges. Most of the area is well drained. Soils are: Munising loamy fine sand, Yalmer sand, Assinins sands, Skanee fine sandy loam, Tawas and Roscommon mucks, Gay muck, Trimountain cobbly fine sand, Paavola gravelly course sandy loam, Kalkaska sand, Keweenaw gravelly loamy sand, Liminga fine sand, and Alcona loamy fine sand.

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

Adjacent ownerships are predominately industrial forest managed for timber production.

Unique Natural Features:

MNFI indicates the potential for osprey, eagle, great blue heron rookery, red-shouldered hawk, goshawk, moose, gray wolf and the potential for wood turtles along drainages.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

There are several streams, Sante River, 13 Mile Creek, and tributaries to the North Branch Otter River.

Wildlife Habitat Considerations:

Maintaining a conifer component in hardwood cover types provide habitat for many of the featured species in this compartment. Retaining mast producing and mature wildlife trees will benefit featured species including black bears, northern goshawks, pileated woodpeckers.

Mineral Resource and Development Concerns and/or Restrictions

Compartment 35: Sections 24-26 & 35-36, T53N R35W, Houghton County
No sand/ gravel pits are located in the area. Sand & gravel potential is unknown. The compartment is located on the east side of the Keweenaw Fault (copper-bearing formations are on the west side of the fault). Therefore, metallic mineral potential is considered minimal. There is no known potential for economic oil and gas production in the UP.

Vehicle Access:

Access is either from the north on a DNR easement from Globe Mine / M-26, from the southeast though private lands off the Tapiola Road, or from the west though private lands off M-26. A permanent stream crossing is needed across the Santee River in Section 25 near the NW corner. A good internal road system should be developed with timber sales.

Survey Needs:

Recreational Facilities and Opportunities:

Fire Protection:

This is not a fire prone area, if there were a fire access would be difficult due to not having a bridge over the Santee River.

Additional Compartment Information:

The following reports from the Inventory are attached:

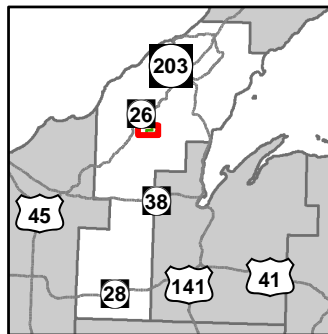
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

The following information is displayed, where pertinent, on the attached compartment maps:

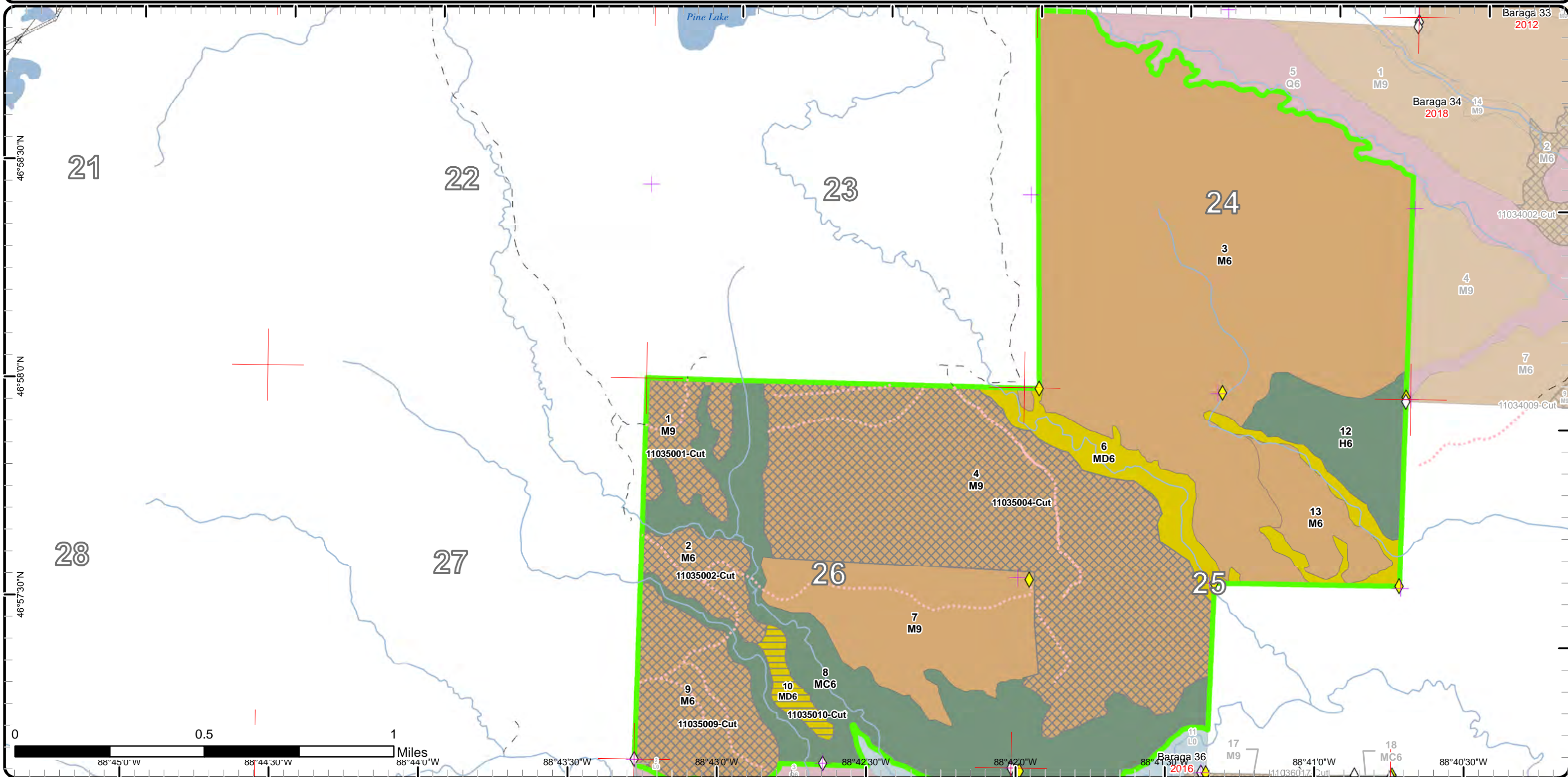
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 35
 T53N, R35W, Sec: 24-26, 35-36
 County: Houghton
 Unit: Baraga
 Mgmt Area: Central Houghton
 YOE: 2019
 Acres: 1662.9 GIS Calculated
 Examiner: Fred Hansen
 Map Revised: 9/12/2017
 Map Phase: Post Review

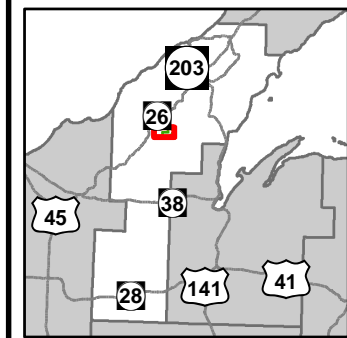


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Counties
- - Poor Dirt Roads
- - - Closed
- Streams
- Lakes and Rivers All
- Pipeline
- ⊕ Powerline
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- 411 - Northern Hardwood
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- Lakes

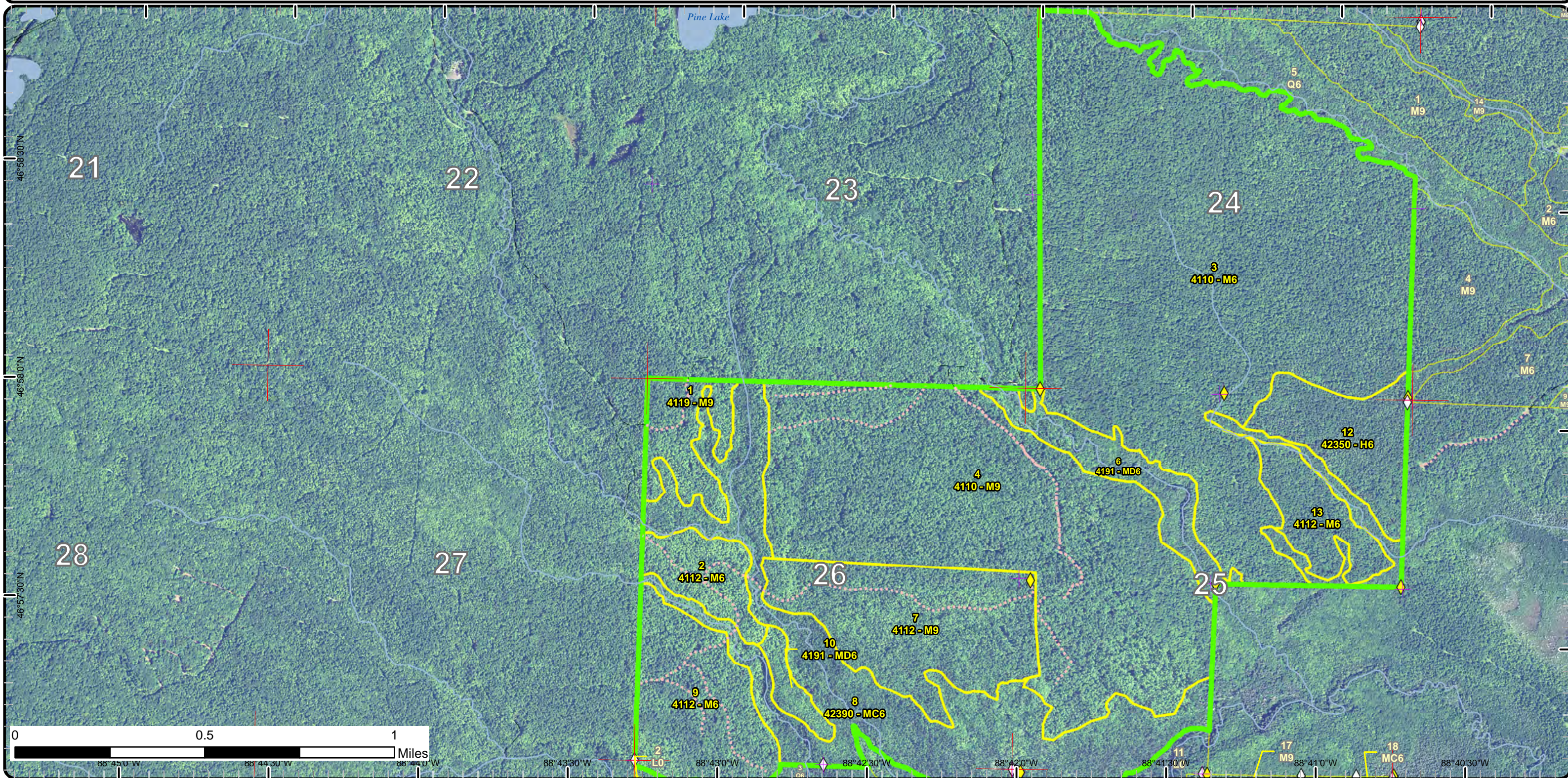


Stand Boundary Map

Compartment: 35
 T53N, R35W, Sec: 24-26, 35-36
 County: Houghton
 Unit: Baraga
 Mgmt Area: Central Houghton
 YOE: 2019
 Acres: 1662.9 GIS Calculated
 Examiner: Fred Hansen
 Map Revised: 9/12/2017
 Map Phase: Post Review

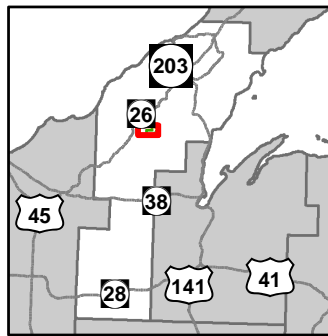


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Counties
- Poor Dirt Roads
- ⋯ Closed
- Streams
- █ Lakes and Rivers All
- Pipeline
- ⊕ Powerline
- Compartment Boundary
- Stand Boundaries
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 411 - Northern Hardwood

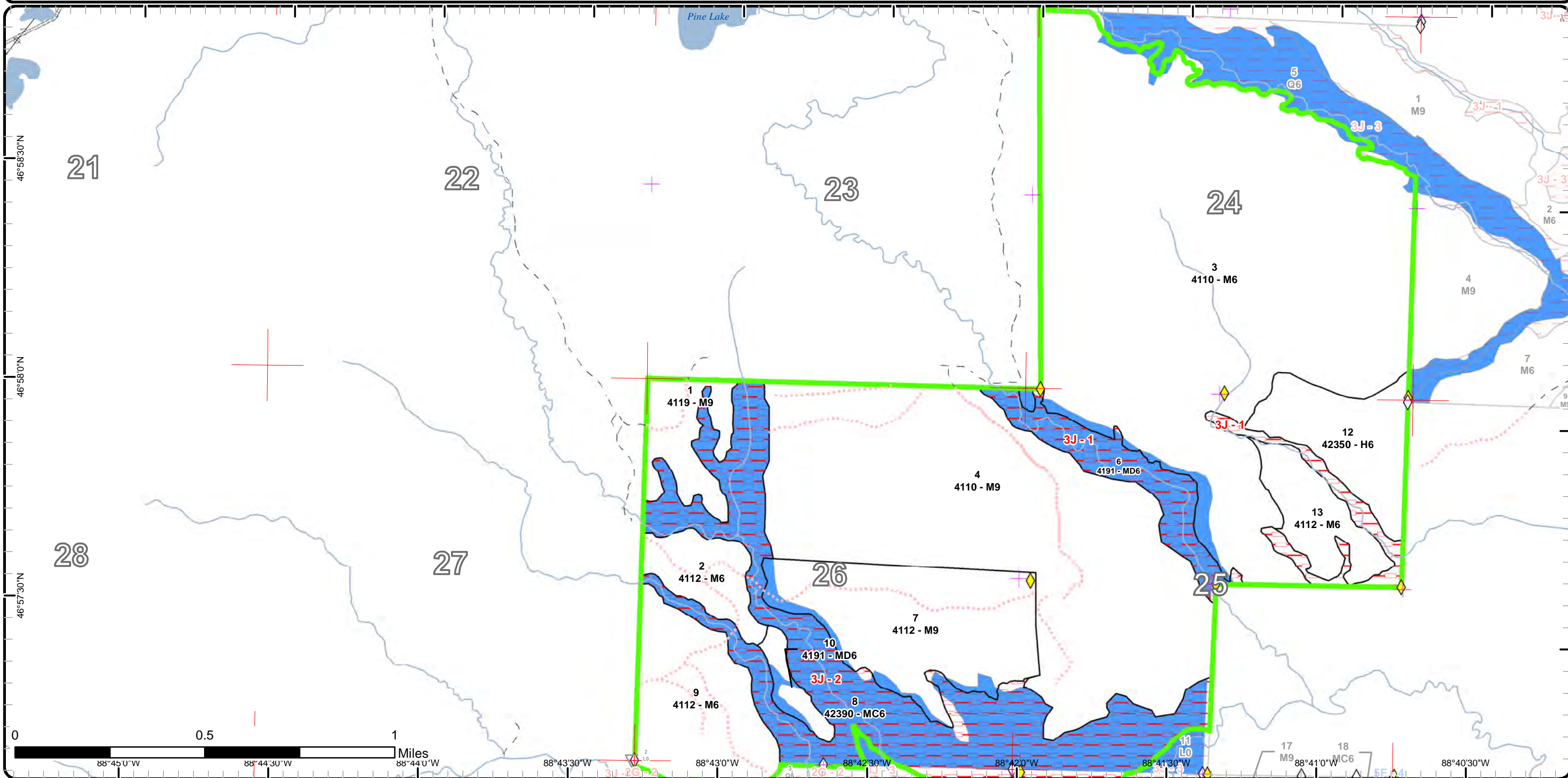


Special Conservation Areas & Site Conditions Map

Compartment: 35
 T53N, R35W, Sec: 24-26, 35-36
 County: Houghton
 Unit: Baraga
 Mgmt Area: Central Houghton
 YOE: 2019
 Acres: 1662.9 GIS Calculated
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- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Counties
- - - Poor Dirt Roads
- ⋯ Closed
- Streams
- Lakes and Rivers All
- Pipeline
- ⊕ Powerline
- Compartment Boundary
- Unavailable
- 3J: Water quality / BMPs (stream, river, or lake)
- ▭ Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- Riparian Area



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	61
Mixed Upland Deciduous	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	66	79
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1295	1295
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	219	219
Total	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	1641	1654



Report 2 – Treatment Summary

Baraga Mgt. Unit

Year of Entry: 2019

Acres of Harvest

Compartment 35

Total Compartment Acres: 1,681

Commercial Harvest - 551
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Mixed Upland Deciduous	13	0	0	0	0	0	0	0	0	13
Northern Hardwood	0	539	0	0	0	0	0	0	0	539
Total	13	539	0	0	0	0	0	0	0	551

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	551	0	0	0	0	0	0	0	0	551
Next Step	0	0	0	0	0	551	0	0	0	551
Total	551	0	0	0	0	551	0	0	0	1103



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	11035001-Cut	38.1	4119 - Mixed Northern Hardwoods	Sawtimber Well	96	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". If areas heavy to oak, aspen and/of dieback 1-5 acres are found, seed tree harvest with a residual 10-30 sq ba of oak, reserving hemlock, cedar and pine.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any tree species that are currently represented in the over story.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

2	11035002-Cut	34.0	4112 - Maple, Beech, Cherry Association	Poletimber Well	98	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". If areas heavy to oak, aspen and/of dieback 1-5 acres are found, seed tree harvest with a residual 10-30 sq ba of oak, reserving hemlock, cedar and pine.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any tree species that are currently represented in the over story.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

4	11035004-Cut	375.3	4110 - Sugar Maple Association	Sawtimber Well	93	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". If areas heavy to oak, aspen and/of dieback 1-5 acres are found, seed tree harvest with a residual 10-30 sq ba of oak, reserving hemlock, cedar and pine.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any tree species that are currently represented in the over story.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
9	11035009-Cut	91.2	4112 - Maple, Beech, Cherry Association	Poletimber Well	98	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Selectively thin hardwoods to 70-90 sqft of BA. Favor oak, hemlock, white pine and cedar where present. Oak should be released on 3 sides to an average BA of 60 sqft. Where 30 sqft or more of hemlock occurs thin to no less than 100 sqft of BA. Follow all guidelines set forth in "The Complete Marker". If areas heavy to oak, aspen and/of dieback 1-5 acres are found, seed tree harvest with a residual 10-30 sq ba of oak, reserving hemlock, cedar and pine.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any tree species that are currently represented in the over story.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

10	11035010-Cut	12.8	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	68	111- 140	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut all trees down to 4.6" DBH except Oak, White Pine and Hemlock.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any tree species that are currently represented in the current over story.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 551.4**

Report 4 – Site Conditions

Baraga Mgt. Unit
Fred Hansen : Examiner

Compartment: 35
Year of Entry: 2019

Availability for Management

Total	Acres	Acres Avail	Acres
Acres	Available	With Condition	Not Available

Dominant Site Conditions

3J

61	61	0	0	Hemlock	
79	13	0	66	Mixed Upland Deciduous	66
1295	1295	0	0	Northern Hardwood	
219	0	0	219	Upland Conifers	219
1,654	1,368		285	Total Forested Acres	285
	83%		17%	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
1	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	66	2F: Too steep	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified
Comments:							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	220	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – 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
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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.

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Baraga Mgt. Unit

Report 7 – Forested Stands

Compartment: 35
Year of Entry: 2019

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4119 - Mixed Northern Hardwoods	Sawtimber Well	34.2	96	111-140	Dirt Jeep Hdwd cut in 2000. Some dieback. focus on removing large diameter trees with dieback.
2	4112 - Maple, Beech, Cherry Association	Poletimber Well	33.0	98	111-140	Dirt Jeep Hdwd cut in 2000. Some dieback. focus on removing large diameter trees with dieback.
3	4110 - Sugar Maple Association	Poletimber Well	599.3	100	81-110	cut between 2008 and 2010 as part of "Fir Low Hdws" 11-011-09-01, ""Gouttoe Hdws" 11-010-09-01 and "Loafer Hdws 11-012-09-01
4	4110 - Sugar Maple Association	Sawtimber Well	375.3	93	111-140	hickey Hdwd and TFC hdwd cut 2000. some dieback along roads.
6	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	66.1	99	111-140	Santi River, Steep slopes, conifer is thicker as you go east
7	4112 - Maple, Beech, Cherry Association	Sawtimber Well	124.8	89	81-110	Globe Hdwd, cut 2010. Hemlock regen creeping into stand along south edge
8	42390 - Mixed Non-Pine Upland Conifers	Poletimber Well	219.3	118	81-110	Creek bottom with steep slopes
9	4112 - Maple, Beech, Cherry Association	Poletimber Well	88.0	98	111-140	Dirt Jeep Hdwd cut 2000. Some dieback. focus on removing larger diameter trees with dieback.
10	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	12.8	68	111-140	Aspen is dying out. North part of stand was thinned in 2009, has lots of die back.
12	42350 - Upland Hemlock	Poletimber Well	60.7	102	81-110	cut in 2009-2010 as part of "Loafer Hdws" 11-012-09-01
13	4112 - Maple, Beech, Cherry Association	Poletimber Well	40.2	82	81-110	cut in 2009-2010 as part of "Loafer Hdws" 11-012-09-01



Stand Cover Type

Acres

Managed
Site

General Comments:

#Type!
