



Baraga Forest Management Unit
Compartment Review Presentation
Compartment #59 **Entry Year: 2012**
Compartment Acreage: 490 **County: Houghton**

Revision Date: 7/14/2010

Stand Examiner: Brad S. Carlson

Legal Description: T53N, R32W; Section 4
T54N, R32W; Sections 33 and 34.

RMU (if applicable):

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

Soil and Topography: Much of the land is level and is only broken by a series of lake benches parrelling the existing lakeshore. Soils consist of Cathro-Gay Mucks, Zeba-Jacobsville complex (fine sandy loam and muck), Abbaye-Munising complex (loamy fine sand), Munising-Skanee complex (loamy fine sand, sandy loams), Skanee-Gay complex (fine sandy loam, sandy loam and muck) and Jacobsville Muck.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The state land is surrounded by small private holding and some industry land. With the exception of section 34, the state land is all in one block.

Unique, Natural Features: Over a mile of Lake Superior shoreline that contains areas with up to 20 foot high sandstone cliffs.

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations: The compartment adjoins Lake Superior to the East.

Wildlife Habitat Considerations: This compartment provides valuable wildlife habitat to grouse, deer, bear, furbearers, woodland raptors and neo tropical migrant song birds. This compartment is within the Jacobsville Deer Yarding complex. This yard is critically important to wintering deer from Southeastern Keewenaw County. Maintenance and expansion of long lived conifer species such as eastern hemlock,

northern white cedar, and white pine are of primary importance. Conservation improvement of short lived conifer species such as spruce and fir, which also provide valuable thermal cover, remains important. Silvicultural practices which promote thermal cover habitat should be emphasized here. Maintenance of wildlife movement corridor particularly along the north to south orientation along the lake shore riparian influence zones is a wildlife emphasis. Maintenance of aspen acreage within this compartment for early forest wildlife species

The entire compartment is contained in the Jacobsville deeryard.

Mineral Resource and Development Concerns and/or Restrictions: Historically this area was known worldwide for its sandstone. Although this area is scattered with 100+ yr old quarries, none of them are present on state land. Surface sediments consist of coarse-textured glacial till and postglacial alluvium. The glacial drift thickness varies between 10 and 50 feet. The Precambrian Jacobsville Sandstone subcrops below the glacial drift. The Jacobsville was previously used as a building stone and was quarried just to the south. The closest gravel pit is located eight miles to the west, but there may be some potential. Abandoned copper mines are located to the west. The Compartment has not been leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access: There is one road called Sunrise Road that the state owns providing excellent access (off of a plowed county road) through the southern portion of this compartment right to the shoreline of Lake Superior. Historical maps show several other roads throughout the entire compartment but due to lack of maintenance they are grown over and barely recognizable on the ground.

Survey Needs: None needed to complete proposed harvest during this cycle of inventory.

Recreational Facilities and Opportunities: There is some evidence of hunting on this land but the pressure seems to be minimal. Hiking opportunities were observed year round on the lakeshore and Sunshine road.

Fire Protection: Has not known to be a fire prone area.

Additional Compartment Information:

- **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**

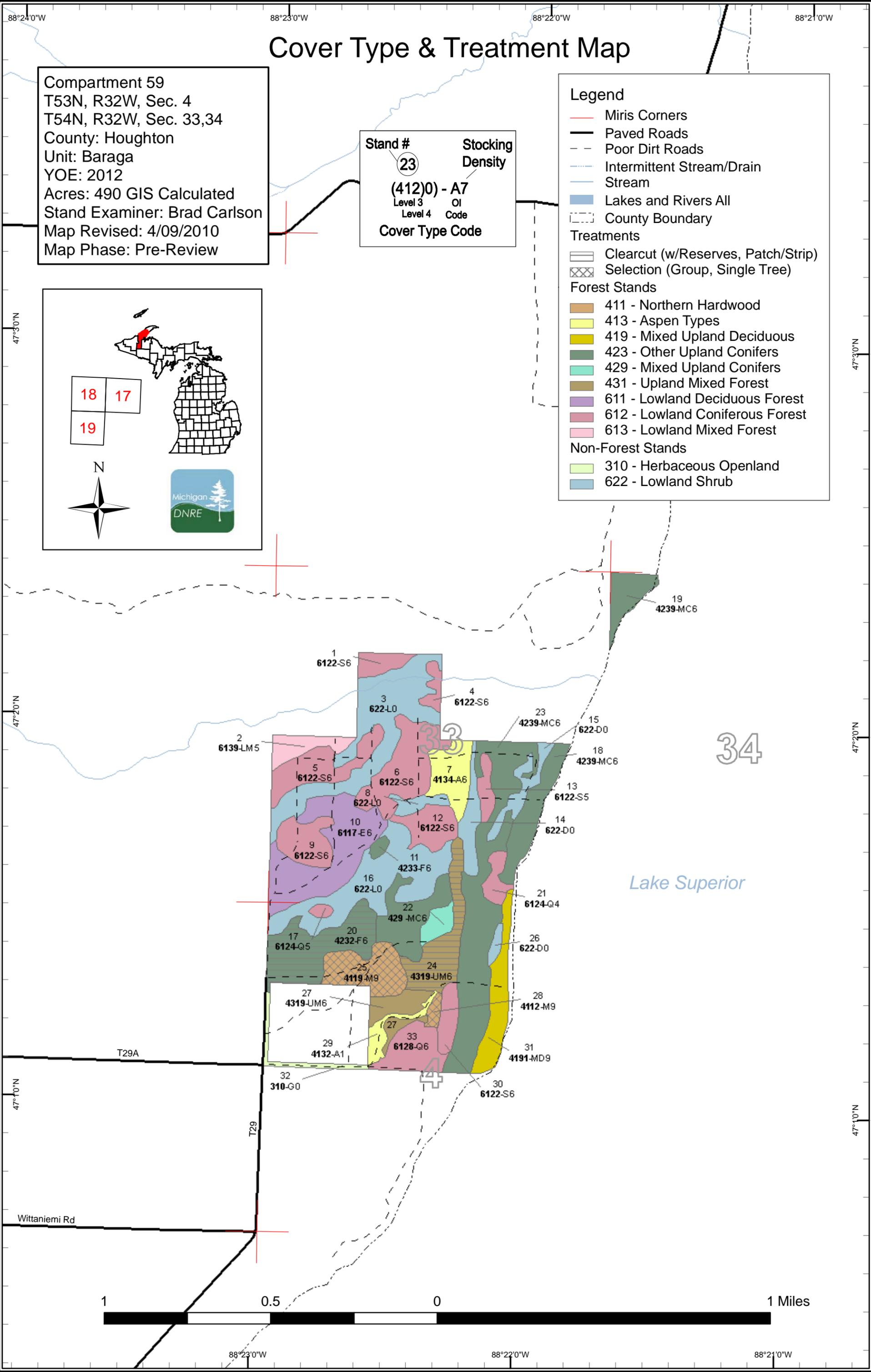
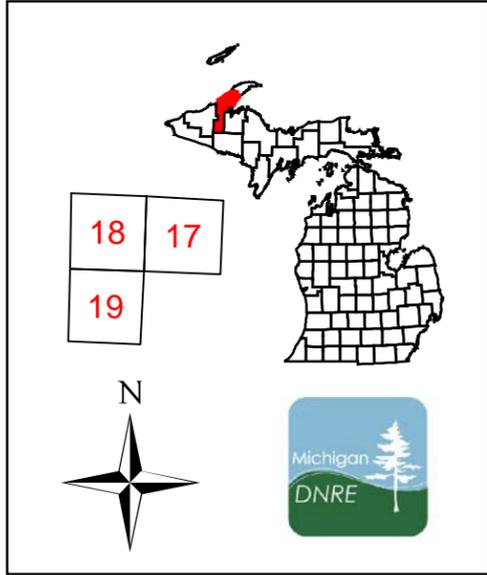
- **The following information is displayed, where pertinent, on the attached compartment maps:**
- ◆ **Base feature information, stand numbers, cover types**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential old growth**

Cover Type & Treatment Map

Compartment 59
 T53N, R32W, Sec. 4
 T54N, R32W, Sec. 33,34
 County: Houghton
 Unit: Baraga
 YOE: 2012
 Acres: 490 GIS Calculated
 Stand Examiner: Brad Carlson
 Map Revised: 4/09/2010
 Map Phase: Pre-Review

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

- Legend**
- Miris Corners
 - Paved Roads
 - - - Poor Dirt Roads
 - ~ Intermittent Stream/Drain
 - Stream
 - Lakes and Rivers All
 - - - County Boundary
- Treatments**
- Clearcut (w/Reserves, Patch/Strip)
 - ▣ Selection (Group, Single Tree)
- Forest Stands**
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 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**
- 310 - Herbaceous Openland
 - 622 - Lowland Shrub



34

Lake Superior

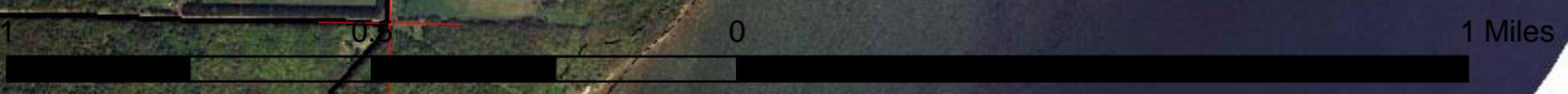
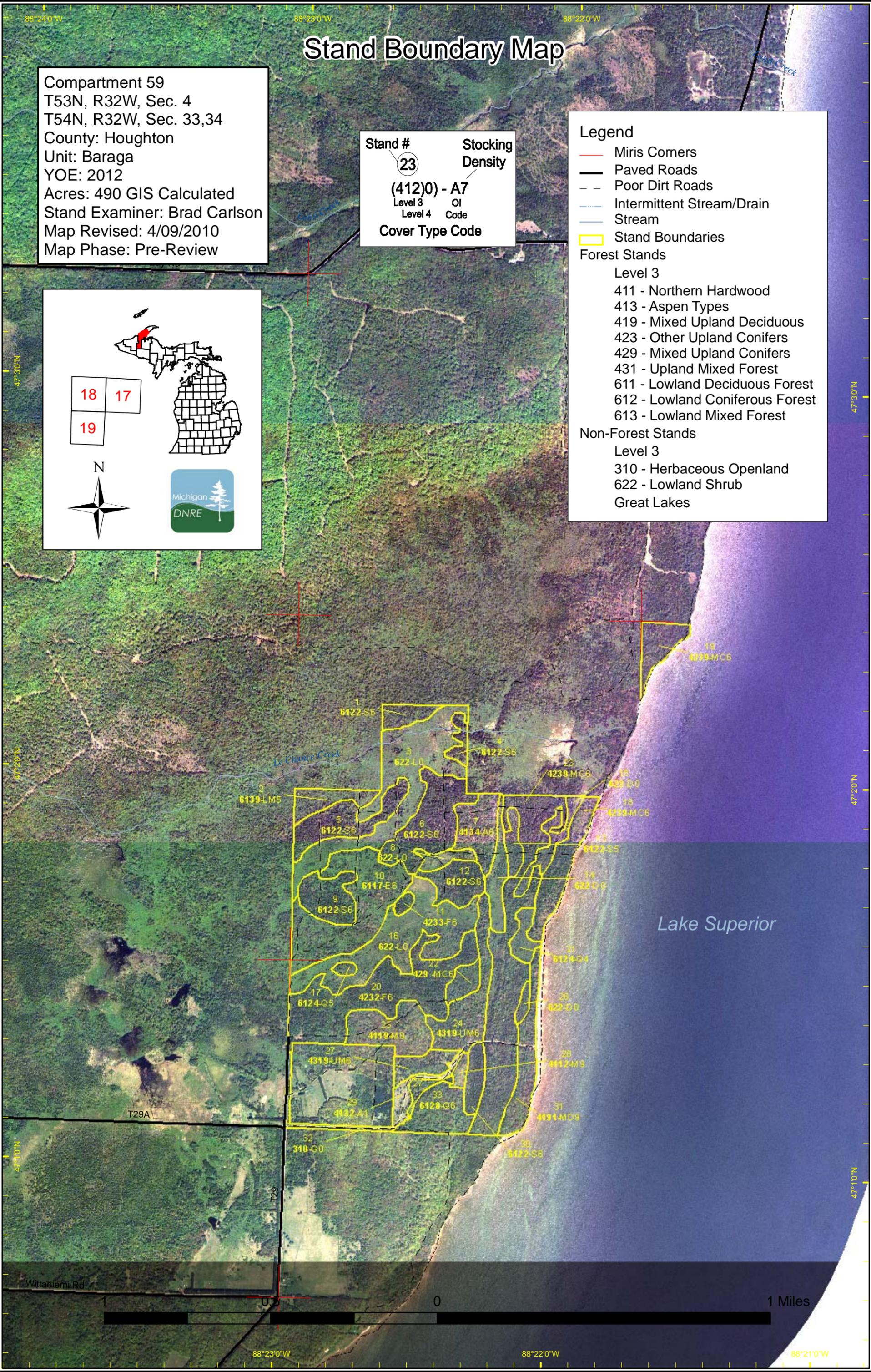
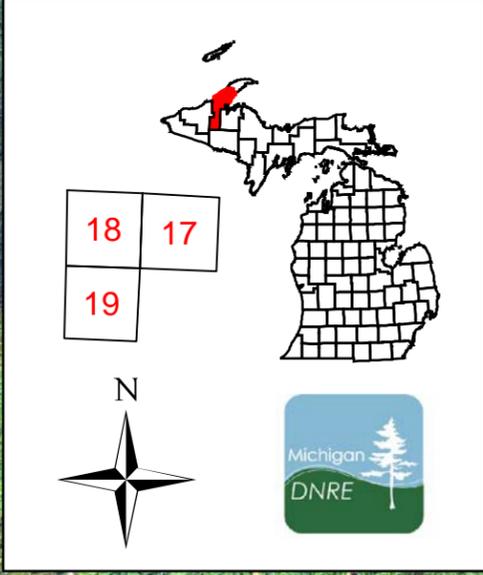


Stand Boundary Map

Compartment 59
 T53N, R32W, Sec. 4
 T54N, R32W, Sec. 33,34
 County: Houghton
 Unit: Baraga
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 Acres: 490 GIS Calculated
 Stand Examiner: Brad Carlson
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Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

- Legend**
- Miris Corners
 - Paved Roads
 - - Poor Dirt Roads
 - Intermittent Stream/Drain
 - Stream
 - Stand Boundaries
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 423 - Other Upland Conifers
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 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 310 - Herbaceous Openland
 - 622 - Lowland Shrub
- Great Lakes

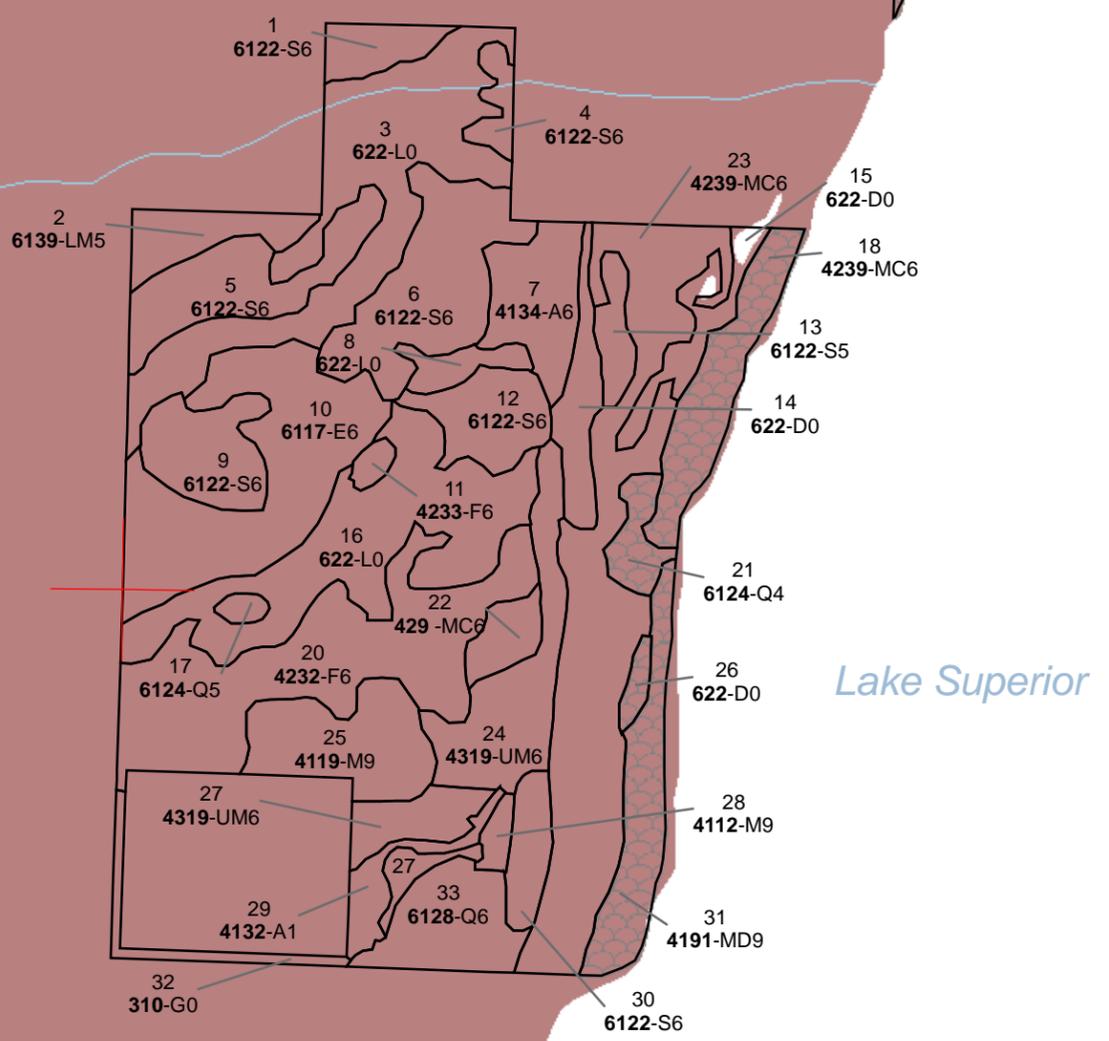
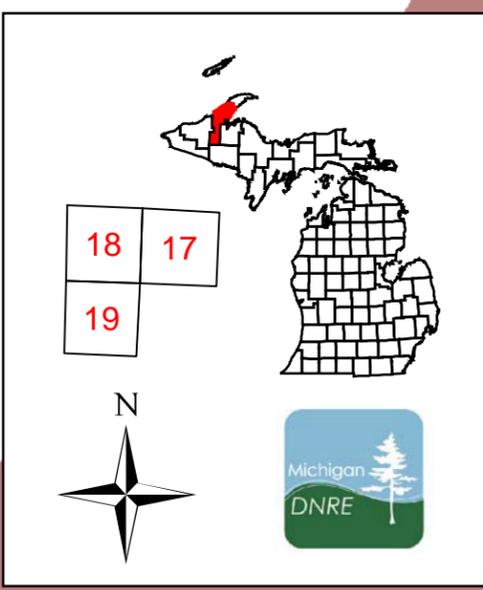


Dedicated & Proposed Special Conservation Area Map

Compartment 59
 T53N, R32W, Sec. 4
 T54N, R32W, Sec. 33,34
 County: Houghton
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 Acres: 490 GIS Calculated
 Stand Examiner: Brad Carlson
 Map Revised: 4/09/2010
 Map Phase: Pre-Review

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

- Legend**
- Miris Corners
 - Stand Boundaries
 - Proposed Special Conservation Areas
 - SCA Removal
 - Dedicated Special Conservation Areas
 - Ecological Reference Areas
 - Deer Wintering Areas
 - Cold Water Streams



88°23'0"W 88°22'0"W 88°21'0"W

47°30'N

47°30'N

47°20'N

47°20'N

47°10'N

47°10'N

Table 1 – Total Acres by Cover Type and Age Class
(Level 3 Cover Type)



	Age Class														Total	
	Non-Forested	1-9	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
Aspen Types	0	0	0	6	0	0	0	0	0	0	0	0	0	0	14	19
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lowland Coniferous Forest	0	0	0	0	0	0	5	6	0	0	0	0	0	0	98	109
Lowland Deciduous Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	39
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
Lowland Shrub	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108
Mixed Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20
Other Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	130
Upland Mixed Forest	0	0	0	0	10	0	0	0	0	0	0	0	0	0	20	30
Total	112	0	0	6	10	0	5	6	0	0	0	0	0	0	351	490



Table 2 – Proposed Treatment Summaries

Baraga Mgt. Unit
Year of Entry 2012

Compartment 059
Total Compartment Acres: 490.2

Acres by Treatment Type

Commercial Harvest - 70	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Northern Hardwood	0	20	0	0	0	0	0	20
Upland Mixed Forest	20	0	0	0	0	0	0	20
Upland Spruce/Fir	29	0	0	0	0	0	0	29
Total	49	20	0	0	0	0	0	70

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
20 11059020-Cut	29.2	42320 - Upland Spruce	High Density Pole	77	Harvest	Clearcut with Reserves	Upland Spruce

Page 1 of 1

Prescription Cut all species except White pine and Cedar (and Hemlock if Present) White Pine and Cedar Currently make up 14% cover and should satisfy retention guidelines.

Other Comments:

Next Steps:

24 11059024-Cut	20.1	4319 - Mixed Upland Forest	High Density Pole	78	Harvest	Clearcut with Reserves	Mixed Upland Forest
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Prescription Cut all species except White Pine and Cedar (and Hemlock if present). White Pine and Cedar currently are 18% of the canopy cover and should satisfy the retention guidelines.

Other Comments:

Next Steps:

25 11059025-Cut	18.2	4119 - Mixed Northern Hardwoods	High Density Log	87	Harvest	Single Tree Selection	Mixed Northern Hardwoods
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Prescription Mark to 70-90 sq ba. Favor oak, white pine, and hemlock where present. Refer to the "Complete Marker" for further marking guidelines.

Other Comments:

Next Steps:

28 11059028-Cut	2.2	4112 - Maple, Beech, Cherry Association	High Density Log	77	Harvest	Single Tree Selection	Maple, Beech, Cherry Association
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Prescription Mark to 70-90 sq ba. Favor oak, white pine, and hemlock where present. Refer to the "Complete Marker" for further marking guidelines.

Other Comments:

Next Steps:

**Total Treatment
Acreage Proposed: 69.7**

Table 4 -- Treatments Prescribed with a Limiting Factor



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
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Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: 0

Stand	Baraga Mgt. Unit		5 – Forested Stands			Compartment: 059	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
1	6122 - Black Spruce	High Density Pole	5.8	Uneven Age	81-110		
2	6139 - Mixed Lowland Forest	Medium Density Pole	8.4	Uneven Age	1-50		
4	6122 - Black Spruce	High Density Pole	3.7	Uneven Age	81-110		
5	6122 - Black Spruce	High Density Pole	17.6	Uneven Age	81-110		
6	6122 - Black Spruce	High Density Pole	25.5	Uneven Age	81-110		
7	4134 - Aspen, Spruce/Fir	High Density Pole	13.8	Uneven Age	81-110		Lots of blow down, Old road in stand.
9	6122 - Black Spruce	High Density Pole	12.9	Uneven Age	81-110		
10	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	39.0	Uneven Age	51-80		Variable BA. Some aspen is 14 inches but most in between 4-6"
11	42330 - Upland Fir	High Density Pole	1.7	Uneven Age	81-110		small diameter and areas of blowdown.
12	6122 - Black Spruce	High Density Pole	11.3	Uneven Age	51-80		Smaller diameter but still nice, west edge is extremely brushy.
13	6122 - Black Spruce	Medium Density Pole	4.8	Uneven Age	1-50		
17	6124 - Lowland Spruce-Fir	Medium Density Pole	1.4	Uneven Age	1-50		wet.
18	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	15.9	Uneven Age	81-110		Most of the Paper Birch is dead/dying and blowing over. Stand is regenerating to balsom and spruce. Heavy browse. Old road to the lakeshore in the north part of the stand.
19	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	9.4	Uneven Age	81-110		Trail to the west of stand from the Rabbit Bay road. Property lines are in. Areas of blowdown in stand.
20	42320 - Upland Spruce	High Density Pole	47.3	Uneven Age	81-110		Cut about 1/2 of stand to try and stagger the black spruce ages in the compartment. DBH's are variable 4-10". There is a grown over Grassy opening in the SW corner of the stand.
21	6124 - Lowland Spruce-Fir	Low Density Pole	5.4	52	1-50		Wet!
22	429 - Mixed Upland Conifers	High Density Pole	5.1	Uneven Age	81-110		Small dia. Stand is a transition between S6 and upland.



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Baraga Mgt. Unit

5 – Forested Stands

Compartment: 059

Inventory Method: IFMAP

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	55.7	Uneven Age	81-110	Thick and variable drainage. stand is situated on the last bench before the lake.
24	4319 - Mixed Upland Forest	High Density Pole	20.1	Uneven Age	81-110	Clear cut leaving White Pine and Cedar (and Hemlock if present). East chain of stand in situated on an inoperable slope.
25	4119 - Mixed Northern Hardwoods	High Density Log	18.2	Uneven Age	141-170	NE corner is poor quality hdwds and fir.
27	4319 - Mixed Upland Forest	High Density Pole	10.0	38	1-50	Old farm feild that has grown back to forest. Variable DBH's and Heights.
28	4112 - Maple, Beech, Cherry Association	High Density Log	2.2	Uneven Age	111-140	
29	4132 - Aspen, Jack Pine	Low Density Sapling	5.6	24	1-50	Old Farm feild converting back to forest.
30	6122 - Black Spruce	High Density Pole	6.5	63	81-110	
31	4191 - Mixed Upland Deciduous with Conifer	High Density Log	16.1	Uneven Age	111-140	
33	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	14.5	Uneven Age	51-80	blowdown area in middle



Stand	Cover Type	Acres	Gen Cmts:
3	6220 - Alder/willow	43.8	
8	6220 - Alder/willow	4.2	
14	6224 - Treed Bog	8.7	
15	6224 - Treed Bog	7.8	
16	6220 - Alder/willow	41.2	Tag Alder, some areas are close to 25% forested.
26	6224 - Treed Bog	2.0	
32	3102 - Grass	4.3	



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

Inventory Method: IFMAP

Stand	SCA Type	SCA Name	Acres	Comments
18	Unique Site - SCA	11059018	15.9	Previously coded as stand condition 8. Recommendation is to remove this coding
19	Unique Site - SCA	11059019	9.4	Previously coded as stand condition 8. Recommendation is to remove this coding
21	Unique Site - SCA	11059021	5.4	Previously coded as stand condition 8. Recommendation is to remove this coding
31	Unique Site - SCA	11059031	16.1	Previously coded as stand condition 8. Recommendation is to remove this coding
26	Unique Site - SCA	NF_11059026	2.0	Previously coded as stand condition 8. Recommendation is to remove this coding



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.

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.
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.
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 reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.