



Compartment Review Presentation

Baraga Forest Management Unit

Compartment 11060

Entry Year 2017

Acreage: 1,252

County Houghton

Management Area: Sturgeon Sloughs

Revision Date: 2014-12-01

Stand Examiner:

Legal Description:

T53N, R33W, Sections 16, 20, 21, 28, 29

Identified Planning Goals:

The lands in this compartment are managed as part of the Sturgeon River Sloughs Wildlife Area.

Soil and topography:

This compartment is level. Most of the soils are Dawson peat. There is some Arnheim silt loam and Tawas – Roscommon muck on the west and east edges.

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

The lands around this compartment are farm lands, with some timber management on the upland.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

There is a HAL hit that should not affect any management activities.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

The Arnheim ditch – a diversion ditch for the Sturgeon River runs through this compartment.

Wildlife Habitat Considerations:

This compartment features lowland brush, tamarack, and other swamp conifers north of 7 impoundments at the Sturgeon River Sloughs Wildlife Area, and is very wet. Timber harvest should be minimized and the area retained primarily in its natural state.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of peat and muck and minor coarse-textured glacial till. 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 in Section 18 to the west, but there may be potential on the uplands. Abandoned copper mines are located seven miles to the northwest. The Compartment has not been leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Access is poor. The east edge touches a county road in Section 28.

Survey Needs:

Survey will be needed if any harvest activities are prescribed.

Recreational Facilities and Opportunities:

Snowmobile trail 15 uses the west spoil bank of the ditch. The area is used some by hunters.

Fire Protection:

This is not a fire prone area however historical fires have had ground fire associated with them. This area has poor access for fire equipment.

Additional Compartment Information:

The following reports from the Inventory are attached:

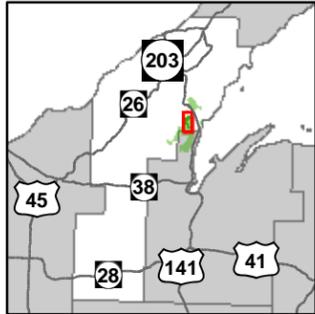
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

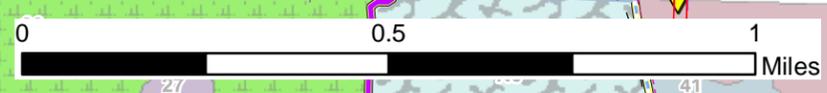
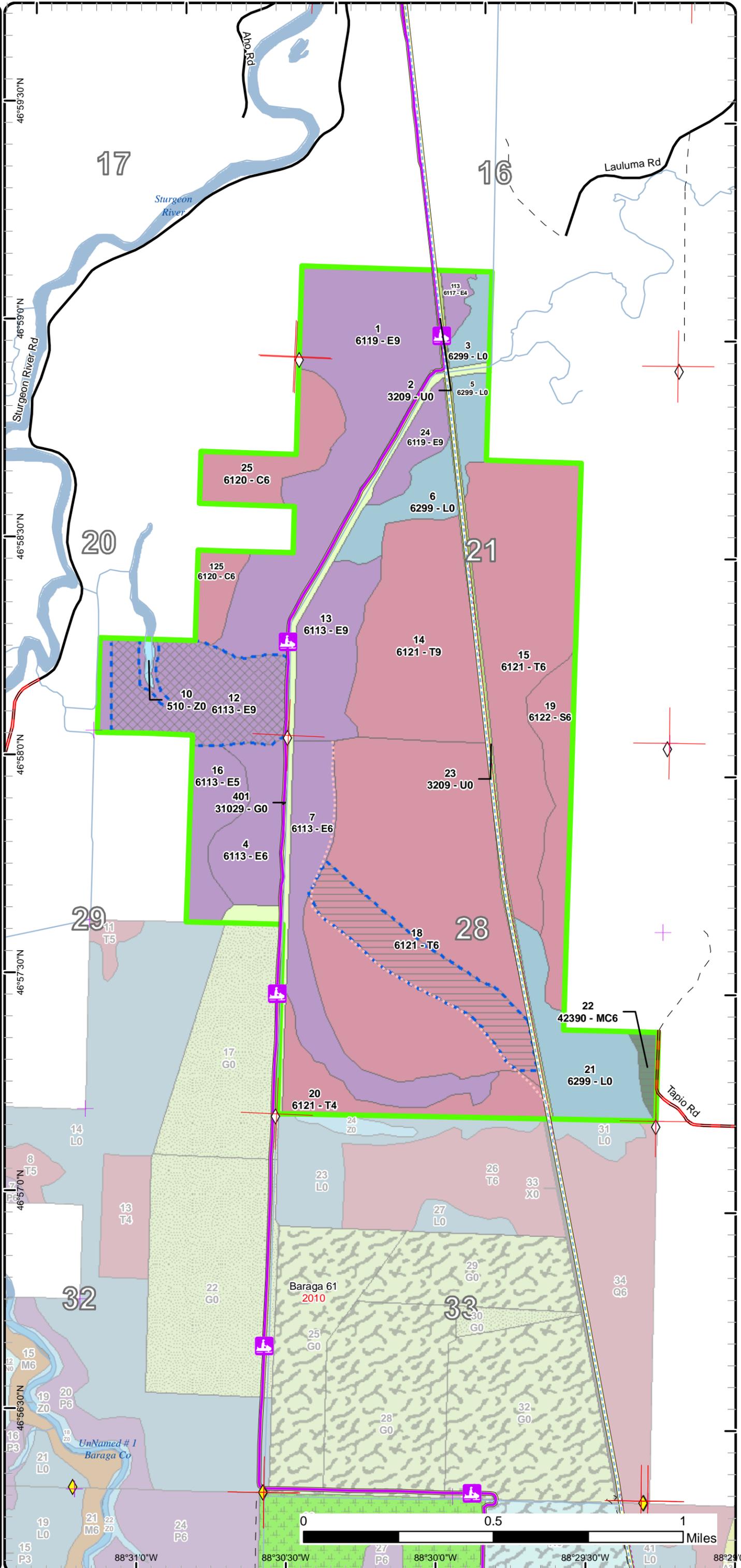
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

Compartment: 60
 T53N, R33W,
 Sections. 16, 17, 20, 21, 28, 29
 County: Houghton
 Unit: Baraga
 Mgmt Area: Sturgeon Sloughs
 YOE: 2017
 Acres: 1252 GIS Calculated
 Examiner: Brad Carlson
 Map Revised: 5/20/2015
 Map Phase: Pre-Review



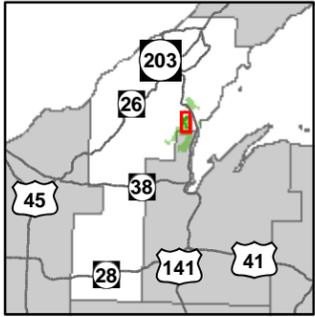
- ✚ Remonumented Section Corner
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- 🛷 Snowmobile Trails
- Ski Trails
- Rivers
- Lakes
- ▨ Treatments with Site Conditions
- ▨ Selection (Group, Single Tree)
- ▨ Clearcut (w/Reserves)
- Forest Cotype
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Cotype
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 500 - Water
- 622 - Lowland Shrub



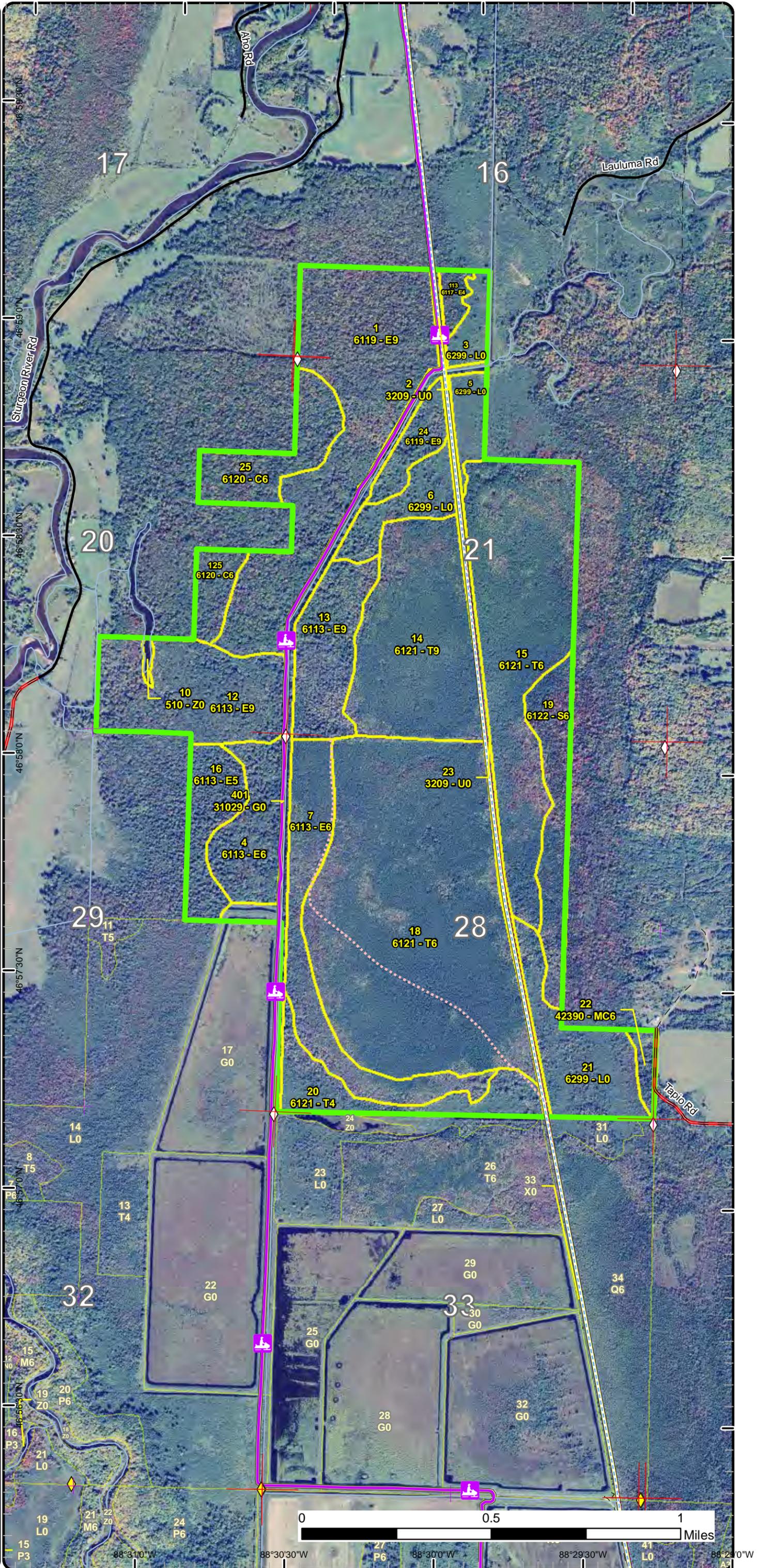
88°31'0"W 88°30'30"W 88°30'0"W 88°29'30"W 88°29'0"W

Stand Boundary Map

Compartment: 60
 T53N, R33W,
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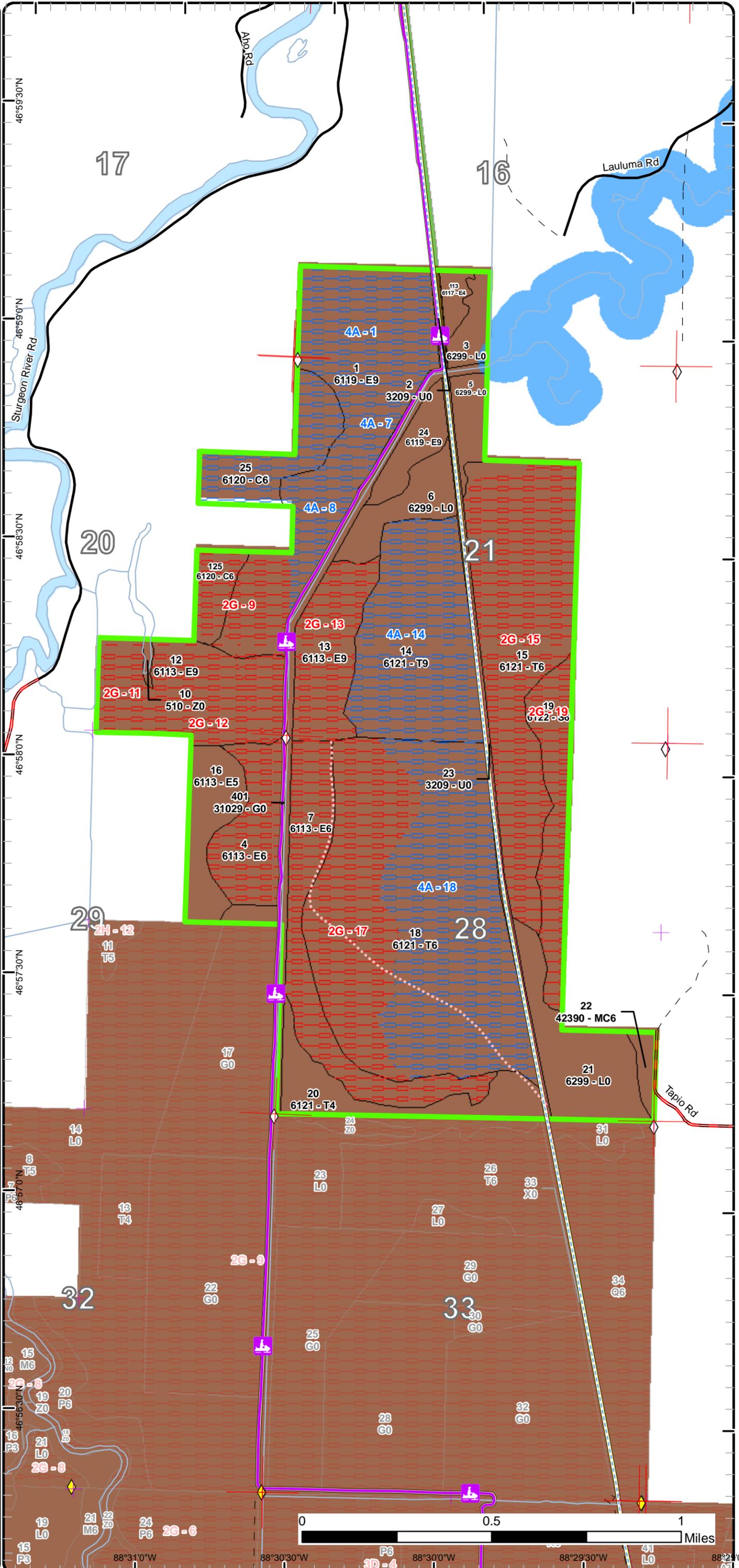
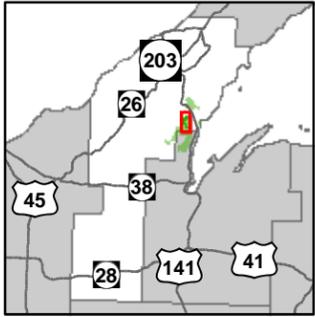


- ✚ Remonumented Section Corner
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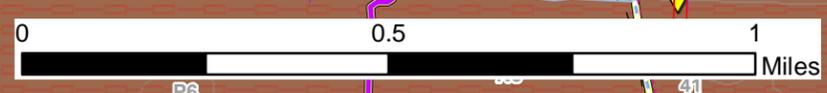


Special Conservation Areas & Site Conditions Map

Compartment: 60
 T53N, R33W,
 Sections. 16, 17, 20, 21, 28, 29
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- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- 🛷 Snowmobile Trails
- Ski Trails
- Rivers
- Stand Boundaries
- Site Condition
- Available w/ Constraints
- Unavailable
- Available Factors W/ Constraints
- 4A: No Markets Available for these Forest Products
- Unavailable Factors
- 2G: Too wet (sensitive soils, does not include access issues)
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Wildlife Management Areas
- Rail-Trail Corridor



88°31'0"W 88°30'30"W 88°30'0"W 88°29'30"W 88°29'0"W

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
Cedar	0	0	0	0	0	0	0	0	37	0	0	0	15	0	0	0	0	0	52
Herbaceous Openland	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Lowland Deciduous	0	0	0	0	0	7	31	39	284	0	0	65	0	0	0	0	0	0	426
Lowland Shrub	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	0	0	0	43
Tamarack	0	0	0	0	38	0	0	0	272	0	0	254	0	0	0	0	0	0	564
Upland Conifers	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Upland Shrub	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	161	0	0	0	38	7	38	39	593	0	0	362	15	0	0	0	0	0	1253



Report 2 – Treatment Summary

Baraga Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 60
Total Compartment Acres: 1,252

Commercial Harvest - 7
Harvests with Site Condition - 16
Next Step Harvest - 7
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Lowland Deciduous	0	67	0	0	0	0	0	0	0	67
Tamarack	50	0	0	0	0	0	0	0	0	50
Upland Conifers	7	0	0	0	0	0	0	0	0	7
Total	57	67	0	0	0	0	0	0	0	125

Proposed and Next Step Treatments by Harvest Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	125	0	0	0	0	0	0	0	0	125
Next Step	7	0	0	0	0	0	118	0	0	125
Total	132	0	0	0	0	0	118	0	0	249



Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
12	11060012-Cut	67.4	6113 - Lowland Maple	Sawtimber Well	75	81-110	Harvest	Group Selection	611 - Lowland Deciduous Forest	Two-Aged	Proposal - Approval Pending Edits

Habitat Cut: No **Site Condition:** Too Wet

Prescription Poor quality timber. BA Range 60-130. Wet ground but operable. Access would be from PVT to the west, unsure of permission. If Rx: Cut all trees greater than 8" dbh, reserve all conifer and elm. Leave tree mark 2-4 large diameter trees (16"+) per cruise point.

Next Step
Treatments:

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

Other A two chain buffer was left along the west line to help prevent wind throw. A buffer was left around the beaver flooding also. Old next step
Comment: comments:

Proposed Start Date: 10/1 /2016

18	11060018-Cut	50.1	6121 - Tamarack	Poletimber Well	78	171-200	Harvest	Clearcut	6121 - Tamarack	Even-Aged	Proposal - Approval Pending Edits
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Habitat Cut: No **Site Condition:** Too Wet

Prescription Harvest all tamarack. Retain any other species. Care should be given to protect any sub-merchantable saplings.
Specs:

Next Step
Treatments:

Acceptable Tamarack. B lack spruce, balsam fir and red maple are acceptable alternatives.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

18	11060018-Cut	50.1	6121 - Tamarack	Poletimber Well	78	171-200	Harvest	Clearcut	6121 - Tamarack	Even-Aged	Proposal - Approval Pending Edits
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Habitat Cut: No **Site Condition:** Too Wet

Prescription Harvest all tamarack. Retain any other species. Care should be given to protect any sub-merchantable saplings.
Specs:

Next Step
Treatments:

Acceptable Tamarack. B lack spruce, balsam fir and red maple are acceptable alternatives.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

18	11060018-Cut	50.1	6121 - Tamarack	Poletimber Well	78	171-200	Harvest	Clearcut	6121 - Tamarack	Even-Aged	Proposal - Approval Pending Edits
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Habitat Cut: No **Site Condition:** No Markets

Prescription Harvest all tamarack. Retain any other species. Care should be given to protect any sub-merchantable saplings.
Specs:

Next Step
Treatments:

Acceptable Tamarack. B lack spruce, balsam fir and red maple are acceptable alternatives.
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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
18	11060018-Cut	50.1	6121 - Tamarack	Poletimber Well	78	171- 200	Harvest	Clearcut	6121 - Tamarack	Even-Aged	Proposal - Approval Pending Edits

Habitat Cut: No **Site Condition: No Markets**

Prescription Harvest all tamarack. Retain any other species. Care should be given to protect any sub-merchantable saplings.

Specs:

Next Step

Treatments:

Acceptable Tamarack. Black spruce, balsam fir and red maple are acceptable alternatives.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

22	11060022-Cut	7.1	42390 - Mixed Non- Pine Upland Conifers	Poletimber Well	55	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal - Approval Pending Edits
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Habitat Cut: No **Site Condition: None**

Prescription Cut all trees to 4.6" dbh. Reserve white pine, cedar, hemlock, oak and apple trees if present. No retention.

Specs:

Next Step

Treatments:

Acceptable Aspen, spruce, fir, red maple.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

**Total Treatment
Acreage Proposed: 275.1**

Dominant Site Conditions

4A

Cedar	37
Herbaceous Openland	
Lowland Deciduous	118
Lowland Shrub	
Lowland Spruce/Fir	
Tamarack	274
Upland Conifers	
Upland Shrub	
Water	
Total Forested Acres	429
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	Available	4A: No Markets Available for these Forest Products	110	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	4A: No Markets Available for these Forest Products	11	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
8	Available	4A: No Markets Available for these Forest Products	34	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Baraga Mgt. Unit
Brad Carlson : Examiner

Compartment: 60
Year of Entry: 2017

9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	53	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	21	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	82	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	46	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
14	Available	4A: No Markets Available for these Forest Products	107	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	142	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Baraga Mgt. Unit
Brad Carlson : Examiner

Compartment: 60
Year of Entry: 2017

17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	171	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
18	Available	4A: No Markets Available for these Forest Products	167	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	43	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 6 – 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 7 – 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 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	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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	145.4	78	51-80	Stand resembles more of an E6 than E9 based upon quality. Poor quality timber. Wetter ground. Might be able to harvest some if access is possible and WLD wishes. If management is possible, consider a diameter harvest. SITE INDEX FROM OIPC: TAMARACK 52
4	6113 - Lowland Maple	Poletimber Well	38.8	69	81-110	High mortality in the tamarack. Poor quality wood, wet ground. BA 110, 50, 70.
7	6113 - Lowland Maple	Poletimber Well	65.2	101	1-50	Some mortality in the tamarack throughout the stand. Wetter ground than the stand to the east. The south part of the stand gets quite wet and heavier to small diameter tamarack.
12	6113 - Lowland Maple	Sawtimber Well	75.7	75	81-110	Poor quality timber. BA Range 60-130. Wet ground but operable. Access would be from PVT to the west, unsure of permission. If Rx: Cut all trees greater than 8" dbh, reserve all conifer and elm. Leave tree mark 2-4 large diameter trees (16"+) per cruise point.
13	6113 - Lowland Maple	Sawtimber Well	46.4	73	51-80	Poor quality. Wet ground. Most likely operable. Access is an issue. Some mortality in the tamarack.
14	6121 - Tamarack	Sawtimber Well	107.2	100	Unspecified	Access is an issue. Some pockets of tag alder along the RR grade with low tamarack stocking.
15	6121 - Tamarack	Poletimber Well	146.6	101	51-80	Access is an issue. Operable ground along with the black spruce stand to the east.
16	6113 - Lowland Maple	Poletimber Medium	30.6	51	1-50	Poor quality timber. BA Range 20, 40, 60. Sparse silver maple poles with a full understory of tag alder. Wet.
18	6121 - Tamarack	Poletimber Well	272.4	78	171-200	Quite a bit of mortality in the tamarack. Most likely operable ground but unsure of how to access.
19	6122 - Black Spruce	Poletimber Well	43.3	101	81-110	Should be operable ground. Access is an issue. The tamarack is in decline. Not much tag alder in the understory. Wet pockets throughout the stand. Left for a wildlife corridor. WLD managed lands.
20	6121 - Tamarack	Poletimber Poor	38.0	31	Immature	Tag alder with scattered tamarack. HAL concern present.
22	42390 - Mixed Non- Pine Upland Conifers	Poletimber Well	7.1	55	51-80	Tamarack on upland old field, spruce and cedar on the slope and edge of swamp. Old trail to RR grade passes through the stand. Treatment area will be limited to the northern 2/3 or stand due to wet ground. Lots of mortality in the tamarack. Reserve cedar and apple trees if harvested.

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Baraga Mgt. Unit

Report 8 – Forested Stands

Compartment: 60
Year of Entry: 2017



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	6119 - Mixed Lowland Deciduous Forest	Sawtimber Well	16.9	77	51-80	Poor quality timber. BA range 40-80. Unsure of access.
25	6120 - Lowland Cedar	Poletimber Well	36.6	77	141-170	Cedar stand. Wet ground.
113	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Poor	6.8	45	Unspecified	Wet ground along RR grade.
125	6120 - Lowland Cedar	Poletimber Well	14.6	110	141-170	Cedar stand. Wetter ground.



Stand	Cover Type	Acres	Managed Site	General Comments:
2	3209 - Upland Shrub (OI)	3.5	No	Railroad grade. 100 ft wide R-O-W. This land may not be state owned.
3	6299 - Lowland Shrub (OI)	12.6	No	
5	6299 - Lowland Shrub (OI)	13.9	No	
6	6299 - Lowland Shrub (OI)	24.5	No	Tag alder with scattered tamarack
10	510- Water (OI)	1.7	No	
21	6299 - Lowland Shrub (OI)	49.2	No	Tag alder. Old walking path to RR passes through the stand.
23	3209 - Upland Shrub (OI)	20.2	No	Railroad grade. 100 ft wide R-O-W. This land may not be state owned.
401	31029 - Grass (OI)	34.5	Yes	ARNHEIM DITCH and SPOIL BANK