Compartment Review Presentation

Baraga Forest Management Unit

Compartment 11075
Entry Year 2018
Acreage: 2,960
County Keweenaw
Management Area: Keweenaw Tip

Revision Date: 2016-05-12

Stand Examiner: Jason Mittlestat

Legal Description:

Grant Township
T58N R27W, Sections 10, 15, 19, 20, 21, 22, 29, 30
T58N R26W, Section 16

Identified Planning Goals:

Manage primarily for recreation and resource protection.

Soil and topography:

The topography is level to rolling. The upland soils are very rocky. Soils are Arcadian-Nipissing-Rock Outcrop complex; Arcadian-Dishno-Rock Outcrop complex, Pacquin Finch complex, Wallace-Rubicon sands, Net-Witbeck complex, and Copper Harbor-Bete Grise complex on the upland; Lupton and Tawas muck, Dawson and Loxley peat, Cathro-Witbeck complex, and Tawas-Deford mucks on the lowlands.

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

State Forest adjoins to the north and west. There are scattered private parcels within the compartment. Land use is mostly for recreation.

Unique Natural Features:

There are rare, threatened and endangered plants within the compartment. The lakeshore area contains many elemental occurrences of species and habitats of concern.

Archeological, Historical, and Cultural Features:

No archeological sites are identified; however it is likely that some may exist.

Special Management Designations or Considerations:

This compartment is part of the Keweenaw Point block.

Watershed and Fisheries Considerations:

Stream crossings should be upgraded as resources become available.

Wildlife Habitat Considerations:

This compartment features threatened and endangered plant species. The Keweenaw Tip is a critical raptor migration corridor and breeding area for merlins large conifers should be retained for raptors to perch. Managing habitat for; black bear, blackburnian warbler, pileated woodpecker, ruffed grouse, northern goshawk and American marten should also be considered when planning harvest specifications in this this compartment. There is also a deer wintering complex in this compartment.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured glacial till and lacustrine (lake) sand and gravel thin to discontinuous along the coastline. There is insufficient data to determine the glacial drift thickness. The Precambrian Copper Harbor Conglomerate and Portage Lake Conglomerate subcrop below the glacial drift. The Copper Harbor was previously mined for small amounts of copper. There are no gravel pits in the area, 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:

Access is poor. There are internal logging roads, but these are old and in poor condition.

Survey Needs:

Survey work will be needed in the area of Bay Lake for timber sale activity.

Recreational Facilities and Opportunities:

Snowmobile trail 3 crosses part of the compartment.

Fire Protection:

The Keystone Bay wildfire was a large project fire that burned in this compartment in 2006 and is what can be expected from future fires, the remote location is primary issue for fire suppression activities.

Additional Compartment Information:

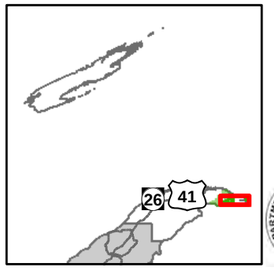
The following reports from the Inventory are attached:

- **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



N

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T58N, R27W, Sec: 15,19-22, 29-30, /nT58N, R26W, Sec: 16
County: Keweenaw
Unit: Baraga
Mgmt Area: Keweenaw Tip
YOE: 2018
Acres: 2960 GIS Calculated
Examiner: Jason Mittlestat
Map Revised: 5/10/2016
Map Phase: Review

- Miris Corners
- Remonumented Section Corners
- Snowmobile Trails
- Designated Equestrian Trails
- ORV License & Trail Permit
- Designated ATV
- Designated ORV Routes
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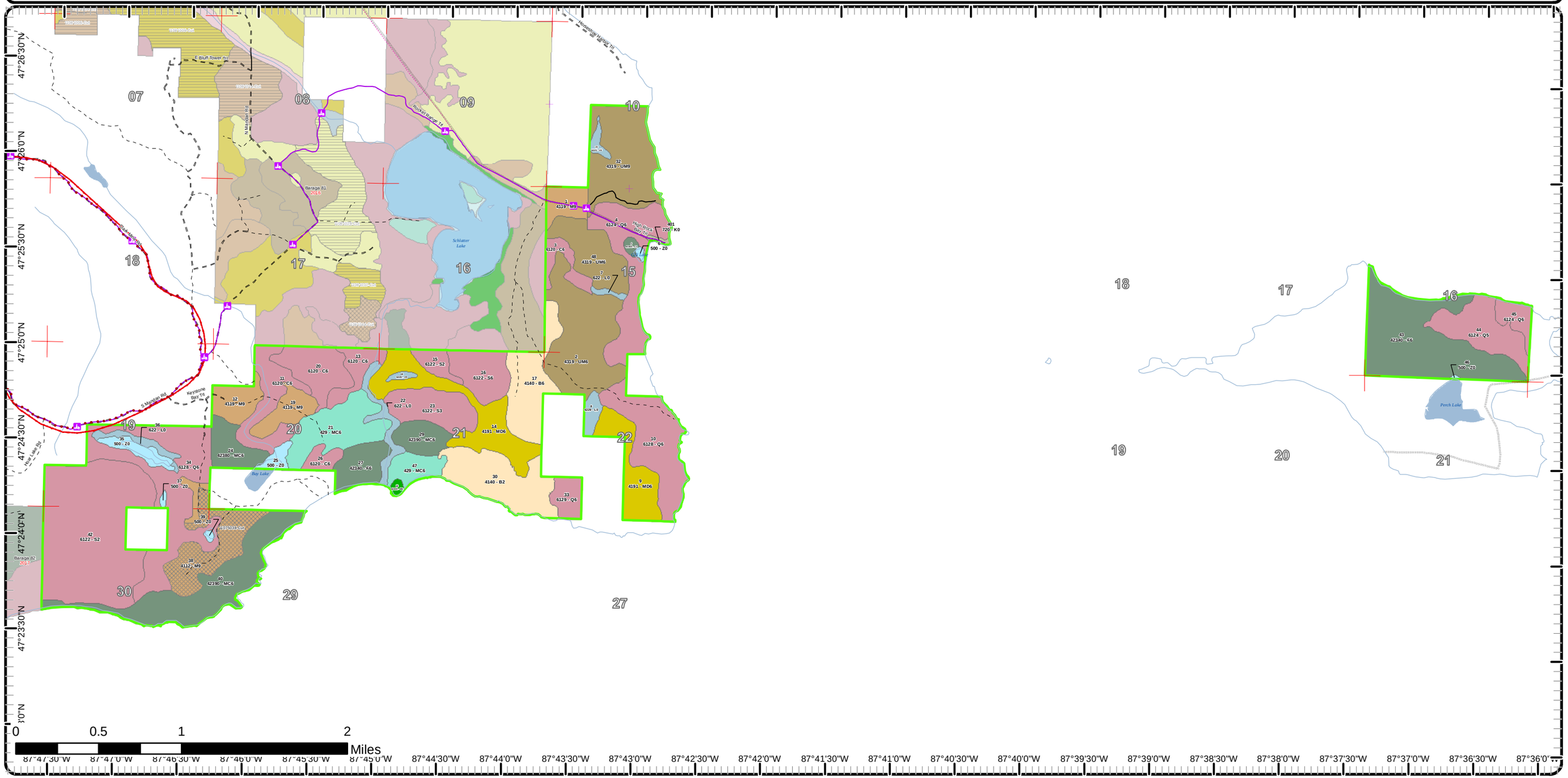
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Rivers
- Pipeline
- Compartment Boundary
- Selection (Group, Single Tree)
- 411 - Northern Hardwood
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Fores
- 612 - Lowland Coniferous Forest
- 500 - Water
- 622 - Lowland Shrub
- 720 - Exposed Rock
- Lakes



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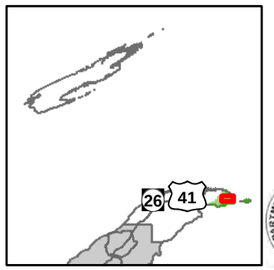

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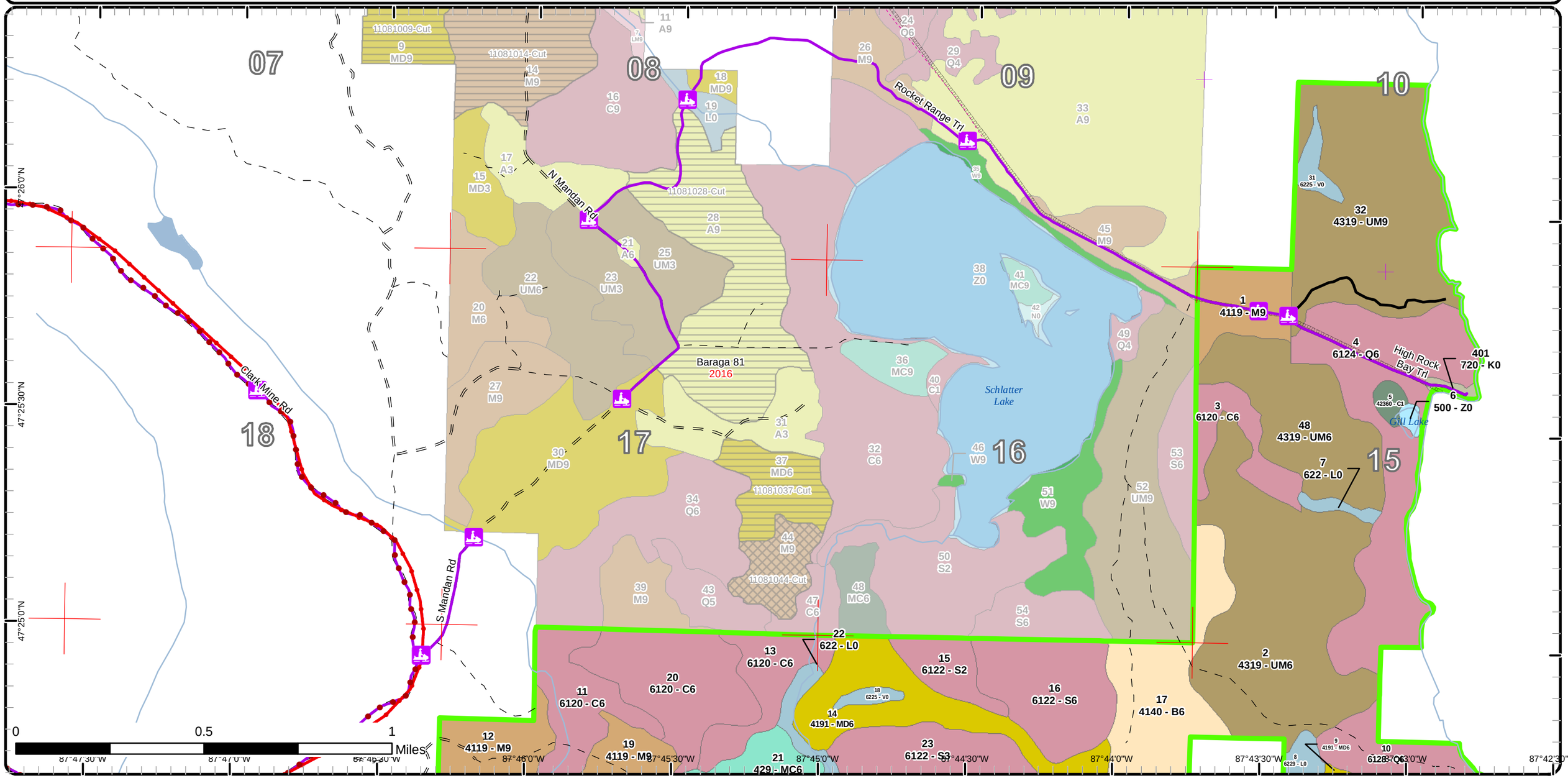

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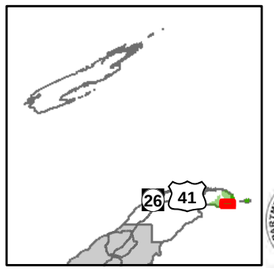

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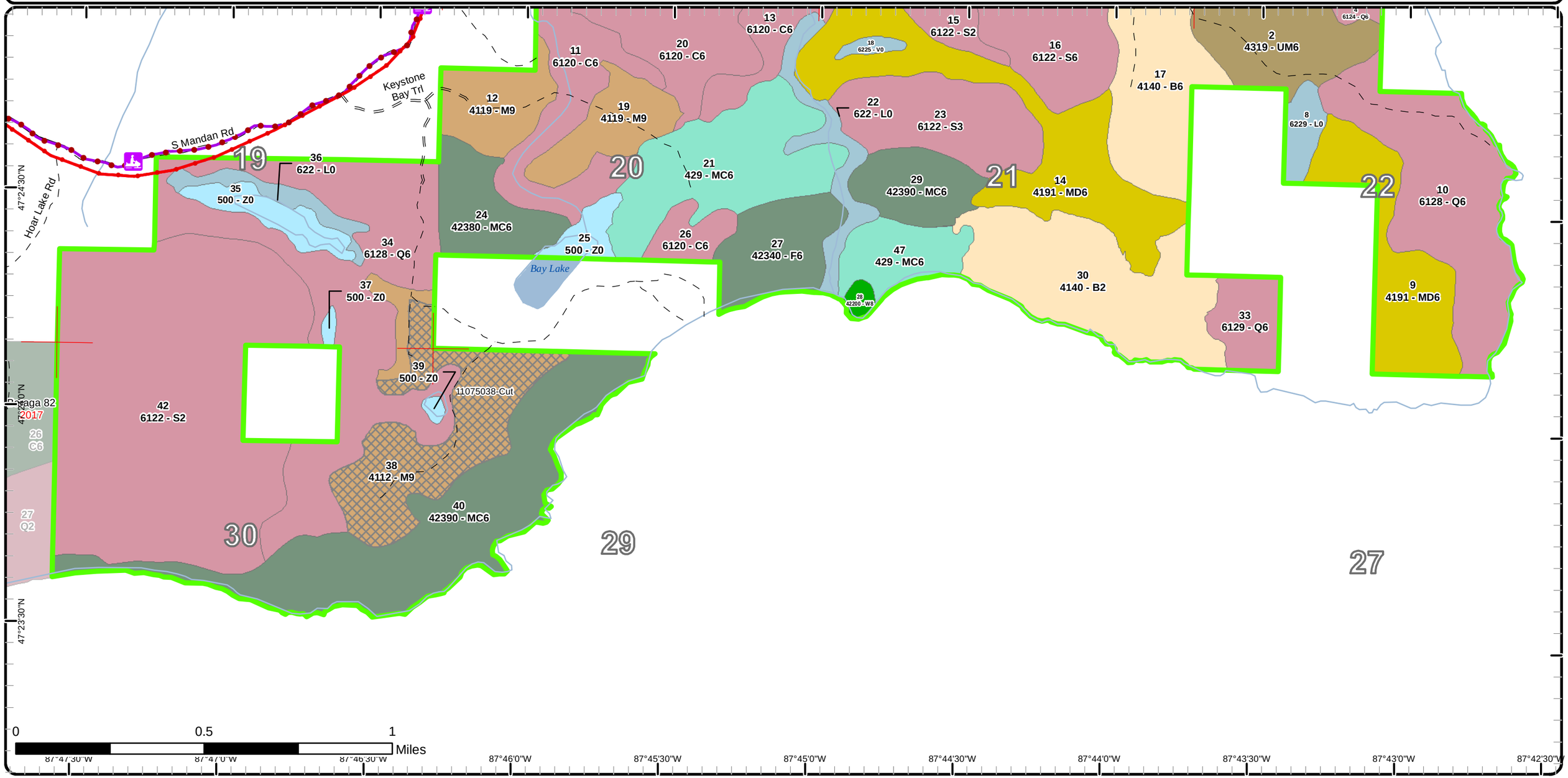

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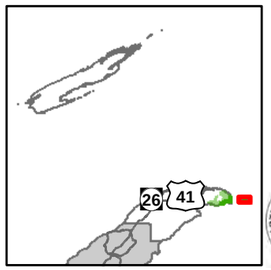

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47°25'30"N
47°25'0"N
47°24'30"N

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22

43
42340 - F6

44
6124 - Q5

45
6124 - Q6

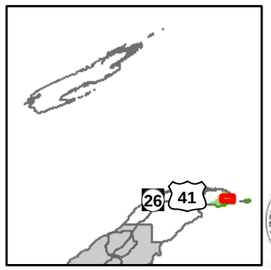
46
500 - Z0

Perch Lake

0 0.5 1 Miles

87°39'0"W 87°38'30"W 87°38'0"W 87°37'30"W 87°37'0"W 87°36'30"W 87°36'0"W 87°35'30"W 87°35'0"W 87°34'30"W

Stand Boundary Map



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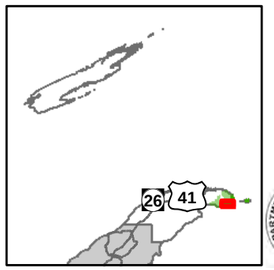

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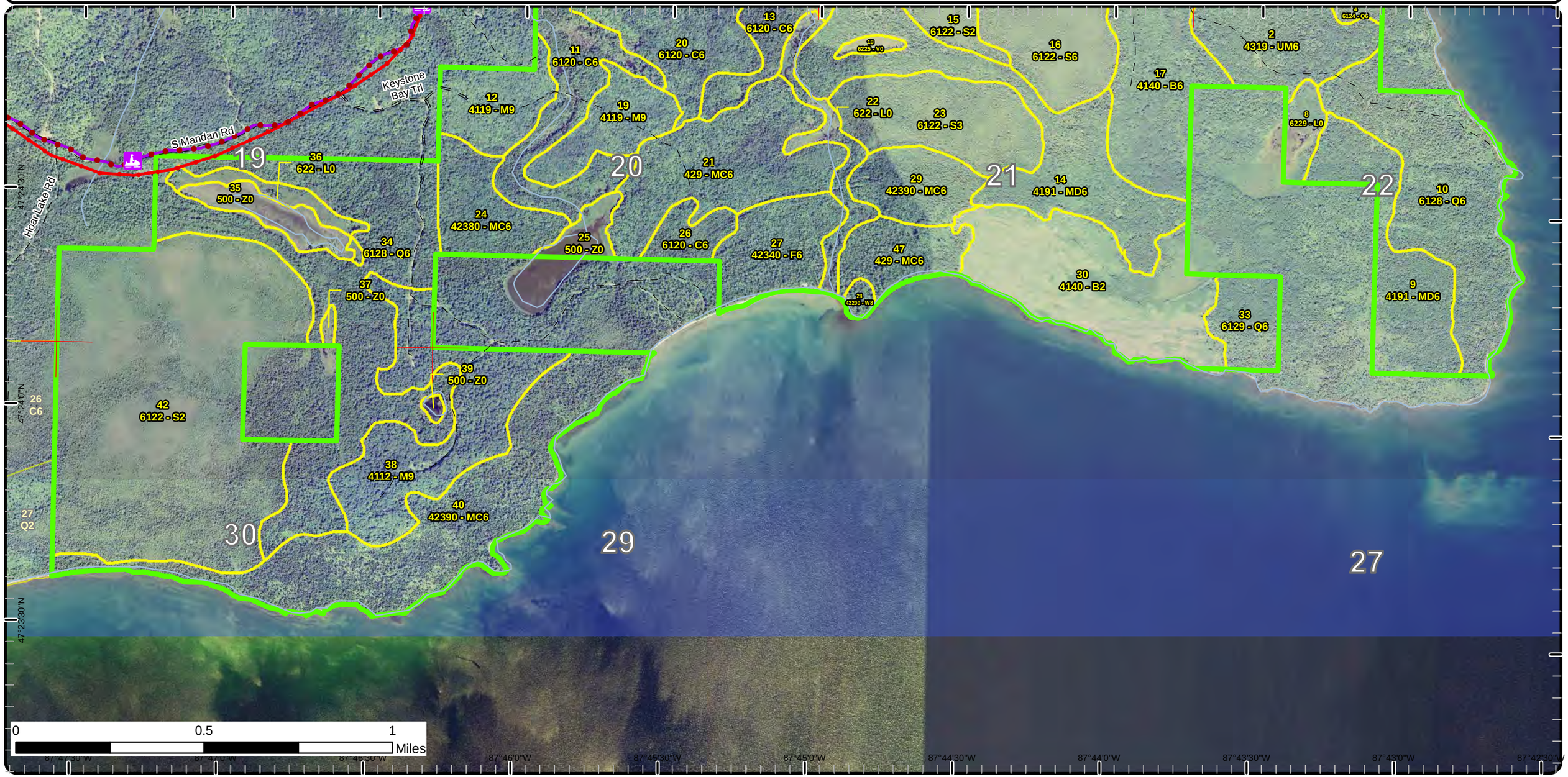

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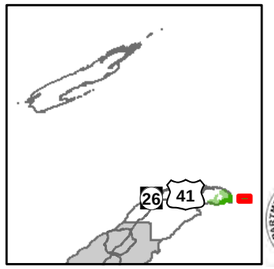

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0 0.5 1 Miles

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87°36'30"W
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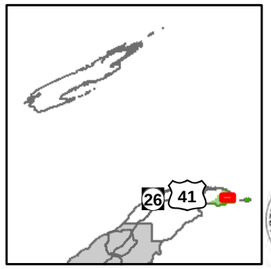
Special Conservation Areas & Site Conditions Map



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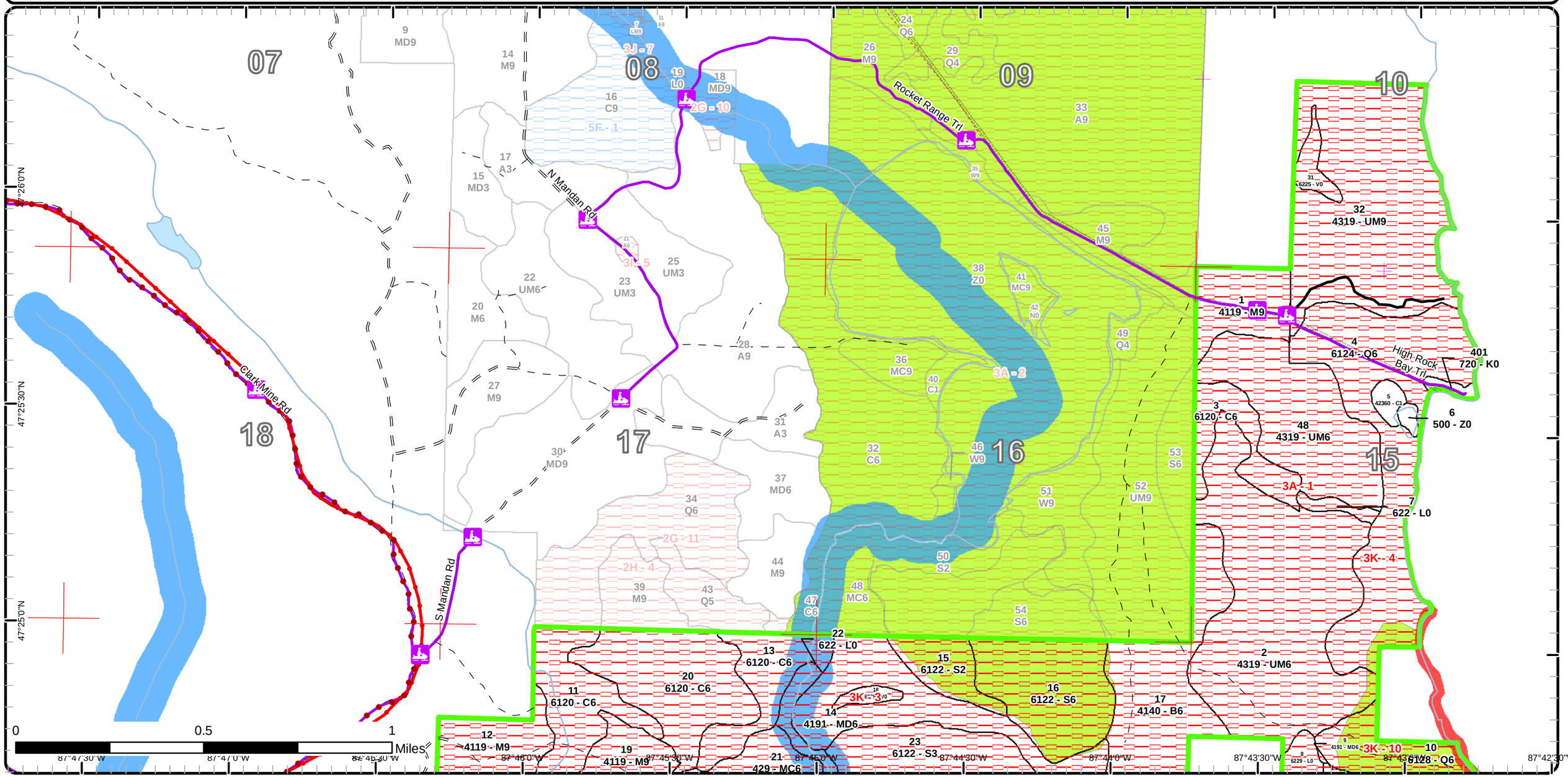
- Rivers
- Pipeline
- Compartment Boundary
- SCA
- SCA Removal
- Unavailable
- 3A: Potential old growth / biodiversity
- 3K: Rare or unique landforms
- Stand Boundaries
- Special Conservation Areas
- Ecological Reference Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Possible Type 2 Old Growth



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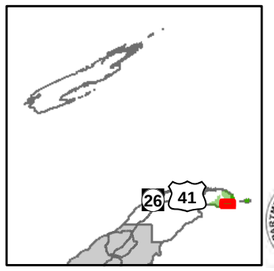

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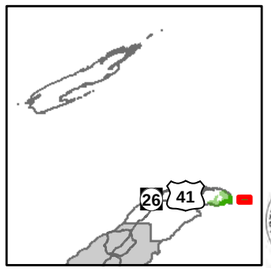
- Rivers
- Compartment Boundary
- SCA
- SCA Removal
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 3A: Potential old growth / biodiversity
- 3K: Rare or unique landforms
- Stand Boundaries
- Special Conservation Areas
- Ecological Reference Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Possible Type 2 Old Growth
- Other SCA (No Category Assigned)

Special Conservation Areas & Site Conditions Map



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- Miris Corners
- Rivers
- Pipeline
- Compartment Boundary
- SCA
- SCA Removal
- Unavailable
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- Stand Boundaries
- Special Conservation Areas
- Ecological Reference Areas
- Great Lakes Islands

47°26'0"N
47°25'30"N
47°25'0"N
47°24'30"N

18 17 16 15
19 20 21 22

2H - 45
45
6124 - Q6
2H - 44
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2H - 43
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Report 1 – Total Acres by Cover Type and Age Class

Baraga Mgt. Unit **Compartment 75** **Year of Entry 2018**

Jason Mittlestat : Examiner

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
Bog	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Cedar	0	0	0	0	0	0	32	0	0	0	5	17	0	0	158	0	0	0	**212**
Exposed Rock	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Lowland Conifers	0	0	0	0	0	0	0	27	0	25	241	0	0	179	0	82	0	0	**554**
Lowland Shrub	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**59**
Lowland Spruce/Fir	0	0	0	0	0	0	20	0	443	0	0	0	0	0	0	0	0	0	**463**
Mixed Upland Deciduous	0	0	0	0	0	0	71	120	0	0	0	0	0	0	0	0	0	0	**191**
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209	**209**
Paper Birch	0	0	117	0	0	0	93	0	0	0	0	0	0	0	0	0	0	0	**210**
Upland Conifers	0	0	0	0	0	94	43	0	36	0	0	0	33	0	0	0	159	0	**365**
Upland Mixed Forest	0	0	0	0	0	0	240	0	0	0	141	0	0	0	0	0	0	0	**381**
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	211	0	0	46	0	0	0	0	0	**257**
Water	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**41**
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	**4**
Total	**115**	**0**	**117**	**0**	**0**	**94**	**499**	**147**	**479**	**236**	**387**	**17**	**79**	**179**	**158**	**82**	**163**	**209**	**2961**

Report 2 – Treatment Summary

Baraga Mgt. Unit

Year of Entry:

Compartment 75

Acres of Harvest

Total Compartment Acres: 2,960

Commercial Harvest - 93

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
Northern Hardwood	0	93	0	0	0	0	0	0	0	**93**
Total	**0**	**93**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**93**

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	93	0	0	0	0	0	0	0	0	**93**
Next Step	0	0	0	0	0	0	93	0	0	**93**
Total	**93**	**0**	**0**	**0**	**0**	**0**	**93**	**0**	**0**	**186**

Stand	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
38	11075038-Cut	93.1	4112 - Maple, Beech, Cherry Association	Sawtimber Well	99	141-170	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Specs: Selectively thin hardwoods to 70-90 square feet of basal area. 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 less than 100 sqft of BA. Follow all guidelines set forth in “The Complete Marker”.

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

Acceptable Regen: Any combination of the original stand’s over story species prior to harvest.

Other Comment: Move the treatment up to FY17 to do with stands in Compartment 82 near Hoar Lake.

Proposed Start Date: 10/01/2016

Total Treatment Acreage Proposed: **93.1**

Report 5 – Site Conditions

Baraga Mgt. Unit

Jason Mittlestat : Examiner

Compartment: 75

Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	*Acres Avail With Condition*	Acres Not Available		Dominant Site Conditions *5C*	2H	3A	3K
12	0	***0***	12	**Bog**			8	4
212	5	***0***	207	**Cedar**			207	
3	3	***0***	0	**Exposed Rock**				
554	0	***0***	554	**Lowland Conifers**		107	206	241
59	0	***0***	59	**Lowland Shrub**			45	14
463	0	***0***	463	**Lowland Spruce/Fir**			147	316
190	0	***0***	190	**Mixed Upland Deciduous**			190	
209	94	***10***	106	**Northern Hardwood**	***10***		106	
210	0	***0***	210	**Paper Birch**			141	68
365	0	***0***	365	**Upland Conifers**			172	193
381	0	***0***	381	**Upland Mixed Forest**			381	
257	0	***0***	257	**Upland Spruce/Fir**		211		46
41	7	***0***	34	**Water**			13	21
4	4	***0***	0	**White Pine**				
2,960	113	***10***	2,838	Total Forested Acres	***10***	318	1,615	905
	4%	***0%***	96%	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**	**3A: Potential old growth / biodiversity**	1,615	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Potential type 2 old growth						
3	**Unavailable**	**3K: Rare or unique landforms**	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: ERA: Keweenaw Point Bog G3G5, S4						

Report 5 – Site Conditions

Baraga Mgt. Unit | **Compartment: 75**

Jason Mittlestat : Examiner | **Year of Entry: 2018**

4	**Unavailable**	**3K: Rare or unique landforms**	75	3B: Threatened, endangered, and special concern species/communities	3G: Other Influence zones - See comments	Unspecified	Unspecified
	Comments: ERA Boreal Forest GU-S3						
5	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: BA in this area is low.						
10	**Unavailable**	**3K: Rare or unique landforms**	122	3B: Threatened, endangered, and special concern species/communities	3G: Other Influence zones - See comments	Unspecified	Unspecified
	Comments: ERA Boreal Forest GU-S3						
12	**Unavailable**	**3K: Rare or unique landforms**	316	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: ERAs: Northern Fen G3S3, Patterned Fen GUS2, Boreal Forest GUS3,						
13	**Unavailable**	**3K: Rare or unique landforms**	36	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: ERAs: Northern Fen G3S3, Emergent Marsh GUS4, Submergent Marsh GUS4						
27	**Unavailable**	**3K: Rare or unique landforms**	46	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: ERA Boreal Forest GU-S3						

30	**Unavailable**	**3K: Rare or unique landforms**	63	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: ERA Boreal Forest GU-S3						
32	**Unavailable**	**3K: Rare or unique landforms**	51	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: ERA Boreal Forest GU-S3						
40	**Unavailable**	**3K: Rare or unique landforms**	193	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: ERA Boreal Forest GU-S3						
43	**Unavailable**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	211	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
44	**Unavailable**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	83	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
45	**Unavailable**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	25	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

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

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	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous species, including many rare plants and animals, several of which are endemic or largely restricted to the Great Lakes region. Due to their isolation, islands provide good examples of many Great Lakes-associated natural communities and ecosystems, and thus have potential to provide insights for understanding the consequences of human disturbance on the increasingly fragmented ecosystems of the mainland.
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	4119 - Mixed Northern Hardwoods	Sawtimber Well	30.6	99	111-140	
2	4319 - Mixed Upland Forest	Poletimber Well	163.7	58	81-110	Longyear acquisition. Clearcut in late 1950's. Very similar to stand 48. However, this stand has a bit more birch.
3	6120 - Lowland Cedar	Poletimber Well	24.9	133	81-110	Cedar stand with a drainage running through it.
4	6124 - Lowland Spruce-Fir	Poletimber Well	119.6	92	111-140	: Lake Superior shore zone. Upland soil, mix of spruce fir and cedar. Potential for threatened and endangered species. Potential hiking trails along shore (were proposed by advisory committee). Strip on lake, south end, ERA basalt bedrock lakeshore. G3 S2 EO rank B
5	42360 - Upland Cedar	Sapling Poor	4.8	99	Unspecified	Treed bog.
9	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	70.6	58	111-140	Was not able to reach due to difficult terrain. Age estimated from adjacent stands.
10	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	121.5	92	171-200	OPIC - FMD: Lake Superior shore zone. Upland soil, mix of spruce fir and cedar. Data from stand 004. Probably cut in late 1950's except near the lake. May have threatened or endangered plant species. Strip along lake ERA, basalt bedroack lakeshore G3 S2, EO rank B
11	6120 - Lowland Cedar	Poletimber Well	69.4	133	81-110	Recommended for 'minimum impact' zone by advisory committee.
12	4119 - Mixed Northern Hardwoods	Sawtimber Well	38.0	99	141-170	BA's 130, 140, 160
13	6120 - Lowland Cedar	Poletimber Well	32.1	58	81-110	
14	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	119.7	60	111-140	Logged in the 1950's. There are old skid or haul roads in the stand that are grown in to balsam.
15	6122 - Black Spruce	Sapling Medium	19.8	56	Unspecified	Poor conifer swamp / muskeg / poor fen. Large undisturbed wetland complex. Currently federally recognized ERA as a poor conifer swamp.
16	6122 - Black Spruce	Poletimber Well	58.0	79	Unspecified	Federally recognized ERA as a Poor Conifer Swamp.
17	4140 - Other Upland Deciduous	Poletimber Well	93.1	58	81-110	OI Stand Year Origin was 1958. The birch stocking increases towards the southern part of the stand.
19	4119 - Mixed Northern Hardwoods	Sawtimber Well	37.1	99	141-170	BA's 140, 150, 160

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
20	6120 - Lowland Cedar	Poletimber Well	64.2	133	81-110	Recommended for 'minimum impact' zone by advisory committee.
21	429 - Mixed Upland Conifers	Poletimber Well	94.1	45	51-80	Keystone Bay Road passes through stand.
23	6122 - Black Spruce	Sapling Well	69.2	79	Unspecified	
24	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Well	42.7	58	51-80	
26	6120 - Lowland Cedar	Poletimber Well	17.0	103	81-110	
27	42340 - Upland Spruce/Fir	Poletimber Well	46.4	115	81-110	"Keystone Bay" LAKE SUPERIOR SHORE. Very nice sand beach. ATV trail along the east side of the stand.
28	42200 - Natural White Pine	Sawtimber Medium	4.3	179	51-80	POINT EAST OF KEYSTONE BAY.
29	42390 - Mixed Non-Pine Upland Conifers	Poletimber Well	36.3	79	51-80	
30	4140 - Other Upland Deciduous	Sapling Medium	116.5	10	1-50	Keystone Bay Wildfire 8/2006. Lots of blow down - burnt timber, mostly cedar. Should be a nice paper birch stand. Looks much better from the ground than it does from the air photos. LAKE SUPERIOR SHORE. Probably never cut. High potential for rare and endangered plant species. Strip along the lake, ERA basalt bedrock lakeshore G3 S2 EO rank B
32	4319 - Mixed Upland Forest	Sawtimber Well	141.0	99	81-110	Over story white pine with aspen / birch mixed in. Two aged from wind throw off of the lake.
33	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	26.8	60	141-170	Was not able to reach due to terrain issues. Mixed black spruce and fir with a ridge of white pine.
34	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	178.8	125	81-110	
38	4112 - Maple, Beech, Cherry Association	Sawtimber Well	103.4	99	141-170	BA's 110, 140, 150, 180. The stand appears to have been thinned in the past, aprx 30 years ago. The quality of the timber improves as you move south in the stand. The north part should be excluded from the treatment area.
40	42390 - Mixed Non-Pine Upland Conifers	Poletimber Well	158.6	179	51-80	Lake Superior shore. Bedrock beach, cobble beach. Lots of blowdown. There was a historic commercial fish operation at Keystone Point. Remains of shacks are evident along shore. Probably never cut (except at commercial fish site at Keystone point). Strip along lake. ERA basalt bedrock lakeshore G3 S2 EO rank B

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	6122 - Black Spruce	Sapling Medium	316.1	79	Unspecified	Rich fen / patterned fen.
43	42340 - Upland Spruce/Fir	Poletimber Well	210.7	86	51-80	OPIC - FMD: Manitou Island. Low, blowdown, a jungle. 1987 data. Observed south end - wild fire. Strip of land on north side: ERA volcanic conglomerate lakeshore G3 S2 EO rank A
44	6124 - Lowland Spruce-Fir	Poletimber Medium	82.5	148	1-50	OPIC - FMD: Manitou Island. Very wet. Strip of land along lake: ERA, volcanic conglomerate lakeshore. G3, S2 EO rank A
45	6124 - Lowland Spruce-Fir	Poletimber Well	24.9	86	51-80	OPIC - FMD: Manitou Island. Low, blowdown, a jungle. 1987 data. Strip of land along lake: ERA, volcanic conglomerate lakeshore G3 S2 EO rank A
47	429 - Mixed Upland Conifers	Poletimber Well	33.3	115	51-80	Lake Superior Shore. Probably never cut. Strip along the lake, ERA basalt bedrock lakeshore G3 S2 EO rank B
48	4319 - Mixed Upland Forest	Poletimber Well	76.0	58	81-110	Longyear acquisition. Clearcut in late 1950's.

Report 9 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	General Comments:
6	500 - Water	2.2	No	Gill Lake. Within the shore influence zone.
7	622 - Lowland Shrub	4.3	No	
8	6229 - Mixed lowland shrub	13.8	No	Large beaver flooding.
18	6225 - Bog	4.2	No	
22	622 - Lowland Shrub	26.4	No	Wetland along Union Creek.
25	500 - Water	12.8	No	Bay Lake.
31	6225 - Bog	7.8	No	
35	500 - Water	21.4	No	Pond
36	622 - Lowland Shrub	14.4	No	
37	500 - Water	2.1	No	
39	500 - Water	2.0	No	Pond
46	500 - Water	0.9	No	Manitou Lake
401	720 - Exposed Rock	2.9	No	High Rock Bay. Open area at end of road. Sparse grass. Frequently used for camping or sightseeing.