

Compartment Review Presentation

Baraga Forest Management Unit

Compartment 11044 Entry Year 2018 Acreage: 1,962

County Houghton

Management Area: Central Houghton

Revision Date: 2016-05-09

Stand Examiner: Jason Mittlestat

Legal Description:

Elm River Township T51N, R35W, Sections 17 Laird Township T51N, R35W, Sections 16, 19, 20 and 21

Identified Planning Goals:

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

Soil and topography:

There are some steep hills along the rivers and streams. The remainder of the land is level to rolling. Soils are combinations of: Munising loamy fine sand and find sandy loam, Yalmer sandy loam, Liminga fine sand, Alcona loamy fine sand, Graveraet loam, Kalkaska sand, Halfaday-AuGres sands, Sturgeon silt loam, Arnheim silt loam and Pelkie fine sand.

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

State land borders the compartment the north, east and west. Several small parcels of private ownership border the compartment to the south where some of the owners have harvested timber from their parcels, but the majority of the private owners use their land as homes or for recreational purposes. The land to the northeast is owned by three different land management companies with primary goals of timber management.

Unique Natural Features:

MNFI indicates the potential for Red Shouldered Hawk, Eagle, Osprey, Great Blue Heron rookery, Goshawk, Moose and Gray Wolf in the compartment. There is also potential for Wood Turtle along riparian corridors.

Archeological, Historical, and Cultural Features:

none.

Special Management Designations or Considerations:

BMP guidelines should be followed around the intermittent streams, Otter river and Bruno creek watercourses.

Watershed and Fisheries Considerations:

The streams in this compartment are cold water trout streams. There is a concern about bank erosion and stream crossings.

Wildlife Habitat Considerations:

Managing habitat for; black bear, blackburnian warbler, pileated woodpecker, ruffed grouse, northern goshawk and American marten should 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 coarsetextured glacial till. There is insufficient data to determine the glacial drift thickness. The Precambrian Jacobsville Sandstone subcrops below the glacial drift. The Jacobsville was previously used as a building stone. A gravel pit is located in Section 17 and there should be potential. Limestone quarries are located two miles to the east, but the outlier formation is not present here. Abandoned copper mines and crushed basalt piles are located eight miles to the northwest. This area has not been previously leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

The Pike Lake Road is a county road which passes through section 19, The Beaver Creek Road starts north of the Otter River on the Pike Lake Road and heads east across Beaver Creek and through sections 19, 20 and 17 where it ends south of Bruno Creek. Access to the lands north of Bruno Creek can be obtained through a series of logging roads which

head south from the Hazel Swamp Road. There is no formal access to the lands south of the Otter River.

Survey Needs:

None identified at this time, will be addressed as needed in the future.

Recreational Facilities and Opportunities:

The Otter River and Bruno Creek water courses offer some excellent fishing opportunities. The large expanse of continuous forest offer great hunting opportunities for both large and small game.

Fire Protection:

This compartment has little to no potential for a large fire with the primary cover type being northern hardwoods. Equipment access would be the primary issue for fire suppression activities.

Additional Compartment Information:

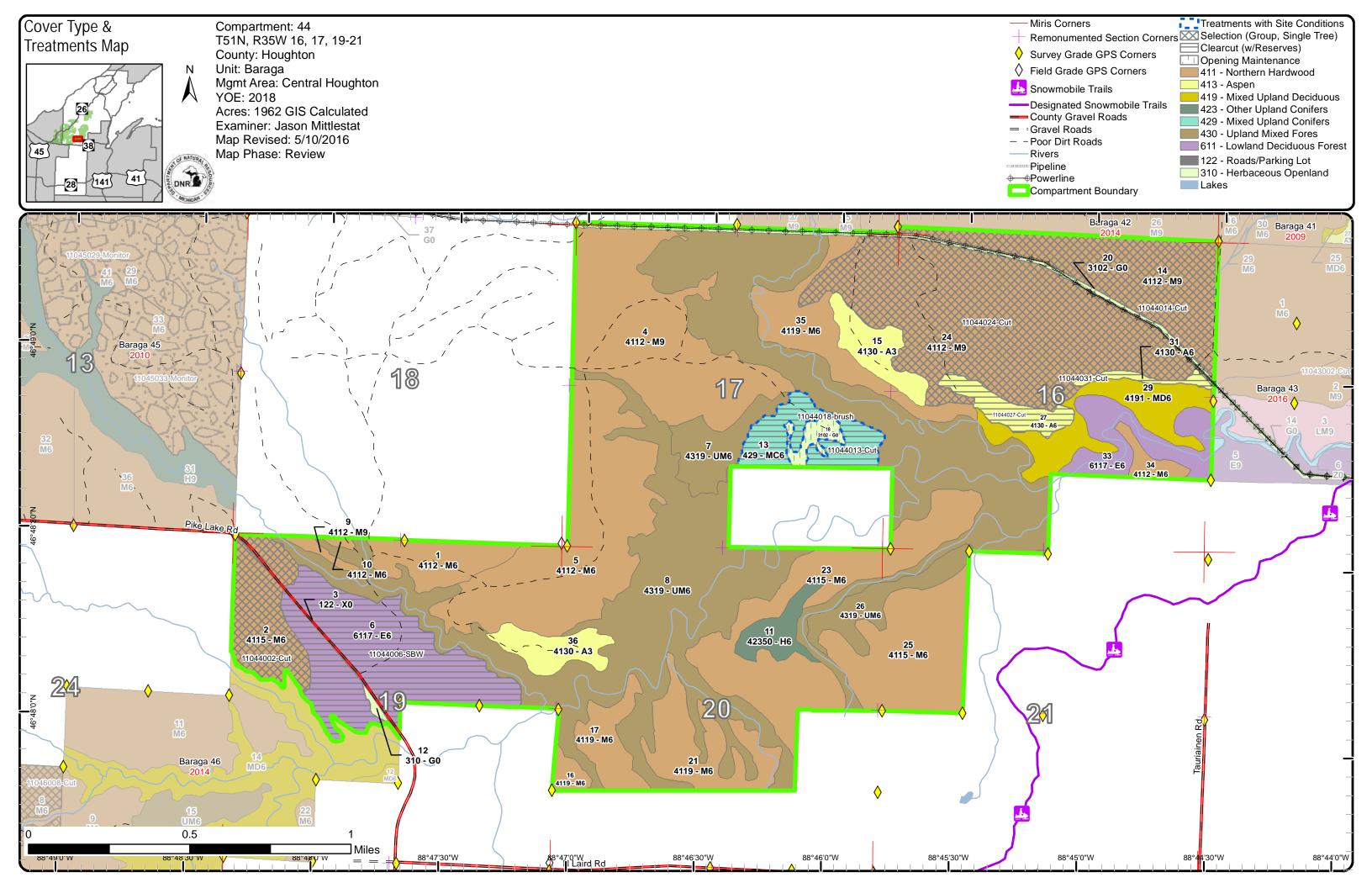
The following reports from the Inventory are attached:

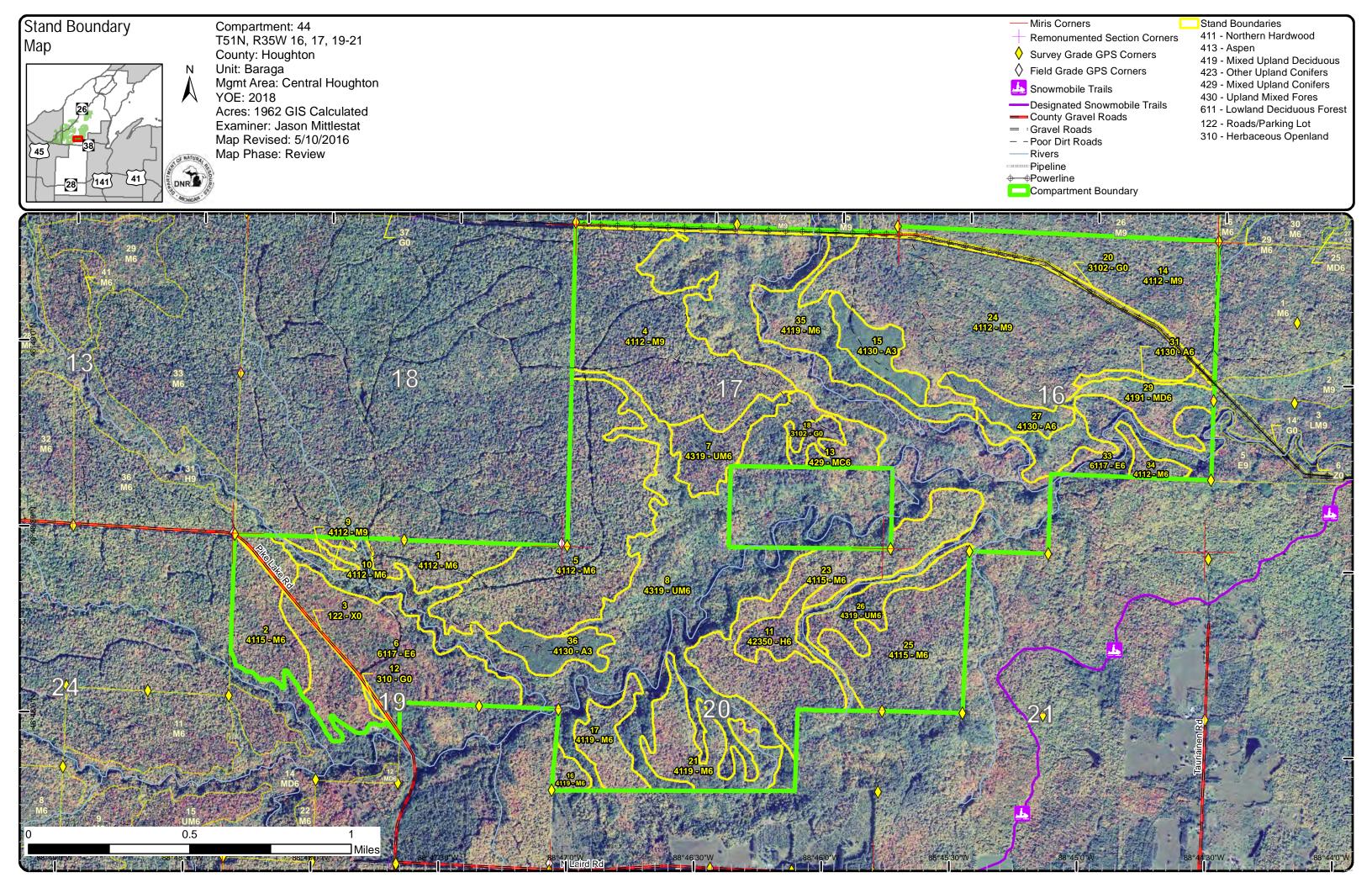
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

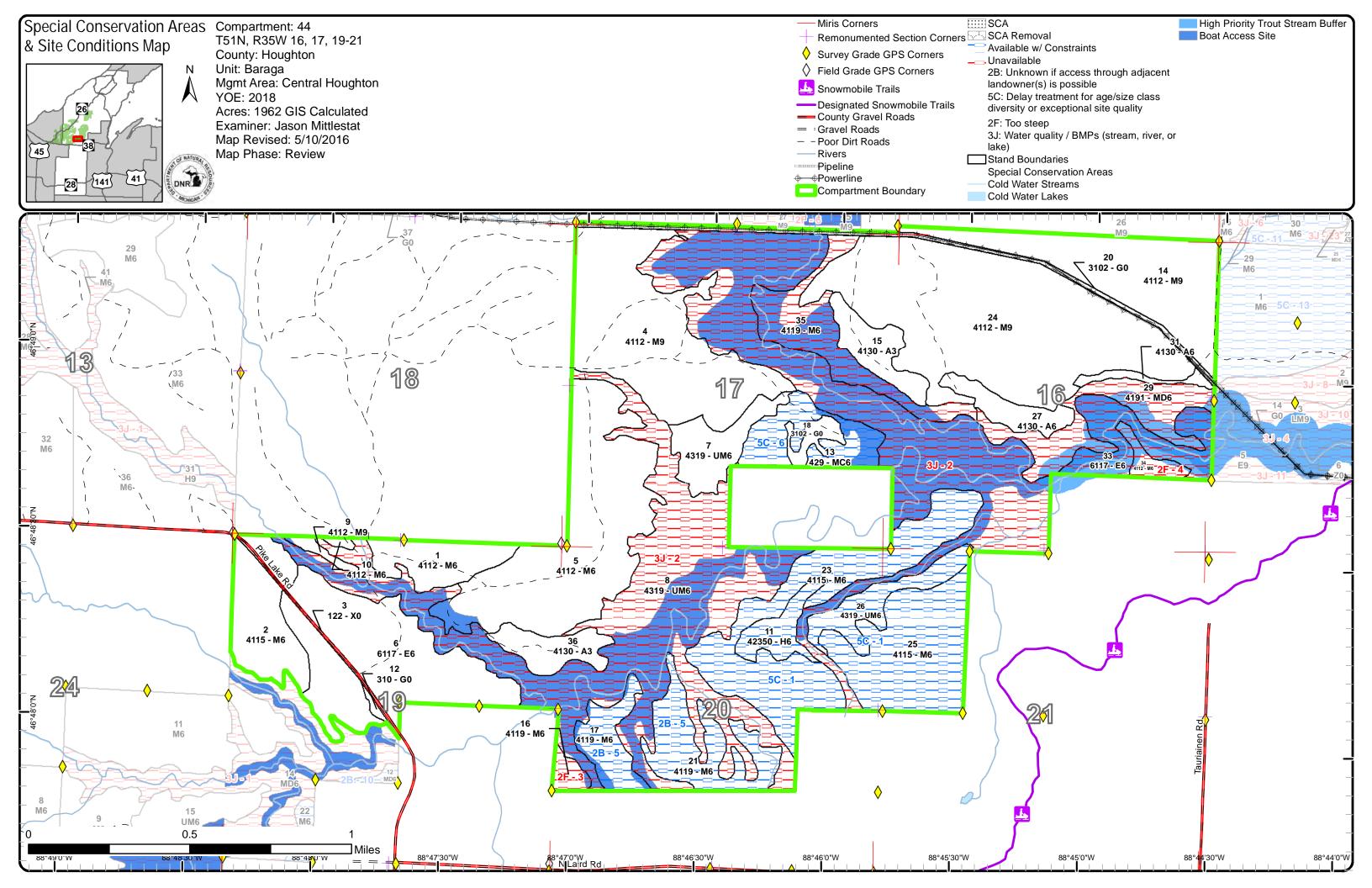
The following information is displayed, where pertinent, on the attached compartment maps:

Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries

Details on the road access system







Baraga Mgt. Unit

Compartment 44 Year of Entry 2018

Jason Mittlestat: Examiner



Age Class

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	₹ 6		3 / 2			3 / 4	18 18 18 18 18 18 18 18 18 18 18 18 18 1	, % /&					0,00	,		\$ 13°		g Jue d	No. No.
Aspen	0	0	47	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	72
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18
Herbaceous Openland	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
Lowland Deciduous	0	0	0	0	0	0	0	0	0	122	0	0	0	0	0	0	0	41	163
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	49
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1032	1032
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	37
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	558	558
Urban	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	33	0	47	0	0	0	25	0	0	122	0	0	0	0	0	0	0	1735	1962



Report 2 – Treatment Summary

Baraga Mgt. Unit

Compartment 44 Year of Entry: **Acres of Harvest Total Compartment Acres: 1,962**

> Commercial Harvest - 520 Harvests with Site Condition - 37 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method

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Aspen		25	0	0	0	0	0	0	0	0	25	
Lowland Deciduous		122	0	0	0	0	0	0	0	0	122	
Northern Hardwood		0	373	0	0	0	0	0	0	0	373	
Upland Conifers		37	0	0	0	0	0	0	0	0	37	
	Total	184	373	0	0	0	0	0	0	0	557	

Regen:

Comment

Proposed Start Date: 10/01/2017

11044014-Cut 93.6 4112 - Maple, Sawtimber 88 111-Harvest Single Tree 411 - Northern Uneven-Proposal Beech, Cherry Well 140 Selection Hardwood Aged

Association

Habitat Cut: No Site Condition:

Prescription Selectively thin hardwoods to 70-90 square feet of basal area. Favor oak, hemlock, white pine and cedar where present. Oak should be Specs: 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". If areas heavy to (oak, aspen, dieback, ash, or hemlock) 1-5 acres are found, seed tree harvest with a residual 10-30 sq ba of oak, reserving hemlock, cedar and pine. Winter cut only (December 1st to March 31st) on one ~40 acre payment unit, preferably on the eastern part of the stand.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Any combination of the original stand's over story species prior to harvest.

Regen: <u>Other</u>

Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and reserve tree species.

Comment:

Proposed Start Date: 10/01/2017

Baraga Mgt. Unit Report 4 -- Treatments Compartment: 44 S Year of Entry: 2018 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approva n Method Objective Name CoverType Density Age Range Type Structure Status d 11044018-18 8 7 3102 - Grass Nonstocked Unspec NonForestMqt **Brush Cutting** 31021 - Cool Proposal brush ified Season Grass **Site Condition: Habitat Cut: No** Prescription Brush hog as needed to maintain opening. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Possibly prescribe burn to maintain opening. **Comment:** Proposed Start Date: 10/01/2017 11044024-Cut 4112 - Maple. Sawtimber 111-Harvest Single Tree 411 - Northern Uneven-Proposal Beech, Cherry Well 140 Selection Hardwood Aged Association **Habitat Cut: No Site Condition:** Prescription 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 Specs: set forth in "The Complete Marker". If areas heavy to (oak, aspen, dieback, ash, or hemlock) 1-5 acres are found, seed tree harvest with a residual 10-30 sq ba of oak, reserving hemlock, cedar and pine. Winter cut only (December 1st to March 31st) on one ~40 acre payment unit, preferably on the eastern part of the stand. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable Any combination of the original stand's over story species prior to harvest. Regen: Other 1 4 1 Retention for this stand will be greater than 3% and will consist of tree species of the dominant cover type and reserve tree species. Comment: 10/01/2017 **Proposed Start Date:** 11044027-Cut 18.9 4130 - Aspen Poletimber 50 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Proposal Retention **Habitat Cut: No Site Condition:** Prescription Harvest all species down to 4.6 inches DBH except hemlock, cedar and white pine. Also, reserve red oak if present. All yellow birch 20" DBH and greater shall be retained. Winter cut only (December 1st to March 31st). Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Any combination of the original stand's over story species prior to harvest. Regen:

Other

Retention for this stand will be greater than 3% and will consist of reserve tree species.

Comment:

Proposed Start Date: 10/01/2017

11044031-Cut Poletimber 6 1 4130 - Aspen 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Proposal Retention Well

Harvest all species down to 4.6 inches DBH except hemlock, cedar and white pine. Also, reserve red oak if present. All yellow birch 20" DBH Prescription

and greater shall be retained. Winter cut only (December 1st to March 31st).

Site Condition:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Habitat Cut: No

Acceptable Any combination of the original stand's over story species prior to harvest.

Regen: **Other**

Specs:

Retention for this stand will be greater than 3% and will consist of reserve tree species.

Comment:

Proposed Start Date: 10/01/2017

Total Treatment 565.7 Acreage Proposed:

Report 5 - Site Conditions

Baraga Mgt. Unit

Jason Mittlestat : Examiner

Compartment: 44
Year of Entry: 2018

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	ditions
Acres	Available	With Condition	Not Available		2B	5C	2F	3J
72	72	0	0	Aspen				
18	0	18	0	Hemlock		18		
29	29	0	0	Herbaceous Openland				
163	122	0	41	Lowland Deciduous				41
49	0	0	49	Mixed Upland Deciduous				49
1032	701	266	65	Northern Hardwood	74	192	16	49
37	0	37	0	Upland Conifers		37		
558	30	28	501	Upland Mixed Forest		28		501
4	4	0	0	Urban				
1,962	958	349	655	Total Forested Acres	74	275	16	639
	49%	18%	33%	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.

Comr	Available ments:	5C: Delay treatment for age/size class diversity or exceptional site quality	238	Unspecified	Unspecified	Unspecified	Unspecified
U	Inavailable	3J: Water quality / BMPs (stream, river, or lake)	639	3A: Potential old growth / biodiversity	2F: Too steep	2G: Too wet (sensitive soils, does not include access issues)	Unspecified
Comr	ments:						
U	Inavailable	2F: Too steep	7	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
Comr	ments:						

Baraga Mgt. Unit
Jason Mittlestat: Examiner

Compartment: 44
Year of Entry: 2018

4	Unavailable	2F: Too steep	9	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified	Unspecified
(Comments:						
5	Available	2B: Unknown if access through adjacent landowner(s) is possible	74	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	37	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Due to stands loca	tion treat if/when adjacent prope	erty to t	he south is acquired. This wo	uld increases sale acre	age by about 15+ acres.	

Mgt. Unit

Compartment: 44
Year of Entry: 2018



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				

Baraga Mgt. Unit Compartment: 44
Year of Entry 2018



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.

Conservation Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effects as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well

S t	Baraga	a Mgt. Unit		Report 8	– Forested	Stands Compartment: 44 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4112 - Maple, Beech, Cherry Association	Poletimber Well	31.1	74	81-110	Some die back along roads and south edge of stand 2/2/2016.
2	4115 - Y.Birch, Hemlock NH	Poletimber Well	51.8	82	111-140	
4	4112 - Maple, Beech, Cherry Association	Sawtimber Well	139.4	87	51-80	cut in the fall and winter 2010-2011 as "Goldie Locks Hardwoods" 11-010-10-01
5	4112 - Maple, Beech, Cherry Association	Poletimber Well	151.6	81	81-110	Some areas of top dieback along roads and river banks.
6	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	122.1	82	81-110	
7	4319 - Mixed Upland Forest	Poletimber Well	30.1	78	51-80	some areas with good white pine over story. if there is good white pine and hemlock regeneration, possibly skip next rotation and clear-cut in 2038.
8	4319 - Mixed Upland Forest	Poletimber Well	500.6	78	81-110	
9	4112 - Maple, Beech, Cherry Association	Sawtimber Well	4.4	74	81-110	Stand was split from stand1.
10	4112 - Maple, Beech, Cherry Association	Poletimber Well	1.6	74	81-110	Stand was split from stand 1.
11	42350 - Upland Hemlock	Poletimber Well	18.1	107	81-110	Part of North Laird hardwoods cutting finished in spring of 2007. Cut in 2028.
13	429 - Mixed Upland Conifers	Poletimber Well	36.8	81	51-80	cut when state acquires property to the south.
14	4112 - Maple, Beech, Cherry Association	Sawtimber Well	93.6	88	111-140	
15	4130 - Aspen	Sapling Well	24.6	16	Immature	
16	4119 - Mixed Northern Hardwoods	Poletimber Well	7.1	78	111-140	
17	4119 - Mixed Northern Hardwoods	Poletimber Well	25.3	71	111-140	
21	4119 - Mixed Northern Hardwoods	Poletimber Well	48.7	84	111-140	
23	4115 - Y.Birch, Hemlock NH	Poletimber Well	107.9	87	81-110	stage one inventory was done at sale closure. Part of North Laird hardwoods cutting finished in spring of 2007. Cut in 2028.

S Baraga Mgt. Unit t				Report 8	Forested	Stands	Compartment: 44 Year of Entry: 2018		
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	MICHIGAN . S	
24	4112 - Maple, Beech, Cherry Association	Sawtimber Well	227.6	88	111-140				
25	4115 - Y.Birch, Hemlock NH	Poletimber Well	84.1	73	81-110	Part of North Laird	hardwoods cutting finished in sp Cut in 2028.	oring of 2007.	
26	4319 - Mixed Upland Forest	Poletimber Well	27.7	107	51-80	Part of North Laird	hardwoods cutting finished in sp Cut in 2028.	oring of 2007.	
27	4130 - Aspen	Poletimber Well	18.9	50	81-110				
29	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	48.6	73	81-110				
31	4130 - Aspen	Poletimber Well	6.1	50	81-110				
33	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	41.2	71	81-110				
34	4112 - Maple, Beech, Cherry Association	Poletimber Well	9.1	81	111-140				

4119 - Mixed Northern Hardwoods

4130 - Aspen

35

36

Poletimber Well

Sapling Well

48.7

22.4

87

18

111-140

Immature

Report 9 - Nonforested Stands

Compartment: 44 Year of Entry: 2018



Stand	Cover Type	Acres	Managed Site	General Comments:
3	122 - Road/Parking Lot	3.9	No	
12	310 - Herbaceous Openland	1.7	No	
18	3102 - Grass	8.7	No	Stand is converting to forested 2/3/2016.
20	3102 - Grass	18.8	No	Power Line