

# **Compartment Review Presentation**

**Shingleton Forest Management Unit** 

Compartment 173 Entry Year 2015 Acreage: 1,309 County Alger Management Area: Pictured Rocks Buffer

**Revision Date:** 04/30/2013

Stand Examiner: Robert Tylka

## Legal Description:

T47N R17W Sections 4,5,8 and 9

#### **Identified Planning Goals:**

The area features high-quality northern hardwood timber that is intensively managed.

#### Soil and topography:

Most of this compartment consists of gently rolling, hilly terrain featuring rich, loamy soils. The lowland areas interspersed throughout form the headwaters of the Mosquito River plus Chapel and Section 34 Creeks.

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

Pictured Rocks National Lakeshore lies adjacent to the north, and this compartment lies within the Pictured Rocks Inland Buffer SCA. There are no privately-owned lands within the compartment, but due to the proximity of the PRNL there is heavy seasonal traffic along County Rd. 639 and the Chapel Rd.

## **Unique Natural Features:**

No Unique Natural Features known.

## Archeological, Historical, and Cultural Features:

There are no known archeological features features within this compartment. Any historical and/or cultural values would be related to its proximity with the PRNL.

#### **Special Management Designations or Considerations:**

The compartment is located within the Pictured Rocks Inland Buffer SCA. All 3 waterways (Mosquito River, Chapel Creek, Section 34 Creek) associated with this compartment are designated trout streams associated with the Lake Superior watershed.

#### Watershed and Fisheries Considerations:

Both Chapel Creek and Section 34 Creek are designated trout waters. The several existing beaver ponds on Chapel Creek could either block all spawning and so hurt the trout, or if there is still spawning habitat available, the ponds could produce much larger trout than the stream itself. However, Chapel Creek has not been surveyed in a very long time, so we do not know the extent or health of the trout population. Section 34 Creek is of such good quality that in the mid-1980s Fisheries Division cleared the stream with rotenone and stocked Grayling. This was one of only two streams in the state where we tried to bring back the Grayling. Few were ever seen after planting, and the effort was soon discontinued. The creek today still remains a very good quality trout water.

#### Wildlife Habitat Considerations:

Both Chapel Creek and Section 34 Creek are designated trout waters. The several existing beaver ponds on Chapel Creek could either block all spawning and so hurt the trout, or if there is still spawning habitat available, the ponds could produce much larger trout than the stream itself. However, Chapel Creek has not been surveyed in a very long time, so we do not know the extent or health of the trout population. Section 34 Creek is of such good quality that in the mid-1980s Fisheries Division cleared the stream with rotenone and stocked Grayling. This was one of only two streams in the state where we tried to bring back the Grayling. Few were ever seen after planting, and the effort was soon discontinued. The creek today still remains a very good quality trout water.

#### Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of end moraine of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien (PdC) and the Cambrian Trempealeau Formation subcrop below the glacial drift. The PdC and Trempealeau could be used for stone. The nearest gravel pit is one mile to the south and there should be potential in the compartment. There is no commercial oil and gas production in the UP.

#### Vehicle Access:

Access is good from County Road 639, the Chapel Road, and Section 34 Creek Road.

#### **Survey Needs:**

None at this time.

#### **Recreational Facilities and Opportunities:**

There are no developed recreational facilities or trails in this compartment, but Pictured Rocks National Lakeshore is a wellknown tourist destination. The area is also popular for hunting and snowmobiling.

#### **Fire Protection:**

Access to this compartment is excellent via the Chapel Lake Road and the existing woods roads. The area is dominated by northern hardwoods, which are generally regarded as a low-risk fuel type. The conifer stands and other lowland types may be at risk under prolonged drought conditions.

#### **Additional Compartment Information:**

Due to its proximity to the shores of Lake Superior, this area generally experiences severe winters.

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









## Report 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit Robert Tylka : Examiner

## Compartment 173 Year of Entry 2015



Age	Class
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Cedar	0	0	0	0	0	0	0	0	10	4	0	0	0	0	14	
Herbaceous Openland	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20	
Lowland Aspen/Balsam Poplar	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	
Lowland Conifers	0	0	15	0	0	0	0	0	32	0	0	0	0	25	72	
Lowland Deciduous	0	0	3	0	0	0	0	0	2	0	0	0	0	31	36	
Lowland Mixed Forest	0	0	0	0	0	0	0	0	43	27	0	0	0	11	80	
Lowland Shrub	14	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
Marsh	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	1005	1005	
Treed Bog	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	
Upland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Water	34	0	0	0	0	0	0	0	0	0	0	0	0	0	34	
Total	94	0	27	0	0	0	0	0	87	30	0	0	0	1072	1309	



- MICHIGAN .	Shingleton Mgt. Unit Year of Entry 2015										Compartment Total Compartment Acres:	173 1,309
				Acre	es by T	reatme	ent Ty	ре				
	Commercial Harvest - 91	Tree Planting - 0		(	Other -	0						
	Habitat Cut - 0	Opening Maintena	nce - C	)								
				Cov	ver Ty	oe by H	larves	st Meth	nod			
				Clear Clear	o left	Loo IS	doon dool	ining of	Contraction of the second	Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.		
	Lowland Deciduous F	Forest	15	0	0	0	0	0	15			
	Lowland Mixed Fores	st	36	0	0	0	0	0	36			
	Northern Hardwood		0	17	0	22	0	0	39			
		Total	51	17	0	22	0	0	91			

Compartment: 173 Shingleton Mgt. Unit **Report 3 -- Treatments Prescribed** Year of Entry 2015 with No Limiting Factor s t а Treatment CoverType Size BA Treatment Treatment Cover Type Acres Stand Approval n Method Objective d Name Density Age Range Type Status 6117 - Lowland Cmpt. Review 15.4 High 89 81-110 Harvest Clearcut with 6117 - Lowland 9 41173009-Cut Deciduous. Mixed Densitv Reserves Deciduous. Mixed Proposal Coniferous Coniferous Pole Prescription CC w/reserves - Retain any hemlock, cedar and white pine encountered. Buffer the drainage that runs through the stand from south to north, and also leave a 200' buffer from the edge of Chapel Creek along the northern edge . Where there are ponds (wider areas of Chapel Creek) the Specs: buffer may be reduced to 100'. <u>Other</u> Some beech regeneration already present in the understory. Comments: All species present are acceptable for regeneration except beech. Monitor regen in accordance with the work instructions, and spray herbicide if <u>Next</u> needed to eradicate beech regen after the harvest. Steps: Proposed Start Date: 10/01/2014 22.3 4110 - Sugar Maple 89 81-110 Harvest Shelter Wood 4110 - Sugar Maple Cmpt. Review 10 41173010-Cut High Association Density with Reserves Association Proposal Pole Prescription Relatively poor quality hardwood stand, approximately 2/3 sugar maple. Implement a shelterwood cut w/reserves, keeping the best quality trees and removing those with poor form, excessive defect, etc. Reserve any hemlock, cedar and white pine encountered in the stand, but cut spruce Specs: and balsam fir as needed. Maintain diversity by regenerating aspen clones. Except for areas where aspen is being regenerated, the target residual BA should be 40-60 sg.ft./acre. Buffer the drainage that runs south-to-north in the eastern part of the stand. Other This stand may be converted back to unevenaged management in the future if the regeneration resulting from this cut provides better quality Comments: trees to work with. All species present are acceptable for regeneration, except for beech if any is present. Plant oak in canopy gaps, and monitor the regen in <u>Next</u> accordance with the work instructions. Steps: Proposed 10/01/2014 Start Date: 19 41173019-Cut 14.0 4110 - Sugar Maple High 89 111-140 Harvest Single Tree 4110 - Sugar Maple Cmpt. Review Selection Proposal Association Density Log Association Prescription High-quality sugar maple stand - select cut down to 80 - 90 residual BA. Specs: Other\_ Maintain/enhance species diversity where possible. Comments: <u>Next</u> All species present are acceptable for regeneration. Monitor the regen in accordance with the work instructions. Steps: Proposed 10/01/2014 Start Date: 41173038-Cut Single Tree Cmpt. Review 38 3.1 4112 - Maple, High 93 111-140 Harvest 4112 - Maple, Beech, Cherry Beech, Cherry Density Log Selection Proposal Association Association Prescription Red maple/beech stand - select cut to 70-90 residual BA. Hold until YOE 2017 and cut with the timber in the Cmp 171, adjacent to the east. Specs: <u>Other</u> Except for the beech, maintain/enhance species diversity wherever possible. Harvest in winter along with the surrounding lowland timber stand. Comments: Next All species except beech are acceptable for regeneration. Additional treatment to eliminate beech regeneration after the harvest may be needed. Steps: **Proposed** 

Start Date: 10/01/2016

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#### **Report 3 -- Treatments Prescribed** with No Limiting Factor

Compartment: 173 Year of Entry 2015

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	41173040-Cut	35.7	6139 - Mixed Lowland Forest	High Density Loc	86	111-140	Harvest	Clearcut with Reserves	6139 - Mixed Lowland Forest	Cmpt. Review Proposal

Prescription CC w/reserves - retain all cedar & hemlock and any white pine encountered in the stand. Watch for drainages near the south edge of the stand and protect them as needed by leaving a buffer strip/retention areas near the adjacent non-forested lowland. Specs:

<u>Other</u> Harvest in winter to avoid excessive damage to the site.

Comments:

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Next All species present (except beech) are acceptable for regeneration. Plant oak in areas that offer acceptable habitat for it, and monitor all regeneration in accordance with the work instructions. Steps:

Proposed Start Date: 10/01/2014

> **Total Treatment** Acreage Proposed: 90.6

3 15 MR	Compartment: 173 Year of Entry 2015	with	s Prescribed Factor	eatment imiting	Mgt. Unit	Shingleton		S t		
Approval Status	Cover Type Objective	Treatment Method	Treatment Type	BA Range	Stand Age	Size Density	CoverType	Acres	reatment Name	a n Tre d N
							#Type!	#Type!		
									<u>on</u> <u>t:</u>	Prescriptior Specs: Other Comment:
										<u>Next</u> Steps:
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Shingleton Mgt. Unit

Robert Tylka : Examiner

**Compartment 173** Year of Entry 2015

## Availability for Management

Total Acres Acres

**Dominant Site Conditions** 

Acres	Available	Not Available		No	ЗJ
14	14		Cedar	14	
9	9		Lowland Aspen/Balsam Poplar	9	
72	40	32	Lowland Conifers	40	32
36	36		Lowland Deciduous	36	
80	80		Lowland Mixed Forest	80	
1005	1005		Northern Hardwood	1,005	
1,215	1,183	32	Total Forested Acres	1,183	32
	97%	3%	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 Dominant Site No. Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002 Not Available	3J: Water quality / BMPs (stream, river, or lake)	32	3L: Other wildlife concerns			
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 – 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.

Conservatio Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical is sites of cultural and historical significance that may occur upon to bottomlands. They include thousands of Native American settler and British outposts, nineteenth century logging camps, mines a the Great Lakes, there are shipwrecks and other remains docum be identified by Natural heritage data from the State Historic Pre this compartment will be implemented in such a manner as to more the sensitive nature of this information, no further detail about log	remains of human occupation. These are errestrial areas and Great Lakes nents and burial sites, as well as French and homesteads. Beneath the waters of nenting the maritime trade. Such sites may servation Office. Proposed treatments in aintain the integrity of these sites. Due to cation is available.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish spec 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.	litions that allow naturally-reproduced or ies (e.g., slimy sculpin) to persist from se conditions due to substantial are established by Director's action and
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 o communities are ecologically and socially significant in their effe as aesthetics, habitat, bank stability, timber production, and their	n which the terrestrial ecosystem e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian cts on water quality and quantity, as well r contribution to overall biodiversity.

S t	Shingleto	n Mgt. Unit		Report 8 –	Forested	Stands Compartment: 173 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	6119 - Mixed Lowland Deciduous Forest	High Density Log	4.1	Uneven Age	141-170	Pocket of hardwoods on rolling terrain/transitional site between the upland hardwoods to the west and true lowlands along a drainage corridor.
3	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	16.6	Uneven Age	1-50	Semi-open stand of poles/saplings on wet ground. A few knobs of slightly higher ground have larger hemlock & red maple on them, while the wetter areas feature lower basal area and mix of comifer poles/hardwood saplings. The understory is dominated by lowland brush and balsam fir.
4	6132 - Mixed Lowland Forest with Cedar	High Density Log	26.5	92	171-200	Low ground near and surrounding Chapel Creek. Basically a mixed stand with pockets of dense cedar.
5	4110 - Sugar Maple Association	High Density Log	138.6	Uneven Age	81-110	Select cut last entry - this a high-quality sugar maple stand.
6	4112 - Maple, Beech, Cherry Association	High Density Log	118.7	Uneven Age	81-110	Select cut last entry - primarily a high-quality maple stand with a few scattered cherry, yellow birch, and conifers.
9	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	15.4	Uneven Age	81-110	Lowland hardwoods with some evidence of age class diversity developing. More sugar maple than is typical of this stand type, but it is considerably lower in quality than the nearby upland maple stands.
10	4110 - Sugar Maple Association	High Density Pole	22.3	Uneven Age	81-110	Medium/poor quality sugar maple on rolling terrain. This stand needs an agressive thinning/selection cut to improve stand quality, as many trees display poor form or excessive defect. Scattered spruce, birch etc. should be maintained, and aspen clones regenerated where possible.
11	6124 - Lowland Spruce- Fir	High Density Sapling	1.7	26	1-50	Conifer regen with a few reaching pole size.
13	6113 - Lowland Maple	High Density Sapling	2.6	24	1-50	Dense hardwood regen and a few poles on a site that is lower and wetter than the adjacent upland hardwoods. Last cut in 1989.
15	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	31.8	85	51-80	Low, wet area between and on the lower fringes of upland hardwood stands. Mostly conifers, but knobs of elevated ground are dominated by lowland hardwoods. Lowland brush is present throughout but heaviest in the wettest areas. Age class diversity is present but inconsistent, so the age from prior inventory has been used here. A few spots are significantly more open, and seasonal drainages are present in the areas adjacent to the lowland pond/marsh complexes.
18	4112 - Maple, Beech, Cherry Association	High Density Log	1.0	Uneven Age	51-80	Select cut last entry - red maple mix on a knob surrounded by lowland Q-type.
19	4110 - Sugar Maple Association	High Density Log	14.0	Uneven Age	111-140	High quality sugar maple stand - ready to select cut.
21	6124 - Lowland Spruce- Fir	High Density Sapling	13.8	26	1-50	Young, generally well-stocked mix of lowland conifers just about to reach merchanable size. A few residuals (advanced regen from the previous stand) are larger. Cedar is a major component.

S t	Shingletor	n Mgt. Unit		Report 8 –	Forested	Stands Compartment: 173 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4110 - Sugar Maple Association	High Density Log	93.0	Uneven Age	81-110	High quality sugar maple - select cut last entry. 98% of the canopy is sugar maple, plus a few basswood, cherry, birch and conifers.
23	6112 - Lowland Aspen	High Density Sapling	8.7	24	51-80	Young aspen just reaching merchantable size.
24	6124 - Lowland Spruce- Fir	Medium Density Pole	8.0	Uneven Age	1-50	Semi-open lowland mixed timber on wet ground. Conifers are dominant, with patches of lowland hardwood. Site indices appear to be relatively low.
26	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	2.8	85	51-80	Mixed lowland timber on the fringe between the upland hardwoods and the flooded bottomlands. Trees appear to be slow-growing, and the quality of the wood is low.
27	4110 - Sugar Maple Association	High Density Log	45.6	Uneven Age	51-80	High-quality upland sugar maple on rolling terrain - select cut last entry. There are a few small pockets of mixed sugar/red maples along the fringe of the stand where it drops into the surrounding lowlands.
29	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	1.7	85	1-50	Low, wet area - inoperable. The stand is developing signs into an unevenaged mix of lowland hardwood and scattered conifers. Although numerous trees are merchantable, the quality of the wood looks poor. This area serves a better purpose as a reserve area for wildlife habitat.
30	6132 - Mixed Lowland Forest with Cedar	High Density Pole	4.2	85		
31	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	11.8	Uneven Age	111-140	Mixed lowland timber - red maple is the dominant species.
32	4112 - Maple, Beech, Cherry Association	High Density Pole	2.1	Uneven Age	51-80	Upland mixed maple - select cut last entry.
33	6130 - Fir, Aspen, Maple	High Density Pole	11.1	Uneven Age	51-80	Lower and wetter than the hardwoods nearby. Showing signs of becoming an unevenaged mix. Some areas are semi-open and feature pockets of regen and/or lowlnad brush. Backflooding from the nearby pond complex has influenced this stand in the past.
34	6120 - Lowland Cedar	High Density Log	3.6	94	111-140	Cedar - retain for wildlife habitat.
36	6120 - Lowland Cedar	High Density Log	10.3	86	171-200	Cedar with other conifers plus a few red maple and paper birch.
37	4110 - Sugar Maple Association	High Density Log	531.2	Uneven Age	81-110	Select cut last entry - high-quality sugar maple stand with scattered cherry, yellow birch, basswood & red maple. A few spruce and balsam fir are also present.
38	4112 - Maple, Beech, Cherry Association	High Density Log	3.1	Uneven Age	111-140	Not cut last entry - recommend cutting to salvage the beech, which displays BBD now. Select cut others as needed. Consider an early start date to avoid losses.

S t	Shingleto	n Mgt. Unit		Report 8 –	Forested \$	Stands Compartment: 173 Year of Entry: 2015
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
39	4112 - Maple, Beech, Cherry Association	High Density Log	6.3	Uneven Age	81-110	Select cut last entry, but a lot of large beech (approx. 25-30 sq.ft/acre) were left - salvage these while the surrounding lowland mix is harvested.
40	6139 - Mixed Lowland Forest	High Density Log	35.7	86	111-140	Mixed lowland timber - ready to cut.
42	4110 - Sugar Maple Association	High Density Pole	28.9	Uneven Age	81-110	Sugar maple stand - select cut last entry.

Shingleton Mgt. Unit

Compartment: 173

Year of Entry: 2015

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Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6239 - Mixed Emergent Wetland	3.0	No	Unspecified	
7	50 - Water	2.7	No	Unspecified	
8	6239 - Mixed Emergent Wetland	10.4	No	Unspecified	
12	50 - Water	6.2	No	Unspecified	
14	3102 - Grass	3.8	No	Unspecified	
16	6224 - Treed Bog	12.1	No	Unspecified	
17	3205 - Mixed Upland Shrub	1.3	No	Unspecified	
20	3102 - Grass	2.8	No	Unspecified	
25	3102 - Grass	11.9	No	Unspecified	
28	50 - Water	24.7	No	Unspecified	Pond/marsh complex featuring a mix of lowland brush and seasonally flooded areas. A few trees are also present on hummocks.
35	3102 - Grass	1.0	No	Unspecified	
41	6220 - Alder/willow	13.9	No	Unspecified	