

Revision Date: 8/8/12

Stand Examiner: Rick-James Hill

Legal Description: T47N R17W Sections 21, 28 and 33

RMU (if applicable): The compartment is located within the Cusino Complex Management Area.

Management Goals: Timber management goals focus on managing upland deciduous forest types such as all-aged northern hardwoods and aspen, with emphasis on features such as species and size/age-class diversity, wildlife habitat, etc. The grassy openings and lowland forest types maintain variety in the ecosystem. Visual management is also an important consideration along the Highway H-58 travel corridor.

Soil and Topography: Terrain varies from flat areas to short ridges. Soils are mostly Munising-Yalmaer-Frohling Complex, Carbondale series mucks, Escanaba-Graylock series and Kalkaska Series Sands.

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

State forest lands surrounded by either state or private timber company lands in the neighboring compartments, with one parcel owned by The Forest Land Group land included within the compartment boundary and one private residence across highway H-58.

Unique, Natural Features (include only non-site specific and non-sensitive information):

There Is a Rich Conifer Swamp to the northwest, also butterwort to the northeast and Loons to the east and northeast. Potential for red shoulder hawk and goshawk in mature hardwood stands and for goshawk in pine stands. There is potential for wood turtle along creek. Potential for rare plants of rich mesic forests: Carex assiniboinensis, showy orchis, Ginseng, green spleenwort, Goblin Fern. Potential for beauty sedge, calypso bulbosa, ram's head in cedar stands.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There are some old railroad grades as well as some remnant openings from past farming in the area.

Special Management Designations or Considerations: There are no special management designations in this area.

Watershed and Fisheries Considerations: Fisheries Values Good. The whole Star Creek system is considered SQCW, supporting a native brook trout population. It is not actively managed by Fisheries Division.

Wildlife Habitat Considerations: This compartment is located in the Grand Marias Sandy End Moraine Outwash sub-subsection. The average growing season is approximately 120 days. The extreme winter temperature generally reaches approximately -35° F. Snowfall in this compartment averages 200 inches or more annually. The compartment falls within the Cusino Complex Management Area which highlights the following Featured Species: American Marten, moose, black bear, gray jay, northern goshawk and white-

tailed deer. General Land Office (GLO) Surveyor notes show a fairly even distribution of sugar maple, beech, yellow birch and balsam fir in the uplands. Hemlock, elm, ironwood, white pine, white birch, and red maple were also present in lesser amounts. Lowlands were dominated by cedar, but also contained black ash, tamarack, spruce and alder. Windthrow and beaver ponding were likely the major forms of natural disturbance within the compartment. Current upland forests contain more aspen than was recorded in the GLO notes. Lowlands are similar in nature to pre-settlement conditions. Wildlife habitat objectives are primarily associated with maintaining within and between stand structural and species diversity. Gray wolves and moose (Michigan special concern) likely utilize the compartment, but no rare species have actually been recorded. Other wildlife species of interest that may utilize this compartment include red-backed salamander, ring neck snake, American woodcock and snowshoe hare.

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) Formation subcrops below the glacial drift. The PdC could be used for stone. The nearest gravel pit is several miles to the south, but there should be potential in the compartment. There is no commercial oil and gas production in the UP.

Vehicle Access:

County highway H-58 runs through this compartment. There are a number of good two tracks throughout the compartment some are blocked but most are not.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

The Sunrise Grade Snowmobile Trail 8 runs through the south end of this compartment.

Fire Protection: This compartment is a mix of hardwoods, aspen and grasslands with numerous two-tracks and overgrown roads throughout. Several spots along two-tracks near Star Creek provide good access for water sources.

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

Table 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit Rick-James Hill : Examiner

Compartment 179 Year of Entry 2014



Age	Class
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	/	6.0	6 ⁷ ,0	67. D	en en		Si de	69.09	R. D.	8 ³³ 8	6 ju	001.001	611.01.	NO JHE	AND	, o ^{to}
Aspen	4	59	100	279	0	0	0	0	0	0	0	0	0	0	443	
Bog	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Cedar	0	0	0	0	0	0	0	0	0	0	0	34	0	0	34	
Cropland	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Low-Density Trees	229	0	0	0	0	0	0	0	0	0	0	0	0	0	229	
Lowland Mixed Forest	0	0	0	0	0	0	0	0	60	0	0	0	0	0	60	
Lowland Shrub	60	0	0	0	0	0	0	0	0	0	0	0	0	0	60	
Lowland Spruce/Fir	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12	
Marsh	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Mixed Upland Deciduous	14	0	0	10	0	0	0	0	0	0	0	0	0	31	54	
Northern Hardwood	0	0	0	0	0	20	9	105	546	0	0	0	0	10	691	
Upland Spruce/Fir	0	0	0	0	9	0	0	0	0	0	0	0	0	0	9	
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
Water	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
Total	355	59	100	289	9	20	20	105	606	0	0	34	0	41	1639	Ī



ATICHIOAN .	Shingleton Mgt. Unit Year of Entry 2014											Compartment Total Compartment Acres:	
-					Acre	s by T	reatm	ent Ty	ре				
	Commercial Harvest - 563	Site F	Prep - 0		Г	ree Pl	anting	- 1		Preso	cribed Burn - 0	Other - 0	
	Habitat Cut - 0	Oper	ning Maintena	nce - 2	26 1	ree Se	eeding	- 0		Pesti	cide - 0		
					Cov	er Ty	oe by H	Harves	st Meth	od			
					Contraction of	in the second	ood 1 oo	do d	ining or	C. Sectif	ACC BOARD		
	Aspen			102	0	0	0	0	0	102	[
	Lowlar	nd Mixed F	orest	20	0	0	0	0	0	20			
	Mixed	Upland De	ciduous	33	0	0	0	0	0	33			
	Northe	rn Hardwo	od	0	407	0	0	0	0	407			
			Total	155	407	0	0	0	0	563			

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Table 3 -- Treatments Prescribed with No Limiting Factor

t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	41179_OutOfY OE-Cut	4.1					Harvest	Single Tree Selection	4110 - Sugar Maple Association	Fld. Tr. Bdy Incomplete

Prescription Cut to 80 SF using selection system. Release crop trees using the complete marker as a guide, mark for best tree in place. This stand has some species variation across it, thin to improve diversity favor retention of mesic confers. In areas of beech use beach bark marking guidelines. Place gaps in areas of less shade tolerant species. Cut aspen clones for aspen regeneration. Leave some single aspen trees where possible for soft snags.

Other Acceptable regeneration is a mix of hardwood species including Sugar maple, Red maple, Basswood, Black Cherry, Yellow Birch, Aspen, White Comments: Birch, Hemlock and White Pine

<u>Next</u> Steps:

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Proposed Start Date: 10/01/2011

> Total Treatment Acreage Proposed:

S t		Shingleton	Compartment: 179 Year of Entry 2014	OF NATURAL PRODUCTS						
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error							
Presc Specs	ription <u>s:</u>									
<u>Other</u> Comn										
<u>Next</u> Steps	<u>.</u>									
<u>Propos</u> Start D										
	ng Factor and N ment Reason	0								
Ac	Total Treatmer reage Propose									

							eatments miting Facto		Year of Entry: 2014	OF NATURAL PRODUCT
	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	41009014- Cut1	5.2	6120 - Lowland Cedar	High Density Pole	141		Harvest	Patch or Strip Clearcut	6120 - Lowland Cedar	Cmpt. Review Proposal - Incomplete
<u>Prescrip</u> Specs:	o <u>tion</u> patch cu	t app. 5 acr	es, determined at tim	ne of prep						
<u>Other</u> Comme	nts:									
<u>Next</u> Steps:	Monitor	according to	o work instructions.							
Propose Start Da)11								
41	I044_OutOfY OE-Cut	0.9					Harvest	Crown Thinning	42210 - Natural Red Pine	Cmpt. Review Proposal - Incomplete
Prescrip Specs:	otion Mark red	I pine and w	white pine to 80 sq.ft.	where dens	ities are	high enoug	h. Cut all other	species except hem	llock, oak, and cedar.	
<u>Other</u> Comme		n will be a p	portion of the red pine	e and white p	oine trees	s remaining].			
<u>Next</u> Steps:	Possible	regeneratio	on harvest next year o	of entry.						
Propose Start Da)13								
4	1172002-Cut	4.4	4112 - Maple, Beech, Cherry Association	High Density Pole	49		Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
	adjacent	hardwood i even aged	in comp 169 in 2014. hardwoods with quali	-			gaps to promote	e species diversity a	ind Sugar Maple. Put s	tand up with
<u>Specs:</u>		n=Residual	Dirt							
<u>Specs:</u> <u>Other</u> <u>Comme</u>	Retentio	n=Residual								
Other_	Retentio <u>nts:</u>		y to follow harvest du	iring the nex	t invento	ry cycle.				

Acreage Proposed: 10.5

S t	Shingleton	Mgt. Unit		5 – Fo	prested Sta	nds Compartment: 179 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4110 - Sugar Maple Association	High Density Log	16.6	83	141-170	This stand was thinned 20 years ago. The stand looks good its ready to be entered again.
2	4110 - Sugar Maple Association	High Density Pole	10.2	81	81-110	Cut in summer of 2002 under rainbow hardwoods #14-02
3	6120 - Lowland Cedar	High Density Pole	9.5	111		Mostly cedar with some other species mixed in.
4	4115 - Y.Birch, Hemlock NH	High Density Log	5.1	81	81-110	white pine planted
5	4112 - Maple, Beech, Cherry Association	High Density Log	2.1	81	111-140	
6	4130 - Aspen	High Density Pole	33.3	27		This aspen stand is growing well it looks good with a lot of balsam mixed in as well as some ironwood and mixed hardwood as well.
8	6120 - Lowland Cedar	High Density Pole	24.3	112		
9	4110 - Sugar Maple Association	High Density Log	6.5	81	51-80	cut in 2004 in Rainbow hardwood sale.
10	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	13.7	7		
 11	4110 - Sugar Maple Association	High Density Pole	4.9	81	81-110	This is a medium quality hardwood site with much balsam fir in the understory. This stand was cut in the 2005 YOE under rainbow hardwood the sale closed in 2007 there was 7 SF of beech left that will be dead by the time this stand is ready to be cut again.
12	6130 - Fir, Aspen, Maple	High Density Pole	59.9	81		Vary wet ground in some areas some areas may be difficult to cut pick and chose about half the stand for this entry period.
13	4112 - Maple, Beech, Cherry Association	High Density Pole	4.0	68	111-140	Medium quality hardwood pulp should be cut for crop trees and spacing.
14	4119 - Mixed Northern Hardwoods	High Density Pole	4.2	81	111-140	Hardwood stand bordering pvt thin in the process remove beech with scale.
17	4112 - Maple, Beech, Cherry Association	High Density Log	12.4	81	81-110	
18	4112 - Maple, Beech, Cherry Association	High Density Pole	4.8	68	111-140	This stand should be cut with a selection cut. Cut most all of the aspen and fir. Cut the rest with a focus on crop trees.
21	4130 - Aspen	High Density Pole	1.7	39		

S t	Shingletor	n Mgt. Unit		5 – Foi	ested Sta	nds Compartment: 179 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4130 - Aspen	High Density Pole	171.8	39		This stand is 39 years old with the entire stand looking good there is a large amount of acres in this age class some of the aspen should be cut to break up the age class
24	4112 - Maple, Beech, Cherry Association	High Density Pole	22.7	81	141-170	Low-end Hardwood, a Selection cut should be done to increase the diversity of the stand and increase the proportion of mesic conifer.
26	4134 - Aspen, Spruce/Fir	High Density Pole	22.2	27		
28	4119 - Mixed Northern Hardwoods	High Density Log	4.6	81	111-140	This stand is being harvested with adjacent stand in compartment 180 its being cut in a 2011 YOE sale.
29	4119 - Mixed Northern Hardwoods	High Density Pole	4.3	58	51-80	
34	4110 - Sugar Maple Association	High Density Pole	10.4	Uneven Age	81-110	This stand is a narrow strip of hardwood along H 58 and a FLG private line Basil area varies a bit can but is mostly above 90- 100 BA
35	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	30.7	Uneven Age		Mixed age spruce, aspen and maple cut now with 4 inch diameter on conifer and 2 inch diameter hardwood spec. leave some spruce along road plant some spruce in open areas to maintain some of wind break.
37	4112 - Maple, Beech, Cherry Association	High Density Pole	6.4	58	51-80	Vary small will be nice some day a TSI cut or Fire wood harvest would be beneficial but is unlikely
38	4130 - Aspen	High Density Pole	31.9	25		
39	4130 - Aspen	High Density Sapling	4.3	17		
40	4119 - Mixed Northern Hardwoods	High Density Pole	3.0	81	81-110	
42	4112 - Maple, Beech, Cherry Association	High Density Log	2.6	81	141-170	This stand should be thined.
43	4130 - Aspen	High Density Sapling	17.7	13		
44	42320 - Upland Spruce	High Density Pole	9.4	42		
45	4112 - Maple, Beech, Cherry Association	High Density Pole	1.4	81	81-110	
46	4130 - Aspen	High Density Pole	12.5	21		

S t	Shingleto	n Mgt. Unit		5 – Fo	prested Star	rds Compartment: 179 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	4112 - Maple, Beech, Cherry Association	High Density Pole	1.0	81	81-110	
48	4130 - Aspen	High Density Pole	27.1	13		
49	6122 - Black Spruce	High Density Pole	11.6	68		
50	4130 - Aspen	High Density Pole	43.8	37		
52	4130 - Aspen	High Density Pole	4.5	5		
53	4112 - Maple, Beech, Cherry Association	High Density Pole	9.7	81	111-140	
56	4112 - Maple, Beech, Cherry Association	High Density Log	7.6	81	141-170	
60	4112 - Maple, Beech, Cherry Association	High Density Log	3.1	81	81-110	
61	4134 - Aspen, Spruce/Fir	High Density Pole	53.0	39		Clear cut this stand to regenerate aspen cut all hardwood over two inches and all conifer over 4 inches. Plant white spruce in areas that don't regenerate consult TMS for planting spec.
62	4130 - Aspen	High Density Pole	2.6	37		
63	4112 - Maple, Beech, Cherry Association	High Density Pole	1.1	81	111-140	Cut using a selection system
64	4119 - Mixed Northern Hardwoods	High Density Pole	9.8	58	81-110	
65	4119 - Mixed Northern Hardwoods	High Density Pole	49.7	81	141-170	This stand should be cut using a selection harvest areas of aspen should be cut to regenerate the aspen.
66	4130 - Aspen	High Density Pole	4.2	39		This stand is on the edge of a hardwood stand and a large opening. Diameters vary most is pulp size. There are many acres of aspen in this size and age class in this compartment as a result this stand should be cut to break up the age class of the area.
67	4119 - Mixed Northern Hardwoods	High Density Pole	28.6	81	81-110	
69	4112 - Maple, Beech, Cherry Association	High Density Pole	12.2	81	111-140	This is a middle of the road hardwood site with a good mix of many species cut using a selection system.
70	4134 - Aspen, Spruce/Fir	High Density Pole	10.0	17		

S t	Shingletor	n Mgt. Unit		5 – Fo	prested Sta	nds Compartment: 179 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
71	4130 - Aspen	High Density Pole	2.1	37		
73	4110 - Sugar Maple Association	High Density Log	104.8	70	81-110	This stand looks good. It was cut with a selection harvest 10 years ago should be able to be cut again in 10 years.
75	4119 - Mixed Northern Hardwoods	High Density Pole	18.3	81	81-110	This stand looks good. It was cut with a selection harvest 10 years ago should be able to be cut again in 10 years.
79	4112 - Maple, Beech, Cherry Association	High Density Pole	73.6	81	111-140	This stand was harvested 20 years ago its ready to be entered now, cut using a selection harvest .
80	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	10.0	38		Clearcut this stand plant white spruce in areas that fail to regenerate to aspen or other hardwood sprouts
84	4119 - Mixed Northern Hardwoods	High Density Pole	245.1	81	141-170	This stand is some what variable in size and composition. Most of the stand is sugar maple poles but there are areas of cherry and red maple as well the whole stand should be thinned to 80 SF. There should be gaps centered on areas of mature cherry and other gap species.

Shingleton Mgt. Unit

6 – Nonforested Stands

Compartment: 179



Year of Entry: 2014

Otored	0		Managed	Management Priority	Concerct Community	MICHIGAN
Stand	Cover Type	Acres	Site	(Objective)	General Comments:	
7	6233 - Wet Meadow	1.0	N\A	Unspecified		
15	330 - Low-Density Trees	1.7	N\A	Unspecified		
16	622 - Lowland Shrub	5.9	N\A	Unspecified		
19	330 - Low-Density Trees	2.1	N\A	Unspecified		
20	330 - Low-Density Trees	37.9	N\A	Unspecified		
22	50 - Water	4.6	N\A	Unspecified		
25	622 - Lowland Shrub	6.2	N\A	Unspecified		
27	330 - Low-Density Trees	3.3	N\A	Unspecified		
30	310 - Herbaceous Openland	3.4	N\A	Unspecified		
31	330 - Low-Density Trees	2.3	N\A	Unspecified		
32	330 - Low-Density Trees	5.0	N\A	Unspecified		
33	31021 - Cool Season Grass	1.3	N\A	Unspecified		
36	123 - Other High Intensity Urban	5.2	N\A	Unspecified		
41	330 - Low-Density Trees	2.1	N\A	Unspecified		
51	6225 - Bog	1.0	N\A	Unspecified		
54	310 - Herbaceous Openland	1.3	N\A	Unspecified		
55	310 - Herbaceous Openland	1.1	N\A	Unspecified		
57	310 - Herbaceous Openland	1.4	N\A	Unspecified		
-						

Shingleton Mgt. Unit

6 – Nonforested Stands

Compartment: 179



Year of Entry: 2014

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:	(Child)
58	330 - Low-Density Trees	142.9	N\A	Unspecified		
59	330 - Low-Density Trees	2.2	N\A	Unspecified		
68	330 - Low-Density Trees	4.2	N\A	Unspecified		
72	2113 - Forage Crops	15.0	N\A	Unspecified		
74	622 - Lowland Shrub	44.9	N\A	Unspecified		
76	2113 - Forage Crops	11.9	N\A	Unspecified		
77	330 - Low-Density Trees	18.5	N\A	Unspecified		
78	330 - Low-Density Trees	1.5	N\A	Unspecified		
81	330 - Low-Density Trees	3.0	N\A	Unspecified		
82	622 - Lowland Shrub	3.1	N\A	Unspecified		
83	330 - Low-Density Trees	2.6	N\A	Unspecified		



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.

Stand	SCA Type	SCA Name	Acres	Comments



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.

Conservation Type Description	HCVA = High Conservation Value Area
Area	SCA = Special Conservation Area





