

# **Compartment Review Presentation**

**Shingleton Forest Management Unit** 

Compartment 41176 Entry Year 2018 Acreage: 1,233 County Alger

Management Area: Pictured Rocks Buffer

Revision Date: 2016-08-31 Stand Examiner: Mario Molin

**Legal Description:** 

T47N R17W Sections 7, 8, 17 and 18

## **Identified Planning Goals:**

Management activities that coordinate multiple uses and benefits for the people of Michigan including recreation, timber production and protection/enhancement of wildlife habitat are desirable.

## Soil and topography:

This compartment is a mix of gently rolling uplands featuring loamy sands to fine sandy loams and wet bottomlands on poorly-drained muck soils. The uplands are moderately well-drained and display high site indices for northern hardwoods.

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

This compartment lies in the Pictured Rocks National Lakeshore Buffer Zone.

### **Unique Natural Features:**

None

## **Archeological, Historical, and Cultural Features:**

None

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

BMP issues are common and must be evaluated as part of any timber management scenario.

## Watershed and Fisheries Considerations:

Fisheries Values: Excellent

The Mosquito River is located along the east side of this compartment. The Mosquito River is a high priority trout stream which carries a 300 ft buffer. Native Brook Trout are located in the river despite some of the beaver activity in this area. A small intermediate tributary to the Mosquito River is located just outside of the west compartment boundary. This stream likely does not support any coldwater fish communities, but still provides aquatic life when water is present. Standard BMP's for intermediate streams should be applied when proposing treatments near this stream.

#### Wildlife Habitat Considerations:

This compartment lies north of Noble Lake and contains a portion of the Mosquito Creek. The General Land Office surveys note the pre-settlement Upland forest contained a mixture of Sugar maple, beech, and yellow birch. Hemlock was also recorded, but to a lesser extent. Lowlands contained cedar, black spruce, balsam fir, and black ash. Although there has been an increase in aspen acreage within this compartment from pre-settlement times, a large portion of this compartment (both upland and lowland) appears to contain a similar mixture of tree species as found circa 1850. The compartment contains one large cedar stand that appears to have never been harvested. Wildlife habitat goals within this compartment include maintaining species and structural diversity with the northern hardwood community, to protect the integrity of an old rich conifer swamp, and provide habitat for early succession related species. This compartment lies within the Pictured Rocks Buffer Management Area and the featured species within this MA are American marten, Blackburnian warbler, northern goshawk, and pileated woodpecker.

## 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 in Section 15 to the east and there should be good potential. There is no commercial oil and gas production in the UP.

#### **Vehicle Access:**

County Road 639 is the northern boundary of this compartment, and Camp 15 Rd. (a DNR road) is the eastern boundary. Access to the southeast portion of the compartment may be limited by the condition and capacity of the bridge located where the Camp 15 Rd. crosses the Mosquito River. Access to the west half of this compartment is best gained by following the Noble Lake Rd. up into the southwest corner.

# **Survey Needs:**

Yes, stands 22 and 51

# **Recreational Facilities and Opportunities:**

The Mosquito River provides opportunities for trout fishing, and the area is subject to light-to-moderate hunting pressure. No improved recreational facilities are in place, but the area's proximity to Pictured Rocks National Lakeshore may result in some traffic from tourists and/or snowmobilers.

#### **Fire Protection:**

. Vehicle access is generally good, although the Noble Lake Road is bermed just inside the compartment boundary.

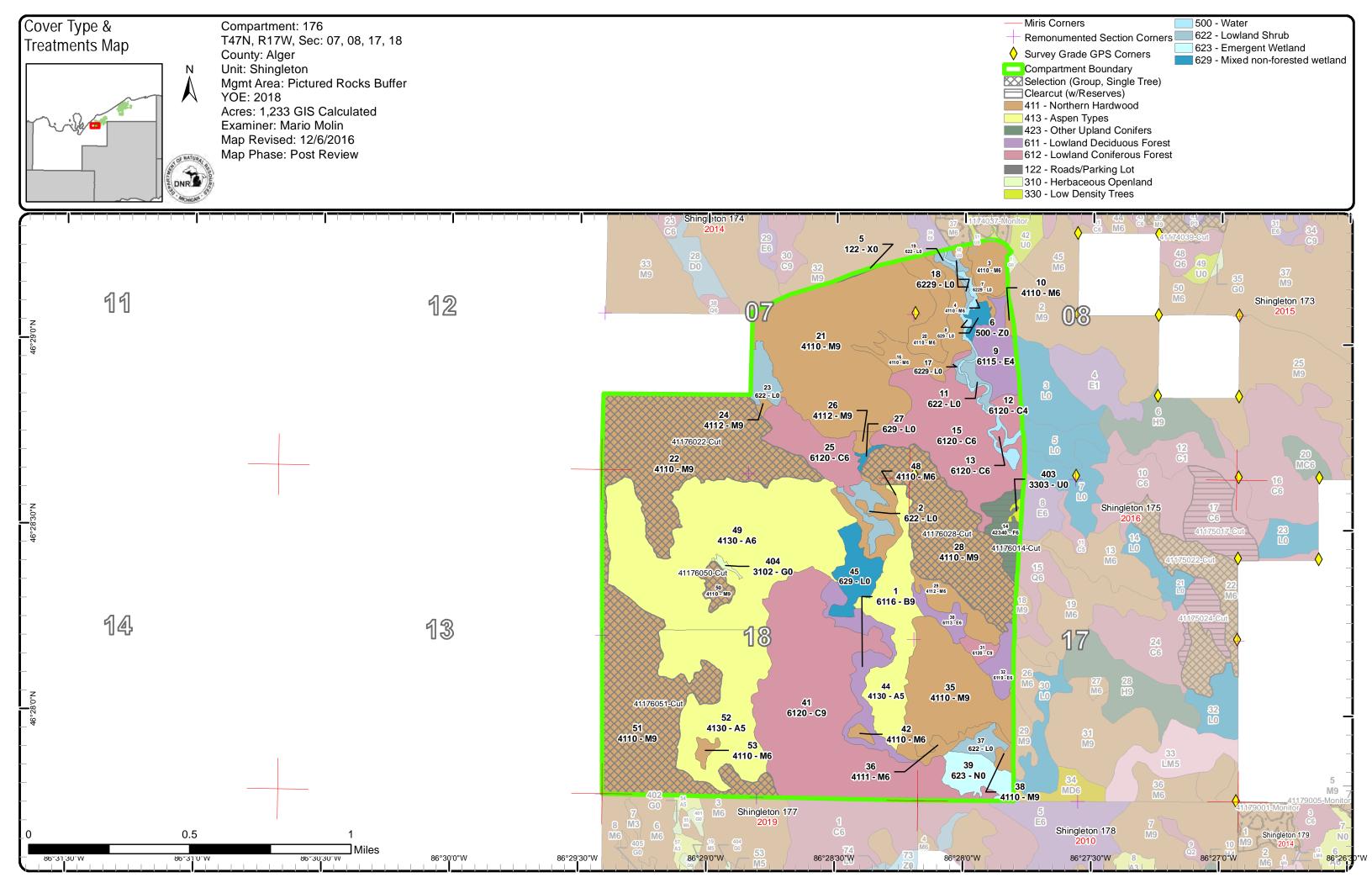
### **Additional Compartment Information:**

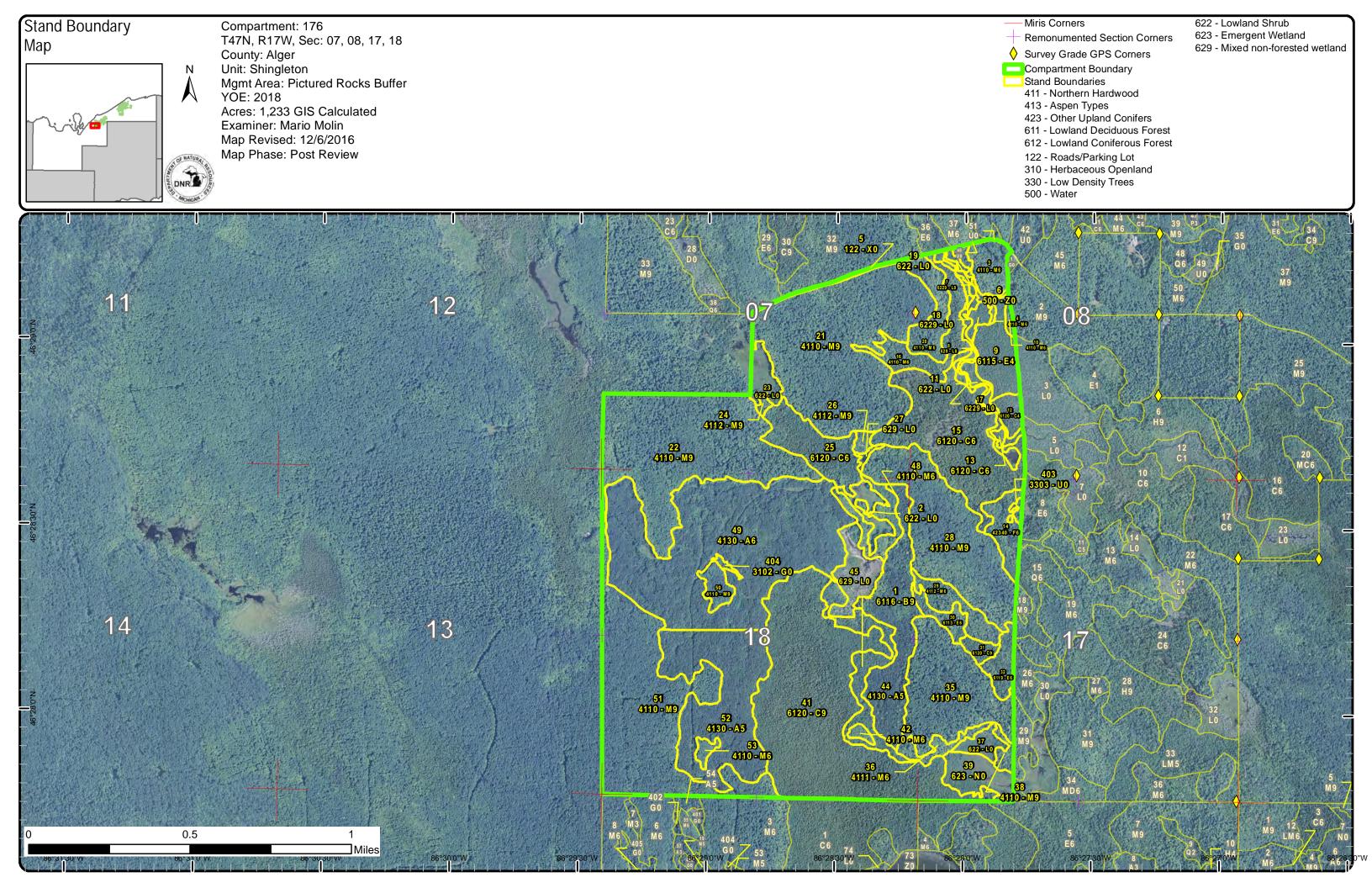
The following reports from the Inventory are attached:

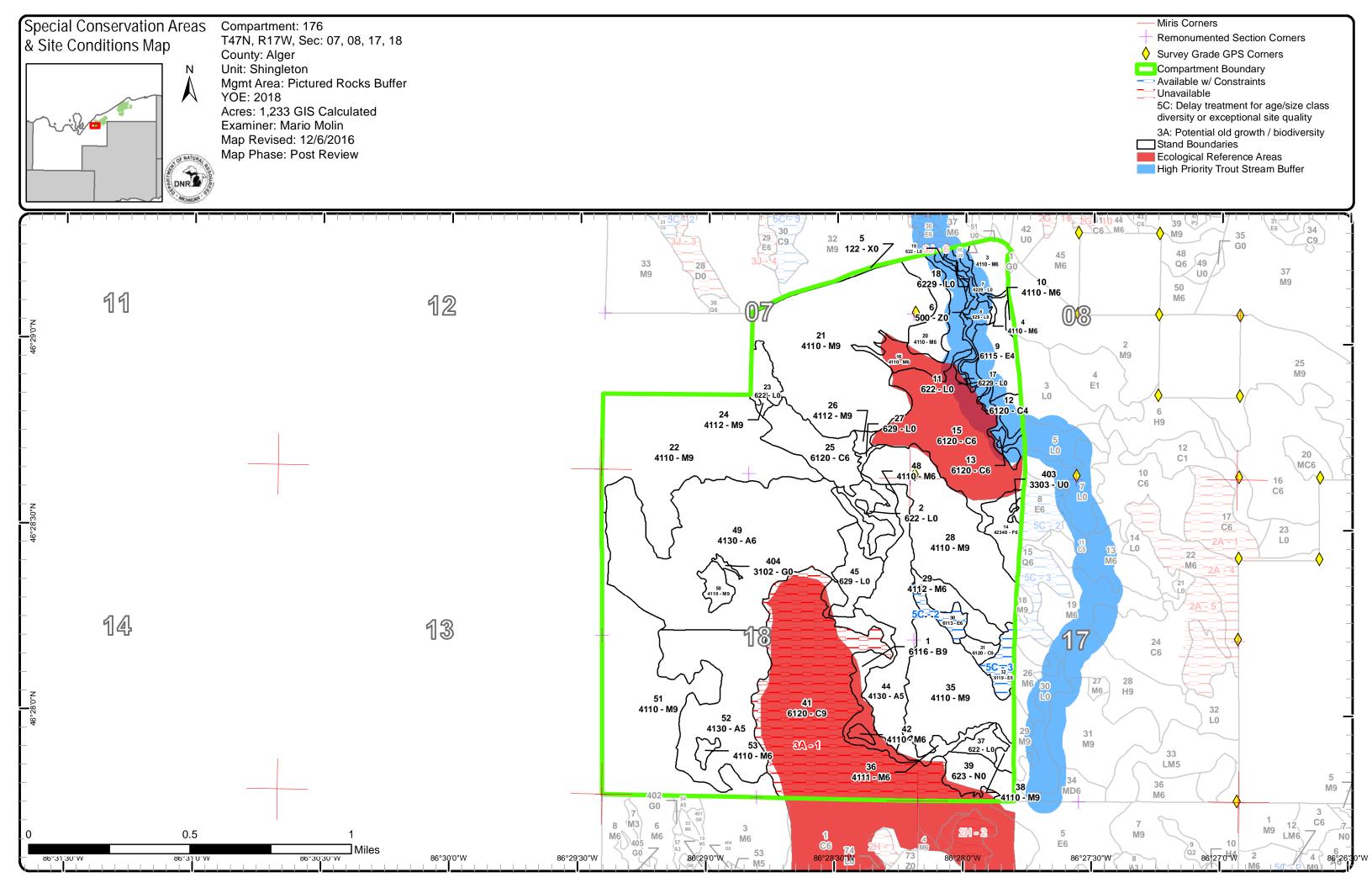
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Compartment 176 Year of Entry 2018

Shingleton Mgt. Unit
Mario Molin: Examiner



# Age Class

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Aspen	0	0	159	71	45	0	0	0	0	0	0	0	0	0	0	0	0	0	275
Cedar	0	0	0	0	0	0	0	0	0	0	0	4	101	0	0	0	145	0	250
Herbaceous Openland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Low-Density Trees	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lowland Deciduous	0	0	0	0	0	18	0	0	0	9	7	0	0	0	0	0	0	0	33
Lowland Shrub	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Marsh	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Northern Hardwood	0	0	0	0	0	0	0	0	0	165	20	0	0	0	0	0	0	379	563
Paper Birch	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	22
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	12
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total	77	0	159	71	45	40	0	0	0	186	27	4	101	0	0	0	145	379	1232



# **Report 2 – Treatment Summary**

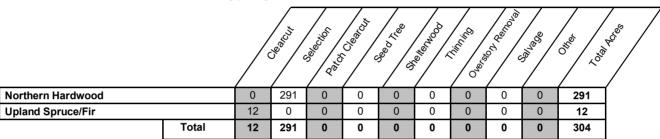
# Shingleton Mgt. Unit Year of Entry: 2018

#### **Acres of Harvest**

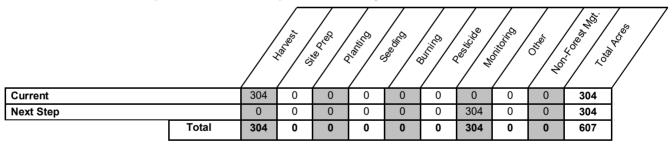
Compartment 176
Total Compartment Acres: 1,233

Commercial Harvest - 304 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

# **Cover Type by Harvest Method**



# **Proposed and Next Step Treatments by Method**



Shingleton Mgt. Unit Report 3 -- Treatments Compartment: 176 s Year of Entry: 2018 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type Approval** n Age Method Objective Name Structure **Status** d CoverType Density Age Range Type 41176014-Cut 42340 - Upland 42340 - Upland 14 12.1 Poletimber 85 81-110 Harvest Clearcut with Even-Aged Draft Field Spruce/Fir Well Retention Spruce/Fir Boundary **Habitat Cut: No** Site Condition: Prescription Clearcut with retention, retention should be against the grade/road when there is some younger healthy birch to include. Do so in areas that will not Specs: interfere with log trucks. Next Step Monitoring, Natural Regen (Intermediate) Treatments: <u>Acceptable</u> Mix of spruce, fir, maple and birch. Regen: Other May be desirable to set up early if SBW comes to the area. Comment: Proposed Start Date: 10/01/2017 22 41176022-Cut 108.8 4110 - Sugar Maple Sawtimber 111-Harvest Single Tree 411 - Northern Uneven-Draft Field Association Well 140 Selection Hardwood Aged Boundary **Habitat Cut: No** Site Condition: Prescription Mark down to 85BA. Specs: Maintain current openings and improve species diversity when possible. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: <u>Acceptable</u> Northern hardwoods. Regen: Stand does vary in size/ae classes, south portion seems more even aged with less regeneration. Other Good stand to give to contractors. Comment: **Proposed Start Date:** 10/01/2017 41176028-Cut 72.3 4110 - Sugar Maple Sawtimber 111-Harvest Single Tree 411 - Northern Uneven-Draft Field Association Well 140 Selection Hardwood Aged Boundary **Habitat Cut: No Site Condition:** Prescription Mark to 85BA.

Maintain old regeneration openings, and improve species diversity where possible.

Next Step

Specs:

<u>Treatments:</u>

. . .

Acceptable Northern hardwoods.

Regen:

Other Good stand to keep for unit staff, nice flat ground.

Monitoring, Natural Regen (Re-Inventory)

Comment:

Proposed Start Date: 10/01/2017

41176050-Cut 6.2 4110 - Sugar Maple Sawtimber 85 111-Harvest Single Tree 411 - Northern Uneven-Draft Field Association Well 140 Selection Hardwood Aged Boundary

Habitat Cut: No Site Condition:

Prescription Mark to 85 BA with focus on regenerations gaps and species diversity.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Northern hardwoods.

Regen:

<u>Other</u>

Comment:

Proposed Start Date: 10/01/2017

Shingleton Mgt. Unit

Report 3 -- Treatments

Compartment: 176 Year of Entry: 2018 DNR DNR MICHIGAN

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
51	41176051-Cut	104.1	4110 - Sugar Maple Association	Sawtimber Well	85	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Draft Field Boundary

Habitat Cut: No Site Condition:

Prescription Mark to 85 BA.

Specs: Maintain regeneration gaps and improve species diversity where possible.

Next Step Monitoring, Natural Regen (Re-Inventory)

303.5

Treatments:

s

Acceptable Northern hardwoods.

Regen:
Other
Comment:

Proposed Start Date: 10/01/2017

Total Treatment Acreage Proposed:

Compartment: 176

Shingleton Mgt. Unit

Mario Molin : Examiner Year of Entry: 2018

Availa	Availability for Management									
Total	Acres	Acres Avail A	Acres	Dominant Site Conditions						
Acres	Available	With Condition Not	Available	<b>5C</b> 3A						

Acres	Available	With Condition	Not Available		5C	3A
276	276	0	0	Aspen		
249	104	0	145	Cedar		145
1	1	0	0	Herbaceous Openland		
1	1	0	0	Low-Density Trees		
34	18	15	0	Lowland Deciduous	15	
49	49	0	0	Lowland Shrub		
15	15	0	0	Marsh		
564	564	0	0	Northern Hardwood		
22	22	0	0	Paper Birch		
12	12	0	0	Upland Spruce/Fir		
2	2	0	0	Urban		
9	9	0	0	Water		
1,233	1,073	15	145	Total Forested Acres	15	145
	87%	1%	12%	Relative Percent		-

<sup>\*</sup>Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

	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 / 145 Uns		Unspecified	Inspecified Unspecified		Unspecified			
Comments: In an ERA for Rich Conifer Swamp (biodiversity), not potential old growth.									
In	an ERA for Rich (	Conifer Swamp (biodiversity),	not pote	ential old growth.					
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	not pote	ential old growth.  Unspecified	Unspecified	Unspecified	Unspecifie		

# **Report 4 – Site Conditions**

Shingleton Mgt. Unit
Mario Molin: Examiner

Compartment: 176 Year of Entry: 2018

3 Available 5C: Delay treatment for 9 Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Unspecified Output O

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Compartment: 176
Year of Entry: 2018



# Report 5 - 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	
	Potential Old Growth		SCA Removal	2	
Comments					
Sliver along edge of E	RA due to mapping discrepancy, does not	meet current SCA criteria.			
	Potential Old Growth		SCA Removal	2	
Comments					
Sliver along edge of E	RA due to mapping discrepancy, does not	meet current SCA criteria.			
	Potential Old Growth		SCA Removal	5	
Comments					
Along edge of ERA du	e to past mapping discrepancy. Does not	meet current SCA criteria.			
	Potential Old Growth		SCA Removal	6	
Comments					
Outside of ERA polygo	on, does not meet current SCA criteria.				

Shingleton Mgt. Unit Compartment: 176





# Report 6 - 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.

Conservatio Area	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish specified 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.	ies (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 effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian cts on water quality and quantity, as well
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of identified as Element Occurrences (EOs) by the Michigan Natura context of their natural community classification system. Element (Excellent) or B (Good) and a Global (G) or State (S) element (rathreatened (2), or rare (3) serve as an initial base of ERAs. They the State. The system is comprised of individual or associations managed for restoration and maintenance of natural ecological public recommendations for lands as ERAs using the DNR Constitutions.	al Features Inventory (MNFI) within the t Occurrences with viability ranks of A writy) ranking of endangered (1), or may be located upon any ownership in of natural community types that are processes and values. The public may

s t	Shingletor	n Mgt. Unit		Report 7	– Forested	Stands Compartment: 176 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6116 - Lowland Birch	Sawtimber Well	21.8	40	81-110	Variable transition site, heavy to paper birch with some in decline. Evidence of stump sprouts but most have been browsed off.
3	4110 - Sugar Maple Association	Poletimber Well	11.4	85	81-110	
4	4110 - Sugar Maple Association	Poletimber Well	3.5	85	141-170	Small stand north end is maple with spruce and fir understory.  Species composition changes to south and some cedar is picked up.
9	6115 - Lowland Ash	Poletimber Poor	18.3	45	1-50	Originally a cedar stand but area has been flooded and most of the cedar died out. Black ash looks as if it came in after the flooding and then also had something causing it to nearly die out, all of the tops are dead with new growth sprouting from lower branches.
10	4110 - Sugar Maple Association	Poletimber Well	1.5	85	111-140	Stand is made up of quality pole class sugar maple overstory with 1 stick sized balsam fir and larger sapling sized sugar maple. Harvesting for SBW will likely cause damage to the quality poles and regen.
12	6120 - Lowland Cedar	Poletimber Poor	5.5	112	1-50	Lots of dead and 1/2 dead cedar. Black ash in stand all appears to be dead. Stand looks to have flooded due to beaver activity.
13	6120 - Lowland Cedar	Poletimber Well	1.0	112	111-140	Cedar stand on an island in the Mosquito River. Inaccessible.
14	42340 - Upland Spruce/Fir	Poletimber Well	12.2	85	81-110	Paper birch is thick along the Grade edge, appears to be young and healthy. Adjust red line accordingly to keep some of these trees.
15	6120 - Lowland Cedar	Poletimber Well	68.4	112	171-200	Cedar stand adjacent to the Mosquito River. DBH's range from 6 to 12"+ throughout the stand. Spruce, fir, birches, maples, & black ash are also present. Most of the mature paper birch and balsam fir have died and blown over, but balsam fir is extremely common throughout the understory. Two-aged characteristics are becoming evident where pockets of blowdown have opened up the canopy. Mountain maple is a significant understory species.
16	4110 - Sugar Maple Association	Poletimber Well	19.9	95	81-110	
20	4110 - Sugar Maple Association	Poletimber Well	16.0	85	81-110	Scattered B. Fir understory.
21	4110 - Sugar Maple Association	Sawtimber Well	122.1	85	81-110	
22	4110 - Sugar Maple Association	Sawtimber Well	108.8	85	111-140	Select cut under TS #07-99 TCR dtd 8-13-02.
	ASSOCIATION	V V CII				Southern end shows little regeneration, and has an even aged look. Northern portion has good regeneration in various sizes
						saplings. Old blue line found (most likely line of agreement), private property owner has harvested their land. No corner found on the

east end.

s t	Shingleton Mgt. Unit			Report 7	– Forested	Stands Compartment: 176 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4112 - Maple, Beech, Cherry Association	Sawtimber Well	1.4	85	81-110	small upland island with wet soils. Advanced fir regeneration in the understory, and a few hemlock and beech.
25	6120 - Lowland Cedar	Poletimber Well	25.3	116	201+	
26	4112 - Maple, Beech, Cherry Association	Sawtimber Well	2.1	85	111-140	Stand is essentially an island, there is a creek on the south side and on the north what appears to be an old blocked creek that has become a spreads. Black ash is in the creeks. Bridge would likely be needed for harvest.
28	4110 - Sugar Maple Association	Sawtimber Well	72.3	85	111-140	North 1/4 of the stand has very good advanced regeneration. Select cut to 85 BA (Keep for our selves to mark, ground is nice and flat)
29	4112 - Maple, Beech, Cherry Association	Poletimber Well	12.4	85	81-110	Good regeneration of yellow birch, black cherry, and hemlock.
30	6113 - Lowland Maple	Poletimber Well	6.5	94	81-110	Scattered black ash and elm in stand.
31	6120 - Lowland Cedar	Sawtimber Well	3.7	108	111-140	Some scattered very large black spruce.
32	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	8.9	85	81-110	Small pocket of hemlock and cedar in the stand.
35	4110 - Sugar Maple Association	Sawtimber Well	55.9	85	81-110	[11-18-08] Stand is now under contract TS 41-029-08-01 Camp 15 Hardwoods. Residual BA: Sugar maple = 69; mix hardwood = 11; hemlock = 1; total = 81 sq.ft./acre. [12-16-09] Sale is now completed TCR dtd 12-01-09.
						2016: Good regeneration, larger pole to medium log size, good diameter distribution developing.
36	4111 - S.Maple, Hard Mast Association	Poletimber Well	6.3	85	81-110	Understory thick with B.Fir and Beech brush.
38	4110 - Sugar Maple Association	Sawtimber Well	3.5	85	51-80	Thick Beech understory, some scattered cherry and fir poles.
41	6120 - Lowland Cedar	Sawtimber Well	145.3	205	171-200	Small pockets of higher ground have hemlock growing on them, cedar regen in open areas from both seeding and layering.
42	4110 - Sugar Maple Association	Poletimber Well	1.8	85	81-110	
44	4130 - Aspen	Poletimber Medium	45.1	34	51-80	
48	4110 - Sugar Maple Association	Poletimber Well	12.1	85	81-110	
49	4130 - Aspen	Poletimber Well	159.4	19	1-50	

S t	Shingleto		Report 7	– Forested	Stands Compartment: 176 Year of Entry: 2018	ESOURCE	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	9
50	4110 - Sugar Maple Association	Sawtimber Well	6.2	85	111-140	No signs of ever being cut, little to no regeneration in some areas.	_
51	4110 - Sugar Maple Association	Sawtimber Well	104.1	85	111-140		•
52	4130 - Aspen	Poletimber Medium	71.2	27	1-50		•
53	4110 - Sugar Maple Association	Poletimber Well	2.4	85	51-80		•

Compartment: 176 Year of Entry: 2018



Stand	Cover Type	Acres	Managed Site	General Comments:
2	622 - Lowland Shrub	7.7	No	
5	122 - Road/Parking Lot	2.4	No	OPIC - FMD: County Road 639
6	500 - Water	8.9	No	OPIC - FMD: Mosquito River
7	6229 - Mixed lowland shrub	1.1	No	OPIC - FMD: Soils - Chippeny-Nahma mucks Habitat types - TTM and FI Lowland brush adjacent to the Mosquito River
8	629 - Mixed non-forested wetland	3.2	No	OPIC - FMD: Soils - Carbondale, Lupton and Tawas mucks and peats Habitat types - TTS and TTM Lowland brush adjacent to the Mosquito River
11	622 - Lowland Shrub	3.2	No	OPIC - FMD: Soils - Carbondale, Lupton and Tawas mucks and peats Habitat types - TTS and TTM Lowland brush adjacent to the Mosquito River
17	6229 - Mixed lowland shrub	1.4	No	OPIC - FMD: Soils - Carbondale, Lupton and Tawas mucks and peats Habitat types - TTS and TTM Lowland brush adjacent to the Mosquito River
18	6229 - Mixed lowland shrub	1.0	No	
19	622 - Lowland Shrub	0.9	No	
23	622 - Lowland Shrub	7.9	No	OPIC - FMD: Soils - Cathro-Ensley mucks Habitat - TTM and FI Seasonally-flooded marsh with stream through it.
27	629 - Mixed non-forested wetland	1.2	No	OPIC - FMD: Soils - Cathro-Ensley mucks Habitat - TTM and FI Seasonally-flooded marsh with stream through it.
37	622 - Lowland Shrub	5.9	No	Scattered submerchantable conifers on the edges near timber. Very wet grass, clumps of willow and tag alder.
39	623 - Emergent Wetland	14.7	No	
45	629 - Mixed non-forested wetland	15.4	No	

Compartment: 176 Year of Entry: 2018



Stand	Cover Type	Acres	Managed Site	General Comments:
403	3303 - Mixed Low Density Trees	1.4	No	OPIC - FMD: Soils - Munising-Yalmer-Frohling, calcareous substratum phases, 1-6% slopes Habitat types - AVO and ATD Grassy opening adjacent to Camp 15 Rd upland brush and a pocket of upland cedar regeneration are established and filling in parts of the stand.
404	3102 - Grass	1.0	No	OPIC - FMD: Soils - Munising calcareous substratum-Cookson complex, 1-6% slopes Habitat type - AVO Open area left after the area was cut - goldenrod etc., and scattered upland brush is also present. Over time this will probably revert to a forested condition.