



Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 143

Entry Year 2016

Acreage: 1,334

County Roscommon

Management Area: Houghton Lake Wetlands

Revision Date: 06/30/2014

Stand Examiner: Jason Lewicki

Legal Description:

T21N, R03W section 6 and 7

Identified Planning Goals:

Maintain current age and species diversity in a range of early and late successional ecosystems as determined by the Houghton Lake Wetlands management area plan.

Soil and topography:

Soils on the uplands consist of Au Gres-Kinross and Au Gres-deford sand complex. The topography for the compartment is very flat with large wetland areas.

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

The entire compartment and much of the township is under State ownership. There are larger blocks of private ownership on the north end of the compartment. There is a 250 acre parcel that lies just east of the compartment within section 8.

Unique Natural Features:

Part of the Lost Twin Lakes hiking trail lies in the south end of the compartment. Much of the area around the hiking trail is a SCA and type 2 old growth.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

Much of the area around the hiking trail is a SCA and type 2 old growth.

Watershed and Fisheries Considerations:

Pup Creek and Wolf creek flow through this compartment. Pup lake lies on the NE boundary of this compartment.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw is quarried for clay elsewhere in the State. There are no nearby gravel pits, but there may be potential on the uplands. Headquarters Field is located one mile to the south. The field has produced over 11.3 million BO and 4.2 Bcf gas primarily from the Devonian Richfield Formation, and is in secondary recovery operations currently. The compartment is not currently leased.

Vehicle Access:

Vehicle access is very good on the west side of this compartment off Waco and Newaygo rd. The east side is blocked by lowland areas or private property.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

A mixed variety of dispersed activities occur on the land from hiking, to hunting, trapping to disperse snowmobiling. The only designated recreational system is found in the southeast portion of the compartment; Lost Twin Lakes Pathway.

Fire Protection:

This compartment is predominantly low ground with a couple of stands of pine type cover. There would not normally be much of a fire protection concern here unless in severe drought conditions. Access for fire suppression in the compartment is poor.

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**

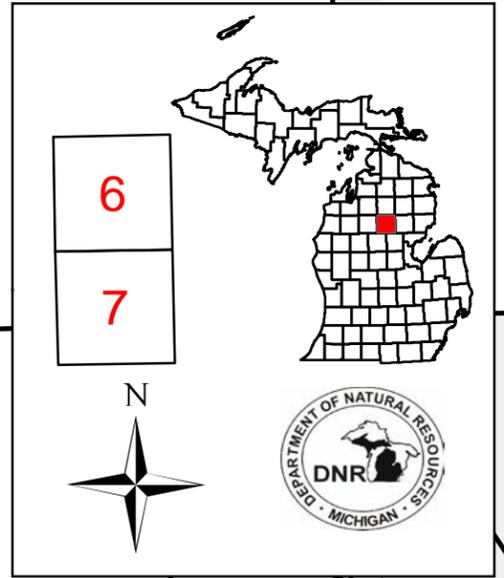
The following information is displayed, where pertinent, on the attached compartment maps:

- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatment Map

Compartment: 143
 T21N R03W
 Sections: 6, 7
 County: Roscommon
 Unit: Roscommon
 Management Area: Houghton Lake Wetlands
 YOE: 2016
 Acres: 1,334 GIS Calculated
 Examiner: Jason Lewicki
 Map Revised: 08/08/2014
 Map Phase: Web Post

Stand # **23**
 Stacking Density
(412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- + Remonumented Section Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Stream
- Intermittent Stream
- 🚲 Bike Trails
- 🚶 Hiking Trails
- 🏂 Ski Trails
- - - Bike Trail
- - - Ski Trail
- ORV Trail

Regen Legend

- 🌳 Natural
- 🌱 Planted

Treatments

- ▨ Seed Tree (w/Reserves)
- ▨ Thinning (Crown, Low, Systematic)
- ▨ Clearcut (w/Reserves, Patch/Strip)
- ▨ Treatments w/ Site Condition

Forest Stands

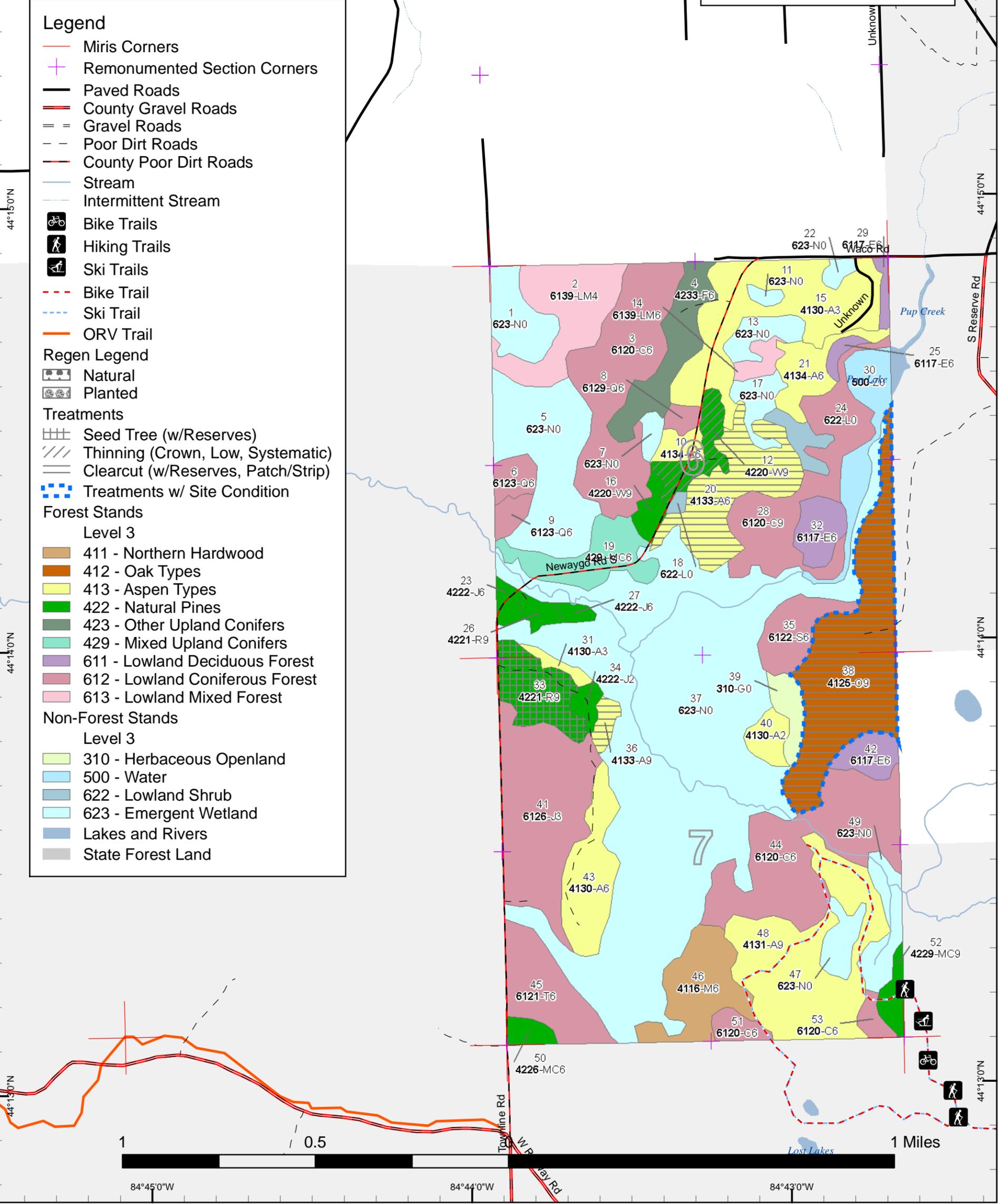
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes and Rivers
- State Forest Land



84°45'0"W 84°44'0"W 84°43'0"W

44°13'0"N

44°14'0"N

44°15'0"N

44°16'0"N

44°13'0"N

44°14'0"N

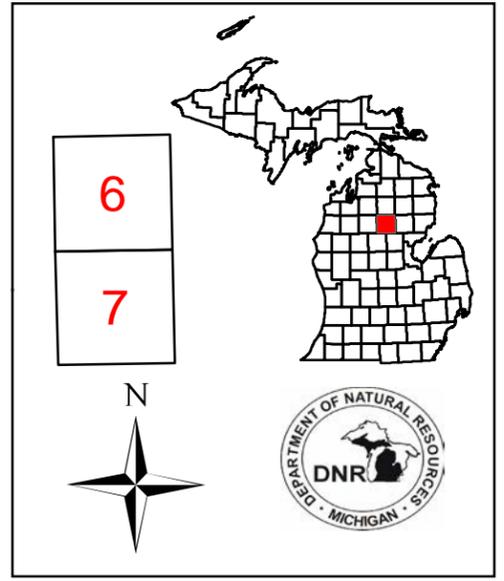
44°15'0"N

44°16'0"N

Special Conservation Areas & Site Conditions Map

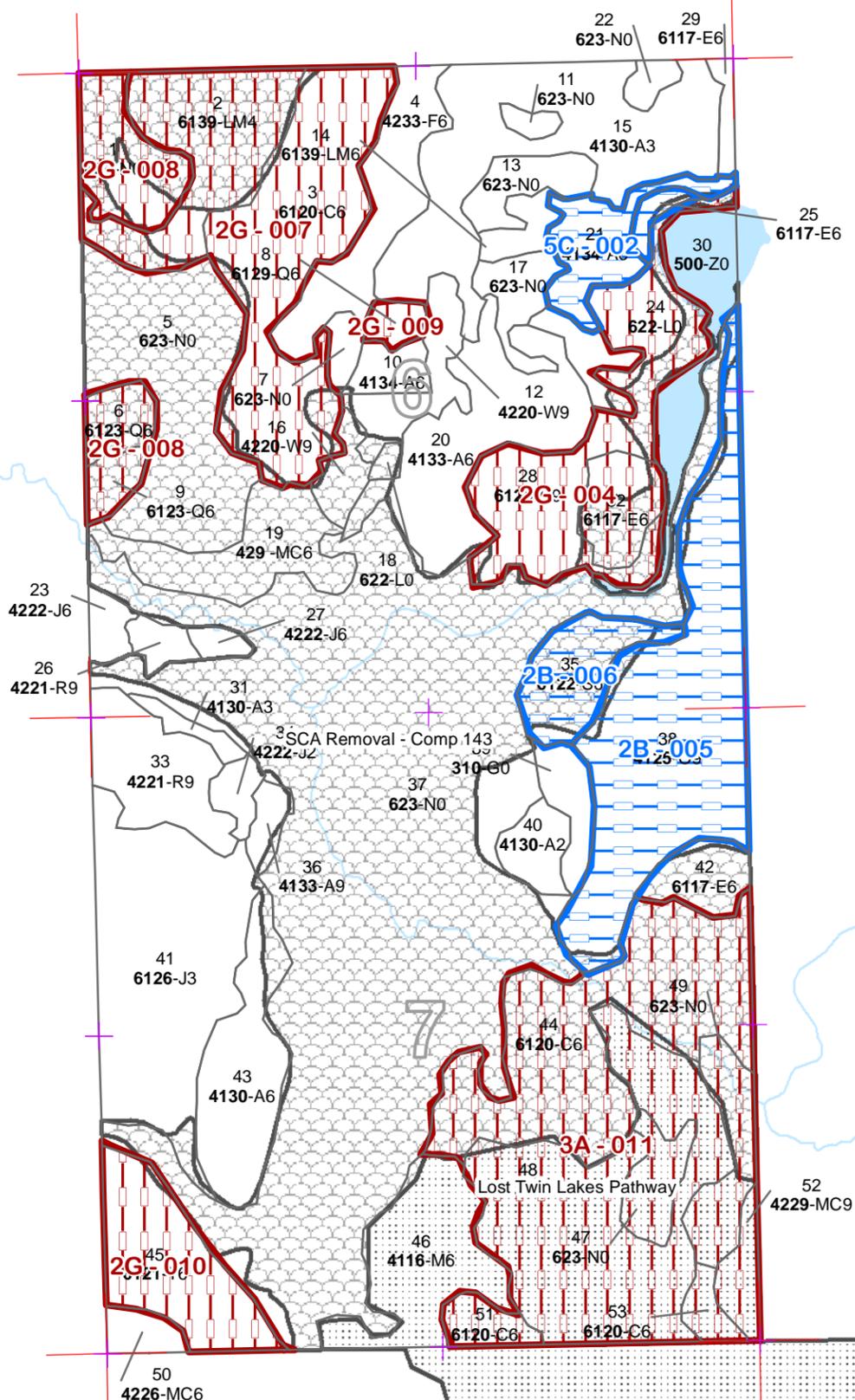
Compartment: 143
 T21N R03W
 Sections: 6, 7
 County: Roscommon
 Unit: Roscommon
 Management Area: Houghton Lake Wetlands
 YOE: 2016
 Acres: 1,334 GIS Calculated
 Examiner: Jason Lewicki
 Map Revised: 08/08/2014
 Map Phase: Web Post

Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- + Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Reviewable SCAs
- Proposed SCA
- SCA Removal
- Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes



84°45'0"W 84°44'0"W 84°43'0"W

44°16'0"N

44°16'0"N

44°15'0"N

44°15'0"N

44°14'0"N

44°14'0"N

44°13'0"N

44°13'0"N

Report 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	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 +		Uneven Age
Aspen	60	11	28	6	0	57	4	0	0	70	0	0	0	0	236
Cedar	0	0	0	0	0	0	0	0	0	193	0	0	0	0	193
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Jack Pine	0	70	0	0	0	0	7	0	0	0	0	0	0	0	77
Lowland Conifers	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16
Lowland Deciduous	0	0	0	0	0	10	18	0	0	0	0	0	0	0	28
Lowland Mixed Forest	0	0	0	0	0	0	41	0	0	0	0	0	0	0	41
Lowland Shrub	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	17	0	0	0	0	0	17
Marsh	440	0	0	0	0	0	0	0	0	0	0	0	0	0	440
Natural Mixed Pines	0	0	0	0	0	0	0	0	5	7	0	0	0	0	12
Northern Hardwood	0	0	0	0	0	0	31	0	0	0	0	0	0	0	31
Oak	0	0	0	0	0	0	0	0	0	81	0	0	0	0	81
Red Pine	0	0	0	0	0	0	4	0	0	22	0	0	0	0	26
Tamarack	0	0	0	0	0	0	0	30	0	0	0	0	0	0	30
Upland Conifers	0	0	0	0	0	24	0	0	0	0	0	0	0	0	24
Upland Spruce/Fir	0	0	0	0	0	25	0	0	0	0	0	0	0	0	25
Water	21	0	0	0	0	0	0	0	0	0	0	0	0	0	21
White Pine	0	0	0	0	0	0	0	0	0	19	0	0	0	0	19
Total	538	81	28	6	0	116	106	46	22	391	0	0	0	0	1334



Report 2 – Proposed Treatment Summaries

Roscommon Mgt. Unit
Year of Entry 2016

Compartment 143
Total Compartment Acres: 1,334

Acres by Treatment Type

Commercial Harvest - 162 Tree Planting - 0 Other - 0
Habitat Cut - 0 Opening Maintenance - 0

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	46	0	0	0	0	0	46
Natural Pines	0	0	22	0	13	0	35
Oak Types	81	0	0	0	0	0	81
Total	127	0	22	0	13	0	162



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	71143012-Cut	12.8	42200 - Natural White Pine	High Density Log	95	111-140	Harvest	Crown Thinning	4220 - Natural White Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin stand to approximately 100 BA. Focus on improving and expanding crowns. Remove poor formed and heavily suppressed white pine. Allow <u>Specs:</u> more sunlight in to let maple and white pine understory develop. Protect understory during harvest.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
20	71143020-Cut	41.6	4133 - Aspen, Mixed Pine	High Density Pole	55	81-110	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clearcut stand and manage for aspen regeneration. Leave clumps or pockets of aspen for retention. Focus retention pockets where there is thick <u>Specs:</u> balsam fir present. Leave 1 brush pile for every 2 acres for snowshoe hare habitat. Place brush piles near conifer swamp edges.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
33	71143033-Cut	22.3	42210 - Natural Red Pine	High Density Log	90	111-140	Harvest	Seed Tree with Reserves	4221 - Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Seed tree harvest stand leaving 5-10 sq ft of residual pine for seed and diversity. Manage for understory oak and pine. Pine understory must be <u>Specs:</u> protected during harvest. Do not allow skidding of tops. High quality utility poles present.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
36	71143036-Cut	4.3	4133 - Aspen, Mixed Pine	High Density Log	65	111-140	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clear cut stand with reserves and manage for aspen. Aspen should fill in completely after harvest. Use some clumps of oak and pine for retention <u>Specs:</u> in areas where aspen is absent and not expected to fill in.										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
Total Treatment Acreage Proposed:		80.9								

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	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	71143038-Cut	80.9	4125 - Black, N. Pin Oak	High Density Log	95	111-140	Harvest	Clearcut with Reserves	412 - Oak	Cmpt. Review Proposal

Prescription Factor limit stand. Access would have to be created over the old beaver dam crossing or through private property.

Specs: Clearcut stand with reserves by leaving small clumps or groups of oak for seed source. Expand all aspen where possible and leave pine component. Manage stand for oak and aspen with a small pine component. Possible harvest some adjacent lowland stands.

Other

Comment:

Next

Steps:

Proposed

Start Date: 10/01/2015

Limiting Factor

2B: Unknown if access through adjacent landowner(s) is possible

**Total Treatment
Acreage Proposed: 80.9**

Report 5 – Site Conditions

Roscommon Mgt. Unit
Jason Lewicki : Examiner

Compartment 143
Year of Entry 2016

Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5C	3A	2G	2B
	Available	Not Available						
235	166	69	Aspen	150	16	69		
191	1	190	Cedar	1		80	111	0
77	77		Jack Pine	77				
16		16	Lowland Conifers				16	
28	16	12	Lowland Deciduous	13		0	12	3
41	5	36	Lowland Mixed Forest	5			36	
17	17		Lowland Spruce/Fir	0				17
12	5	7	Natural Mixed Pines	5		7	0	
31	31	0	Northern Hardwood	31		0		
81	81		Oak	1				80
26	26		Red Pine	26				
30		30	Tamarack				30	
24	24		Upland Conifers	24				
25	25		Upland Spruce/Fir	25				
19	19		White Pine	19				
852	492	360	Total Forested Acres	376	16	156	204	100
	58%	42%	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
002	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16				
Comments:							
004	Not Available	2G: Too wet (sensitive soils, does not include access issues)	61				
Comments: Some edge areas may be operable.							

Report 5 – Site Conditions

Roscommon Mgt. Unit
Jason Lewicki : Examiner

Compartment 143
Year of Entry 2016

005	Available	2B: Unknown if access through adjacent landowner(s) is possible	84	2C: Engineered Bridge Needed (Dept. portable bridge not available or inadequate)	
Comments:					
006	Available	2B: Unknown if access through adjacent landowner(s) is possible	17	2C: Engineered Bridge Needed (Dept. portable bridge not available or inadequate)	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
Comments: Possibly harvest portions of stand if access is gained for adjacent oak stand.					
007	Not Available	2G: Too wet (sensitive soils, does not include access issues)	100		
Comments:					
008	Not Available	2G: Too wet (sensitive soils, does not include access issues)	31		
Comments:					
009	Not Available	2G: Too wet (sensitive soils, does not include access issues)	4		
Comments:					

Report 5 – Site Conditions

Roscommon Mgt. Unit

Compartment 143

Jason Lewicki : Examiner

Year of Entry 2016

010	Not Available	2G: Too wet (sensitive soils, does not include access issues)	31
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Comments:

011	Not Available	3A: Potential old growth / biodiversity	180
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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
Lost Twin Lakes Pathway Comments	Visual Management Area	Recreational/Scenic Value Area	SCA	308.0
SCA Removal - Comp 143 Comments	Other SCA		SCA Removal	587.3
No longer meets criteria for an SCA.				



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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
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.

S t a n d	Roscommon Mgt. Unit		Report 8 – Forested Stands			Compartment: 143	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2016	
2	6139 - Mixed Lowland Forest	Low Density Pole	36.0	65			
3	6120 - Lowland Cedar	High Density Pole	63.9	90	141-170		
4	42330 - Upland Fir	High Density Pole	25.2	50	81-110	Stand of primarily upland fir with some red maple and aspen mixed in. Aspen is primarily found on east edge and in some scattered interior locations.	
6	6123 - Lowland Fir	High Density Pole	7.1	75	51-80		
8	6129 - Mixed Coniferous Lowland Forest	High Density Pole	3.8	75	1-50	Small upland area on the north end.	
9	6123 - Lowland Fir	High Density Pole	5.0	75	81-110		
10	4134 - Aspen, Spruce/Fir	High Density Pole	5.9	35	51-80		
12	42200 - Natural White Pine	High Density Log	12.8	95	111-140	High quality natural white pine stand. This stand was thinned 2 entries ago. BA's range from 70-190. 6 plots taken, 130 BA average.	
14	6139 - Mixed Lowland Forest	High Density Pole	5.4	65			
15	4130 - Aspen	High Density Sapling	59.8	7		Harvested in 2007	
16	42200 - Natural White Pine	High Density Log	6.0	95	81-110	Old sawtimber white pine that has been heavily weeviled in the past. Some scattered maple and aspen. Balsam understory.	
19	429 - Mixed Upland Conifers	High Density Pole	24.1	50	1-50	Small variable stand. A mix of everything. Some low pockets with tag alder. Old foundation present. Historical site along the bank of Pup Creek.	
20	4133 - Aspen, Mixed Pine	High Density Pole	41.6	55	81-110	Aspen stand with heavy amounts of balsam fir and white pine. Balsam fir and white pine are in various levels of the canopy and understory. Hold for 10 years.	
21	4134 - Aspen, Spruce/Fir	High Density Pole	15.7	55	81-110	Mixed stand of aspen, red maple and balsam fir. Hold for 10 years for habitat.	
23	42220 - Natural Jack Pine	High Density Pole	4.3	65	111-140		SCA
25	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	3.0	65	51-80		



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Roscommon Mgt. Unit

Report 8 – Forested Stands

Compartment: 143
Year of Entry: 2016

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	42210 - Natural Red Pine	High Density Log	4.1	65	200+	Small stand of natural red pine. SCA
27	42220 - Natural Jack Pine	High Density Pole	2.7	65	51-80	SCA
28	6120 - Lowland Cedar	High Density Log	48.6	90	111-140	
29	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	3.1	65	81-110	Part of a larger stand in the compartment to the east. Lowland aspen stand with pockets of dead black ash. Operable under the right conditions.
31	4130 - Aspen	High Density Sapling	3.2	16		
32	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	12.1	65		SCA
33	42210 - Natural Red Pine	High Density Log	22.3	90	111-140	90 year old red pine stand that was thinned 2 entries ago. Stand has a good understory of oak and pine, even decent amounts of red pine. High quality pine site.
34	42220 - Natural Jack Pine	Medium Density	4.4	16		
35	6122 - Black Spruce	High Density Pole	17.3	80	111-140	Operable under right conditions. Difficult access.
36	4133 - Aspen, Mixed Pine	High Density Log	4.3	65	111-140	Mixed stand of old black oak along with some bigtooth aspen and white pine. Black oak is of a older age class and is over mature and in decline.
38	4125 - Black, N. Pin Oak	High Density Log	80.9	95	111-140	Mature black oak stand mixed with aspen and white oak. Some red maple mixed in. Scattered red pine in canopy. Variable height understory of white pine. Stand is found on rolling hills and ridges and is blocked/landlocked by PVT property and a creek and beaver dam.
40	4130 - Aspen	Medium Density	7.7	17	51-80	
41	6126 - Lowland Jack Pine	High Density Sapling	65.3	14		High water table jack pine that was harvested in 1998 and seeded. Pocket of aspen on the south end.
42	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	9.8	55	51-80	Some areas could potentially be harvested under the right conditions. Appears to be the wettes on the north edge along oak stand.
43	4130 - Aspen	High Density Pole	28.3	22	81-110	

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Roscommon Mgt. Unit

Report 8 – Forested Stands

Compartment: 143
Year of Entry: 2016

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	6120 - Lowland Cedar	High Density Pole	69.7	95	111-140	
45	6121 - Tamarack	High Density Pole	29.9	75		
46	4116 - Mixed N. Hardwood - Aspen	High Density Pole	31.0	60	81-110	High water table stand of red maple mixed with some aspen. Variable understory of white pine. Heavier white pine component on SE side where its higher and drier.
48	4131 - Aspen, Oak	High Density Log	69.6	95	111-140	SCA. Lost Twin Lakes Foot Trail.
50	42260 - Natural Pine, Mixed Deciduous	High Density Pole	5.0	82	141-170	Mixed aspen and white pine stand. Manage with the compartment to the south.
51	6120 - Lowland Cedar	High Density Pole	6.0	90	51-80	
52	42290 - Natural Mixed Pine	High Density Log	6.6	95	111-140	SCA. Lost twin lakes pathway bisects stand.
53	6120 - Lowland Cedar	High Density Pole	4.3	95	81-110	SCA, lost twin lakes pathway SCA.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6239 - Mixed Emergent Wetland	18.3	No	Unspecified	
5	6239 - Mixed Emergent Wetland	55.5	No	Unspecified	
7	6239 - Mixed Emergent Wetland	3.6	No	Unspecified	
11	6239 - Mixed Emergent Wetland	2.2	No	Unspecified	
13	6239 - Mixed Emergent Wetland	9.5	No	Unspecified	
17	6239 - Mixed Emergent Wetland	8.8	No	Unspecified	
18	6229 - Mixed lowland shrub	1.4	No	Unspecified	
22	6239 - Mixed Emergent Wetland	3.1	No	Unspecified	
24	6229 - Mixed lowland shrub	7.0	No	Unspecified	
30	50 - Water	21.3	No	Unspecified	
37	6239 - Mixed Emergent Wetland	315.8	Yes	Unspecified	
39	3102 - Grass	8.4	No	Unspecified	
47	6239 - Mixed Emergent Wetland	9.1	No	Unspecified	
49	6239 - Mixed Emergent Wetland	14.3	No	Unspecified	