

Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 71021 Entry Year 2018 Acreage: 1,325

County Roscommon

Management Area: Upper Muskegon

Revision Date: 2016-06-15

Stand Examiner: Charles VanKalker

Legal Description:

T24N R4W sections 5 and 6

Identified Planning Goals:

Vegetation management in the Upper Muskegon management area (MA) will provide forest products; maintain or enhance wildlife habitat; protect areas of unique threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management for this 10-year period will focus on harvesting older jack pine and balancing age class distributions of oak, aspen and red pine. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation. Expected trends within this 10-year planning period are the need to manage exotic species (especially Phragmites and glossy buckthorn), the need to continue to manage cover types for a balanced age-class distribution and an expected increase in recreation pressure.

Soil and topography:

The dominant landform consisting of sandy outwash plains with large ridges of ice-contact sands surrounded by poorly drained outwash channels and plains. Houghton and Higgins lakes are adjacent to this area and the Upper Muskegon River flows near this management area. The management area falls within Grayling Outwash Plain sub-region as classified by Albert (1995). Terrain consists of mostly level outwash plain of Grayling Sand to the east and hillypitted outwash deposits of Roselawn Sand to the west.

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

Most of this compartment is solid state ownership with the exception of parts of the SW guarter of section 6.

Unique Natural Features:

Eagle nests and rough fescue have been found in the compartment. Potential exists for dusted skipper, grizzled skipper, and red-legged spittlebug in open jack pine. Potential also exists for secretive locust in bog habitat.

Archeological, Historical, and Cultural Features:

None found during inventory.

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

There is a small kettlehole in the northeast quarter of section 5.

Wildlife Habitat Considerations:

The eastern portion of this compartment is primarily plantation. The western side transitions to mostly upland oak that has been clear-cut. Overall, the compartment lacks in-stand diversity, retention, and structural complexity. Enhancing these qualities should be a primary goal in the small stands that are proposed.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of icecontact

and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 1,000 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum in other areas of the State. Most of the good gravel pits are associated with upland areas. The nearest gravel pit is located just to the west and potential appears to be good in upland areas. East Norwich Field is located to the south. The field has produced over 15.9 million BO and 15.7 Bcf gas primarily from the Devonian Richfield Formation. It is in secondary recovery operations currently. There is one old lease held-by-production in Section 6.

Vehicle Access:

This compartment is very accessible due to the numerous forty roads that intersect it. Most are dry and clear of debris.

Survey Needs:

None.

Recreational Facilities and Opportunities:

Motorized Trails occur within the compartment: Michigan Cross Country Cycle, West Higgins 50" Trail, and ORV Route / Snowmobile Trail #6-7. Assure logging ahead signs are placed on the trail to notify users of logging activity. Focus retention pockets in clusters along or near trail. Retention of trees near or along the recreational trail that are substantial enough to withstand wind throw are encouraged; if not remove. All sign posts and confidence markers shall be protected. Ensure logging activity does not obliterate the trail. All stumps within 20 feet of the snowmobile trail shall be Flush-Cut to ensure stumps do not result in unsafe conditions. Prohibit widening of any single track recreational trail, blocking trail crossings or leaving slash and debris on any recreational trail or road. Non-merchantable understory maintained adjacent to trail shall be protected and be maintained next to trail tread to promote narrow use. The county roads are heavily used year round Dispersed recreation is likely popular throughout the compartment due to the road access t and varying cover types offering hunting and gathering (Mushrooms/Berries) opportunities.

Fire Protection:

There is excellent access throughout the compartment. The kettlehole lake in the northeast corner could be used as a water point. The thick jack pine plantations on the east side of the compartment could be problematic.

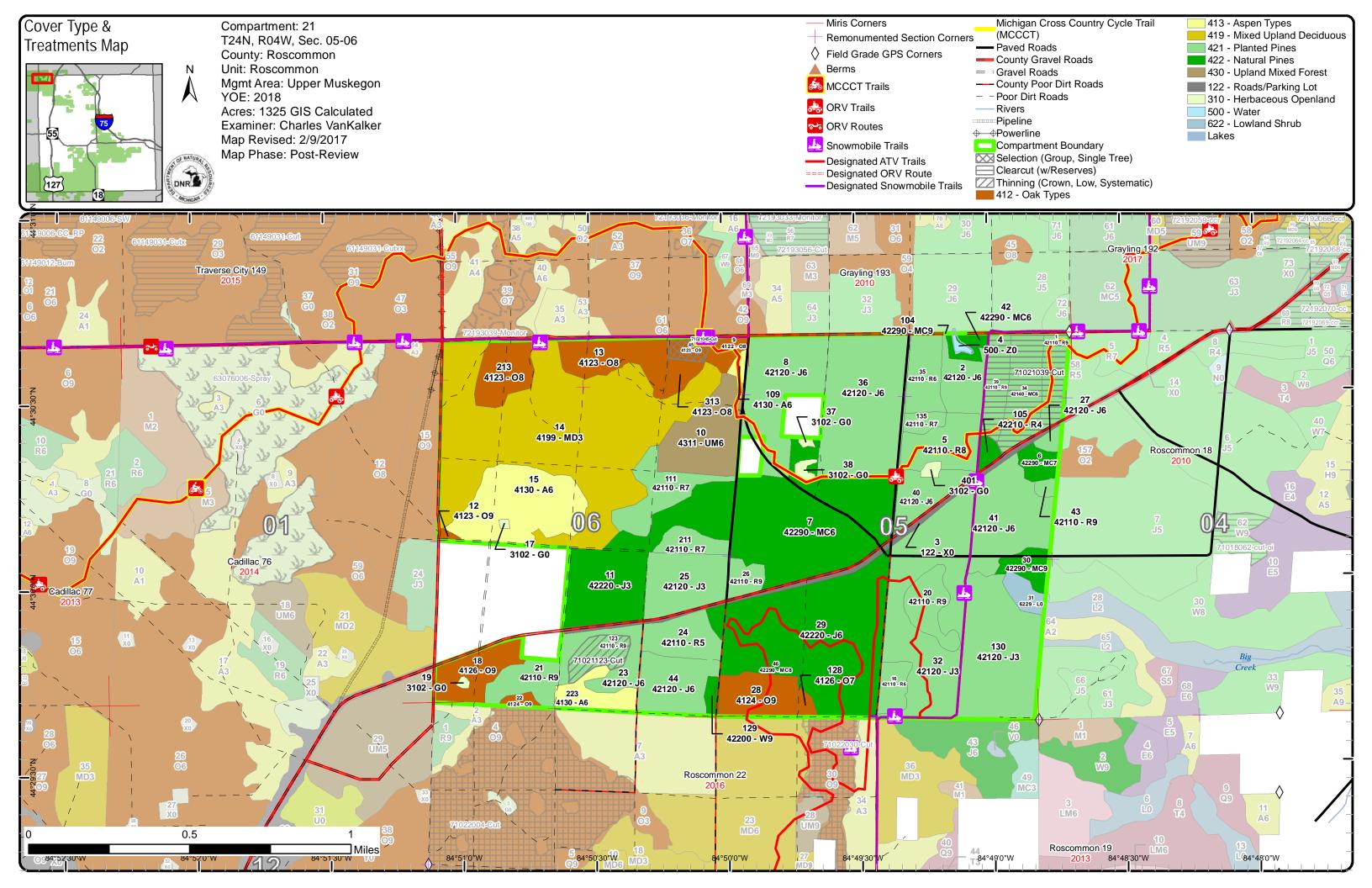
Additional Compartment Information:

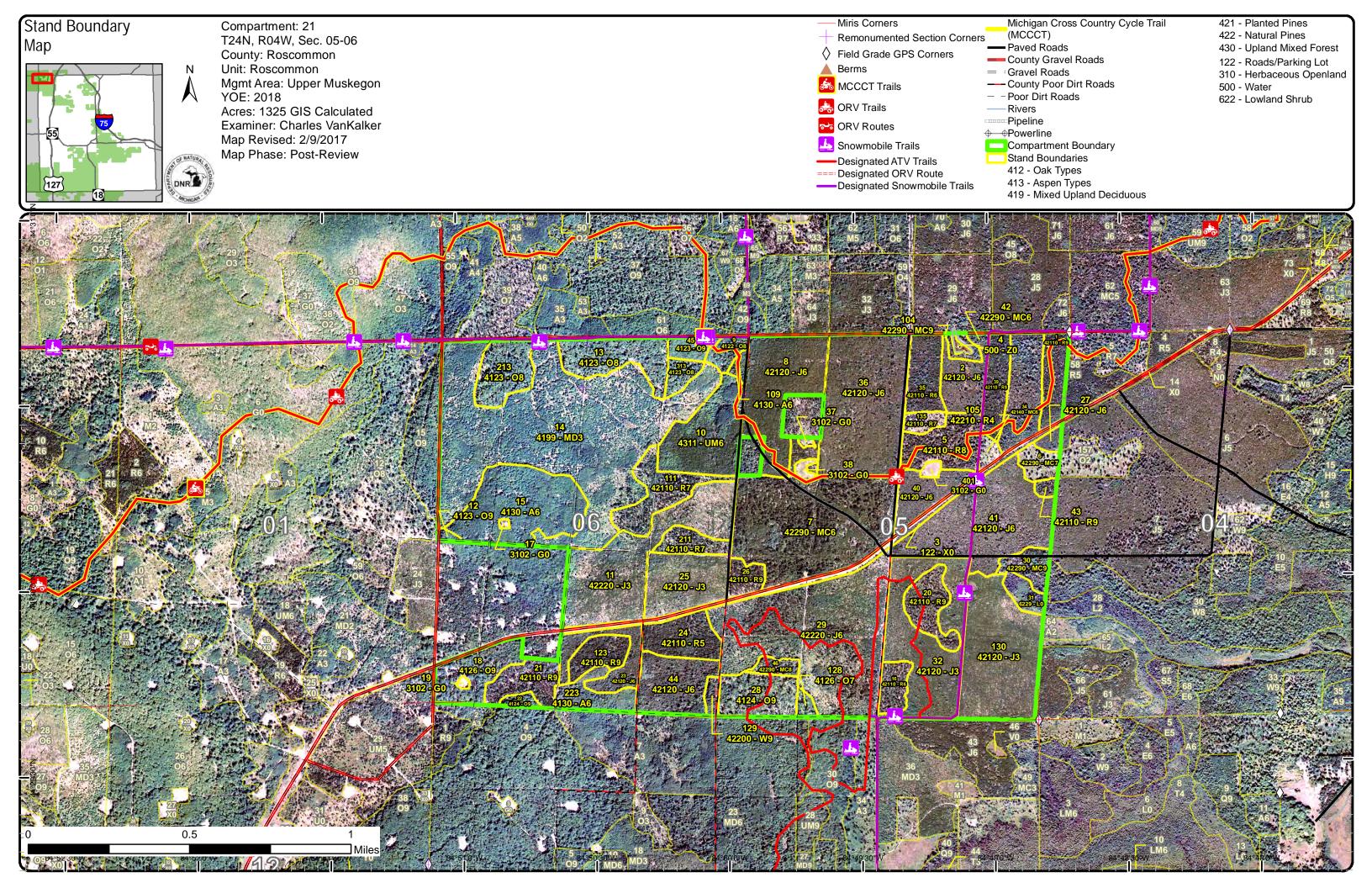
The following reports from the Inventory are attached:

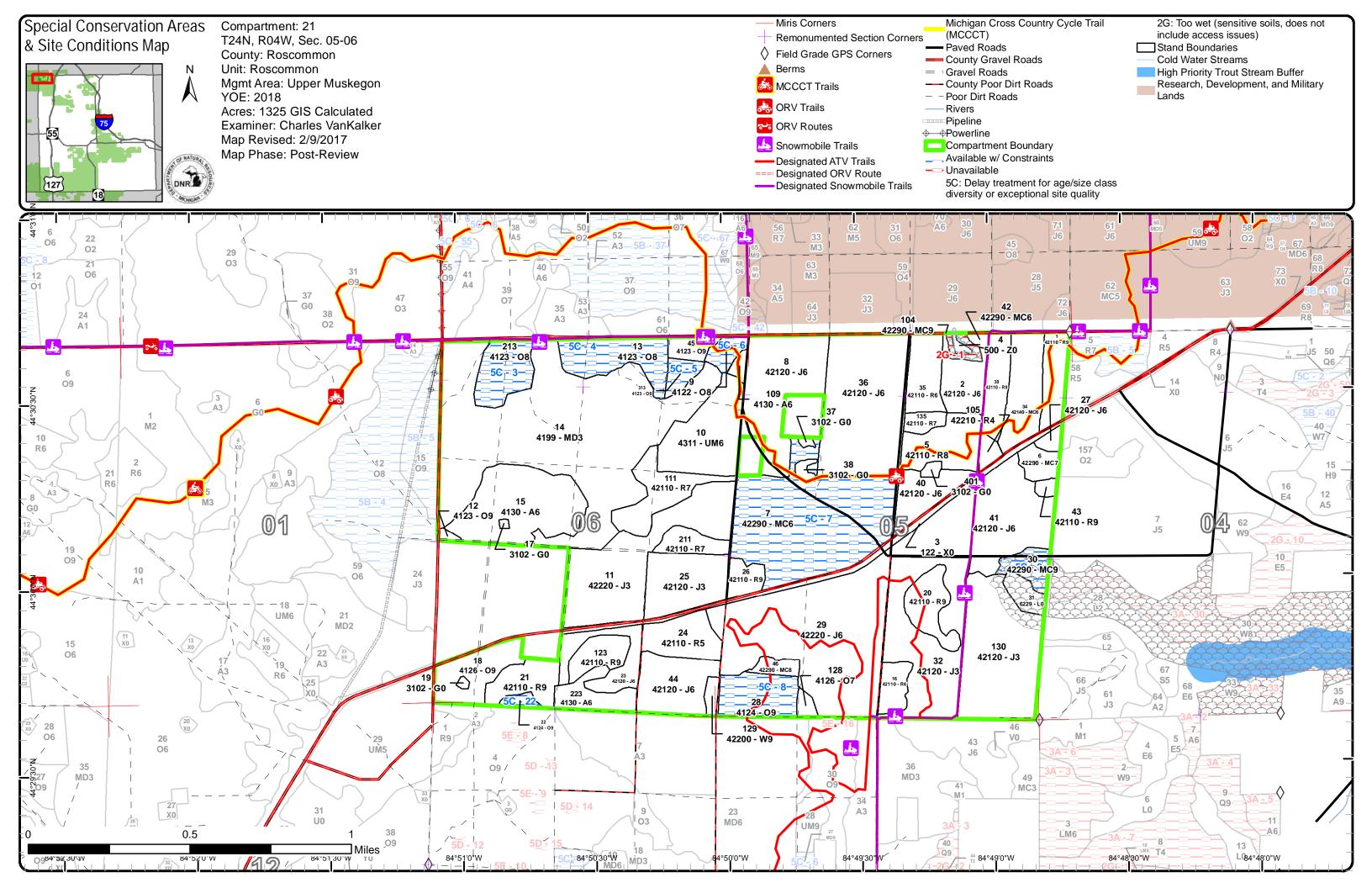
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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 21 Year of Entry 2018



Age Class

	No.	Kor /		\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$2. \$2.	8 / 4	\$ 10°	/ % / &		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80,00	\$ /6/	70.	8, /8,	\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ON AND AND AND AND AND AND AND AND AND AN	g [*] Jugar	No. No.
Aspen	0	0	0	49	13	2	0	0	0	0	0	0	0	0	0	0	0	0	64
Herbaceous Openland	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Jack Pine	0	0	207	156	207	3	0	0	0	0	0	0	0	0	0	0	0	0	573
Lowland Shrub	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Mixed Upland Deciduous	0	0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180
Natural Mixed Pines	0	0	0	96	0	0	0	0	3	0	7	0	9	0	0	0	0	7	121
Oak	0	0	0	0	0	0	0	0	0	52	28	3	6	0	0	0	0	21	110
Planted Mixed Pines	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Red Pine	0	0	0	0	45	120	13	5	0	0	0	0	0	0	0	0	0	0	183
Upland Mixed Forest	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Urban	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White Pine	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	32	0	387	336	289	125	13	8	3	52	35	3	15	0	0	0	0	28	1325

Roscommon Mgt. Unit

Charles VanKalker: Examiner



Report 2 – Treatment Summary

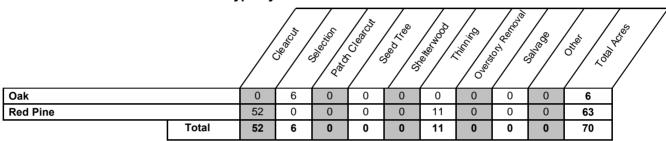
Roscommon Mgt. Unit Year of Entry: 2018

Acres of Harvest

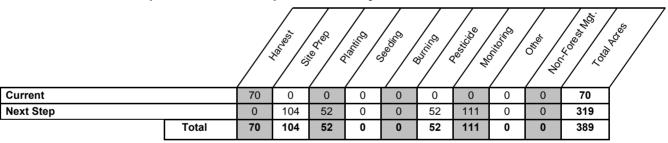
Compartment 21
Total Compartment Acres: 1,325

Commercial Harvest - 70 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Roscommon Mgt. Unit

Report 3 -- Treatments

Compartment: 21 Year of Entry: 2018 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
39	71021039-Cut	52.2	42110 - Planted Red Pine	Sawtimber Well	39	111- 140	Harvest	Clearcut	42110 - Planted Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Final harvest all trees to a 2 inch spec, Chip harvest to promote future planting operations. Leave 3 - 5% retention in pockets along the edge of <u>Specs:</u> stand, preferably to the south for a visual buffer to Moorestown Rd. Mark to leave quality white oak in clumps.

Next Step SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant; Pesticide, Skidder/Mechanical; Monitoring, Artificial Regen(1yr);

<u>Treatments:</u> Monitoring, Artificial Regen(3yr)

Acceptable Planted Red Pine

Regen:
Other
Comment:

S

Proposed Start Date: 10/01/2017

45 71021045-Cut 6.1 4123 - Red Oak Sawtimber 94 141- Harvest Single Tree 412 - Oak Types Even-Aged Draft Field Boundary

Habitat Cut: No Site Condition:

<u>Prescription</u> Mark to cut for best tree in place down to 70 to 80 residual BA. Remove the poor form and suppressed trees. Retain all white pine and except to <u>Specs:</u> remove for operability of machinery. Leave quality white oak when possible for diversity and wildlife.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any combination of hardwoods and pine to a fully stocked stand.

Regen:

Other Include appropriate ORV specs for the trail that runs through the east side of the stand.

Comment:

Proposed Start Date: 10/01/2017

123 71021123-Cut 11.2 42110 - Planted Sawtimber 54 141- Harvest Crown Thinning 4211 - Planted Even-Aged Draft Field Red Pine Well 170 Red Pine Boundary

Habitat Cut: No Site Condition:

Prescription Reduce the BA to 90-120. Removing poor form and low quality trees first.

Specs:

Next Step Treatments:

Acceptable

Regen:
Other
Comment:

Proposed Start Date: 10/01/2017

Total Treatment Acreage Proposed: 69.5

Roscommon Mgt. Unit

Charles VanKalker : Examiner

Availa	ability for	Managemer	nt				
Total	Acres	Acres Avail	Acres		Domina	nt Site	Conditions
Acres	Available	With Condition	Not Available		5C	2G	
65	65	0	0	Aspen			
6	6	0	0	Herbaceous Openland			
572	572	0	0	Jack Pine			
7	7	0	0	Lowland Shrub			
180	180	0	0	Mixed Upland Deciduous			
121	13	105	3	Natural Mixed Pines	105	3	
110	31	79	0	Oak	79		
24	24	0	0	Planted Mixed Pines			
184	184	0	0	Red Pine			
35	35	0	0	Upland Mixed Forest			
18	18	0	0	Urban			
1	1	0	0	Water			
3	3	0	0	White Pine			
1,325	1,139	183	3	Total Forested Acres	183	3	
	86%	14%	0%	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.

1 Unavailable 2G: Too wet (sensitive soils, does not include access issues) Comments: 2 Available 5C: Delay treatment for	3	Unspecified	Unspecified	Unspecified	Unspecified
2 Available 5C: Delay treatment for					
age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:					

Report 4 – Site Conditions

Roscommon Mgt. Unit

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3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	19	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	24	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	96	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Roscommon Mgt. Unit

Charles VanKalker : Examiner

8	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	20	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	3	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Roscommon Mgt. Unit

Compartment: 021 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	3
Comments				
This area no longer m	eets the criteria to be classified as a Speci	al Conservation Area.		
	Potential Old Growth		SCA Removal	20
Comments				
This area no longer m	eets the criteria to be classified as a Speci	al Conservation Area.		

Roscommon Mgt. Unit Compartment: 21





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.

Conservation Area	Туре	Description	HCVA = High Conservation Value Area SCA = Special Conservation Area
	esearch and ilitary Areas	These areas provide facilities and lands specifically dedicated for include the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (the High and Hog Islands, all state owned land on Beaver, South Fow Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research, and over 144,000 acres of Military Lands.	00 acre Houghton Lake Wildlife Research nat includes most of Garden Island, all of ox and North Fox Islands), the Cusino

S t	Roscommor	Mgt. Unit		Report 7	- Forested	Stands Compartment: 21 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	Sawtimber Well	13.9	39	81-110	Red pine planted in 1978.
2	42120 - Planted Jack Pine	Poletimber Well	15.4	38	81-110	
5	42110 - Planted Red Pine	Sawtimber Medium	21.9	46	111-140	This stand is 45 year old red pine plantation with larger diameter red pine scattered throughout.Plantation rows not clearly evident. Jack pine was harvested in 2002 and the jack pine regen is dense in openings. Possibly wait until jack pine becomes merchantable to treat again.
6	42290 - Natural Mixed Pine	Sawtimber Poor	7.3	91	1-50	Harvested in 2008. 10 to 30 BA of mature Oak/Red Pine/White Pine super canopy with different age classes filling in the sub canopy.
7	42290 - Natural Mixed Pine	Poletimber Well	95.6	29	111-140	Natural jack pine regeneration from a cut in 1988 where red pine was left. Red Pine is left in pockets throughout the stand with Jack Pine filling in.
8	42120 - Planted Jack Pine	Poletimber Well	47.0	28	81-110	
9	4122 - Oak, Pine	Sawtimber Medium	6.0	111	111-140	Scattered wolfy oak and red pine present. BA is variable.
10	4311 - Pine, Aspen Mix	Poletimber Well	35.1	24	51-80	
11	42220 - Natural Jack Pine	Sapling Well	61.7	14	Immature	Stand has mature RP over story at about 5-10 BA. Second age class is natural regen of JP and planted RP. High mortality in RP planting (~70%) leading to heavy natural JP regen. South block of stand more dense to JP.
12	4123 - Red Oak	Sawtimber Well	1.3	91	141-170	Leftoveoakl From cut to the north
13	4123 - Red Oak	Sawtimber Medium	24.4	87	51-80	Shelterwood-prep completed in 1990. 2008 RX burn to set-back red maple stump sprouts, but not torch mid-story white pine. Long-term mixed oak/pine management. Stand is scheduled to be treated for oak wilt in the fall of 2016. FTP created for using herbicide to kill red oak requiring no tree removal. Heavy deer browse on oak seedlings.
14	4199 - Other Mixed Upland Deciduous	Sapling Well	179.8	17	Immature	Could be typed as an M3 (red maple) in many spots. Oak stump sprouts coming along ok in others. Aspen present throughout stand.
15	4130 - Aspen	Poletimber Well	49.3	27	Immature	Stand Year Origin was 1990
16	42110 - Planted Red Pine	Poletimber Well	8.5	41	111-140	

s t	Roscommon Mgt. Unit			Report 7	Forested	Stands Compartment: 21 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4126 - White, Black, N. Pin Oak	Sawtimber Well	21.1	94	51-80	Decent regen of oak in sub canopy. More jack pine in the northeast corner.
20	42110 - Planted Red Pine	Sawtimber Well	15.3	43	81-110	ORV trail runs through middle of stand. No good access. Surrounded by jack pine.
21	42110 - Planted Red Pine	Sawtimber Well	15.3	48	111-140	Plantation in a valley. Northeast corner of stand has less red pine and is more intermixed with oak and red maple. Likely due to red pine failing soon after planting.
22	4124 - Red with White Oak	Sawtimber Well	2.8	87	81-110	
23	42120 - Planted Jack Pine	Poletimber Well	16.0	38	81-110	
24	42110 - Planted Red Pine	Poletimber Medium	18.0	40	111-140	East side has lower BA with mixed Quaking Aspen.
25	42120 - Planted Jack Pine	Sapling Well	28.6	16	Immature	
26	42110 - Planted Red Pine	Sawtimber Well	7.2	49	141-170	Stand was thinned last year of entry. No proposed treatment. Wait until next year of entry and thin out defect.
27	42120 - Planted Jack Pine	Poletimber Well	2.9	43	81-110	
28	4124 - Red with White Oak	Sawtimber Well	20.4	97	51-80	High quality oak stand. Single tree selection harvest in 2011. Heavy browse on oak regen. Possibly take out large declining oak next YOE.
29	42220 - Natural Jack Pine	Poletimber Well	108.6	21	1-50	Red Pine super canopy with dense second age class. Red Pine was inter planted and now found in pockets throughout stand. Quaking Aspen are in small dense pockets through stand also. It is sparse and open in the southwest corner.
30	42290 - Natural Mixed Pine	Sawtimber Well	8.9	116	111-140	Diverse stand with large diameter Red Pine and White Pine seed trees scattered throughout.
32	42120 - Planted Jack Pine	Sapling Well	54.9	17	Immature	Jack pine stand with red pine super canopy.
34	42140 - Planted Mixed Pine	Poletimber Well	23.9	38	81-110	Stand is mainly planted jack pine. Originally planted in 1978, then planted again on year later due to failure. Jack pine plantation is most evident in the center of the stand. Both the north and south ends are a mix of pine species.
35	42110 - Planted Red Pine	Poletimber Well	16.6	33	111-140	Stand comprised of larger diameter RP (57yrs) with planted RP (32yrs) underneath in the south end. The center of stand has less larger diameter RP and the planted RP is mixed with JP and mixed oak. North end of stand is heavier to JP and less larger diameter RP.

s t	Roscommon Mgt. Unit			Report 7	– Forested	Stands Compartment: 21 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	42120 - Planted Jack Pine	Poletimber Well	71.7	39	Unspecified	Possible treatment??
39	42110 - Planted Red Pine	Sawtimber Well	14.4	39	111-140	Red pine plantation planted in 1978.
40	42120 - Planted Jack Pine	Poletimber Well	16.0	36	51-80	OPIC - FMD: OI Stand Year Origin was 1978
41	42120 - Planted Jack Pine	Poletimber Well	62.5	38	81-110	Scattered singles and groups of monarch red pine over planted jack pine.
42	42290 - Natural Mixed Pine	Poletimber Well	1.6	57	81-110	Diverse stand similar to stand 104 with exception of large diameter pine.
43	42110 - Planted Red Pine	Sawtimber Well	2.2	54	81-110	
44	42120 - Planted Jack Pine	Poletimber Well	25.6	33	81-110	Supercanopy of large Red Pine and a few scattered White Pine.
45	4123 - Red Oak	Sawtimber Well	6.1	94	141-170	
46	42290 - Natural Mixed Pine	Sawtimber Medium	4.5	62	81-110	New stand. Leftover from oak harvest to the south. Large log sized Red Pine to the west and thins out to the east. Large over mature oak scattered throughout.
104	42290 - Natural Mixed Pine	Sawtimber Well	3.4	71	51-80	Stand surrounding kettle pond.
105	42210 - Natural Red Pine	Poletimber Poor	3.6	46	1-50	Mainly pole sized Red Pine stand with a few scattered large diameter seed tree Red Pine. Select cut at last YOE.
109	4130 - Aspen	Poletimber Well	2.4	42	81-110	
111	42110 - Planted Red Pine	Sawtimber Poor	21.5	46	1-50	Leftover red pine from a sale in 2001. Natural Jack Pine Regeneration in the openings. Decent oak regen
123	42110 - Planted Red Pine	Sawtimber Well	11.2	54	141-170	
128	4126 - White, Black, N. Pin Oak	Sawtimber Poor	2.8	100	1-50	Thinned oak stand that is converting to red maple and quaking aspen.
129	42200 - Natural White Pine	Sawtimber Well	3.2	69	141-170	Harvested to remove low quality stems last YOE. Very good WP site. Thick regen of Red Maple and Quaking Aspen in the south end.
130	42120 - Planted Jack Pine	Sapling Well	61.3	18	Immature	

S t	Roscommo	n Mgt. Unit		Report 7	- Forested	Stands Compartment: 21 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
135	42110 - Planted Red Pine	Sawtimber Poor	4.7	69	1-50	Treated last year of entry.
211	42110 - Planted Red Pine	Sawtimber Poor	9.3	42	1-50	Leftover red pine from a sale in 2001. Natural regen of jack pine and has good oak regeneration in many spots.
213	4123 - Red Oak	Sawtimber Medium	19.2	87	51-80	Shelterwood-prep completed in 1990. Rx burn to set-back red maple stump sprouts, but not torch mid-story white pine. Long-term mixed oak/pine management. BURNED IN 2008.
223	4130 - Aspen	Poletimber Well	13.2	39	Unspecified	Stand Year Origin was 1978
313	4123 - Red Oak	Sawtimber Medium	5.8	87	51-80	This stand is similar to 13 and 213, but was not part of the prescribed burn in 2008. Due to this the understory is more

dense than those stands.



Stand	Cover Type	Acres	Managed Site	General Comments:
3	122 - Road/Parking Lot	17.5	No	Harvested in 2008. 10 to 30 BA of mature Oak/Red Pine/White Pine super canopy with different age classes filling in the sub canopy.
4	500 - Water	1.1	No	
17	3102 - Grass	0.5	No	OLD WELL SITE
19	3102 - Grass	0.7	No	OIL WELL SITE
31	6229 - Mixed lowland shrub	6.8	No	
37	3102 - Grass	0.8	No	Wet grassy area with a few stunted jack pines. South edge of private camp.
38	3102 - Grass	1.9	No	Wet grassy area with a few stunted jack pines.
401	3102 - Grass	1.7	No	