



Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 71014

Entry Year 2017

Acreage: 634

County Roscommon

Management Area: AuSable Outwash

Revision Date: 2015-07-08

Stand Examiner: Doug Bates

Legal Description:

T24N R 02W Sections 6, 7, & 18

Identified Planning Goals:

Maintain age and species diversity in both early and late successional ecosystems.

Soil and topography:

Terrain is generally flat to rolling hills. The north portion of the compartment is low and soils consisting of Rifle peat, Newton loamy sand, and Saugatuck sand. The southern portion of the compartment is upland with soils consisting of Grayling sand, Roselawn sand, and Roselawn gravelly sandy loam.

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

A portion of the compartment lies within the boundary of the Village of Roscommon. This compartment comprises the west 3 sections of the Forest Fire Experiment Station. Private property within the compartment is fairly evenly distributed between subdivisions, permanent residences, and industrial/commercial properties.

Unique Natural Features:

The Marguerite Gahagan Nature Preserve is in the SENW and E1/2SW of Section 7.

Archeological, Historical, and Cultural Features:

None identified or detected during field work.

Special Management Designations or Considerations:

Part of the Michigan Department of Natural Resources Forest Fire Experiment Station.

Watershed and Fisheries Considerations:

Robinson Creek (a trout stream) runs along the east edge of the compartment.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions

Sections 6, 7, & 18, T24N R2W, Roscommon County

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 600 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. There is a gravel pit in Section 18 and another to the north (Section 32, T25N R2W). There may be additional potential within the compartment. St. Helen Field is six miles to the southeast. The field has produced over 8.7 million bbls of oil and 14.7 Bcf gas from the Devonian Richfield Member. It is in secondary recovery operations currently. Most of the State land in the compartment is currently leased.

Vehicle Access:

Vehicle access to most of the compartment is excellent via state highway, county roads, and forest two-tracks except in section 6 where access is limited by wet terrain and private property.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Dispersed recreational hunting within the compartment occurs throughout the parcel for hiking, bird watching, berry / mushroom picking, deer hunting and small game hunting. Located in the In the North half of the compartment is the South

Branch Au Sable River, a high quality trout stream, used by anglers and water enthusiasts. Undesignated ORV trails are likely within the compartment from surrounding private land owners. Utilize forest management practices to curtail damage by off road vehicle use.

Fire Protection:

Additional Compartment Information:

The following reports from the Inventory are attached:

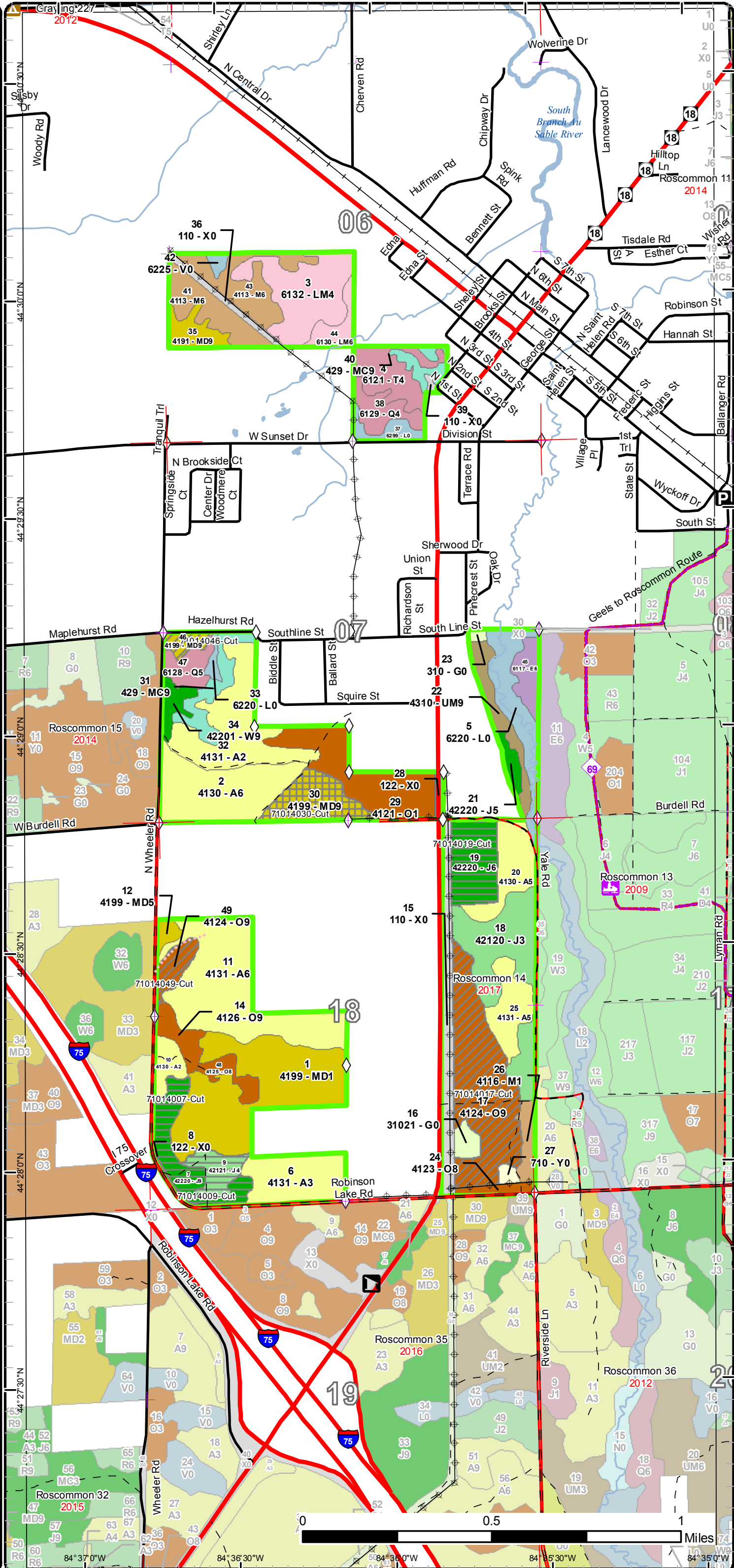
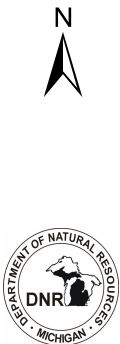
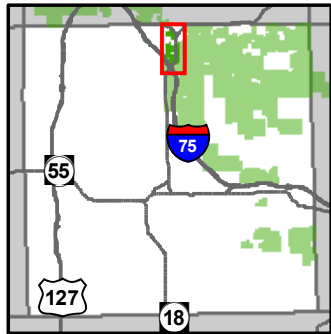
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

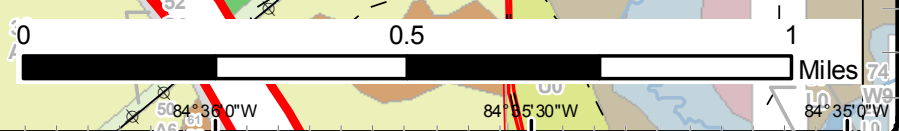
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

Compartment: 14
 T24N, R02W 06, 07, 18
 County: Roscommon
 Unit: Roscommon
 Mgmt Area: AuSable Outwash
 YOE: 2017
 Acres: 634 GIS Calculated
 Examiner: Doug Bates
 Map Revised: 7/22/2015
 Map Phase: Pre-Review

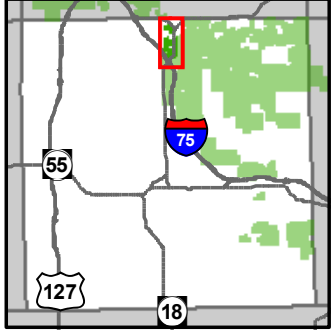


- ✦ Remonumented Section Corner
- ◇ Field Grade GPS Corners
- Miris Corners
- Highway
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Closed Roads
- ▲ Campground
- P Parking Lot
- ♿ Snowmobile Trails
- Designated ORV Routes
- Designated Snowmobile Trails
- Railroads
- Rivers
- Lakes
- Powerline
- Treatments
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Seed Tree (w/Reserves)
- Forest Covertype
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Fores
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- Non-Forest Covertype
- 110 - Low Intensity Urban
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 622 - Lowland Shrub
- 710 - Sand/Soil

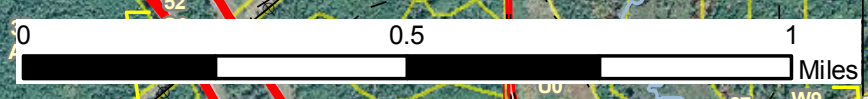
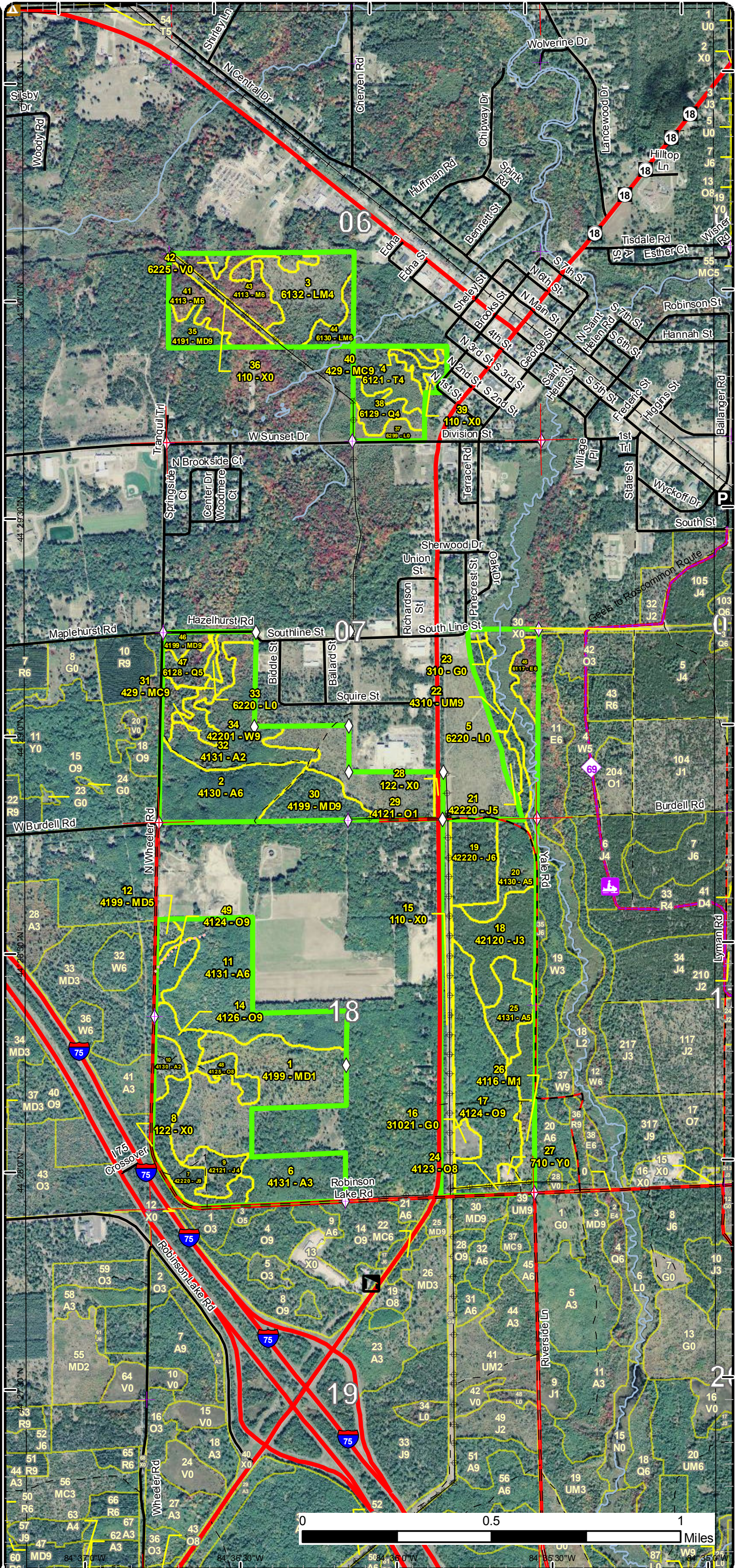


Stand Boundary Map

Compartment: 14
 T24N, R02W 06, 07, 18
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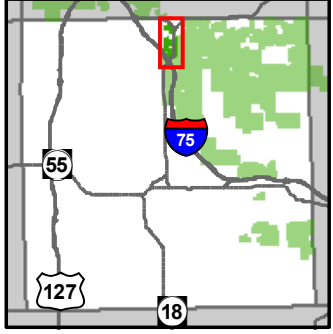


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Special Conservation Areas & Site Conditions Map

Compartment: 14
 T24N, R02W 06, 07, 18
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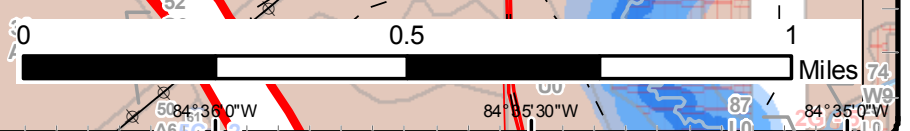
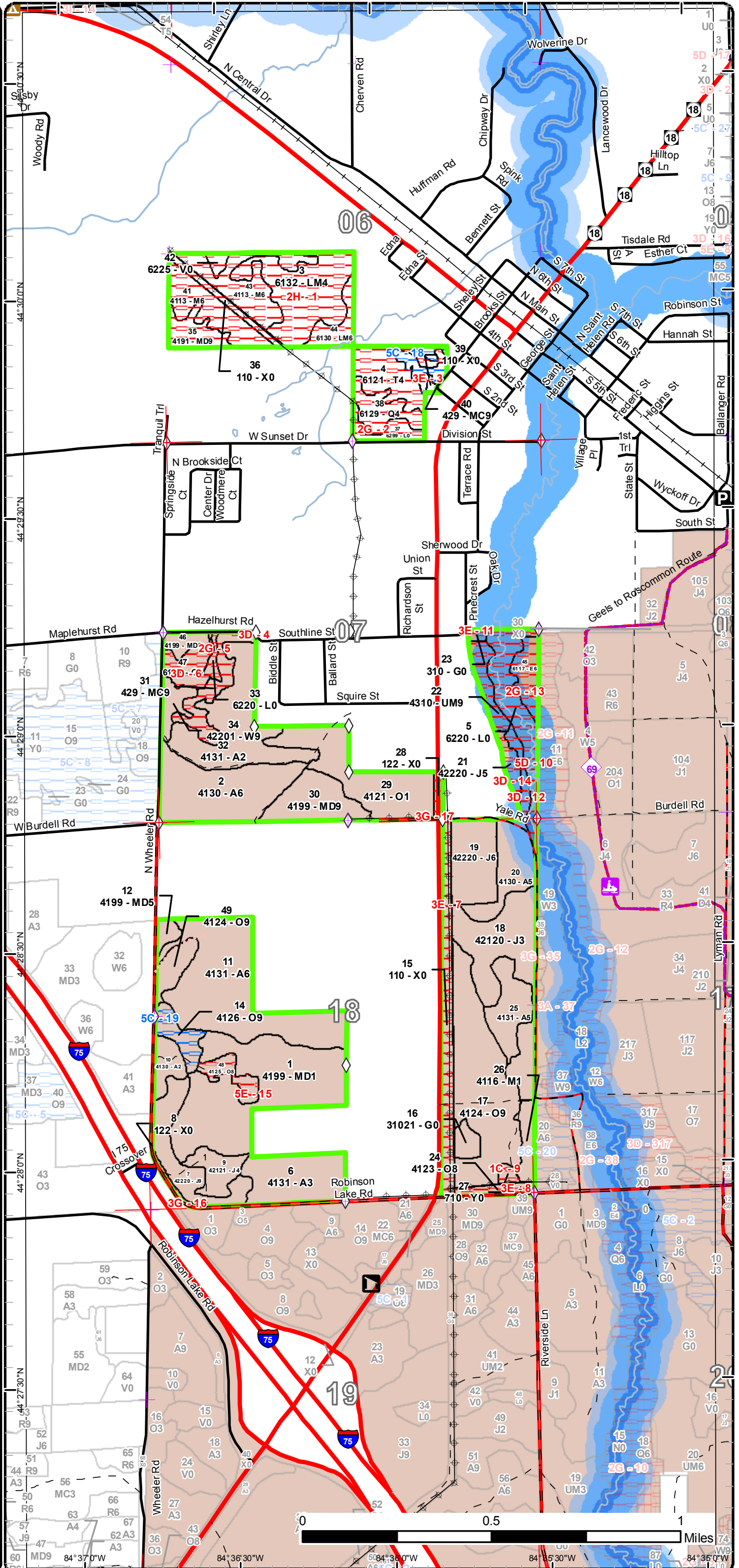


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- ♿ Snowmobile Trails
- Designated ORV Routes
- Designated Snowmobile Trails**
- Designated Snowmobile Trails
- Railroads
- Rivers
- Powerline
- Stand Boundaries
- Site Condition**
- Available w/ Constraints
- Unavailable
- Available Factors W/ Constraints**

5C: Delay treatment for age/size class diversity or exceptional site quality

Unavailable Factors

- 1C: Other dept or div proc/practices
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3D: Recreational / Scenic values
- 3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)
- 3G: Other Influence zones - See comments
- 5D: Unproductive Forest Land
- 5E: Long-Term Retention
- Special Conservation Areas**
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Research, Development, and Military Lands



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	39	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Herbaceous Openland	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Jack Pine	0	0	0	34	0	0	8	38	0	0	0	0	0	0	0	0	0	0	80
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	16
Lowland Deciduous	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	7
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	34
Lowland Shrub	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Mixed Upland Deciduous	0	57	0	2	0	0	0	0	0	0	24	4	0	0	0	0	0	0	87
Northern Hardwood	0	6	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	37
Oak	0	29	0	0	0	0	0	0	0	12	57	0	0	0	0	0	0	0	98
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Tamarack	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	10	15
Upland Mixed Forest	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	10
Urban	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
White Pine	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
Total	60	92	39	169	15	0	15	48	31	51	97	9	0	0	0	0	0	10	636



Report 2 – Treatment Summary

Roscommon Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 14
Total Compartment Acres: 634

Commercial Harvest - 114
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Jack Pine	42	0	0	0	0	0	0	0	0	42
Mixed Upland Deciduous	0	0	0	16	0	4	0	0	0	20
Oak	0	0	0	0	0	52	0	0	0	52
Total	42	0	0	16	0	56	0	0	0	114

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	114	0	0	0	0	0	0	0	0	114
Next Step	0	25	25	0	0	0	83	0	0	134
Total	114	25	25	0	0	0	83	0	0	248



S t 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
7	71014007-Cut	17.0	42220 - Natural Jack Pine	Sawtimber Well	60	Unspec ified	Harvest	Clearcut	4222 - Natural Jack Pine	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			*Final harvest all species to a 2 inch d.b.h.. Mark to leave 10-20 basal area of large crowed oaks for mast/seeding. Side towards white oak if possible.								
<u>Specs:</u>			*Place a regeneration protection spec in contract to protect as much of the god oak regeneration as possible. *No retention do to its long narrow shape and possible blowdown.								
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u>			Jack pine mix with oak at varying stocking level each to full stocking. If does not restock trench and plant with jack pine.								
<u>Regen:</u>											
<u>Other</u>			Old next step comments:								
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/1 /2016								
9	71014009-Cut	7.9	42121 - Planted Jack Pine, Mixed Deciduous	Poletimber Poor	55	Unspec ified	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			*Final harvest all species to a 2 inch d.b.h. including the pin cherry. Mark to leave 10basal area of large crowed oaks for mast/seeding. Side towards white oak if possible. Have stand chipped when harvested.								
<u>Specs:</u>			No retention do to type conversion								
<u>Next Step</u>			SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)								
<u>Treatments:</u>											
<u>Acceptable</u>			Planted red pine to full stocking levels.								
<u>Regen:</u>											
<u>Other</u>			Replant stand to red pine at plantation spacing. Old next step comments:								
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/1 /2016								
17	71014017-Cut	45.9	4124 - Red with White Oak	Sawtimber Well	93	111- 140	Harvest	Crown Thinning	4122 - Oak, Pine	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Thin stand down to a 70-90 basal area average. Remove poor formed, overmature trees when possibly. Side towards keeping more white oak and if find a large masted oak, even if it's red, leave for mast.								
<u>Specs:</u>											
<u>Next Step</u>											
<u>Treatments:</u>											
<u>Acceptable</u>			An oak stand with upcoming regeneration of aspen and white pine mixed in. Red maple can be a component but just not the dominant.								
<u>Regen:</u>											
<u>Other</u>			Steering stand overall tree class into younger healthier forms. Old next step comments:								
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/1 /2016								
19	71014019-Cut	17.2	42220 - Natural Jack Pine	Poletimber Well	67	Unspec ified	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal
Habitat Cut: No			Site Condition:								
<u>Prescription</u>			Final harvest all species to a 2 inch d.b.h. with the following exceptions:								
<u>Specs:</u>			Do not cut any red pine and mark a few large mast oaks for mast. The stand needs to be chipped so can trench. Leave no retention do to site conversion.								
<u>Next Step</u>			SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)								
<u>Treatments:</u>											
<u>Acceptable</u>			Planted red pine to full stocking. Also expect some oak regeneration to be present.								
<u>Regen:</u>											
<u>Other</u>			Old next step comments:								
<u>Comment:</u>											
<u>Proposed Start Date:</u>			10/1 /2016								

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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
30 71014030-Cut	16.1	4199 - Other Mixed Upland Deciduous	Sawtimber Well	93	81-110	Harvest	Seed Tree with Retention	4310 - Pine, Oak Mix	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Remove all aspen and red maple to a two inch d.b.h.. Remove the white pine down to a five inch d.b.h. and mark to leave 20-30 basal area of oak for mast and seeding, preferably white oak when possible. Do not cut any red pine.

Specs:

Place a 3% by area retention island in the stand. Try to place in a way where get a good percentage of red pine and white oak.

Next StepTreatments:

Acceptable A mixed stand of varying amounts of either oak and/or aspen with white pine to full stocking.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

46 71014046-Cut	3.8	4199 - Other Mixed Upland Deciduous	Sawtimber Well	100	81-110	Harvest	Low Thinning	4121 - Oak, Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin the stand down to 50-70 basal area average. Remove all aspen and multi-stemmed red maple. Leave larger masteds oaks for mast/seed.

Specs: Side to white oak when possible.

Next StepTreatments:

Acceptable A mixed stand of oak, aspen, and white pine with a red maple component to full stocking

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

49 71014049-Cut	6.1	4124 - Red with White Oak	Sawtimber Well	88	111-140	Harvest	Crown Thinning	4124 - Red with White Oak	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Do a crown thinning by marking the overstory down to an average BA of 70. Open up around some of the larger crown trees for mast/seed.

Specs: Then manage for best tree in place and side towards leaving more white oak if possible. No retention. Put the allowable damage to red maple regeneration at a higher percent. It is thick in here and will regenerate if removed for access.

Next StepTreatments:AcceptableRegen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

**Total Treatment
Acreage Proposed: 114.1**

Report 5 – Site Conditions

Roscommon Mgt. Unit

Doug Bates : Examiner

Compartment: 14

Year of Entry: 2017

Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Conditions																		
Acres	Available	With Condition	Not Available	5C	1C	2G	2H	3D	3E	3G	5D	5E										
172	172	0	0	Aspen																		
2	0	0	2	Bog											2							
5	4	0	1	Herbaceous Openland											1							
79	76	0	4	Jack Pine											4							
16	0	0	16	Lowland Conifers											7							
7	0	0	7	Lowland Deciduous											7							
34	0	0	34	Lowland Mixed Forest											34							
25	0	0	25	Lowland Shrub											7							
87	79	0	8	Mixed Upland Deciduous											8							
37	6	0	31	Northern Hardwood											31							
97	81	7	9	Oak										7	4	6						
2	0	0	2	Sand, Soil											2							
15	0	0	15	Tamarack											15							
15	0	5	10	Upland Conifers										5	10							
10	0	0	10	Upland Mixed Forest											10							
26	1	0	25	Urban											4	19	3					
5	5	0	0	White Pine																		
634	423	12	199	Total Forested Acres										12	2	38	78	31	23	3	18	6
	67%	2%	31%	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
1	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	78	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Doug Bates : Examiner

Compartment: 14

Year of Entry: 2017

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	3D: Recreational / Scenic values	10	3A: Potential old growth / biodiversity	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3D: Recreational / Scenic values	7	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	18	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Doug Bates : Examiner

Compartment: 14

Year of Entry: 2017

8	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	4	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	1C: Other dept or div proc/practices	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	5D: Unproductive Forest Land	18	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	3E: Easement / lease, non-military (e.g.- Consumers Power red pine, etc)	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Michcon buried petroleum line R.O.W..							
12	Unavailable	3D: Recreational / Scenic values	10	3G: Other Influence zones - See comments	3A: Potential old growth / biodiversity	Unspecified	Unspecified
Comments: Provides shade to Robinson Creek which feeds a cold water trout watercourse. Super-canopy white pine provides scenic value also in close proximity to the Village of Roscommon.							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: Borders Robinson Creek which is a feeder stream in the South Branch AuSable River, a Natural River. Leave to act as buffer for sedimentation to future treatments further east.							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Doug Bates : Examiner

Compartment: 14

Year of Entry: 2017

14	Unavailable	3D: Recreational / Scenic values	4	3G: Other Influence zones - See comments	Unspecified	Unspecified	Unspecified
Comments: Buffer for Robinson Creek, which is a feeder stream into a Natural River, South Branch AuSable.							
15	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	3G: Other Influence zones - See comments	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: County road and corresponding cleared R.O.W..							
17	Unavailable	3G: Other Influence zones - See comments	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: State highway, M-18, and corresponding cleared R.O.W..							
18	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
Comments:							
19	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



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 – 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	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.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4199 - Other Mixed Upland Deciduous	Sapling Poor	56.8	5	Immature	Stand final harvested in the Fall 2009. The white oaks were left resulting in an average of 10-20 basal area overall, but the main concentration is in the northern half. They are not impacting the regeneration at this time. The red maple is thick in many locations and is the dominant regenerating species. There is good oak stump sprouting though. These seem to be the only oaks tall enough to avoid the browsing. Decent oak seeding in here but it is being browsed to the snow line. The last inventory said to interplant red pine in insufficient regenerated spots. At this time it is too early to tell if the open spots that are currently there won't fill in. Should be able to decide next YOY if and where any red pine needs inter-planted.
2	4130 - Aspen	Poletimber Well	32.8	27	Immature	Stand has terrain to it, i.e. ravines. It has come back real nice to aspen. In the pole size class with some just at log even. Have mix of oak from stump sprouting scattered about from the parent stand. The regeneration in the sub-canopy contains all the overstory species, with red maple being overwhelmingly the heaviest.
3	6132 - Mixed Lowland Forest with Cedar	Poletimber Poor	27.8	80	1-50	Stand is part of a larger 80 acre landlocked parcel of stand land. It is lowland ground with balsam fir, some poplar and cedar. The cedar is old with some log sizes but mainly poles. It is starting to die out and containing heavy blow down areas. Recommend putting up the 80 acres for disposal.
4	6121 - Tamarack	Poletimber Poor	14.8	30	Immature	Best way to describe the stand is a lowland complex with some slightly higher ridges mainly in the northern half. The low area is tamarack in both canopy layers. Mixed in with the tam. is heavy tag alder and dogwood. On the higher ridges is where find the larger trees of the tamarack species along with the black spruce and balsam fir. It is a stand that is best left alone and let nature manage it.
6	4131 - Aspen, Oak	Sapling Well	21.4	25	Immature	Good dense stand with almost an equal mix of oak and aspen. The mix is evenly spaced also. A few scattered log sized oaks were left from the parent stand, mainly white oak.
7	42220 - Natural Jack Pine	Sawtimber Well	17.0	60	Unspecified	Mature jack pine stand ready to be treated. Has very good oak regeneration of all height classes with some jack pine mixed in. Mark to leave 10-20 basal area of large crowned oaks for mast. Will need to be careful not to damage to much of the regeneration with the harvest. Do not leave retention do the narrow size and potential for blown down next to the road. Feel the site will be a good mix of oak and jack pine regeneration post harvest especially with the amount that is currently there.
9	42121 - Planted Jack Pine, Mixed Deciduous	Poletimber Poor	7.9	55	Unspecified	Stand appears to have been inter-planted with jack pine as evident by the rows of jack pine and old trench marks. Could not find any planting records though. The pine is very poor quality and form with barely one stick in 50+ year old stock. About 20 BA of large oak trees were left for mast. They are starting to decline. The open areas have pin cherry in them and they were trenched around instead of planting these areas. Recommend final harvesting the stand and plant to red pine. This particular area does not grow good jack and maybe more conducive to red. Plant all areas including those in pin cherry. There is some oak and jack regeneration present and those will mix in with the future stand



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
10	4130 - Aspen	Sapling Medium	6.3	18	Immature	The stand was final harvested in 1997. There are two distinct aspen clones in the north and south quarters. The middle of the stand is mainly open grass with stump sprouting oaks scattered about. The aspen canopy closure is 90+ percent whereby the oaks is under 25%. The stand are too small to stand alone and they were cut at the same time. Over time will become on since there is a fair amount of oak in under the aspen and the clones are slowly moving into the middle.
11	4131 - Aspen, Oak	Poletimber Well	51.5	26	Immature	Good aspen regeneration being dense for the most part. Do have a good oak component mixed in and this is where the canopy closure is less. The regeneration under the aspen is heavy to maple. Do find oak but it is under mainly the stump sprouting oaks.
12	4199 - Other Mixed Upland Deciduous	Poletimber Medium	2.5	26	Immature	Mixed stand of mainly stump sprouted oaks and red maple. It is sparser in the center with the denser canopy in the outer perimeter where picking up aspen coming in.
14	4126 - White, Black, N. Pin Oak	Sawtimber Well	6.9	91	111-140	Almost a pure white oak stand that is just into sawlog class. Stark difference to the oak stand to the immediate north. This one has little red maple regeneration and a good amount of oak. Recommend leaving this stand for now. Let it get a little for sawlog size to it and then thin.
17	4124 - Red with White Oak	Sawtimber Well	45.9	93	111-140	Stand was treated in 1997 when all the aspen, jack pine, and red maple were removed. The maple regeneration is heavy to full in a great majority of the stand. Do find mixed oak in there and then where the aspen was the aspen is coming in good. Recommend thinning the stand down to a 50-70 basal area managing for younger trees. The stand has a higher elevation on the west half and grades down slope to the east. The BA is higher on the higher elevation whereby the lower elevation is where most of the white pine is found along with aspen regeneration.
18	42120 - Planted Jack Pine	Sapling Well	33.5	22	Immature	Stand was harvested in 1988 and was planted in 1993 to jack pine. The pine is gnarly and not the best form. It is dense though.
19	42220 - Natural Jack Pine	Poletimber Well	17.2	67	Unspecified	Mature jack pine stand with a good mix of oak. The oak is poor quality pin though and is older than the jack pine. There is decent oak regeneration underneath with some white pine. Recommend harvesting the stand leaving a few large canopied oak for mast/visual. Leave all red pine and replant the site to red pine. This is a good red pine site and would like to put a longer lived species to try and do uneven management in the future along this heavily traveled route. Feel the oak will stump sprout good here also and give the pine a good mix for the future. With the potential for blown down recommend no retention.
20	4130 - Aspen	Poletimber Medium	14.5	27	Immature	Dense aspen regeneration where the parent clones were. There is a fair amount of open areas yet between the clones that is slowly filling in with the aspen and oak along with some white pine and maple. The understory regeneration present is heavy on the red maple side followed up by pine and then oak.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	42220 - Natural Jack Pine	Poletimber Medium	3.8	65	Unspecified	A sparser jack pine stand with an oak component. There is decent jack pine regeneration in the understory with some oak. The stand could be harvested but with the close proximity to Robinson Creek which feeds into the South Branch AuSable River, a Natural River, it is best to leave the stand as a buffer and let it manage itself .
22	4310 - Pine, Oak Mix	Sawtimber Well	9.8	62	81-110	Two-aged stand with overmature oak and super-canopy white pine over a younger denser stand of white, red, and jack pine around 40 years younger. The super-canopy white pine line the bank edge of Robinson Creek. The oak is scattered about and is being over taken by the pine, especially white. This stand could be treated by removing the oak and some pine out of there but do to it bordering Robinson Creek and the amount of damage to other regeneration mixed in with the overstory. It is best to let this stand manage itself and give scenic value, it is converting back to a white pine stand.
24	4123 - Red Oak	Sawtimber Medium	3.8	93	51-80	This is a strip that lies on the east side of Robinson Lake Road and contains the cleared R.O.W. for an overhead powerline. Between the road and the powerline is a thin strip of mature oak and pine. It is not very wide, contain much product, and would difficult to manage under a harvest. Leave trees for visual. There is a buried Petroleum Line along the edge of the roadway also.
25	4131 - Aspen, Oak	Poletimber Medium	12.8	27	Unspecified	Stand was final harvested but apparently left some larger diameter white pines based on the majority of them in the stand are log sized. This stand was part of a parent stand that included stand 18. When the parent stand was trenched and planted to jack pine, this area was not treated do to the numerous aspen clones and good oak stump sprouting.
26	4116 - Mixed N. Hardwood - Aspen	Sapling Poor	5.5	5	Immature	This was two separate stands with the north half being an oak type and the southern half jack pine. It was cut in September 2009 and had all species removed to 5 inches and left all white oak, red/white pine and some marked trees. The north half actually has come back in as aspen and red maple both in the overstory and under. The south half is more open with less overstory canopy but decent oak regeneration. Lumped two stands together because harvested at the same time and their small size.
29	4121 - Oak, Aspen	Sapling Poor	29.0	7	Immature	This was a final harvest done in 2006. It was trenched and planted to a red pine plantation in 2008. The red pine is doing good, but so is the stump sprouting oak and aspen clones. The oak/aspen is at canopy closure for a forested stand. At this point it has not shaded out the pine. Believe the pine will eventually overtake the current overstory and become a pine stand with some mixed oak/aspen. A 50+ foot strip was left along M-18 for visual. It consists of pin oak and jack pine.
30	4199 - Other Mixed Upland Deciduous	Sawtimber Well	16.1	93	81-110	Overmature pin oak and aspen. There is a moderate density of oak regeneration along with maple. White pine is there to a lesser degree. Recommend a harvest and manage for a pine/oak mix. Maple and aspen mixed in is acceptable.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	429 - Mixed Upland Conifers	Sawtimber Well	10.2	110	111-140	An older white pine stand with a good percentage of these pines being super-canopy. The mid-canopy is filled with some white pine, balsam fir, and traces of oak, but the main component is red maple. The regeneration is heavy with a mix of maple, white pine, and fir. Directly across the street is a Marguerite Gahagen Nature Preserve open to the public. Recommend leaving this stand for scenic values. The north strip along Maplehurst, north of the pipeline R.O.W., had a treatment done in 1998 involving removing of aspen and jack pine.
32	4131 - Aspen, Oak	Sapling Medium	32.3	18	Immature	Two stands that were final harvested in 1997. The northern half was one stand that was slightly lower in elevation. Can see the difference in the size and quality of the aspen regenerating. They are smaller here. The aspen in the south half is much denser and larger diameter. Finding some even into pole size. Decided to combine the two stands though since they were treated at the same time and method. Overall the stand is patchy. The areas with no aspen will find oak or pin cherry or a mix of both.
34	42201 - Natural White Pine, Mixed Deciduous	Sawtimber Well	5.1	83	1-50	Visual buffer strip created from a treatment in 1998. This stand had all the oak, aspen, and jack pine removed. What resulted is a white pine stand mixed with red maple. The regeneration is heavy to maple and aspen.
35	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	7.6	95	51-80	Landlocked stand land with this stand consisting of pin oak, red maple, white pine, and jack pine of all size ranges. Mostly upland site. Adjacent landowner may be willing to allow access into area but not if we will be doing a treatment more than a light thinning. Recommend the 80 acre parcel be put up for disposal.
38	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	8.6	95	Unspecified	Spruce and tamarack mixed lowland stand. Has regeneration of both spruce and tamarack in the understory. Where this is absent the sub-canopy is tag alder. Inaccessible for commercial operations.
40	429 - Mixed Upland Conifers	Sawtimber Well	5.2	100	81-110	All the larger overmature jack pine have died out leaving the white pine as the dominant species. The stand is a mix of several species and is mainly high ground with some low swales here and there. The stand could be treated now but recommend waiting till the oaks get larger and then harvest leaving large white pine and oak several oaks for mast.
41	4113 - R.Maple, Conifer	Poletimber Well	14.3	75	81-110	Stand is part of a larger 80 acre landlocked parcel of stand land. It is mostly seasonably dry ground containing predominately red maple, some aspen mixed in, with some white pine and pin oak. There are some surpercanopy red and white pine out there but mostly the size class is large poles and some smaller log. An adjacent landowner would entertain allow access for treatment of stand if we only did a light thinning, nothing else. Recommend putting up the 80 acres for disposal.
43	4113 - R.Maple, Conifer	Poletimber Well	16.8	75	81-110	Stand is part of a larger 80 acre landlocked parcel of stand land. It is mostly seasonably dry ground containing predominately red maple, some aspen mixed in, with some white pine and pin oak. There are some surpercanopy red and white pine out there but mostly the size class is large poles and some smaller log. An adjacent landowner would entertain allow access for treatment of stand if we only did a light thinning, nothing else. Recommend putting up the 80 acres for disposal.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	6130 - Fir, Aspen, Maple	Poletimber Well	6.5	80	51-80	Stand is part of a larger 80 acre landlocked parcel of stand land. Low ground with balsam fir, quaking aspen and some other trace species. Recommend putting up the 80 acres as surplus.
45	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	7.5	57	111-140	Lowland hardwoods stand with a good component of fir/pine. It is along the edge of Robinson Creek which feeds into the South Branch of AuSable River. The ground grades upward as go to the east. The ground is seasonably wet and could be treated under just the right conditions, but recommend not to treat it because of the close proximity to the creek that feeds into a Natural River and potential for sedimentation. Leave as a buffer for treatments further east.
46	4199 - Other Mixed Upland Deciduous	Sawtimber Well	3.8	100	81-110	Overmature oak stand that has very little oak regeneration. The regeneration is heavy to maple and pine especially when under the same corresponding overstory species. This area is in a high visibility area and has the Marguerite Gahagan Nature Preserve directly across the street. Do a thinning removing all the aspen, and multi-stemmed red maple. Open up the areas around the large crowned oaks for natural seeding. Drop BA down to 70, where aspen is denser the BA will be less.
47	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	7.1	90	51-80	Mixed maple, cedar, white pine and balsam fir lowland stand of poorer quality. The sizes class is still in the pole size even with the higher ages. Decent regeneration amounts on the slightly "higher" low ground. Find heavy amounts of tag alder mixed in, sometimes just tag alder. Leave stand for visual concern and with the low ground conditions feel it would cause to much damage trying to treat and not get good regeneration besides. Contains some super-canopy white pine trees scattered about.
48	4125 - Black, N. Pin Oak	Sawtimber Medium	5.5	88	81-110	Long term retention pocket left from a previous treatment of Stand 1.
49	4124 - Red with White Oak	Sawtimber Well	6.1	88	111-140	Back in 1989 removed the red maple and aspen from stand. This resulted in a full red maple understory regeneration. Find a little bit of aspen where the parent clones were, mainly the northern quarter. The oak is at maturity and should be treated. The basal area is lighter at the north end and this is where find the aspen. Recommend thinning the stand to a 70 BA average. Open up around some of the larger crowned mast trees and then manage for best tree in place. Side towards white oak for residual also. Will damage a good amount of red maple regeneration but this is fine, it'll come back.



Stand	Cover Type	Acres	Managed Site	General Comments:
5	6220 - Alder/willow	18.4	No	Tag alder marsh with Robinson Creek flowing through it.
8	122 - Road/Parking Lot	1.3	No	Robinson Lake Road.
15	110 - Low Intensity Urban	18.8	No	This is a strip that lies on the south side of M-18 and contains the cleared R.O.W. for an overhead powerline. Between the road and the powerline is a thin strip of mature oak, aspen, and pine. It is not very wide, contain much product, and would difficult to manage under a harvest. Leave trees for visual/scenic values.
16	31021 - Cool Season Grass	3.7	No	Open grass field.that was at one time an old well site.
23	310 - Herbaceous Openland	0.9	Yes	Cleared opening containing utility R.O.W.'s including the active Michcon buried petroleum line and old abandoned Total line.
27	710 - Sand, Soil	1.5	No	This is a sand pit that was used as a non-designated shooting range. It has now since been closed with a gate because of safety concerns to nearby residences. The pit is to remain so it can be used by the Forest Fire Experiment Station for equipment testing.
28	122 - Road/Parking Lot	1.9	No	N. Roscommon Road and it's cleared R.O.W.'s.
33	6220 - Alder/willow	1.7	No	Tag alder marsh with some traces of red maple, cedar, white pine, and some balsam around the perimeter.
36	110 - Low Intensity Urban	3.7	No	Buried Petroleum Pipeline (MichCon) and its cleared R.O.W. When trees removed the water table moved up resulting in just wetland grasses coming in.
37	6299 - Lowland Shrub (OI)	5.2	No	Lowland grass mixed with woody shrub vegetation.
39	110 - Low Intensity Urban	0.7	Yes	Village of Roscommon Pump Station. Site is maintained by the village and is gated and locked.
42	6225 - Bog	1.6	No	