



Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 27

Entry Year 2016

Acreage: 1,256

County Roscommon

Management Area: Houghton Lake Wetlands

Revision Date: 06/24/2014

Stand Examiner: Doug Bates

Legal Description:

T24N R04W Sections 32 and 33

Identified Planning Goals:

Maintain current cover types staggering age classes providing healthy forests for both natural and human uses.

Soil and topography:

Mainly Rifle Peat with low flat topography.

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

Contiguous block of state land surrounded by state land.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

No special management needs found for this compartment.

Watershed and Fisheries Considerations:

None noted.

Wildlife Habitat Considerations:

None noted.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of peat and muck and minor 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. The nearest gravel pit is located several miles away and potential appears to be limited. East Norwich Field is located two miles to the northwest. The field has produced over 15.9 million BO and 15.7 Bcf gas primarily from the Devonian Richfield Formation, and is in secondary recovery operations currently. All of Section 32 and most of Section 33 are currently leased.

Vehicle Access:

The only vehicular access is via Higgins Lake Road which is a seasonal county road used as a snowmobile trail in the winter. Only one short forest road exists on a small high ground stand on the west corner where West Pine Drive turns into Higgins Lake Road.

Survey Needs:

None needed.

Recreational Facilities and Opportunities:

Snowmobile Trail 6/7 runs through this compartment on a seasonal county road, Higgins Lake Road, connecting Grayling to Houghton Lake. A combination ORV and Snowmobile Trail parking lot is found across West Pine Drive in the compartment to the north, just off the I-127 on/off ramps. Warning signs will be placed on the trail regarding logging activity on the snowmobile trail system and stacking of cut wood/landing site(s) will be set back off the trail system. All sign posts shall be protected. All stumps within 20 feet of the trail shall be Flush-Cut to ensure stumps do not result in unsafe conditions. Retention pockets will be placed along or near the trail when feasible. The only access is via Higgins

Lake Road, a seasonal county road, where the Department does not have jurisdiction to regulate how it is used. It is a public road regulated by the Roscommon County Road Commission. Contract specifications will be put in place recommending the trail bed be maintained with some sort of snow base. The producer and snowmobile club will need to work jointly on usage. The harvest is on wet soils that do not dry out enough during the summer that a winter cut window is required. Other recreation in the area is limited with occasional hunting usage.

Fire Protection:

This compartment is mostly wet swamp conifer with poor access for fire suppression.

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: 027
 T24N R04W
 Sections: 32, 33
 County: Roscommon
 Unit: Roscommon
 Management Area: Houghton Lake Wetlands
 YOE: 2016
 Acres: 1,256 GIS Calculated
 Examiner: Doug Bates
 Map Revised: 08/07/2014
 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
- PLSS Corner
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Stream
- Intermittent Stream
- Pipeline
- Powerline
- ORV Trails
- Snowmobile Trails
- ORV Trail
- Snowmobile Trail

Regen Legend

- Natural
- Planted

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Other Treatment - See Comments
- Treatments w/ Site Condition

Forest Stands

Level 3

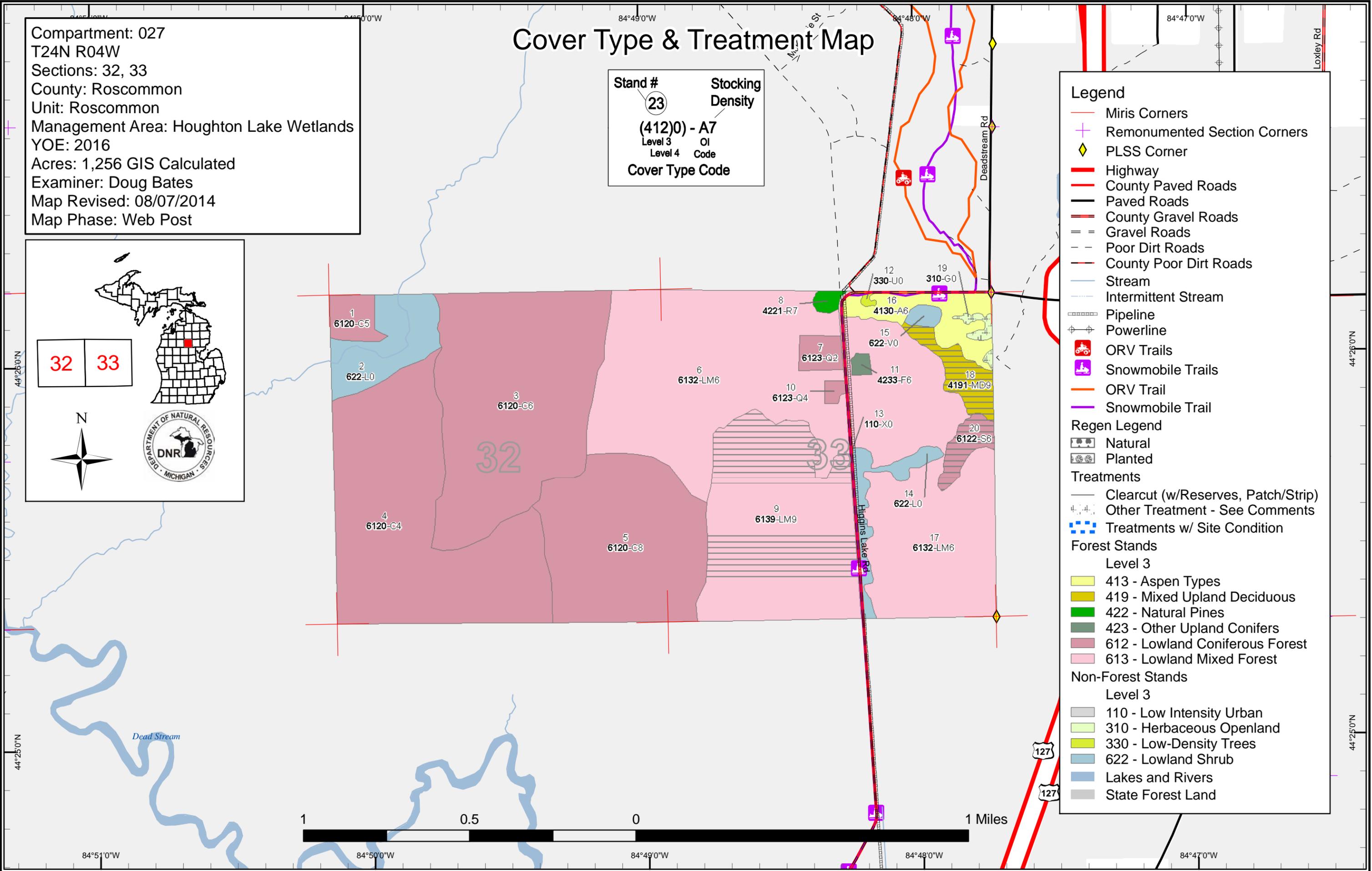
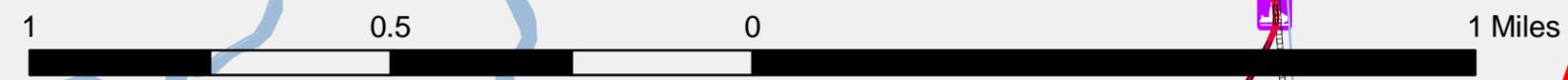
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- Lakes and Rivers
- State Forest Land

32 33



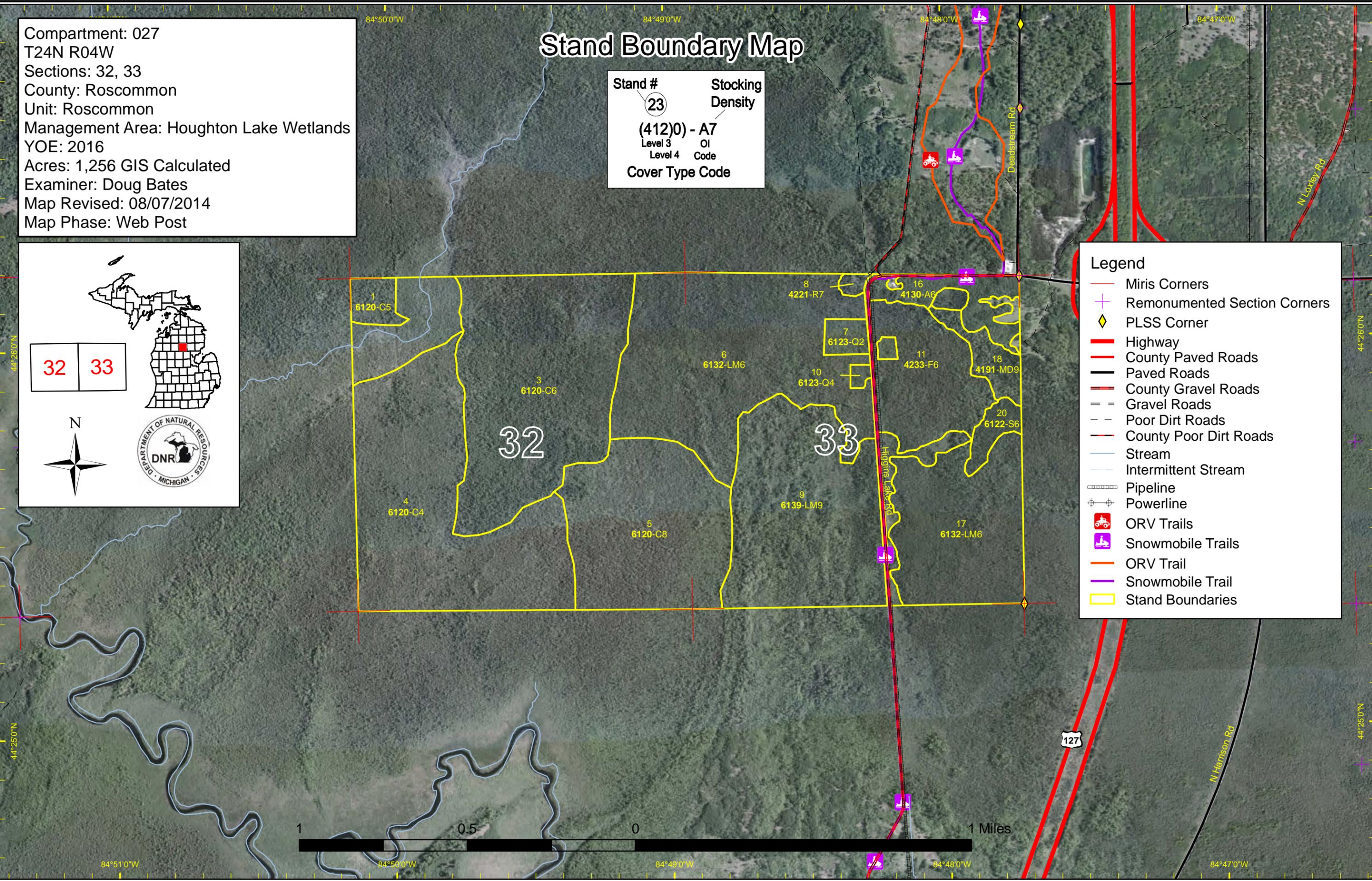
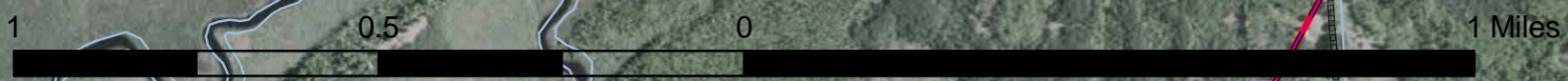
Stand Boundary Map

Compartment: 027
 T24N R04W
 Sections: 32, 33
 County: Roscommon
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- Intermittent Stream
- Pipeline
- Powerline
- ORV Trails
- Snowmobile Trails
- ORV Trail
- Snowmobile Trail
- Stand Boundaries



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	0	0	0	28	0	0	0	0	0	0	0	0	0	0	28
Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Cedar	0	0	0	0	0	0	0	207	12	200	0	141	0	0	560
Herbaceous Openland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Low-Density Trees	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lowland Conifers	0	0	9	2	0	0	0	0	0	0	0	0	0	0	11
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	161	391	0	0	0	552
Lowland Shrub	55	0	0	0	0	0	0	0	0	0	0	0	0	0	55
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	17	0	0	0	0	17
Red Pine	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
Upland Spruce/Fir	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	70	0	9	33	0	0	0	207	12	390	394	141	0	0	1256



Report 2 – Proposed Treatment Summaries

Roscommon Mgt. Unit
Year of Entry 2016

Compartment 027
Total Compartment Acres: 1,256

Acres by Treatment Type

Commercial Harvest - 111 Tree Planting - 0 Other - 0
 Habitat Cut - 0 Opening Maintenance - 4

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Lowland Coniferous Forest	11	0	0	0	0	0	11
Lowland Mixed Forest	82	0	0	0	0	0	82
Mixed Upland Deciduous	17	0	0	0	0	0	17
Total	111	0	0	0	0	0	111



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9	71027009-Cut	82.2	6139 - Mixed Lowland Forest	High Density Log	90	81-110	Harvest	Clearcut with Reserves	6117 - Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
<p><u>Prescription</u> Treatment: Remove all tree species to a two inch d.b.h.. The harvest is to be done in a dry summer or frozen ground conditions to lessen damage potential to wet soils.</p> <p><u>Specs:</u> Retention: Place pocket(s) of retention within the stand away from uncut portions of parent stand at a 10% total area. **Place 13-15 brush piles spaced out along the edge of the cut lines along the west and north sides adjacent to cedar stand. These are for rabbit habitat and should be constructed of a couple larger pole size pieces crossed over each other and then covered by tops/branches all the way to ground.</p> <p><u>Other</u> Access is down Higgins Lake Road, a seasonal county road that ends further south of the stand at the Muskegon River. This road is used as a snowmobile trail in the winter. If harvesting requires a winter treatment, specs. will already need to be in the contract to have the producer, administrator and grooming club to work together on both using the road. It is a public road and we can not restrict the producer from using it.</p> <p><u>Comments:</u></p> <p><u>Next</u> A mixed stand of varying stocking levels for maple, birch, fir, and spruce is acceptable. Some regeneration is already present. Evaluate the regeneration in ten years to determine if it is acceptable before cut the other two remaining strips from the original parent stand.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
18	71027018-Cut	17.4	4191 - Mixed Upland Deciduous with Conifer	High Density Log	93	51-80	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Treatment: Remove all tree species to a two inch d.b.h. with the following exceptions:</p> <p><u>Specs:</u> - Do not cut any red pine - Do not cut any white pine 16 inches or greater in d.b.h..</p> <p>Retention: Place pocket(s) of retention inside stand of 3-5 percent by area. **A higher damage percentage to understory regeneration will be needed to treat stand. The producer will need to cut regen. instead of running over to operate within stand. **The only access is from the north and through a Wildlife Division maintained food plot. Harvest will be done in winter to lessen potential damage to opening and to help operate within stand. Specs. will be in place to protect the opening and sale administrator will work with both the producer and biologist for placement. ****Place 8 brush piles along the treatment areas cut west edge and the adjacent cedar stand for rabbit habitat. Construction should consist of couple large pieces for the base covered by smaller top/branch materials.</p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next</u> A mixed regeneration of maple, spruce, oak, and/or aspen is acceptable. Present levels dictate it should fill in to full stocking after treatment.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
20	71027020-Cut	11.4	6122 - Black Spruce	High Density Pole	98	111-140	Harvest	Clearcut with Reserves	6124 - Lowland Spruce-Fir	Cmpt. Review Proposal
<p><u>Prescription</u> Treatment: Remove all tree species to a two inch d.b.h..</p> <p><u>Specs:</u> Retention: Place pocket(s) of retention inside stand of 3-5 percent by area. **The only access is from the north and through a Wildlife Division maintained food plot. Harvest will be done in winter to lessen potential damage to opening and to help operate within this wetter ground stand. Specs. will be in place to protect the opening and sale administrator will work with both the producer and biologist for placement. **Place 6-8 brush piles along the treatment areas cut edge and the adjacent cedar stands for rabbit habitat. Construction should consist of couple large pieces for the base covered by smaller top/branch materials.</p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next</u> A mixed stand of spruce and maple in vary amounts is acceptable. There is some regeneration present already.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										

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	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	NF_71027019-NonFor	3.6	3102 - Grass				Non-Forest Management	Other - Specify	3102 - Grass	Cmpt. Review Proposal

Prescription Maintenance such as mowing to be done by Wildlife Division.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: Unspecified

**Total Treatment
Acreage Proposed: 114.6**

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	#Type!	#Type!							

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

Total Treatment
Acreage Proposed: 0.0

Report 5 – Site Conditions

Roscommon Mgt. Unit

Doug Bates : Examiner

Compartment 027

Year of Entry 2016

Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5D	5B	5A
	Available	Not Available					
28	28		Aspen	28			
560	7	553	Cedar	7	0		553
11	11	0	Lowland Conifers	11			0
551	165	386	Lowland Mixed Forest	86		78	386
11	11	0	Lowland Spruce/Fir	11			0
17	17	0	Mixed Upland Deciduous	17			0
3	3		Red Pine	3			
2	2		Upland Spruce/Fir	2			
1,184	243	940	Total Forested Acres	165	0	78	940
	21%	79%	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	Not Available	5A: Not able to obtain desirable regeneration	12	2G: Too wet (sensitive soils, does not include access issues)			
Comments:							
003	Not Available	5D: Unproductive Forest Land	39	2G: Too wet (sensitive soils, does not include access issues)			
Comments:							
004	Not Available	5A: Not able to obtain desirable regeneration	748	2G: Too wet (sensitive soils, does not include access issues)			
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Compartment 027

Doug Bates : Examiner

Year of Entry 2016

005	Not Available	5A: Not able to obtain desirable regeneration	180	2G: Too wet (sensitive soils, does not include access issues)	
Comments:					
007	Not Available	5D: Unproductive Forest Land	15		
Comments:					
008	Not Available	5A: Not able to obtain desirable regeneration	1	2G: Too wet (sensitive soils, does not include access issues)	
Comments:					
009	Not Available	3G: Other Influence zones - See comments	6		
Comments: County Road					
010	Not Available	5D: Unproductive Forest Land	4	2G: Too wet (sensitive soils, does not include access issues)	
Comments:					
011	Available	5B: Maintain for regeneration purposes	37		
Comments: Allow for paper birch seeding to be blown into cut stand to north.					

Roscommon Mgt. Unit

Report 5 – Site Conditions

Compartment 027

Doug Bates : Examiner

Year of Entry 2016

012	Available	5B: Maintain for regeneration purposes	42
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Comments:

Seeding of paper birch into cut area to north.



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
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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	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	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
HCVA	Legally dedicated Natural Areas, Wilderness or Wild Areas	The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	Medium Density Pole	12.3	85		Poor quality cedar stand with no regeneration of it. The ash component is dead. This stand is the tip of a stand to the west in C24.
3	6120 - Lowland Cedar	High Density Pole	199.9	90	81-110	More open areas with more species found in the overstory such as red maple and spruce. Larger spruce found here. The cedar quality not as good as stand to the east. Maybe stand elevation is lower. More tag alder present. Hard to access to harvest with the loss of the cedar component completely based on the heavy deer sign, treatment should not be done.
4	6120 - Lowland Cedar	Low Density Pole	206.9	72	1-50	Poor quality cedar with no regeneration. Ash dead with only some regeneration of it. Areas of decent maple regeneration with some areas exclusively tag alder. No way to get to too harvest if wanted too.
5	6120 - Lowland Cedar	Medium Density Log	141.3	115	81-110	Larger cedar in the log class, but still low quality. Ash is all dead in the stand. No cedar regeneration but some balsam fir and ash. Not sure how long the ash will survive till bore hits again. Site is wet, no access, and no regeneration of it. Couple this will deer numbers in the area would lose the component all together after harvest. Would never regenerate it. Leave stand as is.
6	6132 - Mixed Lowland Forest with Cedar	High Density Pole	208.9	100	111-140	Decent cedar stand, some large log sizes but mostly poles. No regeneration of cedar, Only regeneration is ash and fir. Heavy deer and rabbit sign. Browsing everything but the ash and balsam fir. Do not harvest, won't regenerate and will lose cedar completely.
7	6123 - Lowland Fir	Medium Density	8.7	26		Strip cut done in 1988. Heavier fir just still not quite out of the sapling class. Some large trees were left in the strips but not enough to impact. Pockets of aspen scattered amongst fir/spruce. Just a mix of everything at this point.
8	42210 - Natural Red Pine	Low Density Log	3.1	104	1-50	Red pine overstory is dying with multiple snags. Red maple regeneration coming in. Stand will eventually be a maple type. It is a slight ridge between two low areas. Had a prescribed burn done in it and it got too hot. Heavy scorch marks on the boles of the red pines that have died most recently. Their in scattered pockets also. Bark Beetle heavy in the snags and will be a matter of time till they spread to the live ones. Small stand with not enough volume to warrant a harvest. Let manage itself. Future snags will benefit wildlife species.
9	6139 - Mixed Lowland Forest	High Density Log	161.0	90	81-110	This stand is so diverse and intermixed that it would be very hard to delineate it out into separate stand with all the transition zones involved. It is mainly two types, black spruce and paper birch. The birch is found on the slightly higher mounds with trace amounts of aspen and maple. The regeneration is mainly red maple but limited. Most of the sub-canopy is tag alder. These mounds grade down into the spruce with some balsam fir. More regeneration of spruce and fir in the sub-canopy but still quite a bit of tag. The most practical way to treat it as a whole stand but this would not be the best to regenerate the birch. Recommend breaking the stand into at least four strips and cut alternating strips allowing the wind to disperse birch seeds from untreated strips into the open strips. The soils have a high water table and doubt if could harvest in a dry summer. This leaves a winter harvest as optimal but access is down a seasonal county road that is used as a snowmobile trail



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
10	6123 - Lowland Fir	Low Density Pole	2.4	37	1-50	Strip cut done in 1977. The balsam is larger here with the sub-canopy being fir with trace of birch and spruce.
11	42330 - Upland Fir	High Density Pole	2.3	37	1-50	Strip cut done in 1977. Just into pole class. Better stocking than stand west of road. Mix of aspen and fir with birch and trace amounts of cedar and spruce.
16	4130 - Aspen	High Density Pole	28.2	35		Harvested in 1978. Aspen clearcut that came back fairly well. There is still some aspen in the sub-canopy but most is either oak or maple. Large aspen is found on the eastern end. Evaluate in another ten years to determine if want to treat then.
17	6132 - Mixed Lowland Forest with Cedar	High Density Pole	182.3	105	81-110	Cedar stand with a heavy component of deciduous trees primarily with paper birch with some red maple and traces of aspen. No cedar regeneration but thick balsam fir and little to nothing else. Heavy deer sign but not much sign of browsing on the fir. Three acre pure spruce pocket about half way down the west line. Fear would lose the cedar component if treat because the deer population in the area would not allow needed regeneration of it.
18	4191 - Mixed Upland Deciduous with Conifer	High Density Log	17.4	93	51-80	More upland spruce stand with a heavier component of red maple. More spruce at the east end. Bracken fern ground cover. Regeneration is heaviest under the same typed overstory. Large percentage of spruce was suppressed for years before reaching overstory. The spruce and maple in the overstory are past maturity. Good regeneration of both types in sub-canopy. Harvest stand to not suppress the current regeneration coming in. The harvest must be done in the winter due to the only access is through a maintained wildlife opening.
20	6122 - Black Spruce	High Density Pole	11.4	98	111-140	Lower elevation stand of spruce compared to the spruce stand to the north. Close in age but size here have hardly any sawlog sizes and almost entire canopy is spruce. Some red maple but light even in understory. Would do alright with harvest. Cut with stand to the north because of lower ground to south. Will need to access through a maintained wildlife opening. Harvest between December 01 and March 31.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	6220 - Alder/willow	39.7	No	Unspecified	
12	3302 - Low Density Conifer Trees	1.1	No	Unspecified	This is a past RDR site that was guard railed off to prevent ORV traffic in it. It was then planted with red pine in the areas not naturally vegetating. About 5 years old.
13	11 - Low Intensity Urban	6.0	Yes	High	Higgins Lake Road
14	6220 - Alder/willow	15.5	No	Unspecified	
15	6225 - Bog	3.7	No	Unspecified	
19	3102 - Grass	3.6	Yes	High	Maintain grass opening by wildlife division.