



Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 71073

Entry Year 2017

Acreage: 1,127

County Roscommon

Management Area: Houghton Lake Wetlands

Revision Date: 2015-08-05

Stand Examiner: Dale Ekdom

Legal Description:

T23N R4W Sections 4 and 9

Identified Planning Goals:

Vegetation management in the Houghton Lake Wetlands 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 planning period will focus on balancing the aspen age-class distribution. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunity. Expected trends within the next decade are the need to continue to balance aspen age-class distributions, an expected increase in recreation pressure and invasive species encroachment.

Soil and topography:

Terrain in the compartment is flat and soils are composed of Grayling sand, Saugatuck sand, and Rifle peat. The water table is close to the surface throughout the whole compartment.

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

This compartment a solid block of state land except for the NWNE and the NENW of Section 9. The compartment is surrounded by state land except for private property adjacent to the compartment in section 10. Private property within and adjacent to the compartment is subdivisions and small parcels with both permanent and seasonal residences.

Unique Natural Features:

Blanding's turtle, osprey, eagle, secretive locust, Least bittern, common moorhen, black tern, and rainbow mussel are in the vicinity and the potential is good for them to be found within the compartment as well.

Archeological, Historical, and Cultural Features:

The compartment contains some Archaic and Late Woodland Camps as well as some historic homesteads.

Special Management Designations or Considerations:

All stands in the compartment west of Mead / Higgins Lake Rd. are within the Deadstream Swamp Natural National Landmark as dedicated June 1, 1967.

Watershed and Fisheries Considerations:

The compartment contains a small lake that was formerly used as a walleye rearing pond. Panfish were formerly planted at the handicapped access point in Houghton Lake Flats. The Muskegon River bisects the compartment east to west and Houghton Lake is immediately adjacent to the east of the compartment.

Wildlife Habitat Considerations:

The southeast portion of the compartment contains Houghton Lake Flats which is currently being managed as marshland and provides excellent waterfowl habitat. The forested lowland types provide good habitat for deer, grouse, woodcock, bear, and bobcat as well as other non-game species.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of peat and muck and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum elsewhere in the state. Most of the gravel pits in the region are associated with upland areas. There are no uplands areas in the compartment, so gravel potential appears to be limited. Enterprise Field is located two miles to the west. The field has produced over 4.7 million bbls of oil primarily from the Devonian Richfield Member. It is in secondary recovery operations currently. The entire compartment is currently leased for oil and gas exploration and development.

Vehicle Access:

Overall access is poor due to the wet terrain. US-127 cuts through the compartment north to south. A county road (Mead Rd.) is used to access the sub-division in Section 9 along the Muskegon River and a seasonal county road (Higgins Lake Rd). can be used to access the compartment from the north or south side of the Muskegon River. Old 27 cuts through the SE corner of the compartment. There are basically no forest roads within the compartment due to the wet terrain.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

There is an interpretive trail surrounding the pond in Section 9. Higgins Lake Rd. is also used as a snowmobile trail. A snowmobile bridge crosses the Muskegon, but vehicular traffic needs to drive around. Excellent hunting opportunities exist throughout the compartment.

All stumps within 20 feet of the trail shall be Flush-Cut to ensure stumps do not result in unsafe conditions. If harvest activities occur during the snowmobile season of December 1 thru March 31 a snow bed must be preserved. Assure 'logging ahead' warning signs are placed on the designated trails and main access roads during logging activity. Ensure designated trails signs, post and directional markers are protected. Remove logging activity warning signs when completed.

Fire Protection:

This compartment has poor access for fire suppression but lacks a significant amount of volatile fuel types . Numerous man-made and natural fuel-breaks exist. Muck fires could be problematic in a dry year. There is some over-mature high water table type jack pine surrounding the subdivision.

Additional Compartment Information:

The compartment contains control structures for Houghton Lake and the Houghton Lake Flats. Proposed treatments include 94 acres of final harvests in aspen cover types.

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:

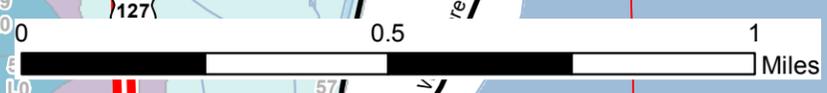
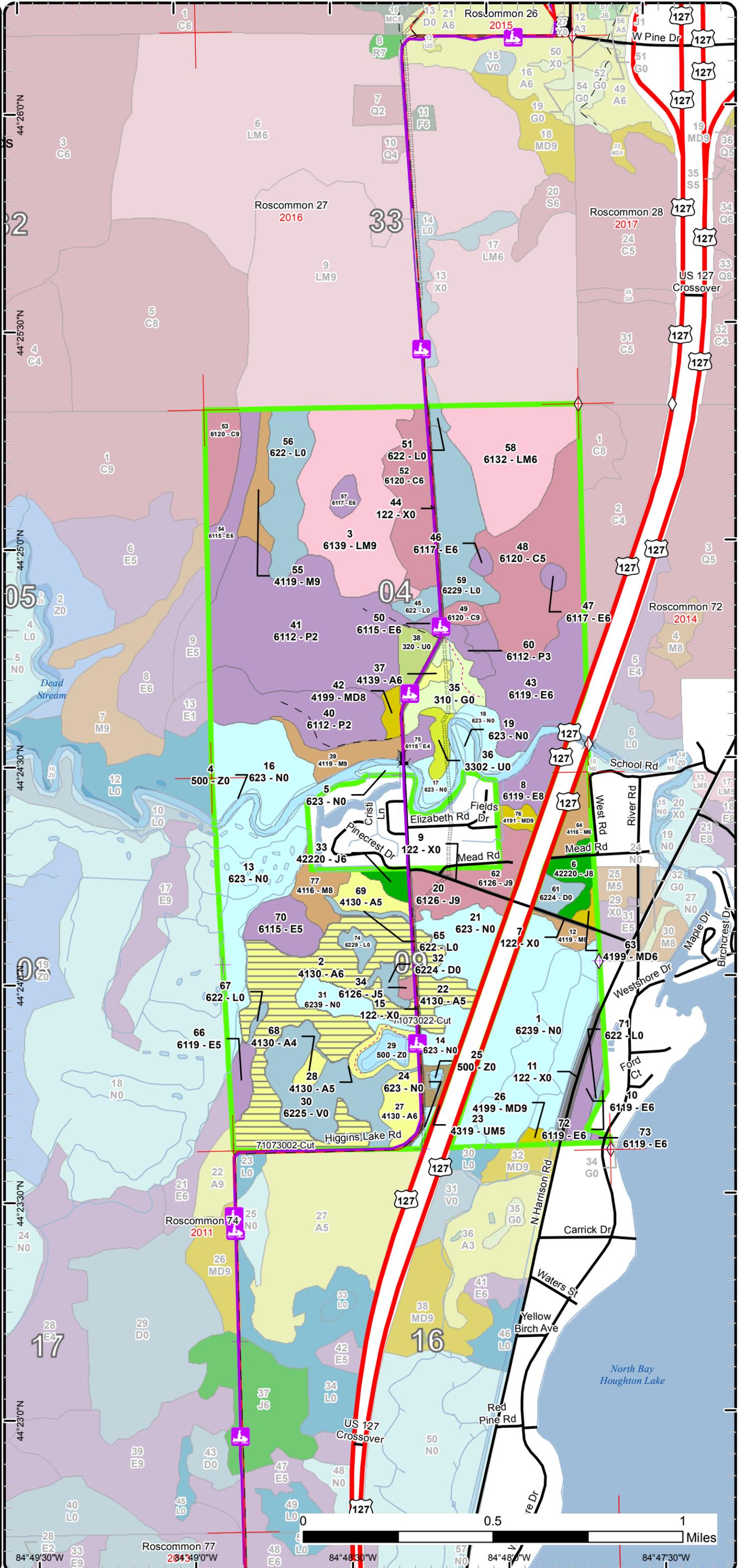
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments

Compartment: 73
 T23N R04W 04, 09
 County: Roscommon
 Unit: Roscommon
 Mgmt Area: Houghton Lake Wetlands
 YOE: 2017
 Acres: 1127 GIS Calculated
 Examiner: Dale Ekdorn
 Map Revised: 7/23/2015
 Map Phase: Pre-Review



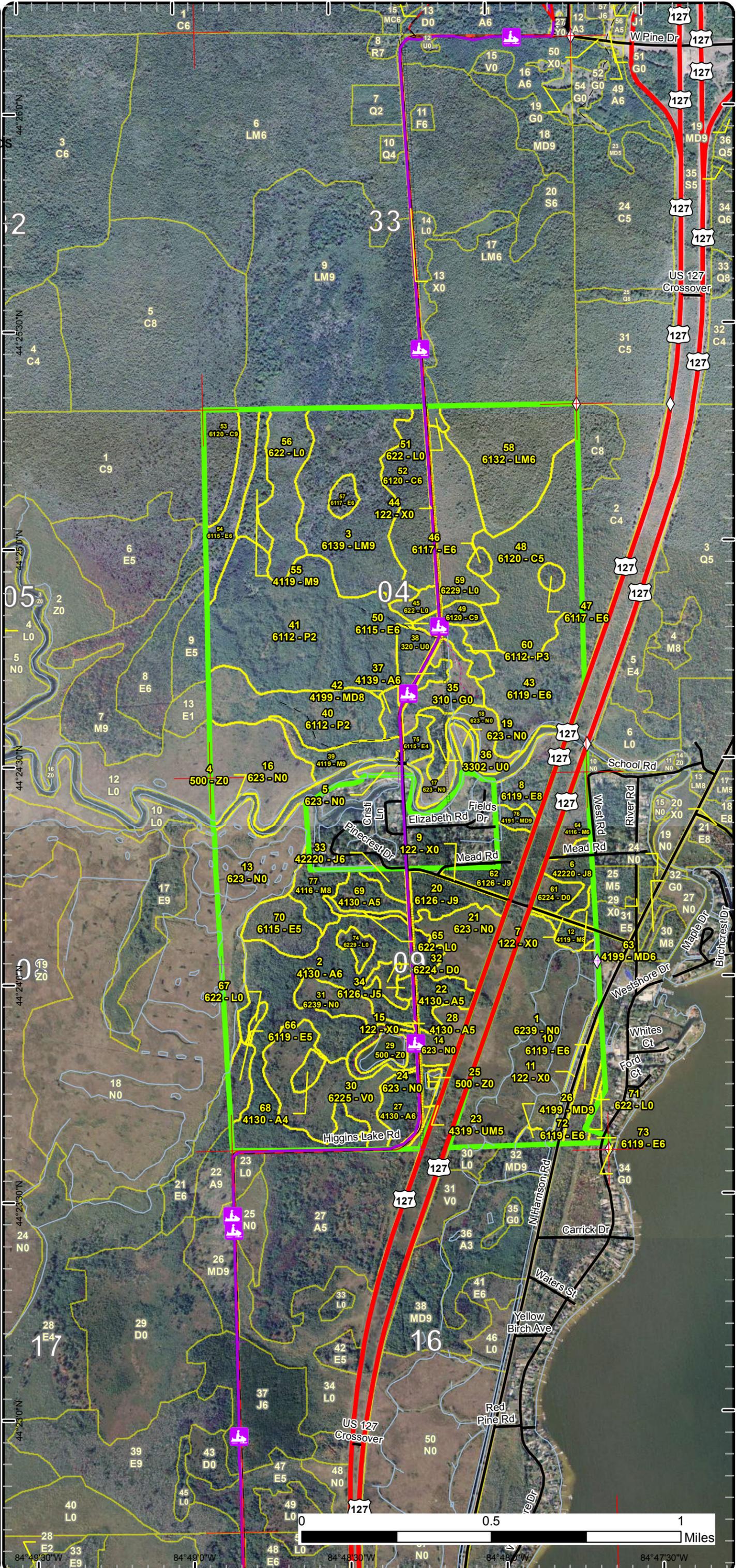
- ✚ Remonumented Section Corner
- ◇ Field Grade GPS Corners
- ✚ Miris Corners
- Highway
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Bridges
- P Parking Lot
- 🚙 Snowmobile Trails
- Designated ATV
- Designated Snowmobile Trails**
- Designated Snowmobile Trails
- Rivers
- Lakes
- Pipeline
- Treatments**
- Clearcut (w/Reserves)
- Forest Coverture**
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 430 - Upland Mixed Fores
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- Non-Forest Coverture**
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



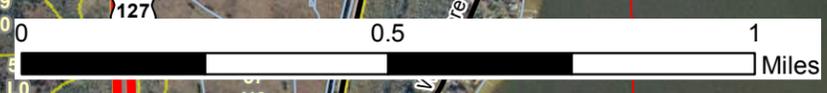
84°49'30"W 84°48'30"W 84°47'30"W

Stand Boundary Map

Compartment: 73
 T23N R04W 04, 09
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- Remonumented Section Corner
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84°49'30"W 84°49'0"W 84°48'30"W 84°48'0"W 84°47'30"W

Special Conservation Areas & Site Conditions Map

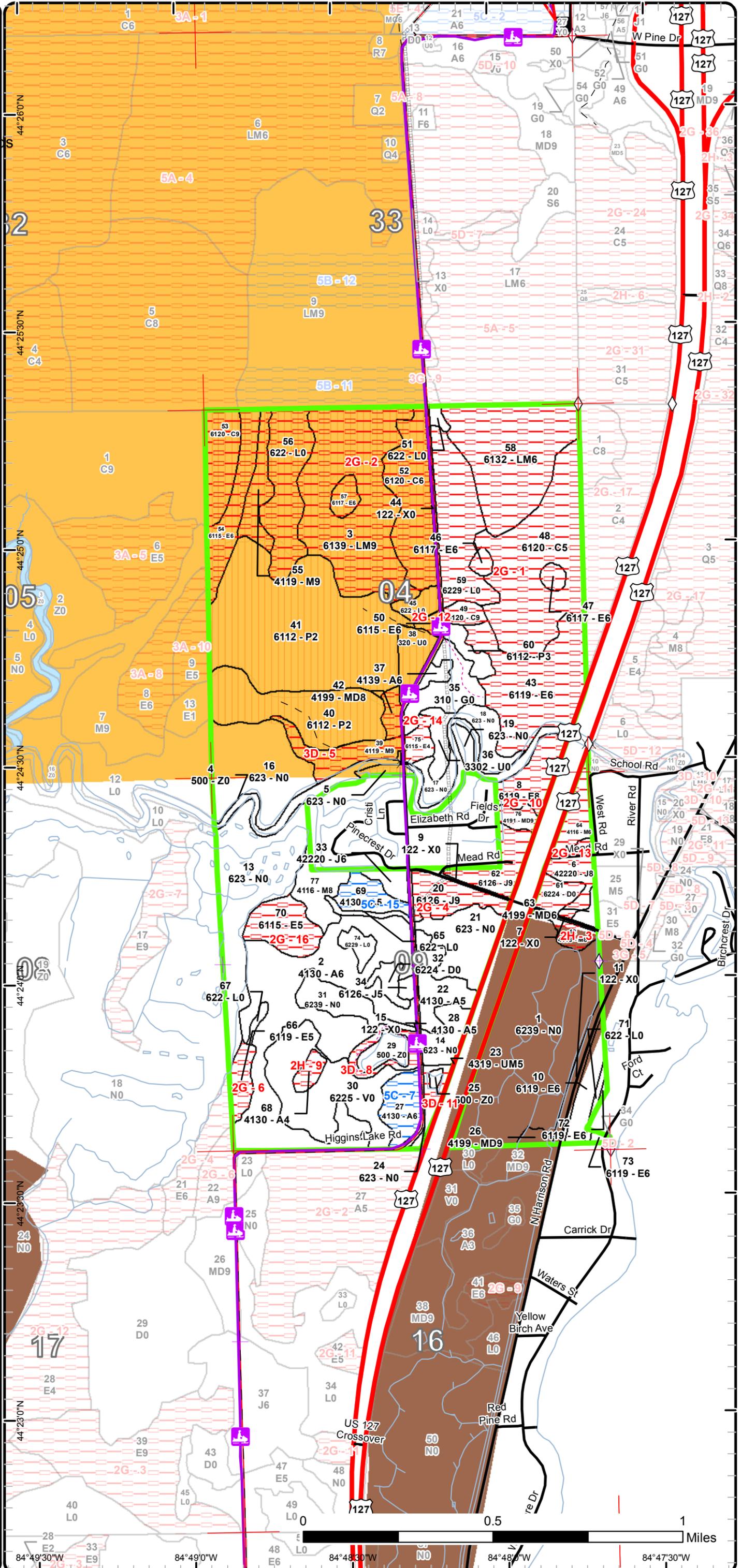
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- Designated Snowmobile Trails**
- Designated Snowmobile Trails
- Rivers
- Pipeline
- Stand Boundaries
- Site Condition**
- Available w/ Constraints
- Unavailable

Available Factors W/ Constraints
 5C: Delay treatment for age/size class diversity or exceptional site quality

Unavailable Factors
 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
 Special Conservation Areas
 Cold Water Lakes
 Non-Dedicated Natural Areas and National Natural Landmarks
 Wildlife Management Areas



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	0	0	0	120	6	0	0	0	0	0	0	0	0	0	0	0	126
Bog	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Cedar	0	0	0	0	0	0	0	28	0	4	0	0	59	15	0	0	0	0	106
Herbaceous Openland	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Jack Pine	0	0	0	0	0	0	5	0	9	24	0	0	0	0	0	0	0	0	38
Low-Density Trees	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Aspen/Balsam Poplar	0	0	41	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
Lowland Deciduous	0	0	0	0	0	65	0	9	0	0	46	0	0	0	0	0	0	0	120
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	119	0	0	0	0	0	0	0	119
Lowland Shrub	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Marsh	229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
Mixed Upland Deciduous	0	0	0	0	0	2	0	0	0	0	10	0	0	0	0	0	0	0	12
Northern Hardwood	0	0	0	0	0	9	0	0	0	0	37	0	0	0	0	0	0	0	46
Treed Bog	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Upland Mixed Forest	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Shrub	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Urban	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Water	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Total	422	0	41	96	0	199	11	37	9	28	212	0	59	15	0	0	0	0	1129



Report 2 – Treatment Summary

Roscommon Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 73
Total Compartment Acres: 1,127

Commercial Harvest - 94
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
Aspen		94	0	0	0	0	0	0	0	0	94
	Total	94	0	0	0	0	0	0	0	0	94

Proposed and Next Step Treatments by Method

		Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current		94	0	0	0	0	0	0	0	0	94
Next Step		0	0	0	0	0	94	0	0	0	94
	Total	94	0	0	0	0	94	0	0	0	188

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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
2 71073002-Cut	80.7	4130 - Aspen	Poletimber Well	49	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Final harvest as much of this stand as possible leaving wettest spots for BMP's and retention, run boundary during snow-off condition so ground vegetation can help determine wet vs. dry ground, mark wolfy oaks (especially white oaks) for mast and retain all conifers for diversity, push out into surrounding wetter stands as much as possible to expand aspen type, Dormant season cut on dry or frozen ground to increase aspen sprouting in the spring and minimize rutting,

Next Step
Treatments:

Acceptable Regen: Any combination of hardwoods and conifers to a fully stocked stand

Other Comment: Use rabbitat/brush pile spec and Hare spec 5.2.4.7 in this stand, may have to place tops or use crane mats in a few of the interior drains to cross with equipment, approve deviation from 25% Chapter 7 threshold at the compartment review due to large amount of wet, non-operable ground in this stand Old next step comments:

Proposed Start Date: 10/1 /2016

22 71073022-Cut	13.4	4130 - Aspen	Poletimber Medium	49	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription final harvest and manage for aspen, line out and buffer any really wet areas including the central bog and any vernal ponds for retention, mark oak to leave (especially white oak) for wildlife mast, use Hare Spec 5.2.4.7

Next Step
Treatments:

Acceptable Regen: acceptable regeneration is any combination of aspen or other hardwoods and jack pine to a fully stocked stand

Other Comment: alternate regeneration will be to trench and seed/plant jack pine if not fully stocked Old next step comments:

Proposed Start Date: 10/1 /2016

Total Treatment Acreage Proposed: 94.2

Report 5 – Site Conditions

Roscommon Mgt. Unit
Dale Ekdorn : Examiner

Compartment: 73
Year of Entry: 2017

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions			
		With Condition	Not Available		5C	2G	2H	3D
125	97	19	9	Aspen	19		4	6
37	37	0	0	Bog				
105	0	0	105	Cedar		105		
14	14	0	0	Herbaceous Openland				
39	6	0	32	Jack Pine		32		
5	5	0	0	Low-Density Trees				
137	137	0	0	Lowland Aspen/Balsam Poplar				
118	11	0	108	Lowland Deciduous		108		
119	0	0	119	Lowland Mixed Forest		119		
71	15	0	56	Lowland Shrub		56		
229	229	0	1	Marsh		1		
12	4	0	8	Mixed Upland Deciduous		4		4
46	11	0	36	Northern Hardwood		19	4	12
10	4	0	5	Treed Bog		5		
3	0	0	3	Upland Mixed Forest				3
8	8	0	0	Upland Shrub				
21	21	0	0	Urban		0		
27	27	0	0	Water		0		
1,127	626	19	482	Total Forested Acres	19	449	8	25
	56%	2%	43%	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	2G: Too wet (sensitive soils, does not include access issues)	190	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Dale Ekdor : Examiner

Compartment: 73

Year of Entry: 2017

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	168	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3D: Recreational / Scenic values	16	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Dale Ekdor : Examiner

Compartment: 73

Year of Entry: 2017

8	Unavailable	3D: Recreational / Scenic values	6	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
9	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	3D: Recreational / Scenic values	4	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Compartment: 73

Dale Ekdor : Examiner

Year of Entry: 2017

14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
15	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	14	Unspecified	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
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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	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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4130 - Aspen	Poletimber Well	80.7	49	Unspecified	mix of BTA, RM, and oak on the driest ground and TA, RM, and black ash on the lower portions, good access from south and east off Deadstream Road but may have to do some roadwork or place a culvert, center part and south part along road is wetter and has standing water with tag alder understory and marsh grass ground cover, scattered areas of jack pine and black spruce poles, middle arm south of stand #31 is sparser/wetter also with a mix of trembling aspen and jack pine, soils range from operable sands to non-operable mucks and the Kotar habitat classification is PARVHa/PARVCo on the operable ground and unclassified lowland on the less operable parts.
3	6139 - Mixed Lowland Forest	Sawtimber Well	68.6	91	Unspecified	Data from Stand #9 - 71027, data collected by DB on 3/19/2014
6	42220 - Natural Jack Pine	Sawtimber Medium	9.1	75	Unspecified	Jack pine stand which is converting to hardwoods (mostly red maple), water table is close to the surface but is probably operable in a dry or frozen condition with the right equipment, would need to access this stand thru a sub-division and may not even have legal access depending on the survey corner location, no good spot for a landing either due to the terrain, hold and let convert to hardwoods
8	6119 - Mixed Lowland Deciduous Forest	Sawtimber Medium	13.3	95	81-110	mix of lowland with black ash poles and tag alder/marsh grass and marginally higher ground with oak SL's and RM/TA poles, very hummocky ground with stand water in most spots, would need to access thru sub-division
10	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	9.1	49	Unspecified	Lowland HW stand, some ash hanging on, tag alder in most of understory, a few spots heavy to conifers, has easement for Lake Twp. VFD Hall
12	4119 - Mixed Northern Hardwoods	Sawtimber Medium	4.4	95	51-80	part of North Unit of the Houghton Lake Flats. stand consists of large oak, red maple, and aspen with a fairly open understory, looks like it may have been treated at some previous YOE but no sale records were found., poor access due to ditch to the east, marsh to the south, US-127 to the west, and a ROW fence to the north
20	6126 - Lowland Jack Pine	Sawtimber Well	12.1	89	Unspecified	lowland jack pine stand with heavy red maple understory of saplings and poles, west end is marginally higher than the east end which is very wet, leatherleaf ground cover thru-out most of the stand (70%), hummocky ground with lots of ponded water, stand is split by a gas transmission line, extreme east end is heavy to trembling aspen and is split off from the rest of the stand by a small arm of the marsh to the south which is has tag alder, stand moving towards 2 aged if not already there, possibly operable during a severe drought or on hard frozen ground in the winter but its all pretty soft ground, soils are Au Gres-Kinross Complex and Kotar habitat classification is PARVCo. no good dry upland spot for a landing, recommend allowing this stand to convert to red maple and using stand for r visual
22	4130 - Aspen	Poletimber Medium	13.4	49	Unspecified	mix of BTA and QA with some of the wetter spots around and north of the small bog in the central part of the stand heavy to jack pine, leather leaf bog in the central part of the stand was too small to map out but will have to be excluded if stand is treated



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4319 - Mixed Upland Forest	Poletimber Medium	3.5	45	51-80	hardwoods and white pine around an old barrow pit, west arm is heavy to white pine poles, south end is oak and red maple, east and north arms are E4/L, not worth treating due to size and configuration, maintain as buffer along US-127
26	4199 - Other Mixed Upland Deciduous	Sawtimber Well	2.2	91	81-110	part of North Unit of the Houghton Lake Flats, very small stand along Old 27 which is mostly hardwoods but does have some scattered jack pine, doing well on its own, part of stand includes pumping station for controlling water levels on the N. Unit of the HL Flats
27	4130 - Aspen	Poletimber Well	10.4	49	Unspecified	nice big tooth aspen stand, upland but with a few wetter pockets/drains, cut now or save for next time as BTA is still quite young yet
28	4130 - Aspen	Poletimber Medium	5.6	55	Unspecified	
33	42220 - Natural Jack Pine	Poletimber Well	4.0	55	Unspecified	Jack pine poles/SL's with RM saplings/poles, terrain ranges from marginally drier upland to bog jack pine, water table close to the surface thru the entire stand but probably operable with care, stand is in transition to J9 and should hold OK due to the higher water table, some natural thinning of JP occurring with some blowdown and mortality, stand going towards 2 aged as the sub-canopy is almost pole-size, solis and Kotar are similar to Stand 20 but terrain is marginally higher and therefore more operable, recommend holding stand and treating with Stand #69 and 77 in 10 years
34	6126 - Lowland Jack Pine	Poletimber Medium	1.5	55	Unspecified	bog jack pine, standing water, high water table, hummocky terrain, heavy red maple saplings in the under-story, jack pine growing well still due to higher water table, allow to convert over time to red maple, may be able encroach a little into the north and south end of this stand when/if the surrounding aspen stand is treated
37	4139 - Aspen, Mixed Deciduous	Poletimber Well	2.4	49	Unspecified	trembling aspen and balsam poplar, edges of stand are encroaching into surrounding "G" type, stand is cut by a major man-made draing flowing south into the Muskegon River
39	4119 - Mixed Northern Hardwoods	Sawtimber Well	11.8	95	81-110	Stand was left as a visual/BMP buffer when stand to the north was cut, , now stand is RM9 and developing an understory of red maple,oak, and blue-beech (hornbeam), scattered lower/wetter areas which may be too wet to operate, maintain stand as a BMP buffer on the Muskegon River
40	6112 - Lowland Aspen	Sapling Medium	36.3	15	Immature	mix of lowland and upland which was regenerated in 2000, upland is TA with red maple and oak, lowland is black ash with marsh grass and tag alder, high ground is fully stocked, low ground is fairly sparse, scattered oak XL's were left for mast when cut, surprisingly the black ash is still hanging on despite EAB
41	6112 - Lowland Aspen	Sapling Medium	95.5	25	Immature	mix of lowland and upland regenerated in 1990, mix of BTA with red maple/oak on the upland and TA/RM with tag alder and marsh grass on the lowland, really wet areas are marsh grass, stand gets wetter as you go west



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4199 - Other Mixed Upland Deciduous	Sawtimber Medium	3.8	95	Unspecified	buffer left when stand to the west was cut, upland along road but grading to lowland as you go west, upland has hornbeam/red maple in the understory, lowland u.s. is tag alder, stand is cut by several drains flowing east to west thru the center of the stand, leave as buffer as stand is too small and marginally operable to do anything treatment-wise
43	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	42.9	46	Unspecified	lowland/upland mix on muck soils, black ash poles dominating with scattered balsam poplar logs, more upland areas have oak and trembling aspen, high water table with boggy soils, oldest trees are 1920 YOO but bulk of stand is much younger with a YOO on the black ash poles of 1969, stand is cut by numerous drains, canopy gaps are full of black ash/red maple/tag alder saplings, lots of standing water in lowest potholes, stand is doing well on its own via gap dynamics and it probably won't regenerate well if clear-cut, not enough basal area density for a partial cut without creating lots of potential for wind-throw, recommend no treatment this YOE
46	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	2.1	65	51-80	small marginally upland island of mostly hardwoods with red maple, paper birch, black ash, and balsam fir, no access - some data taken from previous OI
47	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	2.5	65	51-80	small marginally upland island of mostly hardwoods with red maple, paper birch, black ash, and balsam fir, no access - some data taken from previous OI
48	6120 - Lowland Cedar	Poletimber Medium	58.7	115	Unspecified	Data from Sand #31 - 71028 collected by DEE on 1/28/2015
49	6120 - Lowland Cedar	Sawtimber Well	3.8	80	Unspecified	lowland cedar swamp, high water table and muck soils thru-out stand, some of the best cedar in the compartment, fairly open understory with tag alder in the wetter pockets, stand gets wetter west to east and there are more hardwoods on the east side, some cedar saplings present, stand may possibly be the remains of an old deer enclosure
50	6115 - Lowland Ash	Poletimber Well	1.8	95	Unspecified	stand was left as a buffer when stand to the west was cut, lowland with black ash and a few cedars scattered around, tag alder and BA understory, very boggy soils
52	6120 - Lowland Cedar	Poletimber Well	28.0	65	Unspecified	wet cedar swamp, north end has better qualityswamp conifers than the south end, south end has mor lowland brush
53	6120 - Lowland Cedar	Sawtimber Well	14.6	121	Unspecified	Data from Stand #1 - 71074, collected by JH on 3/10/2009
54	6115 - Lowland Ash	Poletimber Well	15.9	91	Unspecified	Data from Stand #8 - 71074, collected by JH on 3/10/2009
55	4119 - Mixed Northern Hardwoods	Sawtimber Well	10.4	91	81-110	Data from Stand #7 - 71074, collected by JH on 3/10/2009
57	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	4.0	65	51-80	small marginally upland island of mostly hardwoods with red maple, paper birch, black ash, and balsam fir, no access - some data taken from previous OI data



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
58	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	50.1	95	Unspecified	cedar with deciduous trees, lots of balsam fir regeneration, Data from Stand #17 - 71027 and collected by DB on 3/19/2014
60	6112 - Lowland Aspen	Sapling Well	5.1	15	Immature	
62	6126 - Lowland Jack Pine	Sawtimber Well	11.9	89	Unspecified	stand ranges from lowland to marginally higher upland, water table close to the surface thru-out entire stand, mostly wet / soft ground with muck soils and no good spot for a landing, wettest spots are leather-leaf ground cover or tag alder with marsh grass, stand is going towards if not already 2 aged, red maple understory is thumb size sapling to almost pole-size
63	4199 - Other Mixed Upland Deciduous	Poletimber Well	2.2	49	81-110	small stand with red maple and aspen, no good place for a landing, stand is a transition zone between upland and lowland
64	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	9.0	49	51-80	mostly upland red maple saplings/poles with some scattered BTA poles on the south end of the stand and red maple and aspen saplings on the north end of the stand, marginally higher ground on the south end which grades to lower ground on the north end, scattered oak and white pine saplings/poles also, water table is close to or at the surface for much of the stand, access to the stand would be thru a sub-division and may not even have legal access depending on survey corner location, access is across a 3' deep ditch and there is no real good spot for a landing, allow to convert to hardwoods
66	6119 - Mixed Lowland Deciduous Forest	Poletimber Medium	6.5	45	Unspecified	ash and red maple stand with swamp grass ground cover and tag alder under-story, standing water when inventoried, large pockets of "L" thru-out stand, most of the older ash (YOO 1920) is dead but there is a good crop of younger ash poles established
68	4130 - Aspen	Poletimber Poor	3.5	49	Unspecified	island surrounded by bog with no access, starting to fall apart but attempting to regenerate itself, upland but with very hummocky ground and has a water table close to the surface
69	4130 - Aspen	Poletimber Medium	8.5	49	Unspecified	upland terrain but with a few wetter potholes/drainages, both BTA and TA on the upland and TA on the lower ground, parts are fairly sparse with a few small scattered clones and individual aspen, other parts are sold A6, edges of the drainages and openings are A3 or M3 as these areas are slowly filling in, hold and cut with Stands #3 and 70 in 10 years
70	6115 - Lowland Ash	Poletimber Medium	14.4	95	81-110	stand is lowland but has a few scattered knolls, lowland is mostly black ash with swamp grass ground cover and tag alder sub-canopy, upland knolls are RM/TA/WB, high water table thru-out stand with muck soils
72	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	0.6	49	Unspecified	lowland hardwoods with some ash hanging on, a few pockets heavy to conifers
73	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	0.9	49	Unspecified	lowland HW stand with some ash hanging on, tag alder in understory, includes intake ditch for pumping station

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Roscommon Mgt. Unit

Report 8 – Forested Stands

Compartment: 73
Year of Entry: 2017

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	6115 - Lowland Ash	Poletimber Poor	4.6	49	Unspecified	tag alder swales interspersed with small pockets of E6 (black ash/red maple/aspen with tag alder under-story), standing water thru-out entire stand
76	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	3.9	95	51-80	Upland oak/red maple/pine ridge with large RO/RP L-X's and red maple L-P's. very open under-story, no access due to PVT property, US-127, and wet terrain
77	4116 - Mixed N. Hardwood - Aspen	Sawtimber Medium	10.5	95	51-80	hardwood ridge which is 3-4 feet higher than surrounding terrain, fairly open understory with just a few red maple saplings except for the north end which is heavy to BF saplings, there are also a few small pockets with M3, the NE corner and along the private property line/ditch is somewhat lower and wetter but should still be operable given the right ground conditions, there is also a wet swale running between Stand #65 and the private property line which would need to be crossed, recommend holding and treating with StandS #33 and 69 in 10 years



Stand	Cover Type	Acres	Managed Site	General Comments:
1	6239 - Mixed Emergent Wetland	87.4	No	part of North Unit of the Houghton Lake Flats
4	500 - Water	20.3	No	Muskegon River
5	623 - Emergent Wetland	2.5	No	Muskegon River
7	122 - Road/Parking Lot	1.1	No	Mead Road
9	122 - Road/Parking Lot	1.7	No	Mead Road
11	122 - Road/Parking Lot	6.9	No	Old 27 ROW and ditches for HL Flats
13	623 - Emergent Wetland	45.4	No	
14	623 - Emergent Wetland	9.2	No	
15	122 - Road/Parking Lot	5.4	No	Higgins Lake Road
16	623 - Emergent Wetland	34.5	No	
17	623 - Emergent Wetland	5.6	No	
18	623 - Emergent Wetland	8.5	No	
19	623 - Emergent Wetland	3.1	No	Muskegon River
21	623 - Emergent Wetland	20.2	No	
24	623 - Emergent Wetland	2.0	No	
25	500 - Water	0.9	No	Barrow Pond?
29	500 - Water	6.1	No	Barrow Pond
30	6225 - Bog	36.7	No	bog with encroaching swamp conifers in spots, other spots are "N" or "L"



Stand	Cover Type	Acres	Managed Site	General Comments:
31	6239 - Mixed Emergent Wetland	10.9	No	
32	6224 - Treed Bog	4.2	No	Bog with encroaching hardwoods and conifers
35	310 - Herbaceous Openland	13.7	No	currently a non-maintained grassy opening with scattered solitary trees and clumps of trees, also has pockets of "L" and lots of encroaching shrubs filling in parts of the stand, cut in 2 by man-made drain
36	3302 - Low Density Conifer Trees	5.4	No	upland areas are planted white spruce or grassy opening, lowland areas are tag alder swales
38	320 - Upland Shrub	8.1	No	upland shrub with scattered solitary trees and clumps of trees, also pockets of "L"
44	122 - Road/Parking Lot	6.4	No	grassy opening with scattered solitary trees and clumps of trees
45	622 - Lowland Shrub	4.4	No	
51	622 - Lowland Shrub	1.5	No	
56	622 - Lowland Shrub	26.3	No	
59	6229 - Mixed lowland shrub	30.0	No	Was Q4 last YOE but now is non-forested, lowland shrub stand with scattered NWC saplings and poles, cedar is very poor quality and very slow growing
61	6224 - Treed Bog	5.4	No	
65	622 - Lowland Shrub	2.1	No	
67	622 - Lowland Shrub	1.3	No	tag alder swale
71	622 - Lowland Shrub	1.8	No	Power-line ROW
74	6229 - Mixed lowland shrub	3.8	No	mix of bogs, vernal ponds, and forested wetlands, not operable, may be bigger than delineated