



Compartment Review Presentation

Roscommon Forest Management Unit

Compartment 108

Entry Year 2016

Acreage: 1,318

County Roscommon

Management Area: Houghton Lake Wetlands

Revision Date: 04/25/2014

Stand Examiner: Dale Ekdom

Legal Description:

T22N R4W Sections 4, 5, and 6

Identified Planning Goals:

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

Soil and topography:

Terrain in the compartment is basically flat. Soils are Lupton muck, Bergland loam, Newton sandy loam, Saugatuck sand, and Bergland clay loam.

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

This compartment is a solid block of state land with state land surrounding the compartment except on the east side, south-east, and north-east sides. Private property adjacent to the compartment is small parcels with permanent residences or farmland with permanent residences.

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:

Compartment is a part of the Houghton Lake Wildlife Research Area (also known as Porter Ranch).

Watershed and Fisheries Considerations:

Nellsville Drain bisects this compartment north to south and there are numerous smaller un-named drains and intermittent drainages in this compartment.

Wildlife Habitat Considerations:

Maintain ecosystem diversity in the compartment via habitat manipulation to benefit game species such as deer, grouse, rabbits, turkeys, and waterfowl as well as other non-game species.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and peat and muck. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift are the Pennsylvanian Grand River and Saginaw Formations. The Saginaw is quarried for brick making clay elsewhere in the State. Gravel pits are located in Section 4, but potential appears to be limited in Section 5 & 6. Nellsville Field is located one mile to the south. The field has produced nearly 55,000 BO from the Devonian Detroit River Formation. Section 4 is currently leased for oil and gas development.

Vehicle Access:

Vehicle access is excellent to the perimeter of the compartment via M-55 and other county roads. Access to the interior of the compartment is limited due to the wet terrain and absence of travelable roads.

Survey Needs:

None necessary at this time.

Recreational Facilities and Opportunities:

There are no structured recreational facilities within this compartment but there is good habitat for dispersed recreational activities such as hunting. Visual considerations should be considered along M55.

Fire Protection:

There is a high amount of jack pine fuel types in this compartment but the jack pine is growing on terrain that is lower and wetter and the compartment has many natural fuel breaks. Access to some of the jack pine islands is poor.

Additional Compartment Information:

A permanent access point on the south side of M-55 is proposed for timber and recreational purposes if funding can be allocated and permits can be secured. If funding for a permanent access point is not available, a temporary access point may need to be constructed to harvest the timber. Proposed treatments this year-of-entry include 154 acres of jack pine scheduled to be final harvested and regenerated naturally to jack pine. In addition, 16 acres of red pine is scheduled to be thinned and 7 acres of oak are scheduled for a seed tree cut. In addition, 31 acres is scheduled to be seeded to jack pine and 12 acres of opening maintenance is scheduled.

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**

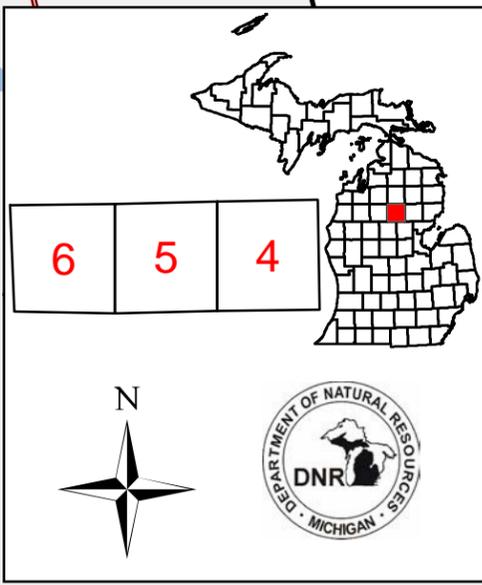
The following information is displayed, where pertinent, on the attached compartment maps:

- 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: 108
 T22N R04W
 Sections: 4, 5, 6
 County: Roscommon
 Unit: Roscommon
 Management Area: Houghton Lake Wetlands
 YOE: 2016
 Acres: 1,318 GIS Calculated
 Examiner: Dale Ekdorn
 Map Revised: 08/08/2014
 Map Phase: Web Post

Stand #
 23
Stocking Density
 (412)0 - 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
- Snowmobile Trails
- Snowmobile Trail

Regen Legend

- Natural
- Planted

Treatments

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

Forest Stands

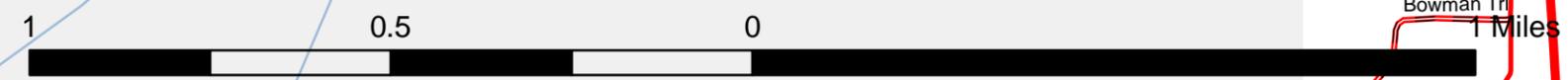
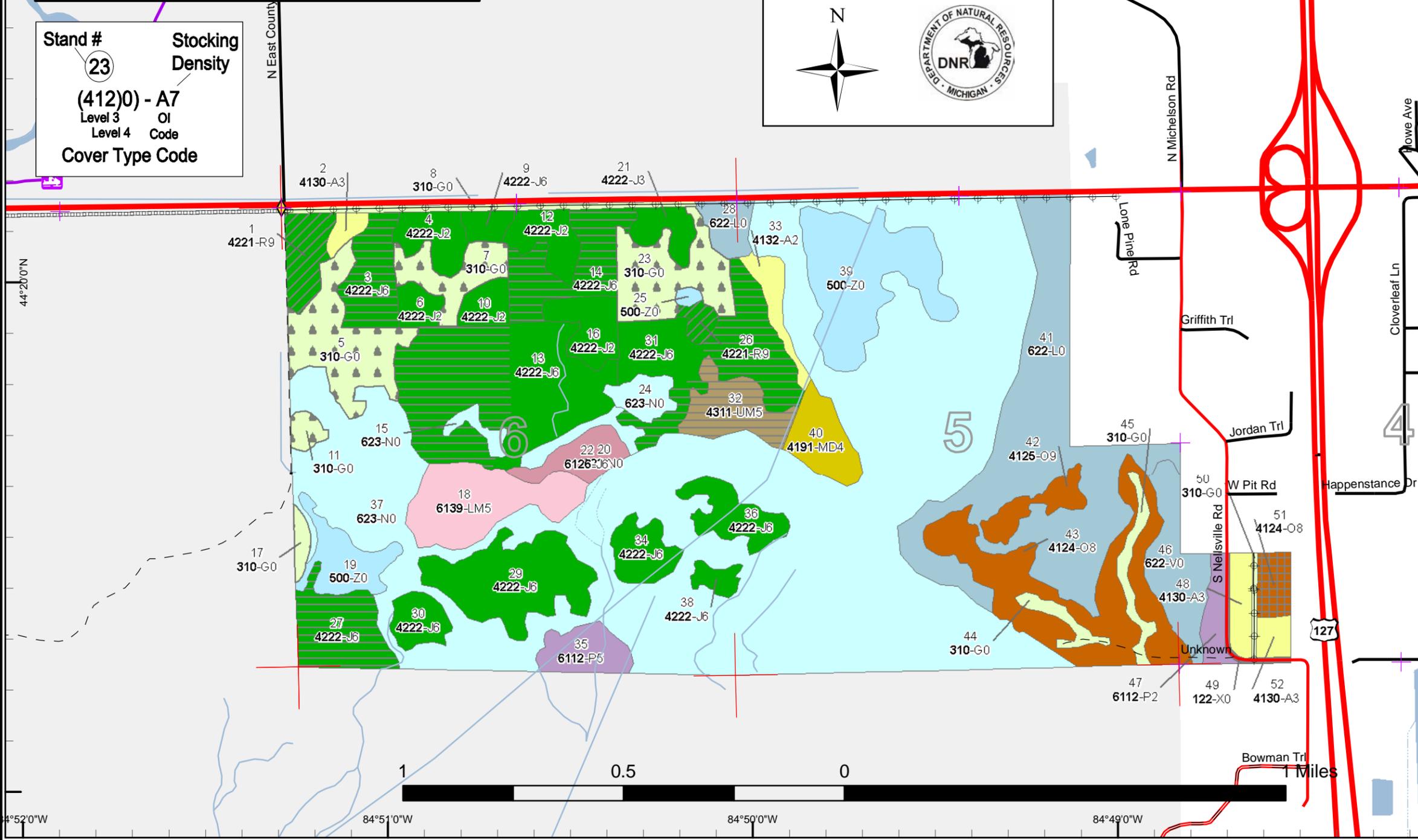
Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

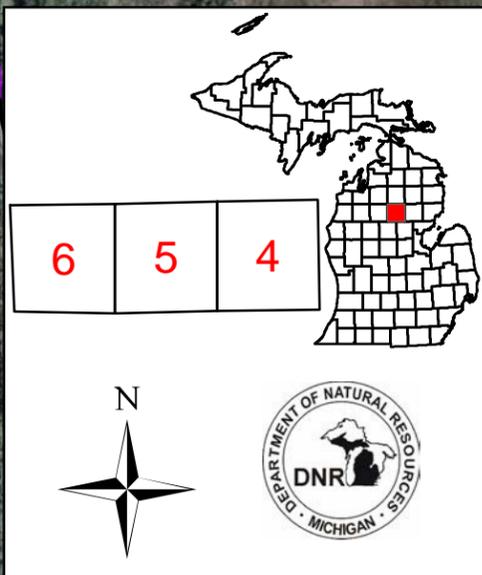
- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes and Rivers
- State Forest Land



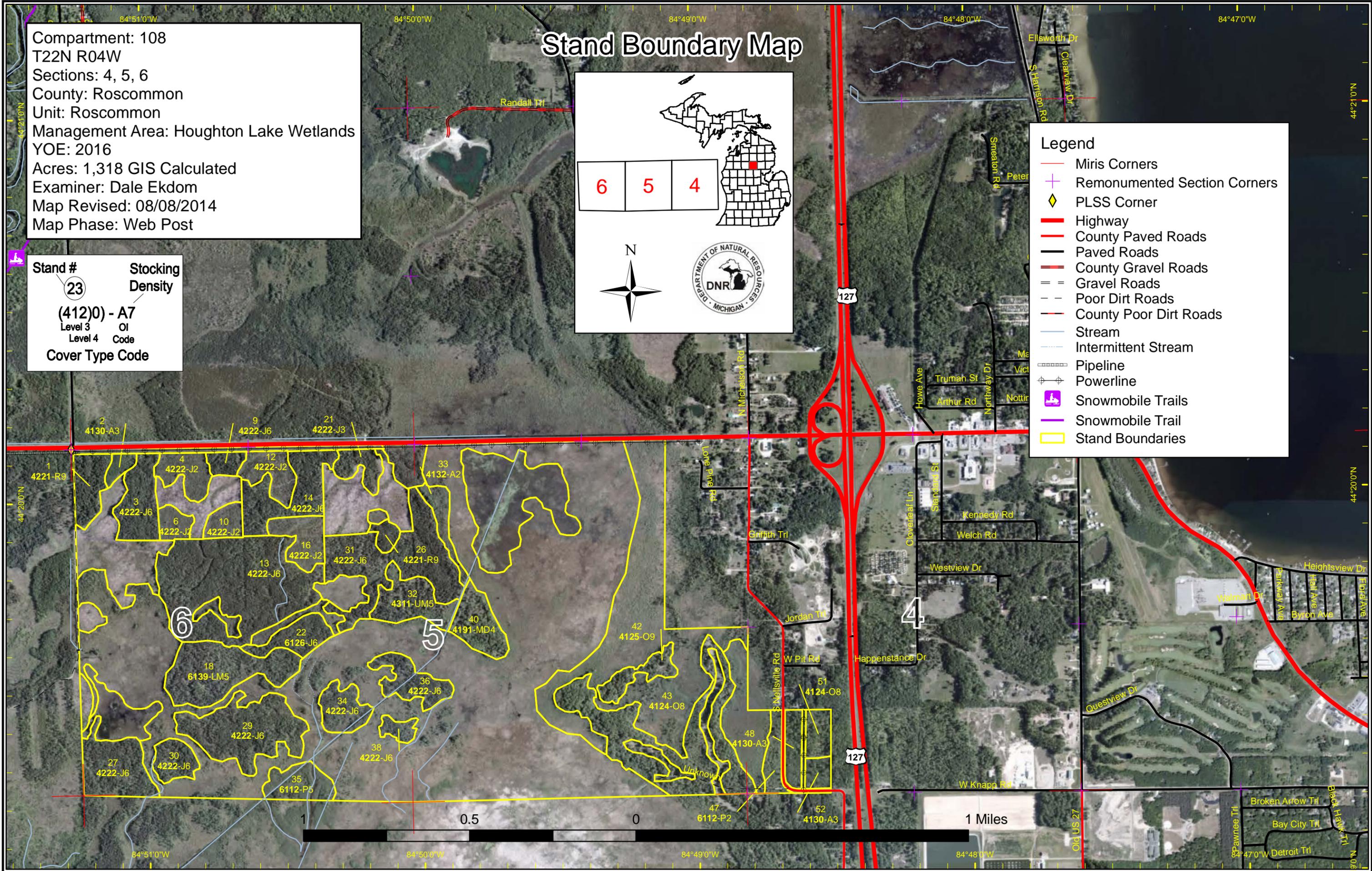
Stand Boundary Map

Compartment: 108
 T22N R04W
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 County: Roscommon
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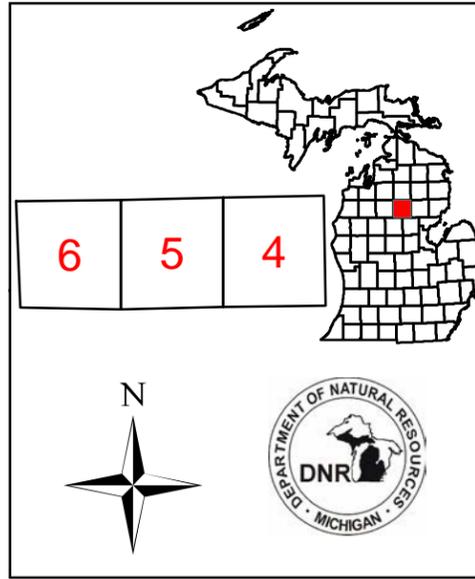
- Legend**
- Miris Corners
 - + Remonumented Section Corners
 - ◆ PLSS Corner
 - Highway
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - - Poor Dirt Roads
 - - County Poor Dirt Roads
 - Stream
 - - Intermittent Stream
 - Pipeline
 - Powerline
 - Snowmobile Trails
 - Snowmobile Trail
 - Stand Boundaries



Special Conservation Areas & Site Conditions Map

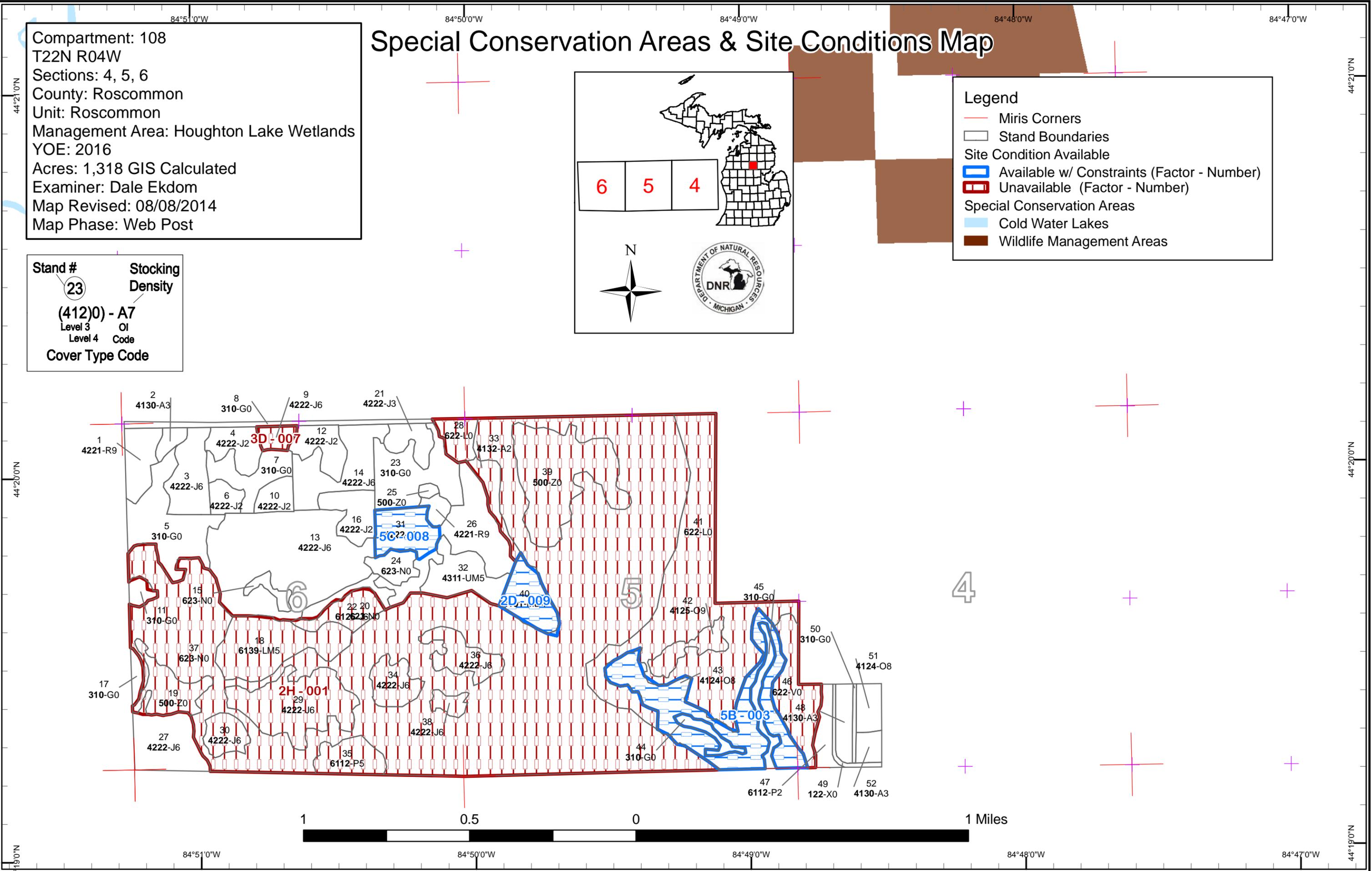
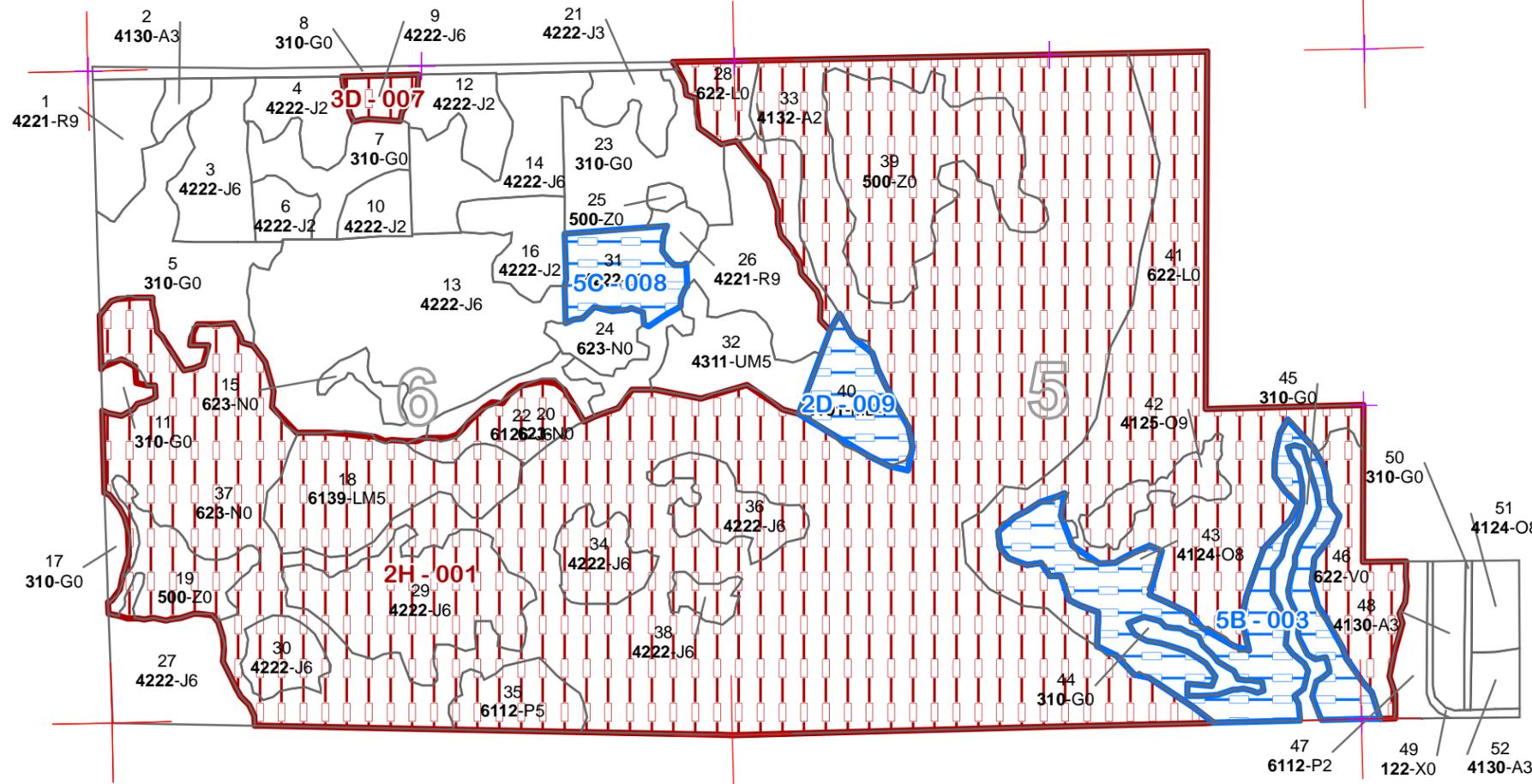
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 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- Stand Boundaries
- Site Condition Available
 - Available w/ Constraints (Factor - Number)
 - Unavailable (Factor - Number)
- Special Conservation Areas
 - Cold Water Lakes
 - Wildlife Management Areas



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	12	11	0	0	0	0	0	0	0	0	0	0	0	23
Bog	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Herbaceous Openland	99	0	0	0	0	0	0	0	0	0	0	0	0	0	99
Jack Pine	0	47	8	0	0	77	73	123	0	0	0	0	0	0	328
Lowland Aspen/Balsam Poplar	0	8	12	0	0	0	0	0	0	0	0	0	0	0	20
Lowland Mixed Forest	0	0	0	0	0	0	0	32	0	0	0	0	0	0	32
Lowland Shrub	117	0	0	0	0	0	0	0	0	0	0	0	0	0	117
Marsh	492	0	0	0	0	0	0	0	0	0	0	0	0	0	492
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
Oak	0	0	0	0	0	0	0	71	0	0	0	0	0	0	71
Red Pine	0	0	0	0	0	4	12	0	0	0	0	0	0	0	16
Upland Mixed Forest	0	0	0	0	0	17	0	0	0	0	0	0	0	0	17
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	63	0	0	0	0	0	0	0	0	0	0	0	0	0	63
Total	797	66	32	0	0	94	77	238	15	0	0	0	0	0	1318



Report 2 – Proposed Treatment Summaries

Roscommon Mgt. Unit
Year of Entry 2016

Compartment 108
Total Compartment Acres: 1,318

Acres by Treatment Type

Commercial Harvest - 176 Tree Planting - 17 Other - 31
Habitat Cut - 0 Opening Maintenance - 11

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Natural Pines	136	0	0	0	16	0	151
Oak Types	0	0	7	0	0	0	7
Upland Mixed Forest	17	0	0	0	0	0	17
Total	153	0	7	0	16	0	176



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	71108001-Cut	11.9	42210 - Natural Red Pine	High Density Log	77	111-140	Harvest	Low Thinning	4221 - Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> remove suppressed, defect, and doubles first and then thin to target basal area of 110 SF/acre, mark merchantable hardwoods where desired for										
<u>Specs:</u> maneuvering within stand										
<u>Other</u> no retention other than residual red pine										
<u>Comments:</u>										
<u>Next</u> final harvest or remove utility poles in 10 years										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
3	71108003-Cut	17.1	42220 - Natural Jack Pine	High Density Pole	62		Harvest	Clearcut with Reserves	42221 - Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> final harvest and regenerate naturally to jack pine, leave jack pine tops scattered as a seed source and manage for a jack pine/aspens mix, leave a 2-										
<u>Specs:</u> 3 chain buffer on M-55 for visual/retention/green-up concerns, leave the wettest areas (south end of stand) for retention/BMP's										
<u>Other</u> will need to access from west thru the R9 stand or construct driveway with culvert on M-55										
<u>Comments:</u>										
<u>Next</u> regeneration check during normal inventory cycle										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
13	71108013-Cut	42.9	42220 - Natural Jack Pine	High Density Pole	57		Harvest	Clearcut with Reserves	4222 - Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> final harvest and regenerate naturally to jack pine, leave jack pine tops as a seed source										
<u>Specs:</u>										
<u>Other</u> leave buffer on wetland type to west and the south for retention/BMP's, probably will access off county line two-track to the west, buffer broad										
<u>Comments:</u> drainage in center of stand to leave a long narrow of stand jack pine for an upright seed source, use brush pile and drumming log specifications - especially along the south and west sides of the stand										
<u>Next</u> regeneration check during normal inventory cycle										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
14	71108014-Cut	23.7	42220 - Natural Jack Pine	High Density Pole	75		Harvest	Clearcut with Reserves	4222 - Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> final harvest and regenerate naturally to jack pine, leave jack pine tops as seed source to regenerate stand back to jack pine										
<u>Specs:</u>										
<u>Other</u> leave 3-5 chain buffer on M-55 for visual/retention/green-up concerns,										
<u>Comments:</u>										
<u>Next</u> regeneration check during normal inventory cycle										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
26	71108026-Cut	3.7	42210 - Natural Red Pine	High Density Log	65	111-140	Harvest	Low Thinning	42211 - Natural Red Pine, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> thin to 120 SF/acre removing all jack pine and marking red pine to remove defect										
<u>Specs:</u>										
<u>Other Comments:</u> poor access due to wetter terrain in surrounding stands and broad drainage on the east and south sides										
<u>Next Steps:</u>										
<u>Proposed Start Date:</u> 10/01/2015										
27	71108027-Cut	22.1	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	70		Harvest	Clearcut with Reserves	4222 - Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> final harvest and manage for natural jack pine by leaving all tops as a seed source										
<u>Specs:</u>										
<u>Other Comments:</u> will need crane-mats to cross a few drains to access stand, no truck access to stand - will need to skid everything thru state land in Missaukee County, combine with sale in Missaukee County in 63094, , add stands in 71109 and 63095 which are only accessible from this stand, mark up to 1 oak per acre for wildlife mast, leave wettest parts of all stands as retention, add brush pile and drumming log specifications for placing these habitat structures along any of the wet drainaiges										
<u>Next Steps:</u> regeneration survey										
<u>Proposed Start Date:</u> 10/01/2015										
31	71108031-Cut	30.0	42220 - Natural Jack Pine	High Density Pole	64		Harvest	Clearcut with Reserves	4222 - Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> final harvest and regenerate naturally to jack pine, leave jack pine tops as a seed source										
<u>Specs:</u>										
<u>Other Comments:</u> buffer lowland on east edge for retention by using over-grown two-track along "L" as the boundary, leave the narrow arm(s) in the SW for retention, any combination of hardwoods and jack pine regeneration to a fully stocked stand is acceptable										
<u>Next Steps:</u> regeneration check during the normal inventory cycle										
<u>Proposed Start Date:</u> 10/01/2015										
32	71108032-Cut	17.5	4311 - Pine, Aspen Mix	Medium Density Pole	56		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> final harvest and regenerate naturally to jack pine, leave jack pine tops for a seed source										
<u>Specs:</u>										
<u>Other Comments:</u> leave a buffer on the south edge for retention/BMP's, use "rabbitat" spec along south edge, leave all oaks for wildlife mast. leave wettest spots for retention especially if doing so would make interior islands										
<u>Next Steps:</u> regeneration check during normal inventory cycle										
<u>Proposed Start Date:</u> 10/01/2015										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
51	71108051-Cut	7.0	4124 - Red with White Oak	Medium Density Log	79	1-50	Harvest	Seed Tree with Reserves	412 - Oak	Cmpt. Review Proposal
<u>Prescription</u> treat with a seed tree cut to release the oak seedlings/saplings but mark 10-20 SF of oak (esp. white oak) to leave for a continuing seed source,										
<u>Specs:</u> concentrate on leaving oak mast trees where oak regeneration is sparse or lacking full stocking										
<u>Other</u> no retention other than the oak marked to leave										
<u>Comments:</u>										
<u>Next</u> regen survey during regular inventory cycle										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2015										
5	NF_71108005- Seed	30.6	3102 - Grass				Tree Seeding	Hand Seed	4212 - Planted Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> seed jack pine from back of a snowmobile during snow covered conditions										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u> regeneration survey										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										
44	NF_71108044- NonFor	4.5	3102 - Grass				Non-Forest Management	Mowing	310 - Herbaceous Openland	Cmpt. Review Proposal
<u>Prescription</u> opening maintenance - mowing or other treatment as specified by Wildlife Division										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										
45	NF_71108045- NonFor	6.8	3102 - Grass				Non-Forest Management	Mowing	310 - Herbaceous Openland	Cmpt. Review Proposal
<u>Prescription</u> opening maintenance - mowing or other treatment as specified by Wildlife Division										
<u>Specs:</u>										
<u>Other</u>										
<u>Comments:</u>										
<u>Next</u>										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> Unspecified										
Total Treatment Acreage Proposed: 217.6										

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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

Compartment 108

Dale Ekdom : Examiner

Year of Entry 2016

Availability for Management

Total Acres	Acres			Dominant Site Conditions					
	Available	Not Available		No	5C	5B	3D	2H	2D
23	16	7	Aspen	16				7	
327	238	89	Jack Pine	223	15		5	84	
20	8	12	Lowland Aspen/Balsam Poplar	8				12	
32	0	32	Lowland Mixed Forest	0				32	
15	14	0	Mixed Upland Deciduous					0	14
70	60	10	Oak	7		53		10	
16	16		Red Pine	16					
17	17		Upland Mixed Forest	17					
520	369	151	Total Forested Acres	286	15	53	5	146	14
	71%	29%	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
001	Not Available	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	823	2G: Too wet (sensitive soils, does not include access issues)			
Comments:							
003	Available	5B: Maintain for regeneration purposes	54				
Comments:							
007	Not Available	3D: Recreational / Scenic values	5	1C: Other dept or div proc/practices			
Comments:							

Report 5 – Site Conditions

Roscommon Mgt. Unit

Compartment 108

Dale Ekdorn : Examiner

Year of Entry 2016

008	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	15
Comments:			
009	Available	2D: Portable Bridge Needed (Dept. bridge will be adequate)	15
Comments:			



Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments				
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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.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	High Density Log	11.9	77	111-140	R9 thinned in June 1997, red pine with scattered pole size quaking aspen and red maple and also some white pine poles and sawlogs, right at edge treatment-wise but could thin once more before either final harvesting or starting to take utility poles, stand has lots of deer beds/tracks
2	4130 - Aspen	High Density Sapling	3.5	26		A3 regenerated in 1997
3	42220 - Natural Jack Pine	High Density Pole	17.1	62		mature J6 stand, mostly jack pine but pockets heavy to red maple, aspen, or both, also scattered hardwoods. jack pine and aspen fading but red pine and red maple doing OK, probably should regenerate stand if access problem due to ditch/powerline on M-55 can be mitigated, lots of deerbeds/tracks within stand, operable but with a higher water table in spots
4	42220 - Natural Jack Pine	Medium Density	11.0	15		J6 cut and regenerated naturally in 1997, mostly jack pine but also scattered hardwoods
6	42220 - Natural Jack Pine	Medium Density	5.6	15		J6 cut and regenerated naturally in 1997, mostly jack pine but also scattered hardwoods
9	42220 - Natural Jack Pine	High Density Pole	4.6	75		small stand left as buffer when stand to the south was cut in 2009, mostly jack pine but with a few hardwoods, converting to hardwoods on its own
10	42220 - Natural Jack Pine	Medium Density	6.6	15		J6 cut and regenerated naturally in 1997, mostly jack pine but also scattered hardwoods
12	42220 - Natural Jack Pine	Medium Density	11.3	15		J6 cut and regenerated naturally in 1997, mostly jack pine but also scattered hardwoods
13	42220 - Natural Jack Pine	High Density Pole	76.5	57		upland jack pine but with hummucky terrain and a high water table, standing water in a lot of it during spring runoff when it was inventoried, a few aspen clones and solitary aspen trees scattered thru-out stand, understroy is fairly open with a few scattered red maple and jack pine saplings and an occasional oak sapling, ground cover is mostly pillow moss and scattered leatherleaf with some bracken fern on the higher ground
14	42220 - Natural Jack Pine	High Density Pole	23.7	75		J6 held last YOE for age/size class diversity, should be regenerated now as jack pine is declining
16	42220 - Natural Jack Pine	Medium Density	12.3	15		J6 cut and regenerated naturally in 1997, mostly jack pine but also scattered hardwoods
18	6139 - Mixed Lowland Forest	Medium Density Pole	32.4	75		jack pine mixed with hardwoods, much of the stand is wet jack pine with some higher pockets heavy to hardwood poles or J3, lots of jack pine and hardwoods seeding in on their own, ground cover is pillow moss, blueberry, and leather leaf, some jack pine saplings are almost pole size, lots of blowdown and/or dead jack pine in spots, heavy wildlife use in this stand - good stand to leave for wildlife



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	42220 - Natural Jack Pine	High Density Sapling	8.1	25		J6 regenerated naturally in 1988, mostly jack pine but has scattered hardwoods
22	6126 - Lowland Jack Pine	High Density Pole	11.2	67		J6 with scattered hardwoods, wetter stand with a high water table, lots of wildlife sign
26	42210 - Natural Red Pine	High Density Log	3.7	65	111-140	natural red pine stand, stand has a higher water table but is probably operable during dry periods or when frozen, mostly red pine sawlogs on the south end and mix of RP poles/sawlogs with some suppressed RP saplings on the north end, consider thinning if surrounding jack pine is treated and access can be gained across wetter terrain, SI or RP is 47.
27	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	22.1	70		island of jack pine cut off by wetter terrain, southwest part of the stand has a broad drainage cutting off the southwest part from the rest of the stand
29	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	35.6	70		island of jack pine surrounded by "L"
30	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	8.7	70		island of jack pine surrounded by "L"
31	42220 - Natural Jack Pine	High Density Pole	45.0	64		jack pine poles and sawlogs with scattered red pine sawlogs and red maple/aspens poles, terrain is approx. 50% upland and 50% lowland but is mostly operable during dry or frozen conditions, stand has narrow swale of "L" in the middle running north to south
32	4311 - Pine, Aspen Mix	Medium Density Pole	17.5	56		mix of upland with oak and jack pine and lowland with aspen and red maple, south edge is mostly low with TA poles and RM saplings which are almost pole-size, rest of the stand is hummocky upland mixed with small lowland pockets that have a mix of mature and over-mature jack pine and aspen, parts of the stand are fairly open, and there are also scattered oaks throughout the drier areas of the stand
33	4132 - Aspen, Jack Pine	Medium Density	7.6	25		habitat cut in 1988, regenerated to a mix of aspen and jack pine
34	42220 - Natural Jack Pine	High Density Pole	11.1	70		island of jack pine surrounded by "L", Nellsville Drain cuts off the southeast part of the stand
35	6112 - Lowland Aspen	Medium Density Pole	12.4	29		lowland aspen island surrounded by "L", marginally higher than surrounding terrain, low volumes/stockings, cut by 2 or 3 broad drainages including Nellsville Drain, west 2/3rds was habitat cut in 1984, east 1/3rd is 1947 YOO
36	42220 - Natural Jack Pine	High Density Pole	13.3	71		island of jack pine surrounded by "L", stand is cut in 1/2 by Nellsville Drain
38	42220 - Natural Jack Pine	High Density Pole	3.9	70		



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	4191 - Mixed Upland Deciduous with Conifer	Low Density Pole	14.6	88		Oak SL's with red maple, trembling aspen, and jack pine poles stand is fairly open with lots of grassy openings for wildlife to use, oak is the oldest species and JP-TA-RM appears to be younger, stand is mostly upland surrounded by low ground and it has a few small wet potholes in the stand interior, some beaver activity along the edges
42	4125 - Black, N. Pin Oak	High Density Log	9.1	79	81-110	2 islands of slightly higher ground surrounded by wet terrain, untreated portion of oak stand to the west, hummocky ground, red maple saplings-poles heavy in spots (esp. on the edges), west island is heavy to red pine, east island is mostly hardwoods, stand is doing well on its own, good stand to leave for wildlife
43	4124 - Red with White Oak	Medium Density Log	54.5	79	51-80	oak ridge surrounded by lowland non-forested types, edges and lower parts which were not treated are sapling-pole size red maple and trembling aspen, bulk of stand was shelterwood cut in 2011 and is now O8A2M1, lots of deer browse on the red maple and oak saplings which regenerated from this treatment, going towards all-aged
47	6112 - Lowland Aspen	Medium Density	7.6	15		lowland aspen stand which was regenerated in 1998, nice A3 along east edge but less aspen as you get towards the west edge which is a lot wetter
48	4130 - Aspen	High Density Sapling	7.5	15		stand cut 1998, left oak sawlogs (especially the north 1/2 of stand), mix of BTA and quaking aspen
51	4124 - Red with White Oak	Medium Density Log	7.0	79	1-50	Approx. 2/3rds red/black oak and 1/3rd white oak, a few scattered R/W pine sawlogs as well, stand was shelterwood cut in 2011 and underburned twice in the last 10 years to reduce the duff layer and expose mineral soil for acorn germination, lots of oak started in the understory except in the north part of the stand which has a heavy red maple understory, most oak regeneration is from seed but there are some stump sprout oak also, stand also has a few scattered aspen and red maple saplings, most oak is cat-faced and fire scarred from the prescribed burns, lots of deer browse within the stand on the oak saplings
52	4130 - Aspen	High Density Sapling	4.6	15		stand cut in 1998, scattered oak and white pines were left



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	3102 - Grass	30.6	Natural Regen	Jack Pine	cut in 2009, A6/J6 which did not regenerate except to grass, dry except during spring run-off and during wetter summers and falls, does have a few wet spots which are sparse to even grass and a few higher knolls which are A2 but most is thick grass, south part is moderately stocked where there was more jack pine but the areas which were heaviest to aspen are now sparsely stocke with aspen/jack pine at best
7	3105 - Mixed Upland Herbaceous	14.4	Natural Regen	Jack Pine	cut and regenerated in 2009, natural regeneration is slow but stand should be forested next YOE,dry but with a water table close to the surface
8	3105 - Mixed Upland Herbaceous	9.0	No	Unspecified	Powerline ROW/M-55/shoulder and ditch, lots of encroaching jack pine saplings
11	3105 - Mixed Upland Herbaceous	3.5	Natural Regen	Jack Pine	cut and regenerated in 2009, natural regeneration is slow but stand should be forested next YOE,dry but with a water table close to the surface
15	6233 - Wet Meadow	3.6	No	Unspecified	grassy wet swale
17	3105 - Mixed Upland Herbaceous	3.0	Natural Regen	Jack Pine	cut and regenerated in 2009, natural regeneration is slow but stand should be forested next YOE,dry but with a water table close to the surface
19	50 - Water	14.8	No	Unspecified	man-made pond?
20	6233 - Wet Meadow	5.9	No	Unspecified	grassy wet swale
23	3105 - Mixed Upland Herbaceous	25.8	Natural Regen	Jack Pine	cut and regenerated in 2009, natural regeneration is slow but stand should be forested next YOE,dry but with a water table close to the surface
24	623 - Emergent Wetland	7.4	No	Unspecified	marsh grass
25	50 - Water	1.4	No	Unspecified	
28	6223 - Inundated Shrub Swamp	8.1	No	Unspecified	stand was habitat cut in 1988 and was J3 last YOE, now there's lots of jack pine motality probably due to a fluctuating water table
37	6230 - Cattail	475.5	No	Unspecified	marsh with cat-tails, etc.
39	50 - Water	46.8	No	Unspecified	not so much cat-tail as suounding stand and with lots of standing water on imagery



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
41	622 - Lowland Shrub	109.1	No	Unspecified	lowland brush
44	3102 - Grass	4.5	Yes	High	maintained wildlife opening
45	3102 - Grass	6.8	Yes	High	Maintained wildlife opening
46	6225 - Bog	22.3	No	Unspecified	bog
49	122 - Road/Parking Lot	2.6	No	Unspecified	Nellsville Road ROW
50	310 - Herbaceous Openland	1.6	No	Unspecified	Powerline ROW