



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 235

Entry Year 2015

Acreage: 1,058

County Marquette

Management Area: Chain Lakes Moraine

Revision Date:

Stand Examiner: Kevin LaBumbard

Legal Description:

T45N R29W Sections 14,15,16.

Identified Planning Goals:

To improve the quality and diversity of State forests and wildlife through proper habitat management, while protecting the riparian values of our wetlands and waters.

Soil and topography:

Terrain ranges from level swamps and wetland drainages to rolling and slightly hilly uplands.

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

Some additional state lands are located to the north, corporate lands lie to the west, a private hunt club borders to the east and small private inholdings are mixed with state land to the south.

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:

Watershed and Fisheries Considerations:

Little Bear Lake, Loon Lake, Peterson Lake, Hagens Lake, and Cranberry Lake.

Wildlife Habitat Considerations:

Compartment 235 is found within the Chain Lakes Management Area; which is a Disintegration Moraine in Southwestern Marquette County. The State Forest covers about 84,600 acres and is mostly contiguous. State Forest Lands are the major ownership in this vicinity. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. Major forest cover types include Aspen, Mixed Lowland Conifer, and Jack Pine. In general, this area has a mid-range site quality. This management area provides multiple benefits to the public including forest products, dispersed recreational activities, and habitat for fish and wildlife species. Some of the most significant wildlife management issues in the management area are: mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; coarse woody debris; and retention or development of large living and dead standing trees (for cavities). Wildlife Division would like to increase the oak resource within this management area and to optimize acorn production. This management area represents approximately ¼ of the oak resource on WUP state forest. In addition to promoting mast crops another priority is to maintain or increase wildlife corridors especially along riparian corridors.

The following have been identified as featured species for the Chain Lakes Management Area: Black bear, Gray Jay, Pileated Woodpecker, Northern Goshawk, Red Crossbill. However, the featured species concept does not preclude the management for other wildlife species within a particular MA, rather it is simply intended to be as a tool to help prioritize or focus habitat management.

For lands purchased with Pittman–Robertson Act or Game and Fish funds, the primary objective of vegetative management must be wildlife restoration.

Mineral Resource and Development Concerns and/or Restrictions

Sections 13 & 14, T45N-R29W, Marquette County

Surface sediments consist of coarse-textured glacial till, peat and muck and an end moraine of coarse-textured till. There is insufficient data to determine the glacial drift thickness. The Precambrian Archean Granite/Gneiss subcrops below the

glacial drift. This rock could be used as a building or dimension stone. A gravel pit is located north of the compartment and potential appears to be good on the uplands. The abandoned Republic iron mine is located seven miles to the northwest. None of the State land in the compartment is leased for metallic exploration, but previous leases were located in the township. There is no economic oil and gas production in the UP.

Vehicle Access:

Access is good from Co. Road FNN (Casey Lake Road) which runs north and south, cutting the compartment almost exactly in half. Additional 2-tracks off of this main road provide access to various parts of the compartment.

Survey Needs:

None needed at this time.

Recreational Facilities and Opportunities:

Access is good from Co. Road FNN (Casey Lake Road) which runs north and south, cutting the compartment almost exactly in half. Additional 2-tracks off of this main road provide access to various parts of the compartment.

Fire Protection:

This compartment lies within the 581 Zone Dispatch area.

Additional Compartment Information:

The following reports from the Inventory are attached:

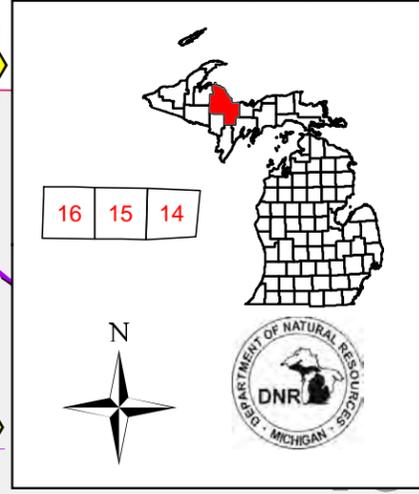
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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: 235
 T45N R29W Sec. 14, 15, 16
 County: Marquette
 Unit: Gwinn
 YOE: 2015
 Acres: 1,058 GIS Calculated
 Examiner: Kevin LaBumbard
 Map Revised: 08/07/2013
 Map Phase: Pre-Review



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

Legend

- PLSS Corner
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Powerline
- Snowmobile Trails
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)

Forest Stands

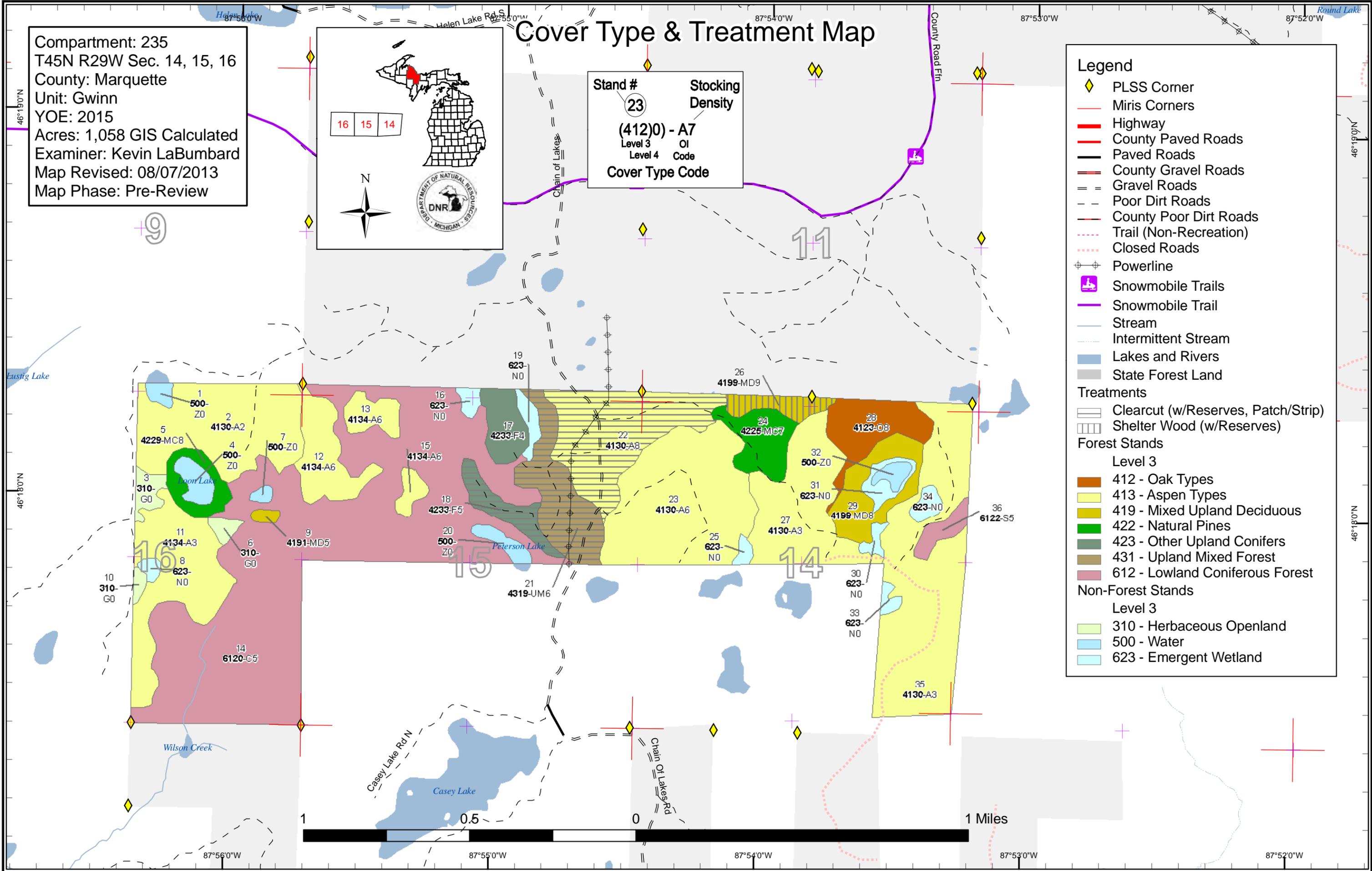
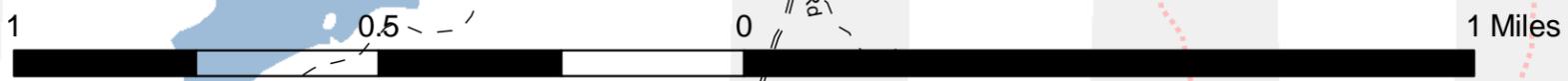
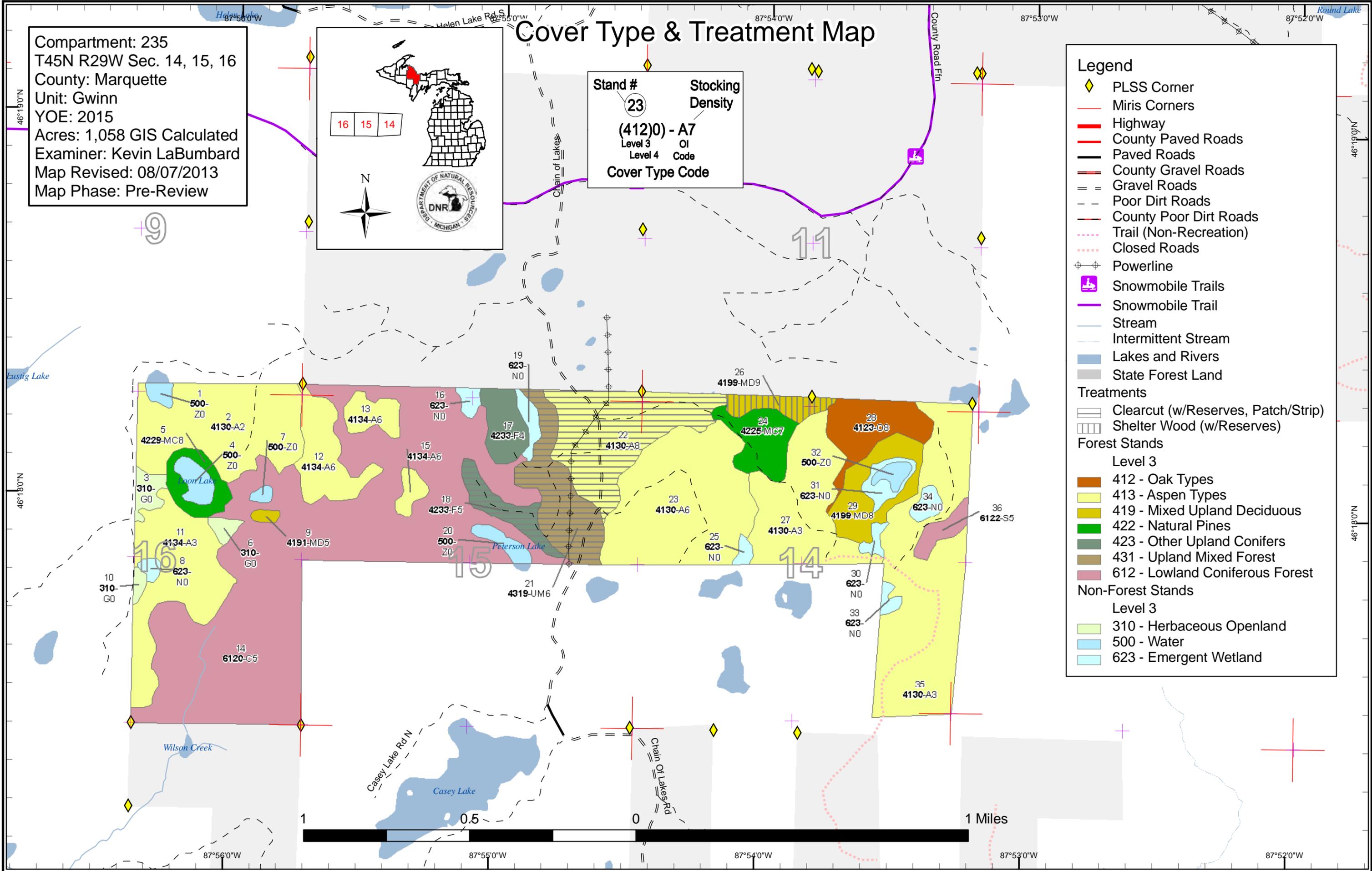
Level 3

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

Non-Forest Stands

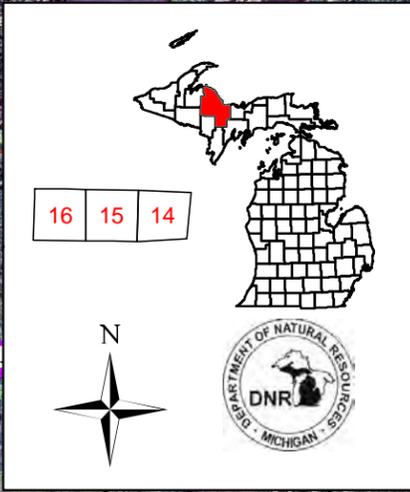
Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 623 - Emergent Wetland



Stand Boundary Map

Compartment: 235
 T45N R29W Sec. 14, 15, 16
 County: Marquette
 Unit: Gwinn
 YOE: 2015
 Acres: 1,058 GIS Calculated
 Examiner: Kevin LaBumbard
 Map Revised: 08/07/2013
 Map Phase: Pre-Review



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

Legend

- ◆ PLSS Corner
- + Remonumented Section Corners
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- = Gravel Roads
- — Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trail
- Snowmobile Trails
- ⊕ Powerline
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

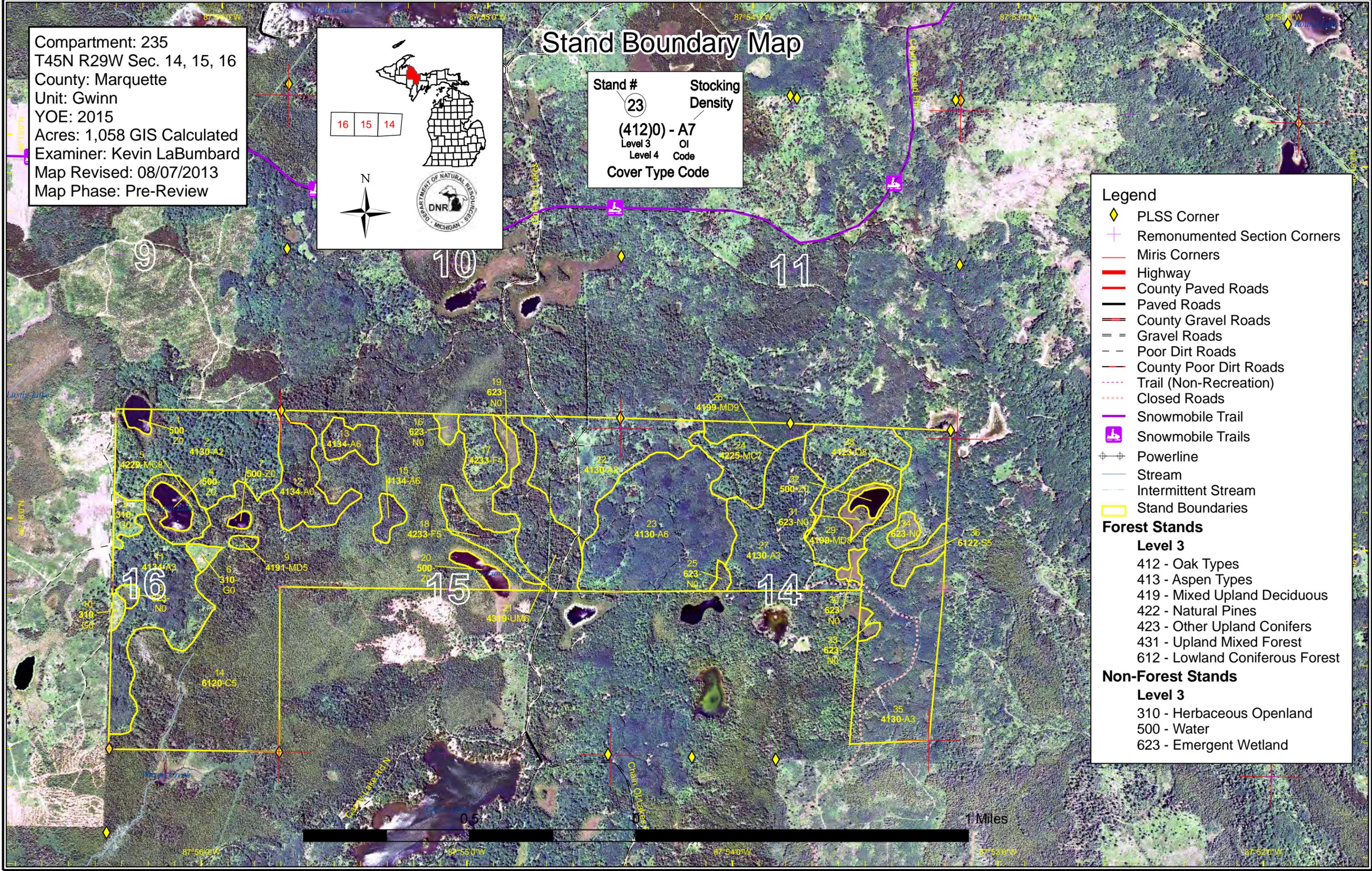
Level 3

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

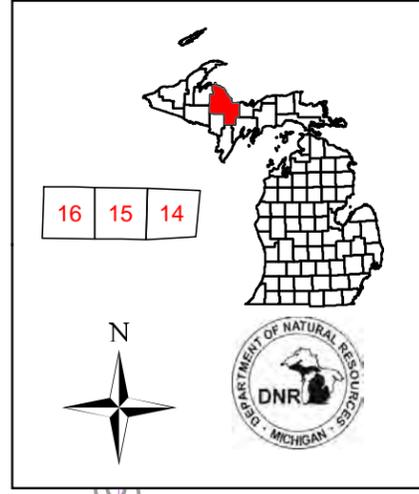
Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 500 - Water
- 623 - Emergent Wetland



Compartment: 235
 T45N R29W Sec. 14, 15, 16
 County: Marquette
 Unit: Gwinn
 YOE: 2015
 Acres: 1,058 GIS Calculated
 Examiner: Kevin LaBumbard
 Map Revised: 08/07/2013
 Map Phase: Pre-Review

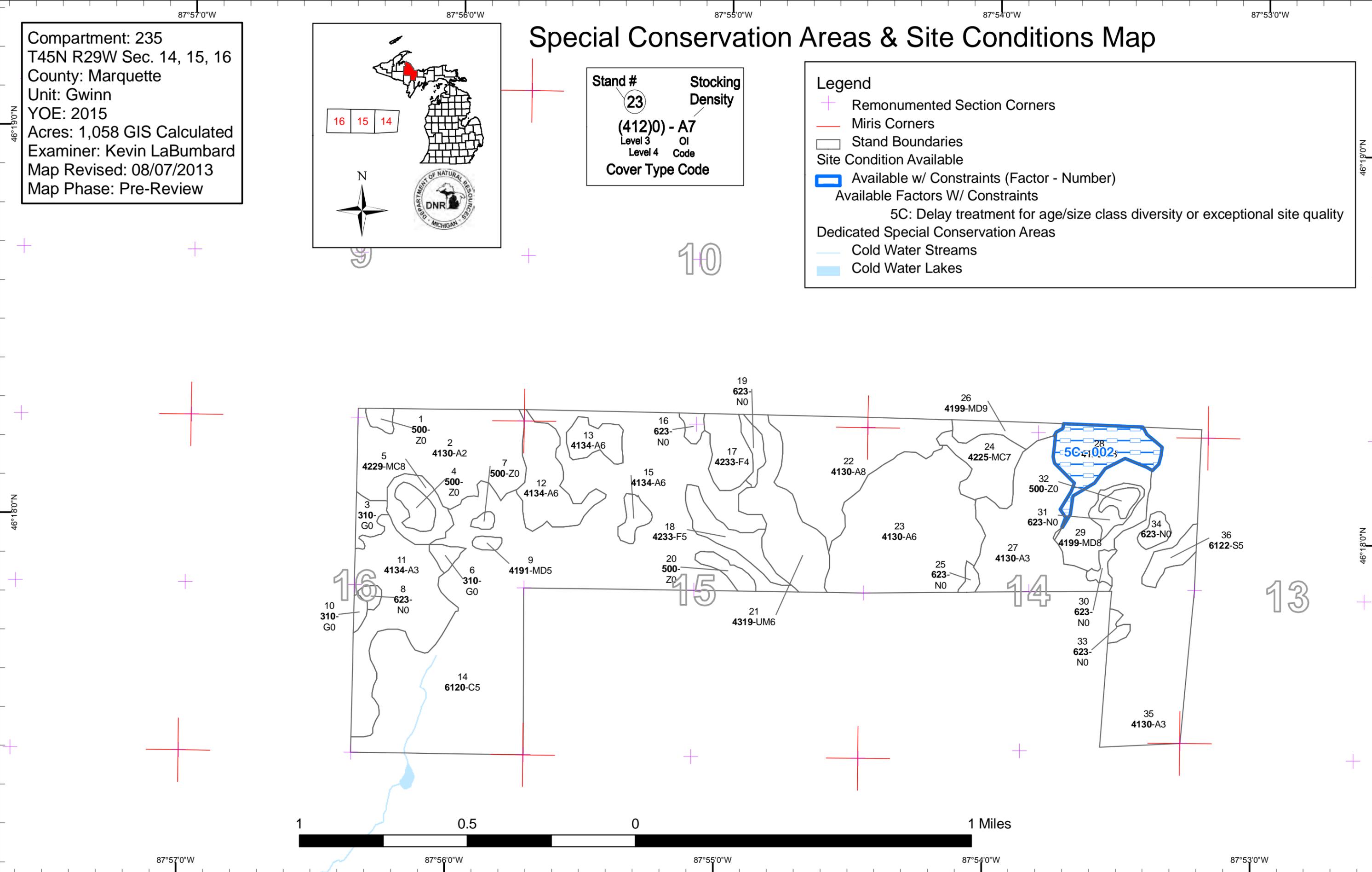
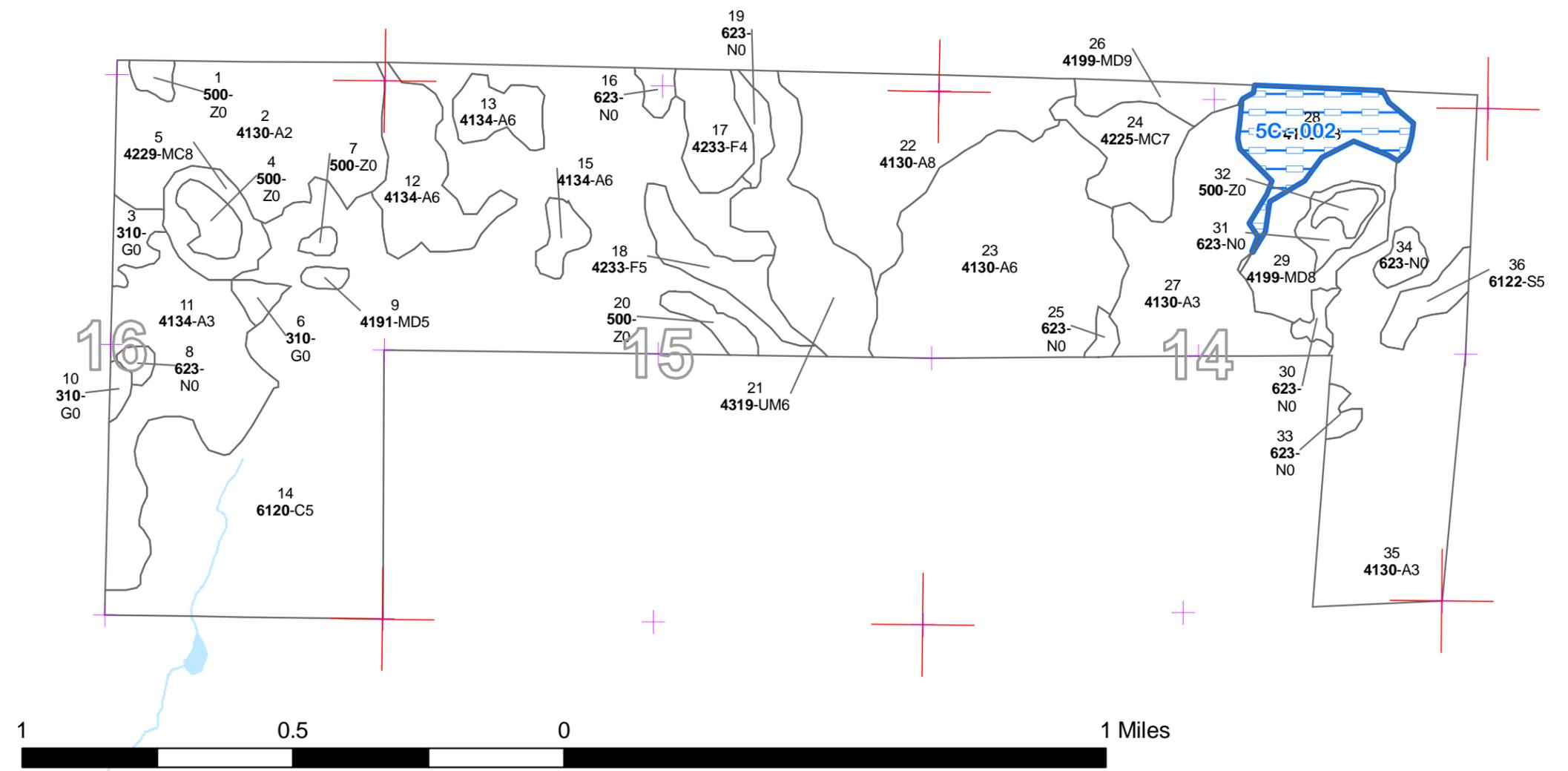


Special Conservation Areas & Site Conditions Map

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

Legend

- + Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes



Report 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit

Compartment 235 Year of Entry 2015

Kevin LaBumbard : Examiner



	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	136	269	43	66	0	0	0	0	0	0	0	0	0	515
Cedar	0	0	0	0	0	0	0	0	0	0	308	0	0	0	308
Herbaceous Openland	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Lowland Spruce/Fir	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
Marsh	28	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	36	2	0	0	0	0	38
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	12	21	0	0	0	33
Oak	0	0	0	0	0	0	0	0	0	28	0	0	0	0	28
Upland Mixed Forest	0	0	0	0	39	0	0	0	0	0	0	0	0	0	39
Upland Spruce/Fir	0	0	16	0	0	0	15	0	0	0	0	0	0	0	30
Water	21	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	61	136	285	43	105	0	15	8	36	41	329	0	0	0	1058



Report 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit
Year of Entry 2015

Compartment 235
Total Compartment Acres: 1,058

Acres by Treatment Type

Commercial Harvest - 130 Tree Planting - 0 Other - 0
 Habitat Cut - 0 Opening Maintenance - 0

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	66	0	0	0	0	0	66
Mixed Upland Deciduous	0	0	0	11	0	0	11
Other Upland Conifers	15	0	0	0	0	0	15
Upland Mixed Forest	39	0	0	0	0	0	39
Total	119	0	0	11	0	0	130



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	32235018-Cut	14.6	42330 - Upland Fir	Medium Density Pole	65		Harvest	Clearcut with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal

Prescription Harvest the fir and black spruce leaving a fringed of black spruce on the west as well as the white pine.

Specs:

Other Part of the stand (aspen) was removed in 1988. Now it's primarily a fir stand with a fair amount of blowdown. 3- 4 stick 70 ba fir with some black
Comments: spruce on the edge. Cruising will be a nightmare.

Next Monitor regeneration per work instructions.
Steps:

Proposed
Start Date: 10/01/2014

21	32235021-Cut	38.6	4319 - Mixed Upland Forest	High Density Pole	45		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
----	--------------	------	-------------------------------	-------------------------	----	--	---------	---------------------------	-------------	--------------------------

Prescription Final harvest of all species except red and white pine.

Specs:

Other A mix of aspen and upland conifers, ready to harvest. Cut with stand 22.
Comments:

Next Monitor regeneration per work instructions.
Steps:

Proposed
Start Date: 10/01/2014

22	32235022-Cut	65.9	4130 - Aspen	Medium Density Log	46		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
----	--------------	------	--------------	-----------------------	----	--	---------	---------------------------	-------------	--------------------------

Prescription Clearcut all aspen retaining the red pine and any white pine.

Specs:

Other Losing aspen. Final harvest retaining the red pine. West side of stand has significant blowdown. Stocking is approximately 50%. 60 ba 4 stick
Comments: aspen.

Next Monitor regeneration per work instructions.
Steps:

Proposed
Start Date: 10/01/2014

26	32235026-Cut	10.8	4199 - Other Mixed Upland Deciduous	High Density Log	85	81-110	Harvest	Shelter Wood with Reserves	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal
----	--------------	------	--	---------------------	----	--------	---------	-------------------------------	--	--------------------------

Prescription Harvest the birch, aspen, red maple and some oak down to 50 ba. Retain the red pine and possibly a few white birch seed trees.

Specs:

Other Red oak and white birch stand with big tooth aspen and red maple. Quite rocky. Heavier to birch west, red oak east. Harvest the birch, aspen,
Comments: red maple, and some oak. Cut with stand 21 of compartment 234 (north). Numerous red pine, white pine, red oak seedlings less than 3' tall.

Next Monitor regeneration per work instructions.
Steps:

Proposed
Start Date: 10/01/2014

**Total Treatment
Acreage Proposed: 129.9**



S
t
a
n
d

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

#Type!

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

**Total Treatment
Acreage Proposed: 0**

Report 5 – Site Conditions

Gwinn Mgt. Unit

Kevin LaBumbard : Examiner

Compartment 235

Year of Entry 2015

Availability for Management

Total Acres	Acres		Dominant Site Conditions	Dominant Site Conditions	
	Available	Not Available		No	5C
515	515		Aspen	515	
308	308		Cedar	308	
8	8		Lowland Spruce/Fir	8	
38	38		Mixed Upland Deciduous	38	
33	33		Natural Mixed Pines	33	
28	28		Oak	0	28
39	39		Upland Mixed Forest	39	
30	30		Upland Spruce/Fir	30	
997	997		Total Forested Acres	970	28
	100%		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 Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	28				
Comments:							
Stand is in perfect shape, no treatment needed.							



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				



Report 7 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
2	4130 - Aspen	Medium Density	73.9	16	1-50	Commercially cut summer of 1996, permit # 10-95, "Little Bear Lake Block", cut by Jim Carey. All oak, red and white pine were left. Objective is both oak & birch. Check for natural regeneration success when possible. Perhaps some oak may be planted in this stand or scarification tried to encourage seeding. 2013- Less than 10 ba of residual red oak. Heavy red maple and aspen regen, along with a few oak, bf, white pine. Did not meet the oak or birch regen objective. Aspen is now the feature species.
5	42290 - Natural Mixed Pine	Medium Density Log	11.9	93		Former POG stand, retain as SCA riparian buffer. High ridge of red pine around Mud Lake.
9	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	1.9	92		Small steep knob jutting into swamp. Former POG stand
11	4134 - Aspen, Spruce/Fir	High Density Sapling	58.6	26		30-40' 4-5 inch aspen saps starting to transition into the pole timber class. Much of the stand is comprised of healthy, tall big tooth aspen. Moose droppings along the swamp edge.
12	4134 - Aspen, Spruce/Fir	High Density Pole	27.4	38		Was commercially cut in 1973-74 by Robert "Topsy" Junak, permit #20/70A. Heavier to fir in southwest part. Specs on this sale called for cutting all merchantable aspen, balsam, birch, maple, and tamarack, as well as all spruce/fir with 2 or more sticks. Currently 3-4 stick aspen with 2-3 stick fir. Some black spruce and tamarack on the fringes. Hold 10 years.
13	4134 - Aspen, Spruce/Fir	High Density Pole	10.5	38		Was commercially cut in 1973-74, permit #20/70A, by Robert "Topsy" Junak. Western and southern portions of stand have heavier upland conifer component.
14	6120 - Lowland Cedar	Medium Density Pole	308.0	103		Short, stunted cedar with black spruce, tamarack, balsam fir.
15	4134 - Aspen, Spruce/Fir	High Density Pole	5.4	38		Was commercially cut in 1973-74 by Robert "Topsy" Junak, permit #20/70A. Small island of aspen and fir.
17	42330 - Upland Fir	Low Density Pole	15.6	25		Was commercially cut in 1986-88 under permit #8-85, "Peterson Lake Block", by Milo Palm of Negaunee. Most of the red and white pine were left. Also, care was required to save a significant portion of the advance spruce/fir reproduction. Some aspen & cherry sprouting also occurred in this stand. 2013- Lightly stocked fir and aspen clones over small openings of heavy braken fern and sweet fern.. Could possibly remove the fir with stand 19 but would make a poor sale.
18	42330 - Upland Fir	Medium Density Pole	14.6	65		Part of the stand (aspen) removed in 1988. Now it's primarily a fir stand with a fair amount of blowdown. 3- 4 stick 70 ba fir with some black spruce on the edge. Cruising will be a nightmare.
21	4319 - Mixed Upland Forest	High Density Pole	38.6	45		A mix of aspen and upland conifers, ready to harvest. Cut with stand 23.
22	4130 - Aspen	Medium Density Log	65.9	46		Losing aspen. Final harvest retaining the red pine. West side of stand has significant blowdown. Stocking is approximately 50%. 60 ba 4 stick aspen.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4130 - Aspen	High Density Pole	98.0	27		Nice young pole stand contains a small island of JP saplings.
24	42250 - Pine, Oak	Low Density Log	20.9	105	1-50	Was commercially cut in Fall of 2006 by St. John Forest Products, Inc., under permit # 111-05-01, "Cranberry Lake Aspen Sale". This was a shortwood operation with St. John's Ponsse crew. This is a rocky site also. Reserve trees were all oak, cherry, spruce, & fir, plus all unmarked pine. Basal area data for residual stocking is from our cruise made after marking this stand. No new roads were built to harvest this unit. Decked on existing road. 2013-Heavy stump sprouting of red maple, medium stocking of aspen regeneration and low stocking of white pine.
26	4199 - Other Mixed Upland Deciduous	High Density Log	10.8	85	81-110	Red oak and white birch stand with big tooth aspen and red maple. Quite rocky. Heavier to birch west, red oak east. Harvest the birch, aspen, red maple, and some oak. Cut with stand 21 of compartment 234 (north). Numerous red pine, white pine, red oak seedlings less than 3' tall.
27	4130 - Aspen	High Density Sapling	62.2	18		Comm. cut summer/fall of 1995, permit # 9-95, Holli Forest Products. "Cranberry Aspen Block". Aspen survival and stocking has suffered in places (especially north of the road) due to shading from the residual oak. Maple reproduction is heavy and dominant in spots also. South of the road it could be typed as A3. 2013-Dense 2-4" aspen saps with wp, rp, ro. Approximately 20 ba residual of red oak.
28	4123 - Red Oak	Medium Density Log	27.7	99	1-50	Was commercially cut in Nov 2006 by St. John Forest Products, Inc. (Farrell Bros. From Crystal Falls - jobber. A tree length operation), under permit # 111-05-01, "Cranberry Lake Aspen Sale". Access was from southwest using an older bermed road from a previous sale and extending it into the sale. Reserve trees were all oak, cherry, spruce, and fir, plus all unmarked red & white pine. I believe we left all of the pine in this unit. From our cruise, there was 28 sq.ft/acre of oak, 5 sq.ft/A of red pine, & 2 sq.ft/A of white pine in Feb 2005. Rolling, rocky, most regeneration is red maple and aspen. Trace of red maple and white birch.
29	4199 - Other Mixed Upland Deciduous	Medium Density Log	25.3	85	51-80	Medium stocked red oak, white birch and red pine sawtimber around the lake. Former POG, recommend removal.
35	4130 - Aspen	High Density Sapling	112.9	23		Was commercially cut in 1988-89 under permit #15-85, "Cranberry Lake Block", cut by Nickels Logging of Norway. Oak were marked with green paint to save, approx. 5 oak per acre. 20-30' aspen saps with a few red pine, red oak, red maple.
36	6122 - Black Spruce	Medium Density Pole	7.6	76		Small black spruce bog.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	50 - Water	3.1	N/A	Unspecified	
3	310 - Herbaceous Openland	6.3	N/A	Unspecified	
4	50 - Water	7.0	N/A	Unspecified	
6	310 - Herbaceous Openland	3.2	N/A	Unspecified	
7	50 - Water	1.7	N/A	Unspecified	
8	623 - Emergent Wetland	2.2	N/A	Unspecified	
10	310 - Herbaceous Openland	2.1	N/A	Unspecified	
16	623 - Emergent Wetland	3.2	N/A	Unspecified	
19	623 - Emergent Wetland	4.8	N/A	Unspecified	
20	50 - Water	5.4	N/A	Unspecified	
25	6239 - Mixed Emergent Wetland	2.2	No	Unspecified	
30	623 - Emergent Wetland	2.8	N/A	Unspecified	
31	623 - Emergent Wetland	5.7	N/A	Unspecified	
32	50 - Water	4.0	N/A	Unspecified	
33	623 - Emergent Wetland	2.6	N/A	Unspecified	
34	6239 - Mixed Emergent Wetland	4.4	No	Unspecified	