



**Gwinn Forest Management Unit
Compartment Review Presentation
Compartment 35 Entry Year: 2013
Compartment Acreage: 1, 505 County: Marquette**

Revision Date: 08/18/2011

Stand Examiner: Kevin LaBumbard

Legal Description: T45N R26W Sections 6,7,18

RMU (if applicable): Chain Lakes Moraine Management Area

Management 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: Topography varies greatly from nearly level to quite steep. Although there are some organic soils, most are excessively drained sands. Soil associations include Rubicon, Crowell, Carbondale, Lupton, Tawas, Rifle, Dawson, Kinross, Kalkaska, Munising and Keweenaw.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Most of the compartment is surrounded by State land except for the private holdings in section 6.

Unique, Natural Features: Potential for osprey, eagle, and great blue heron rookery. Potential for red-shouldered hawk and goshawk. Potential for moose and wolf. Potential for wood turtle in Bear Creek. Potential for grasshopper sparrow in grassy openings. Potential for auricled tway-blade, western dock, veiny meadow-rue, and linear-leaved gentian along riparian areas. Potential for Farwell's water-milfoil and alternate-leaved water-milfoil in shallow lakes. Potential for purple clematis in dry-mesic conifer stands. Potential for fir clubmoss in moist sandy depressions and shorelines. Potential for Canada rice-grass in grassy openings and in clearings in jack pine.

Archeological, Historical, and Cultural Features: None identified.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations: Bear Creek

Wildlife Habitat Considerations: Maintain or increase potential of hard mast production by utilizing management strategies that encourage oak. Identify and implement methods that increase mesic conifer in hardwood stands, especially white pine in oak. Manage for within-stand diversity by protecting and/or enhancing white and red pine, and strive to increase diversity for wildlife. Maintain the best age class diversity in aspen. Strive to increase within-stand diversity in aspen by utilizing retention guidelines to provide the best combination of food and cover. Within Special Conservation Areas along creeks and tributaries maintain large closed canopy conifer to provide snow intercept and cover, mature forest structure and protection for wildlife corridors and riparian areas. Diversity in habitat types in this compartment offers a variety of hunting, trapping, and wildlife viewing opportunities.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of coarse-textured glacial till. The glacial drift thickness varies between 50 and 200 feet. Precambrian Archean

Granite/Gneiss subcrops below the glacial drift. There is not a current economic use for this formation. Gravel pits are located two miles to the southeast and potential should be good. Abandoned iron mines are located six miles to the east. Sections 7 and 19 were previously leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access: Very good from County Road 565, Hemmings Lake Road, and Chain-o-Lakes Road.

Survey Needs: None at this time

Recreational Facilities and Opportunities: A segment of the Bass Lake ORV trail runs through this compartment. In addition, hunting opportunities are excellent for upland game, deer, and bear.

Fire Protection: This compartment has a low risk for wildfire.

Additional Compartment Information:

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential old growth**

Cover Type & Treatment Map

Compartment 35
 T45N, R26W, Sec. 06, 07, 18
 County: Marquette
 Unit: Gwinn
 YOE: 2013
 Acres: 1,505 GIS Calculated
 Stand Examiner: Kevin LaBumbard
 Map Revised: 8/23/2011
 Map Phase: Pre-Review

Stand # **23**
(4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code
 Stocking Density

6

7

18

N

Legend

- Miris Corners
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- + Remonumented Section Corners
- Motorcycle (DNR Sticker)
- Motorcycle Trails
- Lakes and Rivers
- Intermittent Stream/Drain
- Stream

Planned Regeneration

- Planted

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

Forest Stands

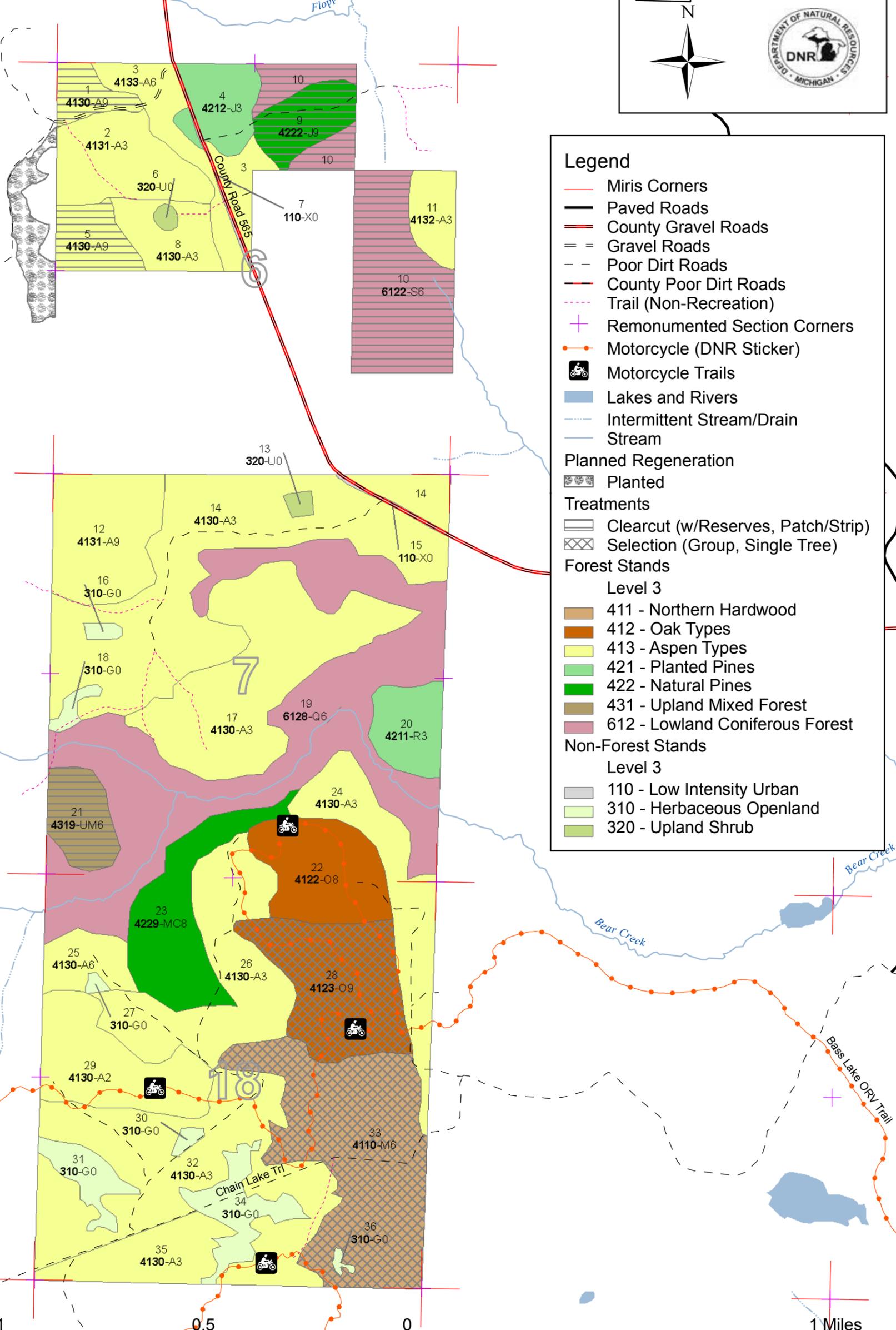
Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub



87°37'0"W 87°36'0"W 87°35'0"W

46°20'0"N

46°19'0"N

46°18'0"N

46°20'0"N

46°19'0"N

46°18'0"N

Stand Boundary Map

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- + Remonumented Section Corners
- Motorcycle (DNR Sticker)
-  Motorcycle Trails
- Stand Boundaries

Forest Stands

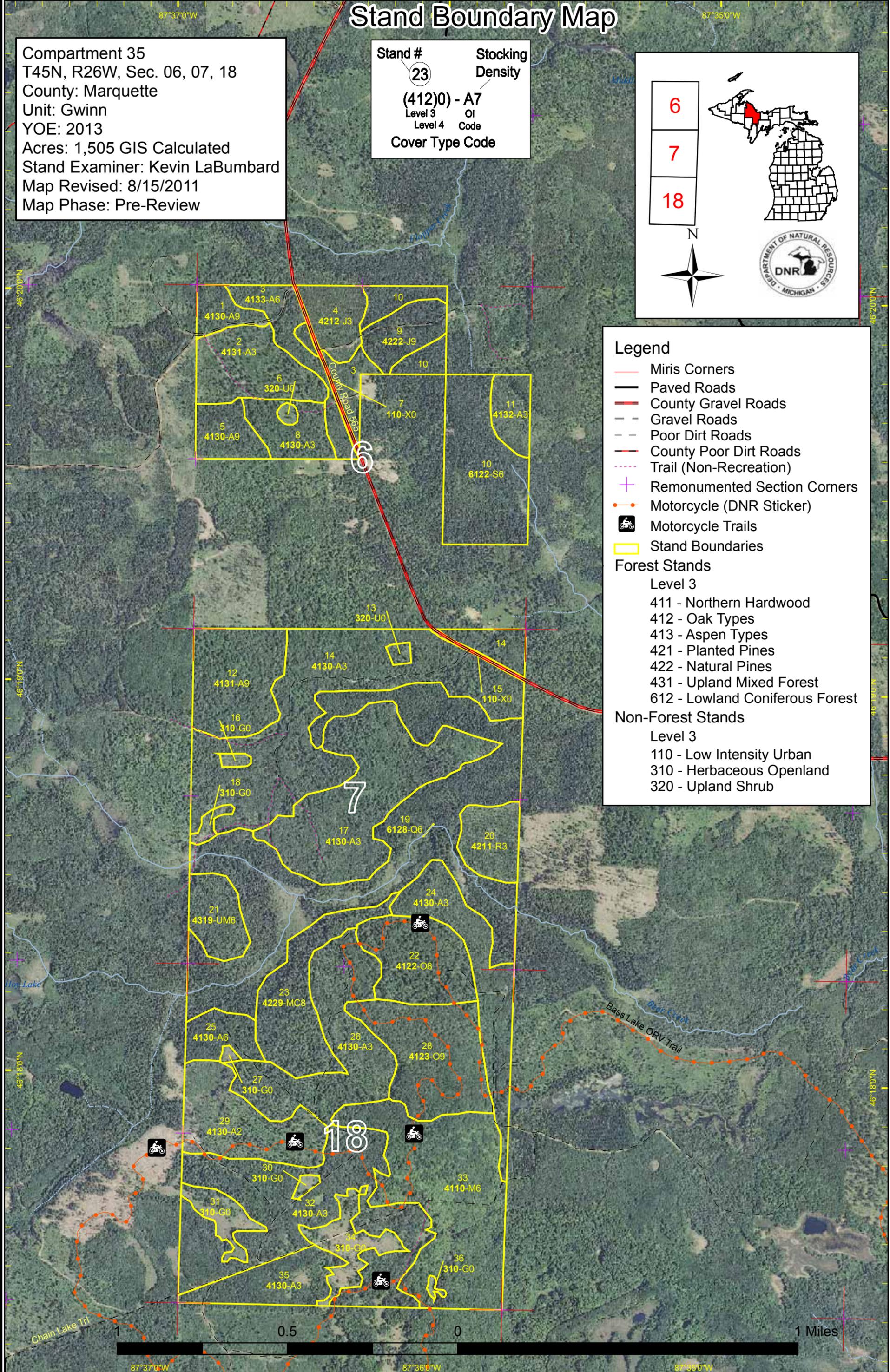
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Level 3

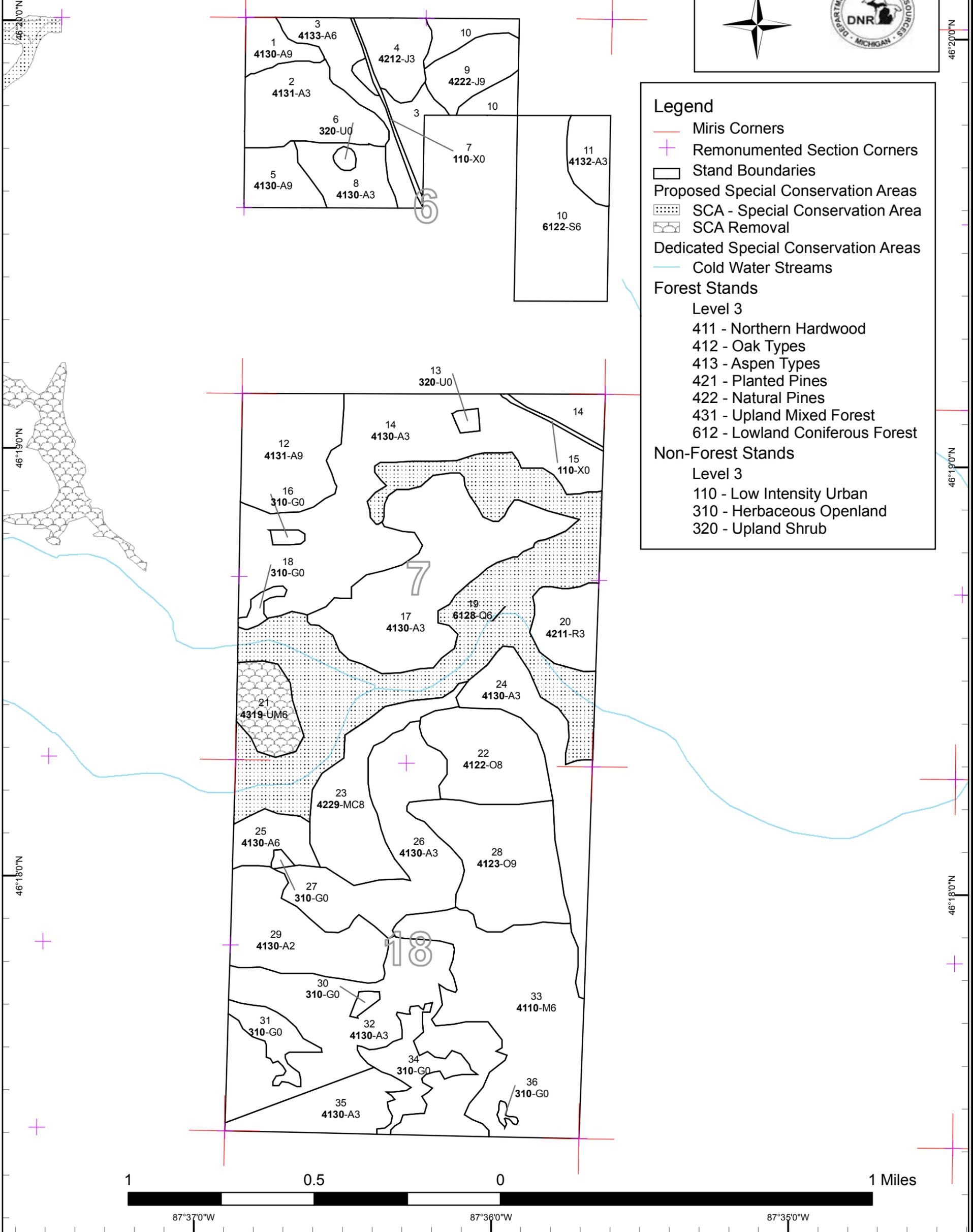
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Dedicated & Proposed Special Conservation Area Map

Compartment 35
 T45N, R26W, Sec. 06, 07, 18
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 Map Revised: 8/23/2011
 Map Phase: Pre-Review

Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries
- Proposed Special Conservation Areas
 - SCA - Special Conservation Area
 - SCA Removal
- Dedicated Special Conservation Areas
- Cold Water Streams
- Forest Stands
 - Level 3
 - 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
 - Non-Forest Stands
 - Level 3
 - 110 - Low Intensity Urban
 - 310 - Herbaceous Openland
 - 320 - Upland Shrub

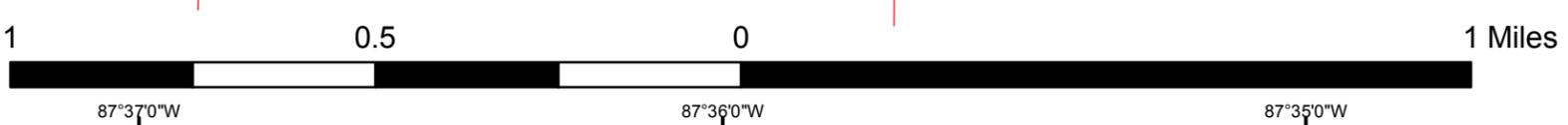


Table 1 – Total Acres by Cover Type and Age Class

Gwinn Mgt. Unit

Compartment 035 Year of Entry 2013

Kevin LaBumbard : Examiner



	Age Class														Total	
	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Unretn Age
Aspen	0	93	53	405	225	0	0	31	0	0	0	0	0	0	0	808
Herbaceous Openland	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Jack Pine	0	0	23	0	0	0	0	0	21	0	0	0	0	0	0	45
Lowland Conifers	0	0	0	0	0	0	0	0	0	196	0	0	0	0	0	196
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	0	82	0	82
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	49	0	0	0	0	49
Northern Hardwood	0	0	0	0	0	0	0	0	0	116	0	0	0	0	0	116
Oak	0	0	0	0	0	0	0	0	0	109	0	0	0	0	0	109
Red Pine	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	23
Upland Mixed Forest	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	22
Upland Shrub	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	55	93	99	405	225	0	0	31	44	421	49	0	0	82	0	1505



Table 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit
Year of Entry 2013

Compartment 035
Total Compartment Acres: 1505

Acres by Treatment Type

Commercial Harvest - 337	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	31	0	0	0	0	0	31
Jack Pine	21	0	0	0	0	0	21
Lowland Spruce/Fir	82	0	0	0	0	0	82
Northern Hardwood	0	116	0	0	0	0	116
Oak	0	64	0	0	0	0	64
Upland Mixed Forest	22	0	0	0	0	0	22
Total	157	179	0	0	0	0	337



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	32035001-Cut	12.3	4130 - Aspen	High Density Log	60	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription:</u> Clearcut aspen, birch, red maple, and jack pine, retaining the red oak component and any white pine which may be present. In addition, any legacy trees, regardless of species, will be retained.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Mixed aspen (quaking and big tooth) with red oak sawtimber, white birch and red maple.</p> <p><u>Next Steps:</u> Monitor regeneration per Work Instructions.</p>									
5	32035005-Cut	18.6	4130 - Aspen	High Density Log	69	Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal
<p><u>Prescription:</u> Clearcut the aspen, red maple, and jack pine retaining the red oak component as well as any white pine and red pine if present. In addition, all legacy trees will be retained if present.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Mature aspen with red oak and jack pine.</p> <p><u>Next Steps:</u> Monitor regeneration per Work Instructions.</p>									
9	32035009-Cut	21.4	42220 - Natural Jack Pine	High Density Log	74	Harvest	Clearcut	42340 - Upland Spruce/Fir	Cmpt. Review Proposal
<p><u>Prescription:</u> Harvest all jack pine, aspen, and black spruce. Retain only the white pine if present. Chipping required yet leaving some slash scattered.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> Mature jack pine stand with upland black spruce and a pocket of aspen sawtimber. Approximately 95 ba jack pine, 10 ba black spruce. Cut with stand 10.</p> <p><u>Next Steps:</u> Scarify the stand with anchor chains, monitor for regeneration per Work Instructions, and if that fails, trench and seed.</p>									
10	32035010-Cut	82.4	6122 - Black Spruce	High Density Pole	120	Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal
<p><u>Prescription:</u> Cut spruce and additional swamp conifers and associated hardwoods retaining the cedar component.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Monitor regeneration per Work Instructions. Any swamp conifers will be acceptable for regeneration.</p>									
21	32035021-Cut	22.4	4319 - Mixed Upland Forest	High Density Pole	71	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> Cut all species except the white pine and any legacy trees if found. The sale boundary will be kept "high" along the east side of the stand.</p> <p><u>Specs:</u> Access will be from the west through the A3 stand.</p> <p><u>Other Comments:</u> Former potential old growth stand. It consists of 3-4 stick mixed aspen, red maple, white birch over black spruce, fir, with scattered white pine.</p> <p><u>Next Steps:</u> Monitor regeneration per Work Instructions.</p>									

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28 32035028-Cut	63.7	4123 - Red Oak	High Density Log	88	Harvest	Single Tree Selection	4123 - Red Oak	Cmpt. Review Proposal

Prescription: Selection harvest leaving 60 ba of large crowned red oak and the white pine.

Specs:

Other Comments: Nice high quality red oak sawtimber stand of acorn and stump sprout origin. As a result, the trees are both single stem and in clumps. The stand contains areas of heavier white birch and aspen in the north and west end with a fair amount of white birch

Next Steps: Monitor regeneration 5 years after harvest. Wildlife Division will underplant with white pine.

33 32035033-Cut	115.7	4110 - Sugar Maple Association	High Density Pole	88	Harvest	Single Tree Selection	4111 - S.Maple, Hard Mast Association	Cmpt. Review Proposal
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Prescription: Selectively mark individual trees for harvest in all size classes working to move the stand toward an all-aged system. Retain the red oak, hemlock, and super canopy white spruce components. Target BA of 80-85.

Specs:

Other Comments: Even-aged hard maple stand with large red oak. Also contains scattered hemlock and white spruce. Ridgey, rocky, rolling terrain.

Next Steps: Monitor regen and evaluate the stand the next inventory cycle.

**Total Treatment
Acreage Proposed: 336.5**

**Table 4 -- Treatments Prescribed with
a Limiting Factor**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

**Total Treatment
Acreage Proposed: 0**

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2013



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 0**

Stand	Gwinn Mgt. Unit		5 – Forested Stands			Compartment: 035
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013
						General Comments:
1	4130 - Aspen	High Density Log	12.3	60		Mixed aspen (quaking and big tooth) with red oak sawtimber, white birch and red maple.
2	4131 - Aspen, Oak	High Density Sapling	42.2	5		10-20 ba red oak over aspen regeneration. Good red maple stump sprouts. Cut in 2005 by Gartland under contract 009-03-01.
3	4133 - Aspen, Mixed Pine	High Density Pole	36.6	24		Aspen poles and saplings with mixed white, jack, and red pines along Co. Rd 565.
4	42120 - Planted Jack Pine	High Density Sapling	23.2	17		10-15' tall 3-4" jack pine with an occasional aspen pole.
5	4130 - Aspen	High Density Log	18.6	69		Mature aspen with red oak and jack pine.
8	4130 - Aspen	High Density Sapling	22.0	17		2-4' aspen saplings with occasional red oak pole in the overstory.
9	42220 - Natural Jack Pine	High Density Log	21.4	74	81-110	Mature jack pine stand with upland black spruce and a pocket of aspen sawtimber. Approximately 95 ba jack pine, 10 ba black spruce. Cut with stand 11.
10	6122 - Black Spruce	High Density Pole	82.4	120		Large black spruce swamp, small diameter, with pockets of additional swamp conifers.
11	4132 - Aspen, Jack Pine	High Density Sapling	15.5	20		2"-4" aspen and jack pine saplings. 60-40 aspen/jack pine blend.
12	4131 - Aspen, Oak	High Density Log	50.6	31	1-50	Red oak and white pine sawtimber over 4" aspen saplings. A trace of red pine and white birch. Fair white pine in the understory with red maple and red oak saplings. Terrain is ridgely with moderately steep slopes. red oak ba 40, white pine 10.
14	4130 - Aspen	High Density Sapling	156.8	31		
17	4130 - Aspen	High Density Sapling	101.1	26		Aspen saplings over decent white pine regeneration with pockets of W7. Scattered red oak and large red pine sawtimber.
19	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	196.4	83		Typical lowland conifer stand. Heavier cedar component along Bear Creek.
20	42110 - Planted Red Pine	High Density Sapling	22.9	17		Almost pure young 4" red pine plantation with a few volunteer white pine and balsam fir.
21	4319 - Mixed Upland Forest	High Density Pole	22.4	71		Former potential old growth stand. It consists of 3-4 stick mixed aspen, red maple, white birch over black spruce, fir, with scattered white pine.





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4122 - Oak, Pine	Medium Density Log	45.6	88		Red oak, white pine, and red pine sawtimber over M3 -red maple-stump sprouts and scattered white pine seedlings. Stand was cut around 1994 under contract # 014-93-01. Nice pocket of large red pine in se corner.
23	42290 - Natural Mixed Pine	Medium Density Log	49.1	93	81-110	Mixed pine sawtimber over aspen, fir, and black spruce. 30 ba white pine, 35 ba red pine, 20 ba of mixed aspen, red maple, black spruce. Scattered red oak.
24	4130 - Aspen	High Density Sapling	52.4	20		25-30' tall aspen with white pine, fir, red pine, red oak, and white birch.
25	4130 - Aspen	High Density Pole	17.4	35		3-4 stick aspen pole stand with fir, some white spruce, and white pine sawtimber over F2/F3.
26	4130 - Aspen	High Density Sapling	75.4	21		Aspen saplings with super canopy red and white pine, red oak over fir, jack pine, and white pine.
28	4123 - Red Oak	High Density Log	63.7	88	51-80	Nice high quality red oak sawtimber stand of acorn and stump sprout origin. As a result, the trees are both single stem and in clumps. The stand contains areas of heavier white birch and aspen in the north and west end with a fair amount of white birch dead standing. Scattered large boulders and rolling terrain.
29	4130 - Aspen	Medium Density	51.3	5		Cut in 2005 by LaFleur under permit # 019-03-01. 1' aspen saplings with a super canopy of red and white pine, and red oak.
32	4130 - Aspen	High Density Sapling	124.3	20		A highly variable stand of multiple clones of aspen, scattered small openings throughout and supercanopy pines and red oak, with pockets of jack pine and balsam fir.
33	4110 - Sugar Maple Association	High Density Pole	115.7	88		Even-aged hard maple stand with large red oak. Also contains scattered hemlock and white spruce. Ridgely , rocky, rolling terrain.
35	4130 - Aspen	High Density Sapling	31.0	16		Aspen saplings with super canopy red and white pine and scattered fir.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	320 - Upland Shrub	1.9	No	Unspecified	Created wildlife opening.
7	11 - Low Intensity Urban	3.1	N/A	Unspecified	Co. Rd 565
13	320 - Upland Shrub	2.4	No	Unspecified	Grass opening filling in with white pine. Almost a W2.
15	11 - Low Intensity Urban	2.0	N/A	Unspecified	Co. Rd 565
16	310 - Herbaceous Openland	2.1	No	Unspecified	Grass opening filling in with white pine. Almost W2.
18	310 - Herbaceous Openland	3.7	No	Unspecified	Natural opening with lots of sweet fern
27	310 - Herbaceous Openland	1.3	N/A	Unspecified	Grass opening filling in with white pine and fir.
30	310 - Herbaceous Openland	2.0	No	Unspecified	Small natural opening.
31	310 - Herbaceous Openland	13.5	No	Unspecified	Natural grass opening
34	310 - Herbaceous Openland	21.5	No	Unspecified	Larger natural opening with upland brush.
36	310 - Herbaceous Openland	1.0	No	Unspecified	Small grass opening

**7 – 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.

Stand	SCA Type	SCA Name	Acres	Comments
19	Unique Site - SCA	32035019	196.4	Typical lowland conifer stand. Heavier cedar component along Bear Creek. SCA riparian corridor along Bear Creek.
21	SCA Removal	32035021	22.4	Former potential old growth stand. It consists of 3-4 stick mixed aspen, red maple, white birch over black spruce, fir, with scattered white pine. Recommend removal of SCA status and schedule clearcut with reserves.



8 – 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	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.