



**Gwinn Forest Management Unit
Compartment Review Presentation
Compartment #266 Entry Year: 2012
Compartment Acreage: 1,040 County: Marquette**

Revision Date: July 15, 2010

Stand Examiner: Tom Seablom

Legal Description: T45N R27W, Sections 20 and 21

Identified Planning Goals ('Management Area' or 'RMU', if applicable): None

Management Goals: Management goals for this compartment are to continue to provide a sustainable flow of timber products and to continue to manage wildlife habitat. Timber products are primarily for fiber production with some pine sawlog management taking place. Wildlife habitat is being provided primarily in early successional stages, with some seral stage habitat being provided in the white and red pine cover types. Treatments proposed for the current entry year include thinning, seed tree, final harvest and planting. These treatments will provide for early successional habitat as the harvested stands regenerate. They will also provide both pulpwood and sawlog products.

Soil and Topography: Soils in this compartment fall into the following associations: Rubicon-Sayner, Grayling, and Kalkaska-Carbondale-Deford. These soils are very deep, excessively drained, sandy soils (Rubicon-Sayner and Grayling) and very deep, somewhat excessively to very poorly drained, sandy and mucky soils (Kalkaska-Carbondale-Deford). They occur on outwash plains and terraces with the poorly drained soils being in the drainages and depressions. Topography in this area is nearly level to very hilly. Steep slopes exist along the Bryan Creek corridor.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Ownership in this portion of the landscape is predominantly State with some scattered private individual ownership. There is a large block of private club land (Michigan Northwoods Club) located to the north of the compartment. Development is recreational homes (Northwoods Club) and camps. Land use is associated with timber production, hunting, fishing, and general recreation.

Unique, Natural Features: None

Archeological, Historical, and Cultural Features: The abandoned ELF corridor runs east-west just to the south of the compartment.

Special Management Designations or Considerations: Several proposed Potential Old Growth stands exist along the Bryan Creek and tributaries to the North Branch of Bass Lake Creek. Some of these stands are being proposed to be removed from this status.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: Chain Lakes Moraine. Special Conservation Areas along Bryan Creek to maintain wildlife corridor and protect riparian areas. Strive for best possible age class distribution in aspen habitat. Utilize treatments that mimic natural fire disturbance in jack pine habitat. Try to maintain or increase oak cover and hard mast production.

Mineral Resource and Development Concerns and/or Restrictions: Sections 20 and 21, T45N-R27W, Marquette County Surface sediments consist of coarse-textured glacial till. The glacial drift thickness varies between 50 and 100 feet. The Precambrian Archean Granite/Gneiss subcrops below the glacial drift. Some of the Granite/Gneiss might be used for dimension stone. A rock (?) quarry is indicated on the topo seven miles to the west. Gravel pits are located just to the west of the compartment, and potential appears to be good. This compartment has never been leased; as it is mostly surface only. There is no economic oil and gas production in the UP.

Vehicle Access: Access to the compartment is good. County roads PW (Bryan Creek Road) and PPZ provide direct access, the remainder is along woods roads. Some of these roads have berms in place to limit vehicle access beyond certain points.

Survey Needs: None

Recreational Facilities and Opportunities: No developed recreational facilities exist at this time and no opportunity exists.

Fire Protection: Several volatile fuel types are found in the compartment and the surrounding landscape. The compartment resides on the southeast end of a larger sandy outwash plain. A large grass opening (approximately a section in size) is immediately to the west of the compartment, several hundred acres of jack pine with some red and white pine stands mixed in are located within the compartment and to the north and northwest of the compartment. Age of the jack pine stands range from young seedling and sapling to mature, the red and white pine stands are mature, with understories of spruce-fir and some being relatively open. The road system in this area is adequate enough to handle current fire suppression equipment and provides adequate fire breaks for ground fire activity.

Additional Compartment Information: None

➤ **The following reports from the Inventory are attached:**

- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summary**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**
- ◆ **Stand Details (Forested and Nonforested)**
- ◆ **Dedicated and Proposed Special Conservation Areas**

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

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

Cover Type & Treatment Map

Compartment 266
 T45N, R27W, Sec. 20, 21
 County: Marquette
 Unit: Gwinn
 YOE: 2012
 Acres: 1,040 GIS Calculated
 Stand Examiner: Thomas Seablom
 Map Revised: 8/30/2010
 Map Phase: Pre-Review

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

Legend

- Miris Corners
- Gravel Roads
- Poor Dirt Roads

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Planting (tree species)
- Other Treatment - See Comments

Forest Stands

Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

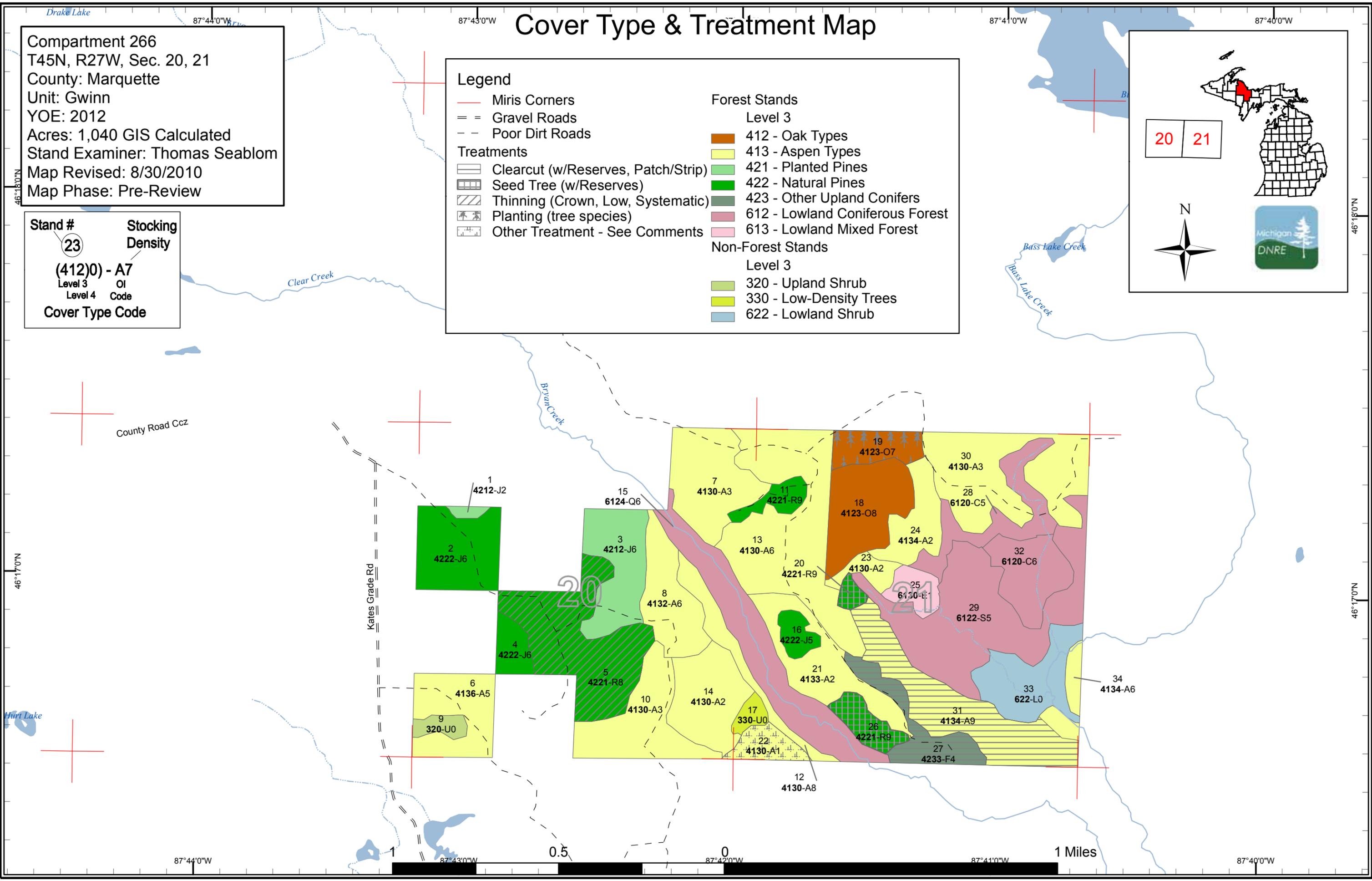
Non-Forest Stands

Level 3

- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub

20 21

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Stand Boundary Map

Compartment 266
 T45N, R27W, Sec. 20, 21
 County: Marquette
 Unit: Gwinn
 YOE: 2012
 Acres: 1,040 GIS Calculated
 Stand Examiner: Thomas Seablom
 Map Revised: 7/07/2010
 Map Phase: Pre-Review

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

Legend

- Miris Corners
- - Gravel Roads
- - Poor Dirt Roads
- Stand Boundaries

Forest Stands

Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

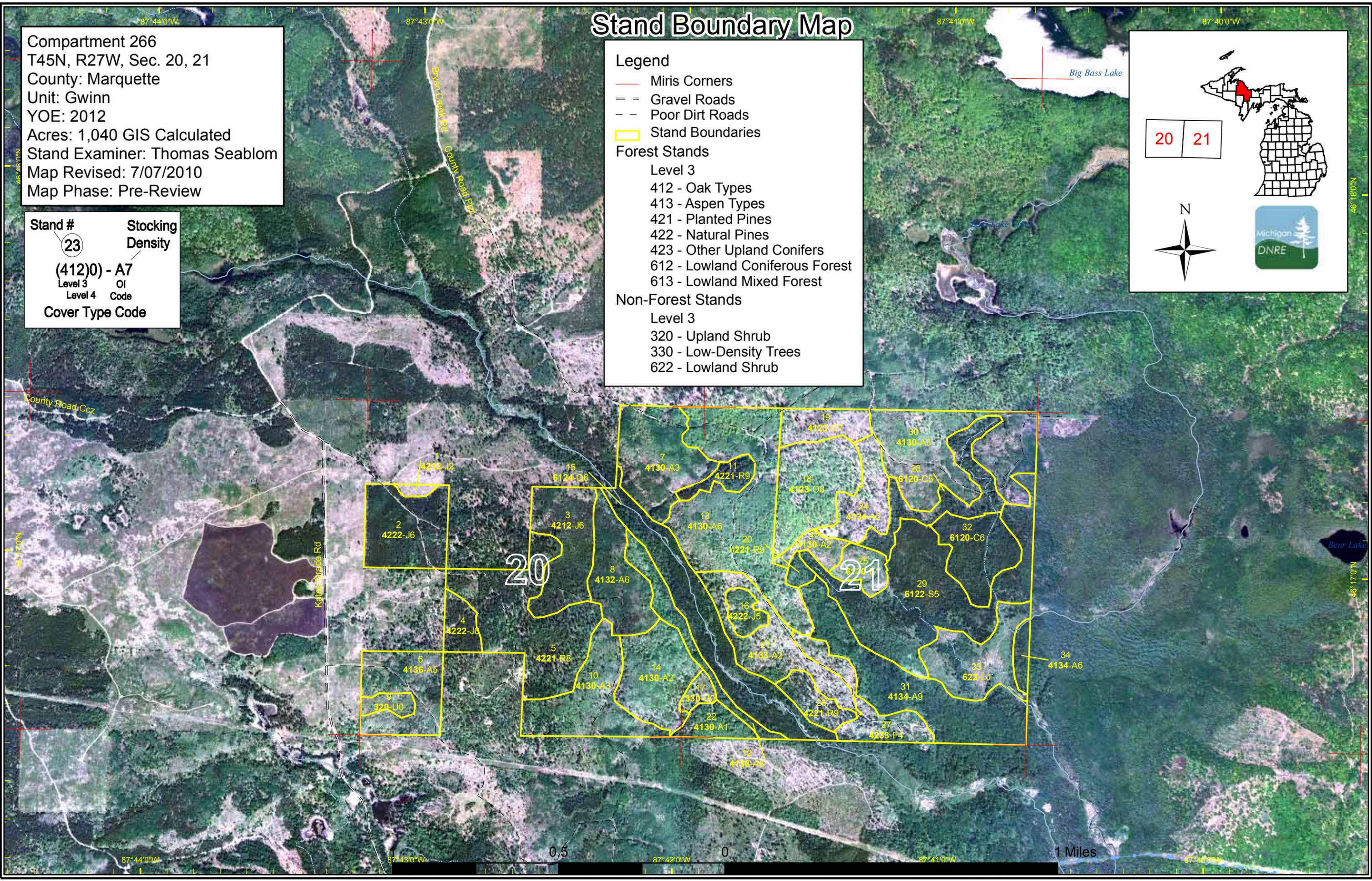
Non-Forest Stands

Level 3

- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub

20 21

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Dedicated & Proposed Special Conservation Area Map

Compartment 266
 T45N, R27W, Sec. 20, 21
 County: Marquette
 Unit: Gwinn
 YOE: 2012
 Acres: 1,040 GIS Calculated
 Stand Examiner: Thomas Seablom
 Map Revised: 7/07/2010
 Map Phase: Pre-Review

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

Legend

- Miris Corners
- Stand Boundaries
- Dedicated Special Conservation Areas
- Cold Water Streams

Forest Stands

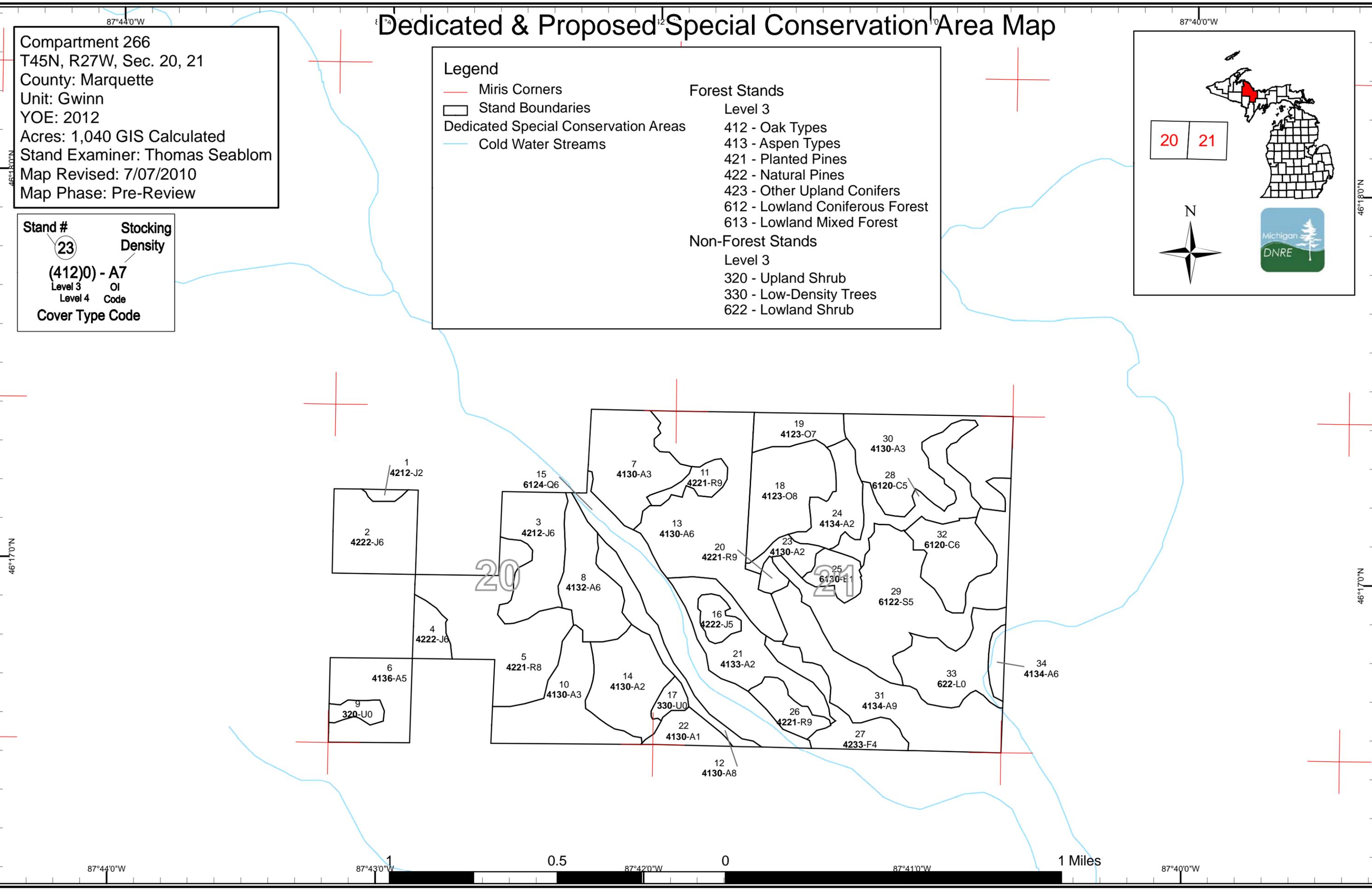
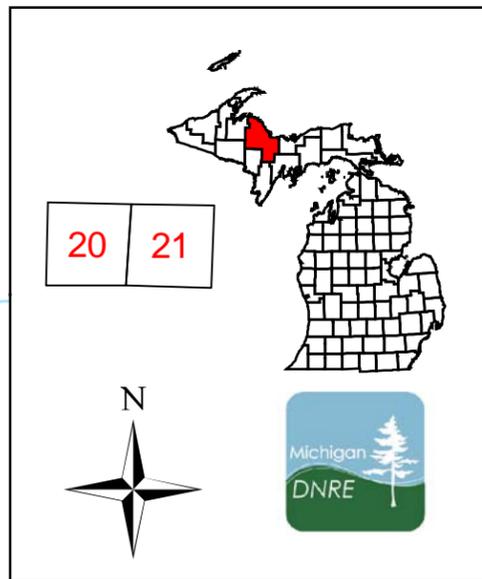
Level 3

- 412 - Oak Types
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub



87°44'0"W

87°43'0"W

0.5

87°42'0"W

0

87°41'0"W

1 Miles

87°40'0"W

46°17'0"N

46°17'0"N

87°44'0"W

87°40'0"W

46°18'0"N

46°18'0"N

Table 1 – Total Acres by Cover Type and Age Class

Data updated before 2:00 PM



	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 +		Uneven Age
Aspen	0	106	8	306	0	0	0	0	88	0	0	0	0	0	0	508
Cedar	0	0	0	0	0	0	0	0	0	28	29	0	0	0	0	57
Jack Pine	0	2	0	37	48	8	0	0	0	0	0	0	0	0	0	95
Low-Density Trees	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	59
Lowland Mixed Forest	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
Lowland Shrub	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	91	0	0	0	0	0	0	91
Oak	0	0	0	0	0	0	0	0	0	57	0	0	0	0	0	57
Red Pine	0	0	0	0	0	0	0	0	93	0	0	0	0	0	0	93
Upland Shrub	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Upland Spruce/Fir	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	23
Total	45	108	42	343	48	8	0	0	88	185	85	29	0	0	59	1040



Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Gwinn Mgt. Unit
Year of Entry 2012

Compartment 266
Total Compartment Acres: 1040

Acres by Treatment Type

Commercial Harvest - 167	Site Prep - 0	Tree Planting - 17	Prescribed Burn - 0	Other - 12
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	60	0	0	0	0	0	60
Red Pine	0	0	16	0	68	0	85
Upland Spruce/Fir	23	0	0	0	0	0	23
Total	82	0	16	0	68	0	167



Data updated before 2:00 PM

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5 32266005-Cut	68.5	42210 - Natural Red Pine	Medium Density Log	84	Harvest	Crown Thinning	Natural Red Pine	Cmpt. Review Proposal

Prescription This stand is to be thinned to a residual basal area of 90-100 sq. ft/acre. Basal area ranges from 120-150 sq. ft. Concentrate removal on smaller diameter and poorly formed trees as well as those with low live crown ratio's (<25-30% live crown).

Other Access to this stand is through private property. Permission has been granted for us to use the road.

Comments:

Next
Steps:

20 32266020-Cut	3.8	42210 - Natural Red Pine	High Density Log	84	Harvest	Seed Tree with Reserves	Natural Red Pine	Cmpt. Review Proposal
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Prescription Seed tree or clearcut w/reserves, harvesting the majority of the red pine, all maple, birch and aspen leaving the oaks.

Specs:

Other Managing the stand as such will allow for the natural regeneration and expansion of red pine within this compartment and this portion of the surrounding landscape.

Comments:

Next Scarify post harvest including approx. 1/2 acre immediately to the south of the stand that is sparsely stocked with balsam and red pine.

Steps:

26 32266026-Cut	12.4	42210 - Natural Red Pine	High Density Log	84	Harvest	Seed Tree with Reserves	Natural Red Pine	Cmpt. Review Proposal
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Prescription Seed tree or clearcut this stand leaving approx. 20 sq. ft/ac. of extra large (>18-inch) red pine for a seed source.

Specs:

Other This stand was harvested last entry. Some red pine were cut, all aspen, maple and birch were removed as well as the majority of the spruce and fir.

Comments:

Next Scarify post-harvest with anchor chains.

Steps:

27 32266027-Cut	22.9	42330 - Upland Fir	Low Density Pole	16	Harvest	Clearcut with Reserves	Planted Red Pine	Cmpt. Review Proposal
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Prescription This stand should be clearcut, herbicided, trenched, and planted to red pine. An occasional birch tree could be left (1-2/acre) as well as 1-2 red pine/acre (preferably >12" dbh).

Specs:

Other This stand is the result of a failed birch seed tree harvest. It is poorly stocked with red pine, balsam fir and white spruce. An occasional pocket of aspen exists. There is no white birch regen. Include this stand with the stand to the east for timber sale purposes.

Comments:

Next Herbicide, trench and plant to red pine according to our current spacing guidelines.

Steps:

31 32266031-Cut	59.5	4134 - Aspen, Spruce/Fir	High Density Log	71	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription Clearcut this stand, retaining some large scattered overmature aspen. Remove all other trees >2" dbh. Possibly winter harvest as some areas are low.

Specs:

Other
Comments:

Next
Steps:

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Data updated before 2:00 PM

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	32266019-Plant	16.5	4123 - Red Oak	Low Density Log	91	Tree Planting	Hand Plant	Oak, Pine	Cmpt. Review Proposal

Prescription: This stand is a good candidate for underplanting of red and or white pine. There are large openings in the canopy and virtually no regeneration in some spots.

Other Comments: These areas were possibly heavy to birch in the previous stand.

Next Steps:

22	32266022-Other	11.6	4130 - Aspen	Low Density Sapling	4	Other	Unspecified	Aspen, Spruce/Fir	Cmpt. Review Proposal
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Prescription: A formal regen survey is needed here.

Specs:

Other Comments: Failed birch seed tree cut. Currently poorly stocked with aspen, white spruce, and balsam fir.

Next Steps:

Next Steps: This stand could be herbicided and planted to red pine.

Next Steps:

**Total Treatment
Acreage Proposed: 195.2**



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Data updated before 2:00 PM

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**

Data updated before 2:00 PM

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2012



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**

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Gwinn Mgt. Unit

5 – Forested Stands

Compartment: 266

Data updated before 2:00 PM

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42120 - Planted Jack Pine	Medium Density	2.3	6		Seeded 2003
2	42220 - Natural Jack Pine	High Density Pole	37.6	32	51-80	Scarified in the fall of 1976 and seeded by helicopter in spring of 1977.
3	42120 - Planted Jack Pine	High Density Pole	36.8	23	51-80	Jack pine poles (just entering this size class), mixed with pockets of aspen. Scattered red pine poles and logs. Stand was cut in 1984, permit #10-82 (Holli Forest Products). Herbicided and trenched in 1985, planted May 1986.
4	42220 - Natural Jack Pine	High Density Pole	10.6	32	51-80	Seeded jack pine with scattered red pine logs
5	42210 - Natural Red Pine	Medium Density Log	68.5	84	81-110	A portion of this stand (north 1/3) was thinned at last entry as it was typed out as a different stand (sale #332-03-01),
6	4136 - Aspen, Mixed Conifer	Medium Density Pole	33.0	29	51-80	Predominately an aspen stand (big tooth and trembling) with scattered jack pine (individuals and pockets) along with scattered red pine and white spruce. There are some mature red pine log trees along the east edge.
7	4130 - Aspen	High Density Sapling	43.1	26	1-50	Mixed aspen stand with red maple in the understory. Scattered red and white pine throughout the stand and some oak seedlings. Stand was cut in 1980-83 by Dave Holli (Permit #5-78) then KG'd in 1983. Where the oak had been cut there is good stump sprout regeneration. The oak sprouts are keeping up with the aspen sprouts.
8	4132 - Aspen, Jack Pine	High Density Pole	32.3	24	1-50	This stand is a mix of aspen and jack pine with a few scattered remnant red pine saw log size trees. There are a few scattered oaks, spruce, and balsam primarily along the southeast edge. This stand was originally part of the stand to the west. It was herbicided, trenched and planted but aspen took over as the dominant tree species.
10	4130 - Aspen	High Density Sapling	41.6	24	1-50	Scattered red and white pine seedlings and saplings. Stand was harvested in 1984-85 by Dave Holli (Permit #9-80). White pine and oak were left.
11	42210 - Natural Red Pine	High Density Log	8.8	84	81-110	Heavy white pine understory. Scattered red pine regen as well. West end is more poles and heavier to jack pine. Wait until next entry for treatment.
12	4130 - Aspen	Medium Density Log	18.1	77	81-110	SCA=>Potential Old Growth. Decadent stand of bigtooth aspen that is beginning to fall apart. Mixed conifer's starting to recruit in the understory. Stand is on a steep (45% slope) hillside along Bryan Creek. It is providing a good buffer to the stream and a wildlife corridor.
13	4130 - Aspen	High Density Pole	89.2	26	1-50	Stand has residual oak in the overstory. There are oak stump sprouts throughout that are competing with the aspen and keeping up in terms of height growth. Scattered red and white pine seedlings and saplings throughout. Stand was cut in 1980-83 by Dave Holli and KG'd in 1983.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
14	4130 - Aspen	Medium Density	36.7	4		Stand was cut in fall of 2005 by Gary Gazan Contracting (#114-02-01). It was a shortwood operation. All oak, cherry, red and white pine were left. The residual red pine has seeded and there is a fair amount of red pine seedlings coming in. Some white pine as well, but no oaks.
15	6124 - Lowland Spruce-Fir	High Density Pole	59.2	Uneven Age		SCA=>Potential Old Growth- Bryan Creek runs through this stand (cold water trout stream).
16	42220 - Natural Jack Pine	Medium Density Pole	7.9	45		Mixed stand of jack pine, red maple with lesser components of white birch and oak.
18	4123 - Red Oak	Medium Density Log	40.2	91	51-80	There is a trace of white spruce, white pine and big tooth aspen in the canopy. Semi-open to closed canopy. Open where it had been heavier to aspen. There are some oak saplings above 5 feet. Stand was harvested in summer of 1993 by Oro Logging (St. John) (Permit #8-92). All oak were left and a 2-inch cutting spec was used on the other species.
19	4123 - Red Oak	Low Density Log	16.5	91		This stand could be lumped in with the stand immediately adjacent to the southwest. Oak is the same age, though the aspen and red maple are 10 years younger. Stand was cut in 2002 (#115-02-01).
20	42210 - Natural Red Pine	High Density Log	3.8	84		Mature red pine stand with scattered big tooth aspen, white birch, red oak and red maple. Aspen are in clone pockets. Trace of white pine seedlings in this stand as well.
21	4133 - Aspen, Mixed Pine	Medium Density	35.5	6		Harvested summer 2002 by John Heidtman #32-115-02-01, "Sputnik Buck Aspen Sale". Birch seed trees were left as were oak and red and white pine. A portion of the stand (south and east) was subsequently herbicided with Tordon (6 qt's/ac., 23 gal's on 15 acres), trenched and planted with red pine in spring 2004. Stand is now a mix of aspen and red pine regen. Scattered red pine and oak along with red and white pine poles.
22	4130 - Aspen	Low Density Sapling	11.6	4		Stand was surveyed in February of 2009 as part of the regen walk through survey. A birch seedtree cut was done here and has failed to produce a well stocked stand. It was requested at the time that the TMS order a formal regen survey for this stand.
23	4130 - Aspen	Medium Density	8.3	15		Variable stand. Type transitions to the south; more jack pine and tamarack on southwest.
24	4134 - Aspen, Spruce/Fir	Medium Density	22.1	7		Harvested 2002, TS #32-115-02-01. Birch seed trees, oak and red pine were left.
25	6130 - Fir, Aspen, Maple	Low Density Sapling	11.0	15		
26	42210 - Natural Red Pine	High Density Log	12.4	84		Stand was selectively cut in 2002 TS#115-02-01. All the red maple, birch and any aspen were removed from this stand as well as merchantable spruce and fir.

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Gwinn Mgt. Unit

5 – Forested Stands

Compartment: 266

Data updated before 2:00 PM

Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	42330 - Upland Fir	Low Density Pole	22.9	16		This stand is the result of a failed birch seed tree harvest. It is poorly stocked with red pine, balsam fir and white spruce. An occasional pocket of aspen exists. There is no white birch regen. Stand was cut in 1993 by Oro Logging, permit #8-92.
28	6120 - Lowland Cedar	Medium Density Pole	28.0	91		SCA=>Potential Old Growth. Corridor along creek. Providing a good buffer. Scattered overstory (supercanopy) white pine. Stand contains both white pine and white birch (pine being more in the north part of stand).
29	6122 - Black Spruce	Medium Density Pole	91.5	85	81-110	Black spruce with scattered tamarack. Aspen and white birch occur along the edge (northwest and south) of stand (transition zone). Riddled with water. Springs and creeks throughout the stand. Standing frozen water throughout the stand inbetween grass hummocks. Lots of deer movement through the stand.
30	4130 - Aspen	High Density Sapling	66.6	20	1-50	
31	4134 - Aspen, Spruce/Fir	High Density Log	63.9	71	171-200	6-7 stick aspen, almost appears to be 2 stands from past cutting practices. Diameter's range from 8-14". A small portion of this stand on the east end was a separate POG stand at last entry. It has been encompassed in this stand but removed from the treatment layer.
32	6120 - Lowland Cedar	High Density Pole	29.1	100	200+	No understory. Typical cedar stand. Would be good SCA; riddled with water and lots of deer movement through this stand at this time. Fairly nice cedar. Stream runs through this stand and was POG last time (stream corridor was).
34	4134 - Aspen, Spruce/Fir	High Density Pole	5.7	71		SCA-POG Stand was typed out as POG last time.



Stand	Cover Type	Acres	Gen Cmts:
9	3201 - Sweet Fern	5.9	
17	330 - Low-Density Trees	5.1	
33	622 - Lowland Shrub	34.4	

**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.

Data updated before 2:00 PM

Stand	SCA Type	SCA Name	Acres	Comments
multiple - see	Unique Site - SCA	32266_SCA	182.7	SCA=>Riparian Corridor. This SCA encompasses feeder creeks to Bass Lake Creek and Bryan Creek as well as those creek's themselves. Both of these are cold water trout streams.



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.

Data updated before 2:00 PM

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.