



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 068 ENTRY YEAR: 2013

Compartment Acreage: 2297 County: IOSCO

Revision Date: 7/23/11

Stand Examiner: Lucas Merrick

Legal Description: Oscoda Township, T24N R08E sections 16, 17, 18, 19, 20, 21

Management Goals: To maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout while providing multiple use and visual management.

Soil and Topography: The compartment is flat north of Bissonette Road. South of the road there is a steep slope and the cover types transition into lowland. Soils are primarily Grayling sands in the upland and Lupton muck in the lowland.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The state owned land in this area shares several property lines with the U.S. Forest Service. There are private subdivisions found in section 20. Multiple private parcels can be found in the east half of section 16.

Unique, Natural Features: Michigan Natural Features Inventory reports that there is excellent potential for Kirtland's warbler, prairie warbler, and grasshopper sparrow. Secretive locust may be found in jack pine. Potential for dusted skipper, grizzled skipper, Henry's elfin and red-legged spittlebug could occur in grassy openings and young jack pine and oak. There is slight potential for red-shouldered hawk and goshawk. This compartment shows excellent potential for eastern massasauga at the borders of conifer swamps and adjacent uplands. Some plant species that may occur are rough fescue, pale agoseris, Hill's thistle, and Alleghany plum in pine barrens/dry sand prairie. Potential for calypso orchid, Limestone oak fern, round-leaved orchids, and ram's head lady-slipper in conifer swamps.

The AuSable River Foote Basin flooding is located .5 to 1 mile south of this compartment.

Archeological, Historical, and Cultural Features: There is potential for such features to exist.

Special Management Designations or Considerations: None at this time.

Watershed and Fisheries Considerations: None at this time.

Wildlife Habitat Considerations: Promote the expansion of aspen and oak cover types. Protect mast producing shrubs whenever possible. Efforts should be made to enhance dead and down woody debris and standing snags.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel. The glacial drift thickness varies between 400 and 600 feet. Beneath the

glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is three and one-half miles to the west, and gravel potential is thought to be limited. This compartment is not leased for oil and gas development. Several Antrim Shale test wells were drilled and abandoned north of this area, but gas production was very limited.

Vehicle Access: The entire compartment is easily accessed by county roads, forest roads, and ORV routes. Roads created for management activities should be blocked once management is complete. There is a Director's Order restricting wheeled vehicle traffic along the power line paralleling Wilber Road.

Survey Needs: The property line as drawn in section 20 is questionable. If activities require delineation of property lines a survey request may be required.

Recreational Facilities and Opportunities: The Old State House Snowmobile Trail #96 is found in this compartment along with the Old State House ORV Trail and ORV Route.

Fire Protection: There is potential for extreme fire behavior in this area. There are large areas of dense young jack pine found within and around the compartment. Access in this area is not of major concern. The multiple roads and trails provide fuel breaks. The growing private interface in this area increases the likeliness of a fire event.

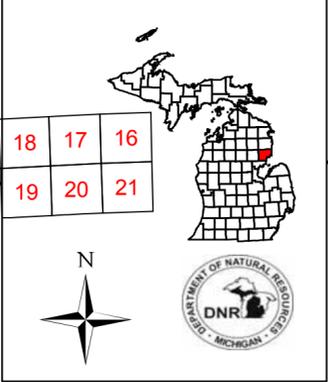
➤ **The following reports are available:**

- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summaries**
- ◆ **Dedicated Conservation Area Details**
- ◆ **Listing of Forested Stands**
- ◆ **Listing of Non-Forested Stands**
- ◆ **Proposed Treatments with No Limiting Factor**
- ◆ **Proposed Treatments with Limiting Factors**

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

- ◆ **Base feature information, stand numbers, cover types, recreation trails and facilities**
- ◆ **Proposed treatments**
- ◆ **Dedicated & Proposed Special Conservation Areas**

Compartment 68
 T24N, R08E, Sec. 16-21
 County: Iosco
 Unit: Grayling
 YOE: 2013
 Acres: 2,297 GIS Calculated
 Stand Examiner: Lucas Merrick
 Map Revised: 9/08/2011
 Map Phase: Pre-Review



Cover Type & Treatment Map

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

Legend

- ◆ RIs Corners
- Miris Corners
- Paved Roads
- County Gravel Roads
- - - Poor Dirt Roads
- Snowmobile Trail
- Motorcycle (DNR Sticker)
- ORV Trail
- ORV Route
- Motorcycle Trails
- ORV Trails
- ORV Routes
- Snowmobile Trails

Treatments

- ▨ Clearcut (w/Reserves, Patch/Strip)
- ▨ Seed Tree (w/Reserves)

Forest Stands

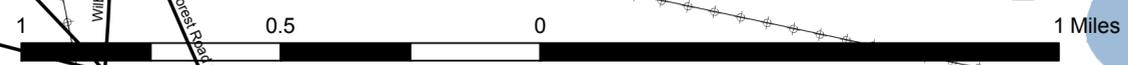
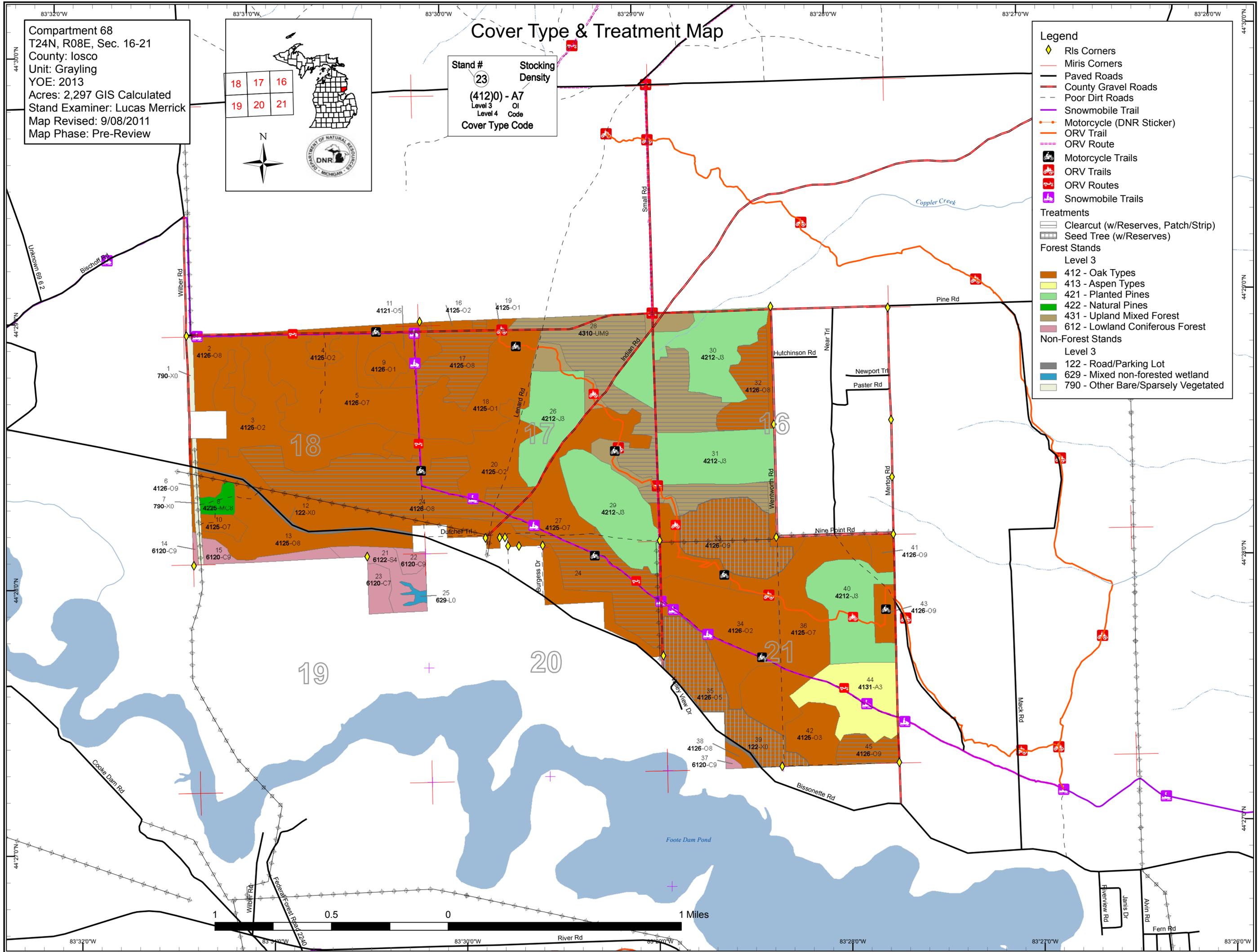
Level 3

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

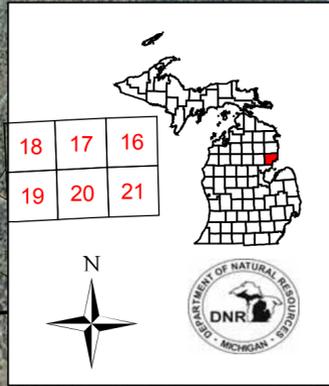
Non-Forest Stands

Level 3

- 122 - Road/Parking Lot
- 629 - Mixed non-forested wetland
- 790 - Other Bare/Sparsely Vegetated



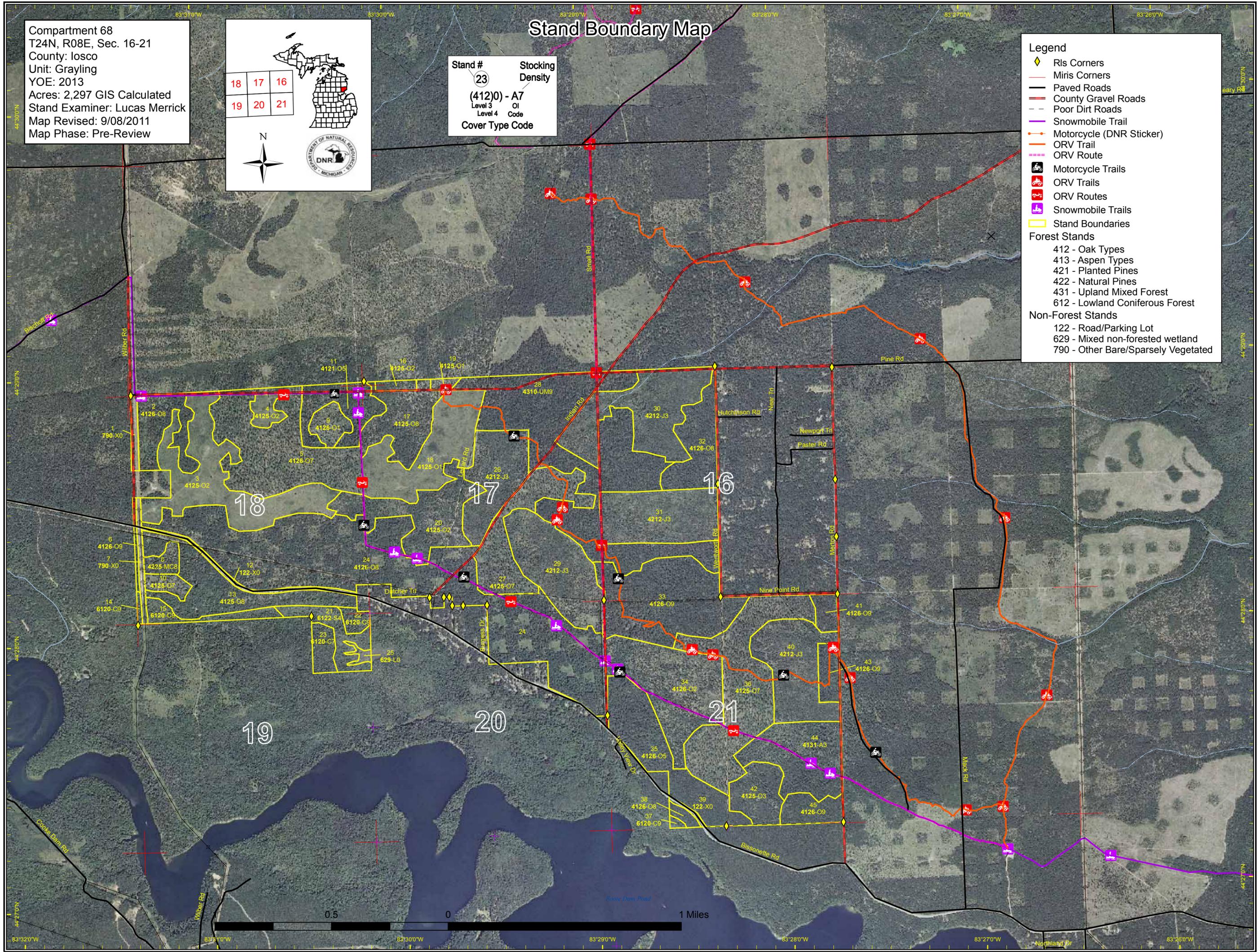
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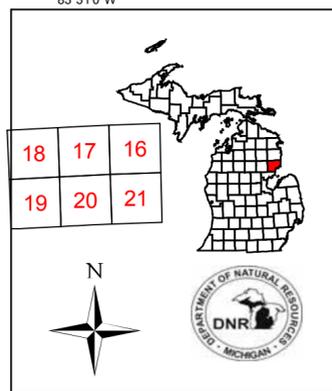
Stand #
 23
 Stacking
 Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code

Stand Boundary Map

- Legend**
- ◆ RIs Corners
 - Miris Corners
 - Paved Roads
 - County Gravel Roads
 - - - Poor Dirt Roads
 - Snowmobile Trail
 - Motorcycle (DNR Sticker)
 - ORV Trail
 - ORV Route
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 - 🛵 ORV Trails
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Dedicated & Proposed Special Conservation Area Map

Stand #
 23
Stocking Density
 (412)0 - 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
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
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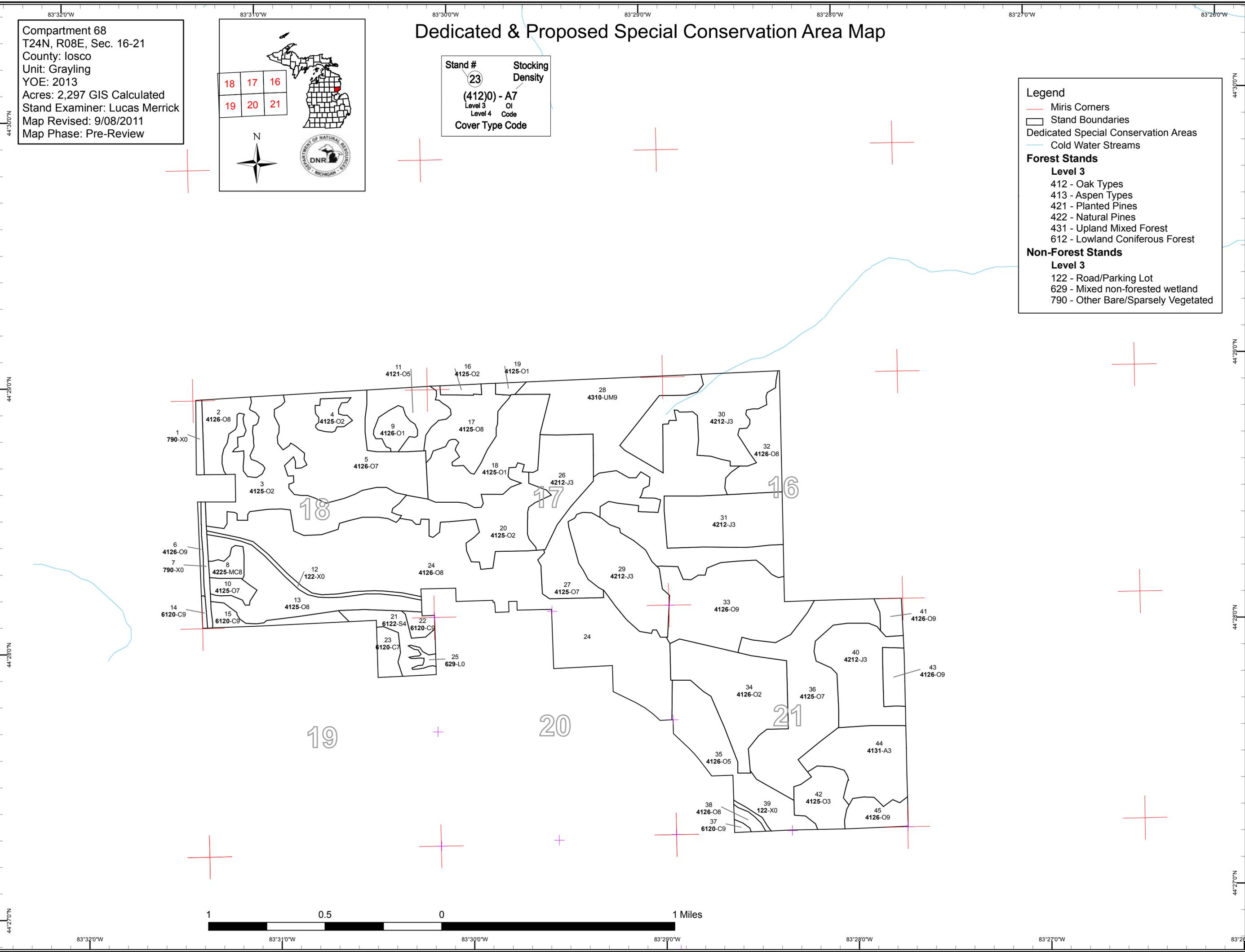
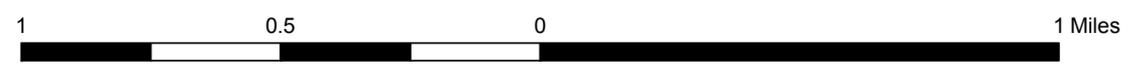
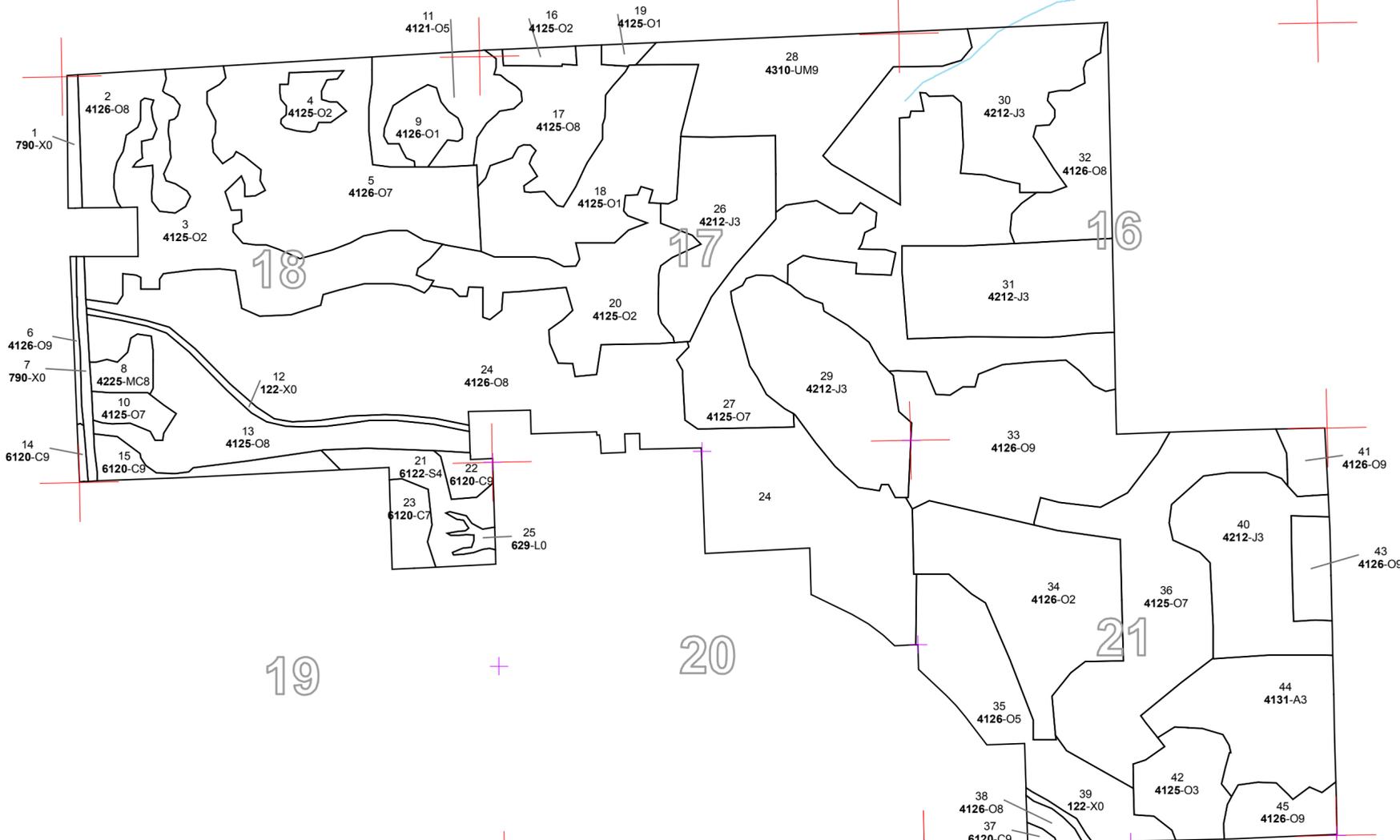


Table 1 – Total Acres by Cover Type and Age Class



	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	0	69	0	0	0	0	0	0	0	0	0	0	0	0	69
Bare/Sparsely Vegetated	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Cedar	0	0	0	0	0	0	0	0	0	0	0	39	0	0	0	39
Jack Pine	0	0	374	0	0	0	0	0	0	0	0	0	0	0	0	374
Lowland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26
Natural Mixed Pines	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10
Oak	0	200	0	221	0	0	0	0	753	95	198	62	10	0	0	1538
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	213	0	0	0	0	213
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total	29	200	443	221	0	0	10	0	753	95	411	126	10	0	0	2297



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2013

Compartment 068
Total Compartment Acres: 2297

Acres by Treatment Type

Commercial Harvest - 647	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

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Oak	329	0	148	0	0	0	477
Upland Mixed Forest	170	0	0	0	0	0	170
Total	499	0	148	0	0	0	647



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
17	72068017-Cut	48.6	4125 - Black, N. Pin Oak	Medium Density Log	97	Harvest	Clearcut with Reserves	4125 - Black, N. Pin Oak	Cmpt. Review Proposal
<p><u>Prescription:</u> Final Harvest 2" and up. Leave red pine, white pine, white oak, and mark out some hybrid oak. Try to leave average sale BA at 5 or less. <u>Specs:</u> Consider this residual as the only retention left in stand. Would recommend trenching and planting pine after harvest operations. Trenching in not expected to cover entire sale area. <u>Other Comments:</u> Management objective is a mixed stand of oak, aspen and pine at moderate or better stocking. The extent of trenching should be based on expected survival of stump sprout and seed origin oak or possible aspen clones. <u>Next Steps:</u> Trench and plant</p>									
24	72068024-Cut	222.3	4126 - White, Black, N. Pin Oak	Medium Density Log	78	Harvest	Clearcut with Reserves	4126 - White, Black, N. Pin Oak	Cmpt. Review Proposal
<p><u>Prescription:</u> Final harvest all trees 2" and up. Leave 3-5% of harvest area in retention islands. Mark out healthy looking white oak at foresters discretion to serve as vertical structure and as a source of mast. May need to exclude the last 5-spot harvest areas from sale area. <u>Other Comments:</u> Management objective is a moderately stocked or better oak stand with aspen and pine represented in the stand. If natural regen fails to meet minimum specs, trench and plant jack pine around existing regen. A HAL hit registered in Section 20 Sale boundary moved from property line as a buffer and due to lack of information as far as property lines and ownership. Will need to request a survey of state owned land if blue line is to be run. <u>Next Steps:</u> monitor regen</p>									
28	72068028-Cut	169.6	4310 - Pine, Oak Mix	High Density Log	91	Harvest	Clearcut with Reserves	4310 - Pine, Oak Mix	Cmpt. Review Proposal
<p><u>Prescription:</u> Final Harvest 2" and up. Leave 5 - 10 % of harvest area in retention islands. Mark out a few of the healthier oak here and there to leave at foresters discretion. Trench and plant jack pine around natural regen. <u>Other Comments:</u> Sale boundary was designed to reduce impact to ORV trail as much as possible. Management objective is a mixed stand of jack pine and oak. <u>Next Steps:</u> Trench and plant</p>									
32	72068032-Cut	38.2	4126 - White, Black, N. Pin Oak	Medium Density Log	78	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Final Harvest with reserves. Retain 3 - 10% of sale area in islands, consider aesthetics during placement. Recommend trenching and planting jack pine around natural regen. <u>Other Comments:</u> Trenching should help to address the encroachment issues from adjacent parcels. <u>Next Steps:</u> Trench and plant.</p>									
33	72068033-Cut	73.4	4126 - White, Black, N. Pin Oak	High Density Log	78	Harvest	Seed Tree with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> Leave 10- 20 BA of mixed species to provide a seed source. Leave some of sale area in islands 3-9%. Avoid aspen within the islands. Attempt to scarify during operations by harvesting with snow off conditions. <u>Other Comments:</u> Management objective is moderate to fully stocked oak and aspen stand with a mix of species currently represented in canopy as well as white pine from adjacent seed sources. If natural regen fails trench and plant red or jack pine. May want to consider immediately trenching and planting after harvest operations to ensure a fully stocked mixed stand. <u>Next Steps:</u> monitor regen</p>									



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
35 72068035-Cut	74.6	4126 - White, Black, N. Pin Oak	Medium Density Pole	85	Harvest	Seed Tree with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription: Leave 10BA of oak. Do not cut/damage red or white pine. Leave 5-10% of harvest area in leave islands. Consider aesthetics when creating islands. Make attempts to scarify (try to limit to snow off conditions)

Other Comments: Management objective is an oak stand with a mixed pine component. Moderate or better stocking is acceptable. If natural regen is not adequate trench and plant red or jack pine around natural regeneration. May want to consider trenching and planting after harvest (red or jack pine).

Next Steps: Monitor regen

45 72068045-Cut	20.1	4126 - White, Black, N. Pin Oak	High Density Log	85	Harvest	Clearcut with Reserves	4126 - White, Black, N. Pin Oak	Cmpt. Review Proposal
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Prescription: Leave 3-5% of sale area in islands. Mark and leave 5BA of misc species throughout sale area.

Specs:

Other Comments: Watch southern property line- the road is south of line. Management objective is mixed oak with a misc pine and aspen component at moderate or better stocking. If natural regen fails, trench and plant red pine around natural regen.

Next Steps: monitor regen

**Total Treatment
Acreage Proposed: 646.7**

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	Grayling Mgt. Unit		5 – Forested Stands			Compartment: 068	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
2	4126 - White, Black, N. Pin Oak	Medium Density Log	37.1	78			Patch cuts found along power line.
3	4125 - Black, N. Pin Oak	Medium Density	109.2	5			A regenerating oak and aspen stand.
4	4125 - Black, N. Pin Oak	Medium Density	10.3	5			A regenerating stand
5	4126 - White, Black, N. Pin Oak	Low Density Log	118.3	78	1-50		A regenerating oak stand.
6	4126 - White, Black, N. Pin Oak	High Density Log	3.5	78			Narrow stand along Wilbur Road.
8	42250 - Pine, Oak	Medium Density Log	9.8	50	51-80		An oak/pine stand
9	4126 - White, Black, N. Pin Oak	Low Density Sapling	14.7	26			Residual overstory of scattered red pine and oak. Stand created through multiple fuel wood cuts.
10	4125 - Black, N. Pin Oak	Low Density Log	9.5	111	1-50		A regenerating oak stand
11	4121 - Oak, Aspen	Medium Density Pole	37.7	78	51-80		Cherry and sedge ground cover. Areas patch cut over last 20-30 years have great regen.
13	4125 - Black, N. Pin Oak	Medium Density Log	69.6	78			South side of Bissonett Road along a ridge.
14	6120 - Lowland Cedar	High Density Log	1.6	102	171-200		Small stand seperated by power line
15	6120 - Lowland Cedar	High Density Log	15.9	102	171-200		Cedar swamp
16	4125 - Black, N. Pin Oak	Medium Density	4.9	26			A regenerating oak and aspen stand. A couple nice pockets of blueberry.
17	4125 - Black, N. Pin Oak	Medium Density Log	48.6	97	1-50		An even aged mature oak stand with a very poor understory in most areas. Misc pine present. Higher BA along the South and Southwest. Fairly sparse in the north.
18	4125 - Black, N. Pin Oak	Low Density Sapling	80.7	5			A regenerating oak and aspen stand. Excellent amount of mast producing shrubs.
19	4125 - Black, N. Pin Oak	Low Density Sapling	3.5	26			A regenerating oak stand.
20	4125 - Black, N. Pin Oak	Medium Density	70.2	26	1-50		A mixed oak, jack pine, and aspen stand. Regenerating approx 20-30' tall. Evidence of an old fire in stand.



S t a n d	Grayling Mgt. Unit		5 – Forested Stands			Compartment: 068	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
21	6122 - Black Spruce	Low Density Pole	25.7	105			Majority of cedar has died, scattered black spruce and alder present
22	6120 - Lowland Cedar	High Density Log	7.2	105	141-170		Heavy balsam understory along slope. Seeps and a stream found in stand.
23	6120 - Lowland Cedar	Low Density Log	12.7	105	81-110		A cedar swamp.
24	4126 - White, Black, N. Pin Oak	Medium Density Log	324.3	78	81-110		Stand has had multiple patch cuts prescribed over the years.
26	42120 - Planted Jack Pine	High Density Sapling	58.0	16			A jack pine plantation.
27	4125 - Black, N. Pin Oak	Low Density Log	61.7	101	1-50		This stand was seed tree/shelter wooded. A nice 3-5' tall understory of oak has developed.
28	4310 - Pine, Oak Mix	High Density Log	212.8	91	51-80		Oak and pine. Design treatment boundary to reduce impact along the ORV trail.
29	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	80.1	16			The 1st couple chains along the northwest were not trenched.
30	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	90.6	16			jack pine plantation.
31	42120 - Planted Jack Pine	High Density Sapling	73.1	16			Jack pine plantation with scattered oak.
32	4126 - White, Black, N. Pin Oak	Medium Density Log	44.5	78	51-80		Mixed oak/pine stand. Areas with good oak regen. Yard debris dumping occurring along edges of stand. Heavier to jack pine in areas.
33	4126 - White, Black, N. Pin Oak	High Density Log	113.2	78	51-80		Typical oak stand for the area.
34	4126 - White, Black, N. Pin Oak	Medium Density	95.7	26			A regenerating oak stand
35	4126 - White, Black, N. Pin Oak	Medium Density Pole	74.6	85	51-80		Illegal fuel wood cutting evident. Oak seedlings but none show potential to advance to the sub-canopy
36	4125 - Black, N. Pin Oak	Low Density Log	124.1	97	1-50		Recently treated oak stand. Sub-canopy showing potential.
37	6120 - Lowland Cedar	High Density Log	1.7	105			Cedar stand with paper birch
38	4126 - White, Black, N. Pin Oak	Medium Density Log	4.7	78			The understory has an excellent amount of wp regen.



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Grayling Mgt. Unit

5 – Forested Stands

Compartment: 068
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
40	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	72.0	16		Pockets of aspen along west edge. Stand cut in 85-trenched and seeded in 95
41	4126 - White, Black, N. Pin Oak	High Density Log	10.2	93	51-80	Smaller isolated oak stand
42	4125 - Black, N. Pin Oak	High Density Sapling	32.0	25		A regenerating oak stand.
43	4126 - White, Black, N. Pin Oak	High Density Log	15.1	93	51-80	Mature oak and pine stand.
44	4131 - Aspen, Oak	High Density Sapling	68.8	17		A regenerating oak and aspen stand. Oak and red pine 12" dbh+ were left.
45	4126 - White, Black, N. Pin Oak	High Density Log	20.1	85	81-110	A mixed oak stand.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	790 - Other Bare/Sparsely Vegetate	6.2	N/A	Unspecified	Wheeled vehicle are not allowed on power line per Directors Order.
7	790 - Other Bare/Sparsely Vegetate	7.7	N/A	Unspecified	
12	122 - Road/Parking Lot	9.7	N/A	Unspecified	
25	629 - Mixed non-forested wetland	3.2	N/A	Unspecified	open water and grass
39	122 - Road/Parking Lot	2.1	N/A	Unspecified	



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
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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.