



COMPARTMENT REVIEW PRESENTATION

GAYLORD FOREST MANAGEMENT UNIT

COMPARTMENT: 113

ENTRY YEAR: 2014

ACREAGE: 1,431

COUNTY: Emmet

Revision Date: 05/08/2012

Stand Examiner: Tricia Mitchell

Legal Description: T34N R05W Sec. 21, 26-28, 33-35

Management Goals: To provide for the protection, integrated management and responsible use of a healthy, productive, and undiminished forest resource base for the social, recreational, environmental, and economic benefit of the State of Michigan.

Soil and Topography: This compartment is very low and relatively flat with the exception of hilly terrain in section 26. Sections 21, 26-28 & 33-35, T34N-R5W, Emmet County: Surface sediments consist of coarse-textured glacial till (uplands) and glacial outwash sand and gravel and postglacial alluvium.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State ownership is fairly contiguous with surrounding ownership including state and private land. The western boundary of the compartment runs mostly juxtapose and parallel to train tracks.

There exists a small illegal dump site on the south end off of West Bear River Road with minimal recent activity.

There are both a pipeline and powerline transecting north-south through section 35 of T34N R05W. Section 26 also has a powerline running north-south.

Unique, Natural Features: There have been records of Blanding's turtle record along Bear River; some potential for nesting red-shouldered hawks and wood turtles in lowland areas. Oak fern has been found in historical surveys. The potential for other unique and natural features exists within and surrounding the compartment.

Archeological, Historical, and Cultural Features: None reported within this compartment.

Special Management Designations or Considerations: None.

Watershed and Fisheries Considerations: This compartment contains portions of the Bear River and its tributaries. The Bear River is a high quality stream for resident trout, as well as migratory runs of steelhead, Coho, and Chinook. Clear cuts along the Bear River should be avoided to discourage beaver activity, and buffers of 300 feet should be observed along the river. While the Bear River is a high quality trout stream, there are locations of the river that have thermal issues. To keep these excellent trout streams in good condition it is critical that the appropriate BMP's and buffers are strictly adhered to.

Wildlife Habitat Considerations: This compartment contains mostly lowland habitat associated with the Bear River. This lowland complex supports black bear, white-tailed deer, and various furbearers and amphibians. One small area of a large cedar stand is going to be treated to regenerate the cedar. Two small areas of lowland deciduous are going to be treated to provide some early successional habitat that benefits woodcock, grouse and white-tailed deer.

Mineral Resource and Development Concerns and/or Restrictions: Sections 21, 26-28 & 33-35, T34N-R5W, Emmet County: Surface sediments consist of coarse-textured glacial till (uplands) and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 0 and 400 feet. The Devonian Antrim Shale and Traverse Group subcrop below the glacial drift. These formations are quarried for cement and stone elsewhere in the State. The nearest gravel pit is located in Section 22 and the uplands have good gravel potential. The nearest oil and gas production, the Antrim Shale gas play, is located 10 miles to the south. The Antrim Shale is pinching out in this area and potential is limited.

Vehicle Access: There is limited vehicle access within this compartment, with the exception of Ecker Road in the North, West Bear River Road along the South boundary of the compartment, and King Road through the isolated parcel in the northeast. Otherwise, vehicle access is minimal and does not provide any access to the interior of the compartment.

Survey Needs: None at this time.

Recreational Facilities and Opportunities: This compartment has a designated motorized use trail generally running east – west among sections 21, 22, and 26-28 of T34N R05W. There is an undesignated dirtbike trail within section 26.

Fire Protection: There is a very low risk of fire throughout this compartment with the exception of an unusually dry summer to dry and cure fuels within the lowland sites. There are some grass-dominated stands that have a greater potential for burning but are generally contained between roads and the Bear River.

Additional Compartment Information:

- **The following 3 reports from the IFMAP Inventory System are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **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 and current SCA's**

Cover Type & Treatment Map

Compartment: 113
 T34N R05W Sec. 21, 26 - 28, 33 - 35
 County: Emmet
 Unit: Gaylord
 YOE: 2014
 Acres: 1,431 GIS Calculated
 Examiner: Tricia Mitchell
 Map Revised: 05/16/2012
 Map Phase: Pre-Review

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

Legend

	Miris Corners		Clearcut (w/Reserves, Patch/Strip)
	Remonumented Section Corners		Thinning (Crown, Low, Systematic)
	Pipe		
	Power		
	Railroads		
	Highway		
	County Paved Roads		
	Paved Roads		
	County Gravel Roads		
	Gravel Roads		
	Poor Dirt Roads		
	County Poor Dirt Roads		
	Trail (Non-Recreation)		
	Closed Roads		
	Ski Trail		
	Hiking Trail		
	Snowmobile Trail		
	Stream		
	Intermittent Stream		
	Lakes and Rivers		

Treatments

	Clearcut (w/Reserves, Patch/Strip)
	Thinning (Crown, Low, Systematic)

Forest Stands

Level 3

	411 - Northern Hardwood
	421 - Planted Pines
	423 - Other Upland Conifers
	611 - Lowland Deciduous Forest
	612 - Lowland Coniferous Forest
	613 - Lowland Mixed Forest

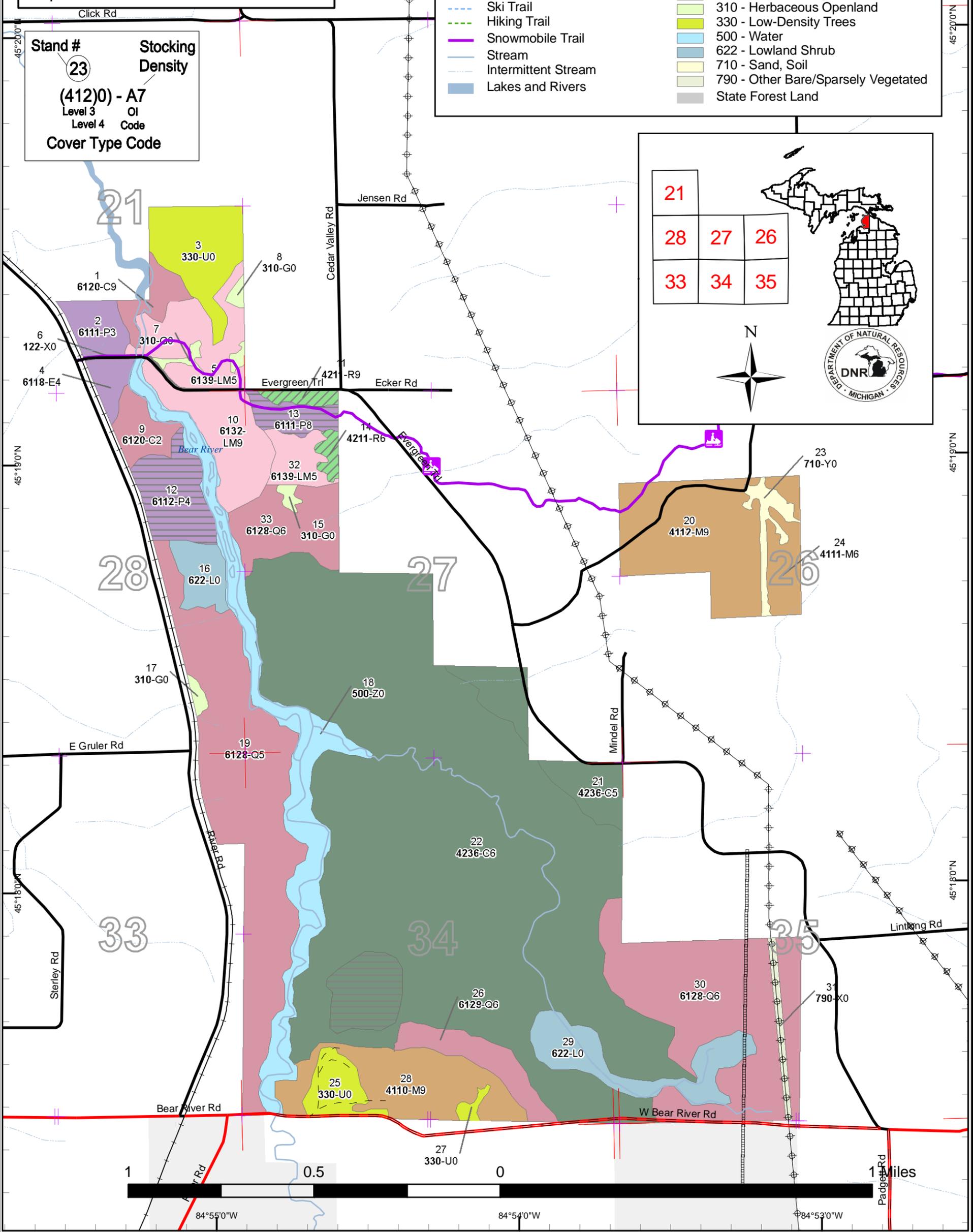
Non-Forest Stands

Level 3

	122 - Road/Parking Lot
	310 - Herbaceous Openland
	330 - Low-Density Trees
	500 - Water
	622 - Lowland Shrub
	710 - Sand, Soil
	790 - Other Bare/Sparsely Vegetated
	State Forest Land

21		
28	27	26
33	34	35

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Stand Boundary Map

Compartment: 113
 T34N R05W Sec. 21, 26 - 28, 33 - 35
 County: Emmet
 Unit: Gaylord
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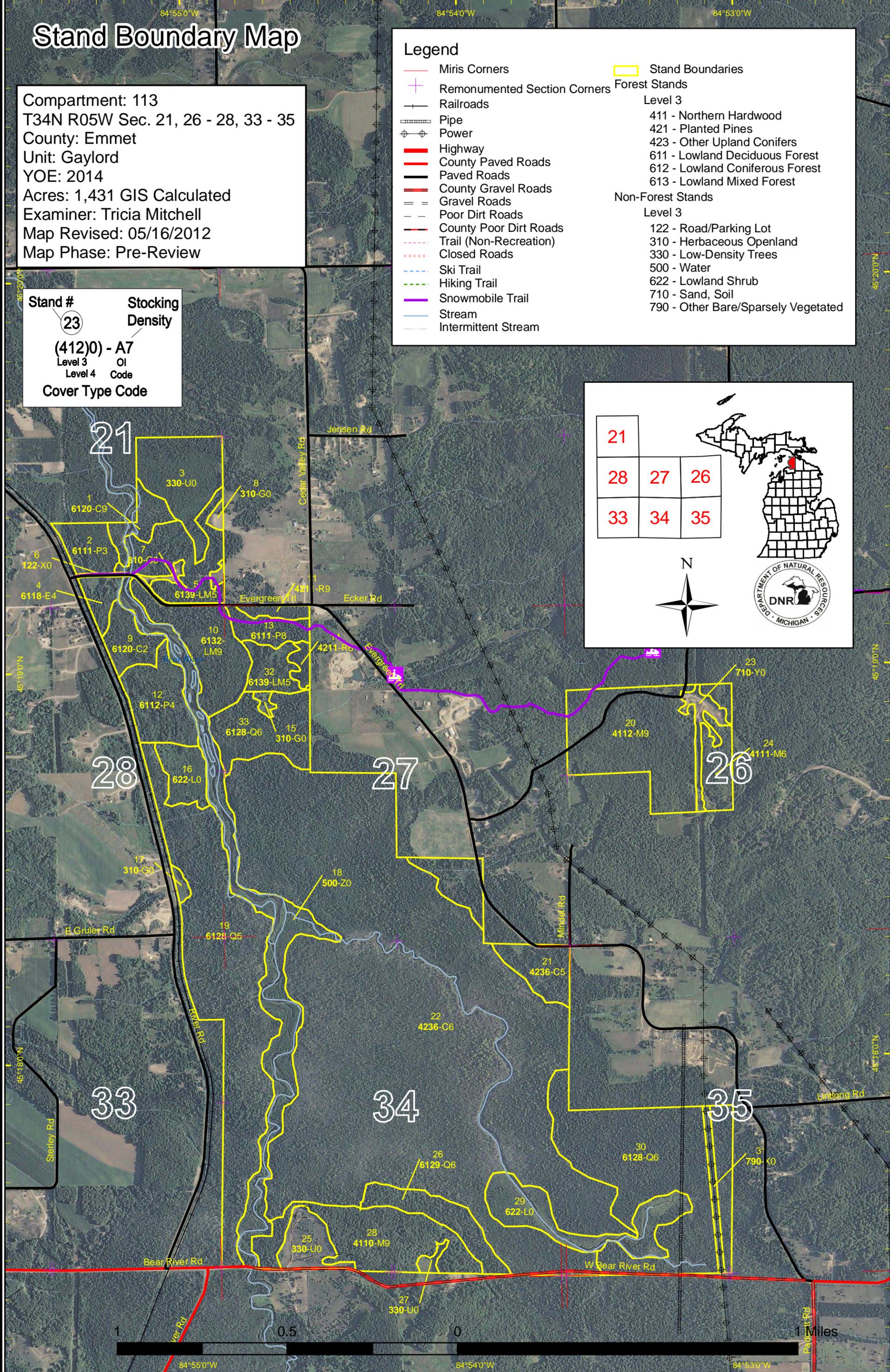
Stand #
 23
Stocking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
Cover Type Code

Legend

	Miris Corners		Stand Boundaries
	Remonumented Section Corners	Forest Stands	
	Railroads	Level 3	
	Pipe	411 - Northern Hardwood	
	Power	421 - Planted Pines	
	Highway	423 - Other Upland Conifers	
	County Paved Roads	611 - Lowland Deciduous Forest	
	Paved Roads	612 - Lowland Coniferous Forest	
	County Gravel Roads	613 - Lowland Mixed Forest	
	Gravel Roads	Non-Forest Stands	
	Poor Dirt Roads	Level 3	
	County Poor Dirt Roads	122 - Road/Parking Lot	
	Trail (Non-Recreation)	310 - Herbaceous Openland	
	Closed Roads	330 - Low-Density Trees	
	Ski Trail	500 - Water	
	Hiking Trail	622 - Lowland Shrub	
	Snowmobile Trail	710 - Sand, Soil	
	Stream	790 - Other Bare/Sparsely Vegetated	
	Intermittent Stream		

21
 28 27 26
 33 34 35

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Dedicated & Proposed Special Conservation Area Map

Compartment: 113
 T34N R05W Sec. 21, 26 - 28, 33 - 35
 County: Emmet
 Unit: Gaylord
 YOE: 2014
 Acres: 1,431 GIS Calculated
 Examiner: Tricia Mitchell
 Map Revised: 05/16/2012
 Map Phase: Pre-Review

- Legend**
- Miris Corners
 - + Remonumented Section Corners
 - Stand Boundaries
 - ▭ Dedicated Special Conservation Areas
 - Cold Water Streams
- Forest Stands**
- Level 3
- 411 - Northern Hardwood
 - 421 - Planted Pines
 - 423 - Other Upland Conifers
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 710 - Sand, Soil
 - 790 - Other Bare/Sparsely Vegetated

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

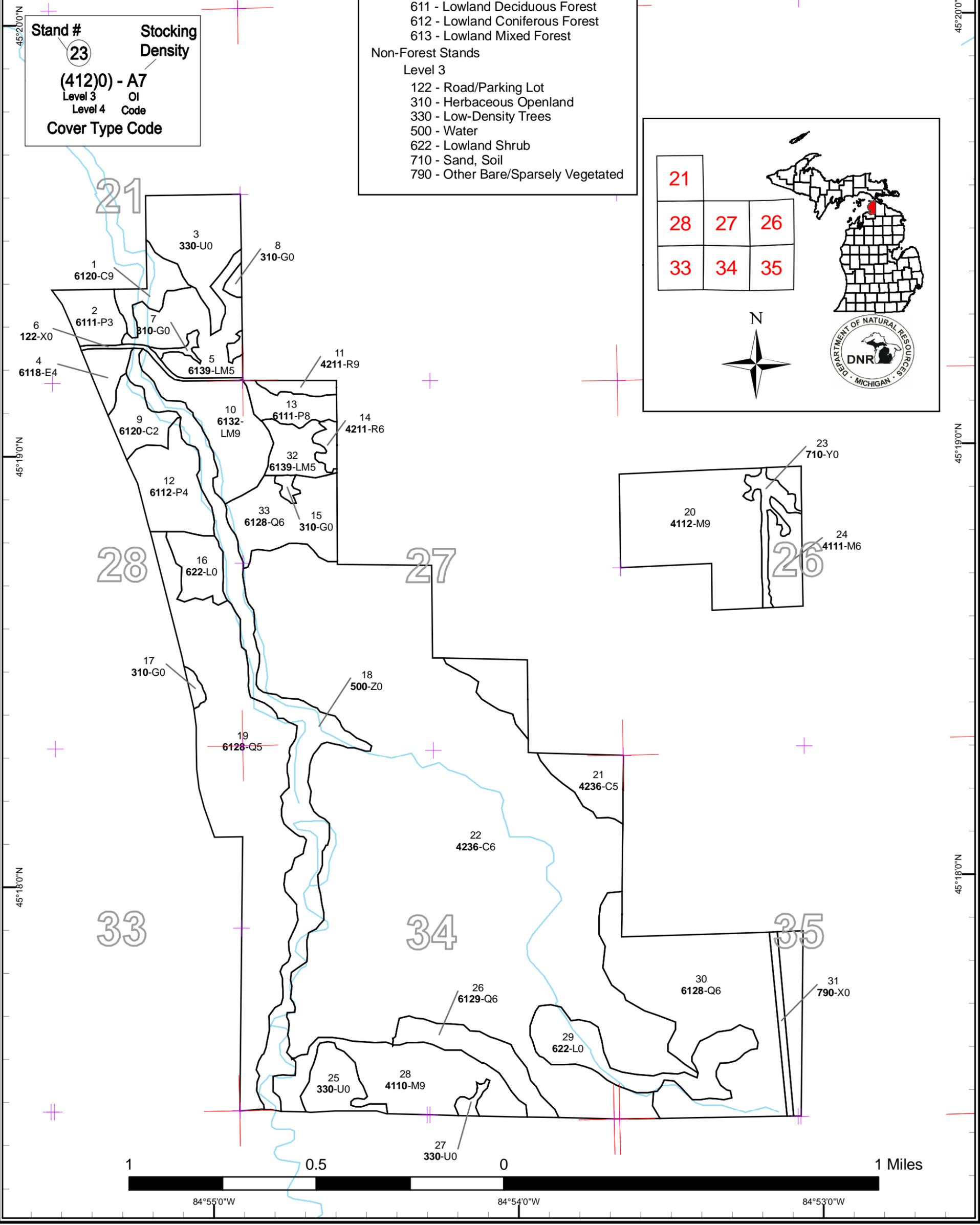
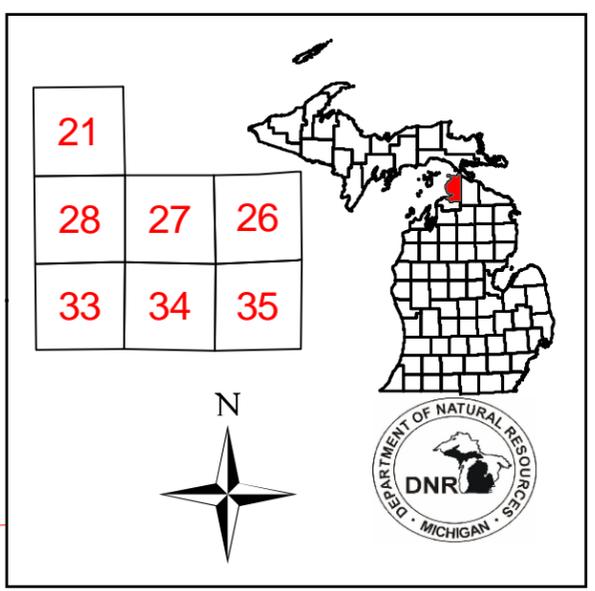


Table 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneren Age
Bare/Sparsely Vegetated	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Cedar	0	0	0	0	14	0	0	578	31	0	0	0	11	0	634
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Low-Density Trees	52	0	0	0	0	0	0	0	0	0	0	0	0	0	52
Lowland Aspen/Balsam Poplar	0	0	0	0	14	39	0	0	0	0	0	0	0	0	53
Lowland Conifers	0	0	0	0	0	137	0	0	33	0	0	0	0	134	304
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8
Lowland Mixed Forest	0	0	13	33	0	35	0	0	0	0	0	0	0	0	81
Lowland Shrub	48	0	0	0	0	0	0	0	0	0	0	0	0	0	48
Northern Hardwood	0	0	0	0	0	18	70	0	50	0	0	0	0	0	138
Red Pine	0	0	0	0	0	9	0	0	0	0	0	0	0	0	9
Sand, Soil	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	77	0	0	0	0	0	0	0	0	0	0	0	0	0	77
Total	204	0	13	33	27	238	70	578	114	0	0	0	11	142	1431



Table 2 – Proposed Treatment Summaries

Gaylord Mgt. Unit
Year of Entry 2014

Compartment 113
Total Compartment Acres: 1431

Acres by Treatment Type

Commercial Harvest - 43	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 28	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Cedar	23	0	0	0	0	0	23
Lowland Aspen/Balsam Poplar	28	0	0	0	0	0	28
Lowland Conifers	12	0	0	0	0	0	12
Red Pine	0	0	0	9	0	0	9
Total	62	0	0	9	0	0	71



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
11	52113011-Cut	4.6	42110 - Planted Red Pine	High Density Log	50	171-200	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Thin to 100-120 BA. Treat with stand 14. Retention will include residual Red Pine and any present deciduous species in the canopy. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
12	52113012-Cut	27.7	6112 - Lowland Aspen	Low Density Pole	58	1-50	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Winter harvest. Clearcut aspen, leave ash and larch. Leave cavity/nesting trees or some residual stock of aspen (1-3 tpa). <u>Specs:</u> <u>Other Comments:</u> Non-commercial harvest (responsibility of Wildlife Division). <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
13	52113013_sm all-Cut	11.6	6111 - Lowland Balsam Poplar	Medium Density Log	58	51-80	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clearcut aspen ONLY, leaving 1-3 mature aspen per acre as nesting/cavity trees. Less than 3% retention because of stand size. Acceptable regen includes low to high stocking of aspen, ash, birch, and/or balsam fir. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										
13	52113013_sm all-Cut	11.6	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	85	81-110	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clearcut aspen ONLY, leaving 1-3 mature aspen per acre as nesting/cavity trees. Less than 3% retention because of stand size. Acceptable regen includes low to high stocking of aspen, ash, birch, and/or balsam fir. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> <u>Proposed Start Date:</u> 10/01/2013										



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
13	52113013_sm all-Cut	11.6	6139 - Mixed Lowland Forest	Medium Density Pole	26	1-50	Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal

Prescription: Clearcut aspen ONLY, leaving 1-3 mature aspen per acre as nesting/cavity trees. Less than 3% retention because of stand size. Acceptable regen includes low to high stocking of aspen, ash, birch, and/or balsam fir.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

14	52113014-Cut	3.9	42110 - Planted Red Pine	High Density Pole	50	171-200	Harvest	Low Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription: Thin to 100-120 BA. Treat with stand 11. Retention will include residual Red Pine and any present deciduous species in the canopy.

Specs:

Other Comments:

Next Steps: Replant to RP after final harvest.

Proposed Start Date: 10/01/2013

22	52113022_isla nd-Cut	23.0	42360 - Upland Cedar	High Density Pole	78	141-170	Harvest	Clearcut with Reserves	6120 - Lowland Cedar	Cmpt. Review Proposal
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Prescription: Cut all cedar, ash, fir, spruce, and birch, leaving heavy slash and debris scattered. DO NOT CUT retention species: hemlock, larch, or legacy white pine. Also retain 3-5 cedar per acre. Acceptable regen includes low to high stocking of a mix of lowland coniferous and deciduous species, also cattail and other wetland associated species.

Other Comments: Short-wood operation to promote abundance of slash. Biomass will be greater than the WHBG recommendation. Specify greater woody biomass in sale specs.

Next Steps: Regen survey in 2-5 years.

Proposed Start Date: 10/01/2013

**Total Treatment
Acreage Proposed: 94.0**

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



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

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Error

Limiting Factor and No
Treatment Reason

**Total Treatment
Acreage Proposed: 0**

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2014



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

Other
Comments:

Next
Steps:

Proposed
Start Date: #Error

**Total Treatment
Acreage Proposed: 0**

Stand	Gaylord Mgt. Unit		5 – Forested Stands			Compartment: 113	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
1	6120 - Lowland Cedar	High Density Log	11.0	143	141-170	Limited regeneration. Snowmobile trail might be problematic for treating stand. Factor limit because of access and Bear River?	
2	6111 - Lowland Balsam Poplar	High Density Sapling	13.7	42	1-50	Wet but not inundated.	
4	6118 - Lowland Deciduous with Cedar	Low Density Pole	8.1	Uneven Age	1-50		
5	6139 - Mixed Lowland Forest	Medium Density Pole	32.7	37	51-80	Seasonal inundation.	
9	6120 - Lowland Cedar	Medium Density	13.7	48	1-50	Lots of cattails.	
10	6132 - Mixed Lowland Forest with Cedar	High Density Log	35.3	53	51-80	Clumpy WC. Very patchy stand, variable. REALLY heavy browsing on ash.	
11	42110 - Planted Red Pine	High Density Log	4.6	50	171-200	Wet, sensitive soils. Consider winter harvest only. Combine with other RP (stand 21B). MO: Replant to RP after final entry.	
12	6112 - Lowland Aspen	Low Density Pole	27.7	58	1-50	BA swings: 20, 70, 50, 10. Average: 37.5. Wet, little volume. Ash falling out. Cankers on some QA; sort of punky. Either let stand convert to non-stocked, open shrub, or try to regenerate aspen.	
13	6111 - Lowland Balsam Poplar	Medium Density Log	11.6	58	51-80	Aspen dying out. Some punky aspen.	
32	6139 - Mixed Lowland Forest	Medium Density Pole	12.7	26	1-50	Gradual increase in RP and QA heading south, some inclusion of WC.	
33	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	32.6	85	81-110	Black cherry, white pine on northern boundary only. Heavy browsing on understory black ash.	
14	42110 - Planted Red Pine	High Density Pole	3.9	50	171-200	Wet ground. Winter harvest only with RP in north (stand 21A). BA Swings: 150, 130, 210, 240, 190, 210. Average: 188.	
19	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	134.4	Uneven Age	51-80		
20	4112 - Maple, Beech, Cherry Association	High Density Log	69.9	68	81-110	Pockets of mature BTA. Healthy ash and beech - LET IT GO.	
21	42360 - Upland Cedar	Medium Density Pole	31.3	87	111-140	Transitions into lowland. Lots of down woody debris, but regen within. No management suggested despite high basal area.	
22	42360 - Upland Cedar	High Density Pole	577.8	78	141-170		



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Gaylord Mgt. Unit

5 – Forested Stands

Compartment: 113
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4111 - S.Maple, Hard Mast Association	High Density Pole	18.1	58	81-110	Location, slopes, and sandy soil might factor limit this site. Pole sized timber; let self-thin and grow for another entry. ORV/dirtbike trails on north end.
26	6129 - Mixed Coniferous Lowland Forest	High Density Pole	20.8	52	141-170	TSI: cc 10-15 ac pocket on West half of sale. Keep out of the pocket of ash. Other ages: 65 (cedar), 80 (QA estimate).
28	4110 - Sugar Maple Association	High Density Log	50.5	85	111-140	
30	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	115.9	52	111-140	Pockets of mature larch; pockets of spruce; pockets of QA. Access would be an issue. Factor limit. BA Swings: 50, 130, 90, 140, 180; Average: 118.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	3303 - Mixed Low Density Trees	34.8	No	Unspecified	
6	122 - Road/Parking Lot	2.8	No	Unspecified	ROAD. Evergreen Trail.
7	3102 - Grass	2.0	No	Unspecified	Encroaching larch, paper birch, alder, cedar, cherry.
8	3102 - Grass	3.0	No	Unspecified	Fence - possible trespass.
15	3102 - Grass	1.8	No	Unspecified	All knapweed.
16	6229 - Mixed lowland shrub	14.0	No	Unspecified	
17	3102 - Grass	2.0	No	Unspecified	Knapweed present, not yet abundant.
18	50 - Water	77.4	N/A	Unspecified	Bear River corridor.
23	710 - Sand, Soil	8.9	No	Unspecified	Powerlines, ORV trails merge, scramble area.
25	3303 - Mixed Low Density Trees	15.0	No	Unspecified	
27	3303 - Mixed Low Density Trees	2.3	No	Unspecified	
29	6223 - Inundated Shrub Swamp	34.3	No	Unspecified	
31	790 - Other Bare/Sparsely Vegetate	6.0	No	Unspecified	Power lines. Wet spots and channels. Limited regen.



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



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.