



GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 182 ENTRY YEAR: 2013

Compartment Acreage: 992

County: CRAWFORD

Revision Date: 7/23/11

Stand Examiner: Lucas Merrick

Legal Description: Grayling Township, T26N R04W Sections 07, 08, 09

Management Goals: The Majority of this compartment is comprised of Hanson Reserve Lands which contain the following deed restrictions: 1) Hanson Reserve lands are to be used as a permanent encampment and maneuvering ground for the military. 2) This land is to serve as a game preserve for the breeding and protection of game and 3) to serve as a forest reserve. The management goal is to maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout while meeting property deed restrictions.

Soil and Topography: The terrain is level to slightly rolling. The soils are very poorly drained Rifle peat mixed with some poorly drained Saugetuck sand and a little well drained Grayling and Rubicon sand. The majority of this compartment is wet all year.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State ownership is dominated by Military Board Hanson Reserve lands with one "40" acre parcel of State of Michigan DNR acquired land. Hanson Reserve Lands were given to the National Guard by Rasmus Hanson in 1913, with several deed restrictions as outlined under the management objective. These restrictions have tasked the DNR with managing the natural resources on these lands as long as management activities do not conflict with military needs. In addition, hunting is prohibited on these lands. Hunting is allowed on the open "40" acquired by the state located in the NE SW of section 8.

Multiple subdivisions and other private holdings are found adjacent to Lake Margrethe. Lake Margrethe State Forest Campground and the Lake Margrethe Access Site (managed by P&R) are located within this compartment.

Unique, Natural Features: Per Michigan Natural Features Inventory there is excellent potential for eastern massasauga and this snake has been found in this compartment. Secretive locust could occur in jack pine or bogs. There is also excellent potential for dusted skipper, grizzled skipper, red-legged spittlebug, and boreal brachionycha in grassy openings and young jack pine. There may be red-shouldered hawks and goshawks. Wood turtles and Blanding's turtle have potential along Portage Creek. Bald eagles and osprey have been seen around Lake Margrethe.

There is excellent potential for plant species such as rough fescue, pale agoseris, Hill's thistle, Canada rice grass, and Alleghany plum in pine barren areas or dry sand prairie. Houghton's goldenrod, Vasey's rush, New England violet, Clinton's bulrush, prairie dropseed, and northern clubmoss could occur in seasonally wet grassy depressions. Houghton's goldenrod and secretive locust have been documented in this compartment.

Archeological, Historical, and Cultural Features: Some features within the compartment have been documented.

Special Management Designations or Considerations: Portage Creek is a “Designated Natural River” these areas are High Conservation Value Areas. The Military Lands are designated Special Conservation Areas. This compartment contains part of the “Bear Swamp”.

Watershed and Fisheries Considerations: Lake Margrethe is 1306 acre lake and forms a boundary for much of the compartment. This lake is used year around for fishing and receives a fair amount of boating pressure. Portage creek flows from Lake Margrethe west through the compartment and is a cold water trout stream.

Wildlife Habitat Considerations: Much of this compartment is considered deer yard. Due to the no hunting restrictions in the Hanson Refuge, high deer populations are evidenced in this area through heavy browse. Some areas have been difficult to regenerate in the past due to heavy browse pressure.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. 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 one-half mile to the north and potential is thought to be limited. This is part of the State Military Reservation. There are no oil and gas leases in this compartment. The nearest production is Beaver Creek Field, located six miles to the south.

Vehicle Access: The roads near/around Lake Margrethe are well maintained and accessible by any 2-wheel drive vehicle. Access is limited within the interior of the compartment.

Survey Needs: None at this time.

Recreational Facilities and Opportunities: Lake Margrethe State Forest Campground and day use area are heavily used throughout the summer months. Lake Margrethe Access Site is heavily used for water based recreational opportunities. Both of these sites are located on military board lands that were leased to the Department under recreational lease dated Septebmer 26, 1961. Most of the compartment is found within in the potential impact zones of the Camp Grayling small arms ranges, limiting dispersed recreation.

Fire Protection: The majority of cover types found in this compartment are not prone to frequent fire events. If a wildfire were to occur within the swamp direct attack by our standard methods would be difficult if not impossible.

➤ **The following reports are available:**

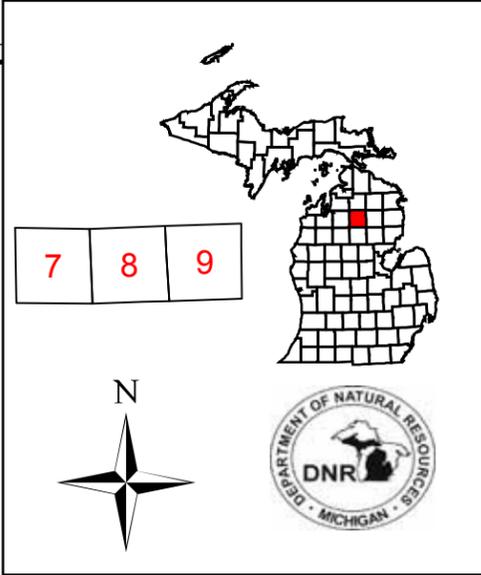
- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summaries**
- ◆ **Dedicated Conservation Area Details**
- ◆ **Listing of Forested Stands**
- ◆ **Listing of Non-Forested Stands**
- ◆ **Proposed Treatments with No Limiting Factor**
- ◆ **Proposed Treatments with Limiting Factors**

➤ **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**

Cover Type & Treatment Map

Compartment 182
 T26N, R04W, Sec. 07, 08, 09
 County: Crawford
 Unit: Grayling
 YOY: 2013
 Acres: 992 GIS Calculated
 Stand Examiner: Lucas Merrick
 Map Revised: 9/07/2011
 Map Phase: Pre-Review



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

Legend

- ◆ RIs Corners
- Miris Corners
- Highway
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- State Highway

Non-Forest Stands

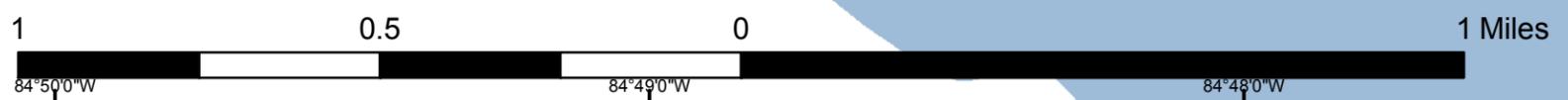
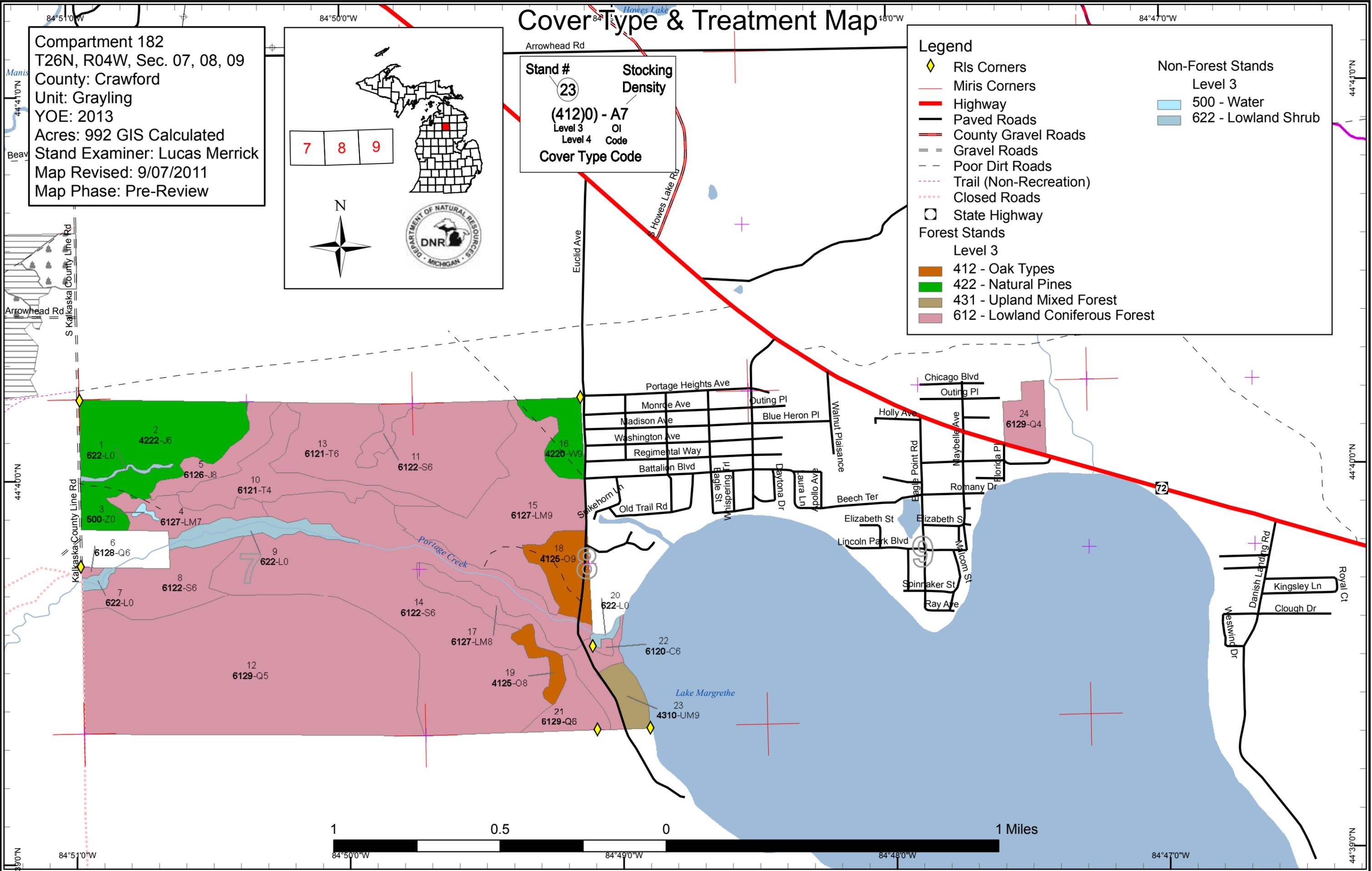
Level 3

- 500 - Water
- 622 - Lowland Shrub

Forest Stands

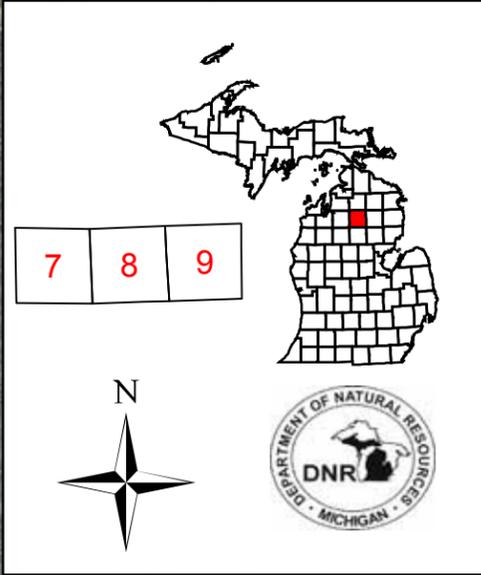
Level 3

- 412 - Oak Types
- 422 - Natural Pines
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest



Stand Boundary Map

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Stand #
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Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
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7 8 9

Legend

- ◆ RIs Corners
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- Highway
- Paved Roads
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- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- State Highway
- Stand Boundaries

Forest Stands

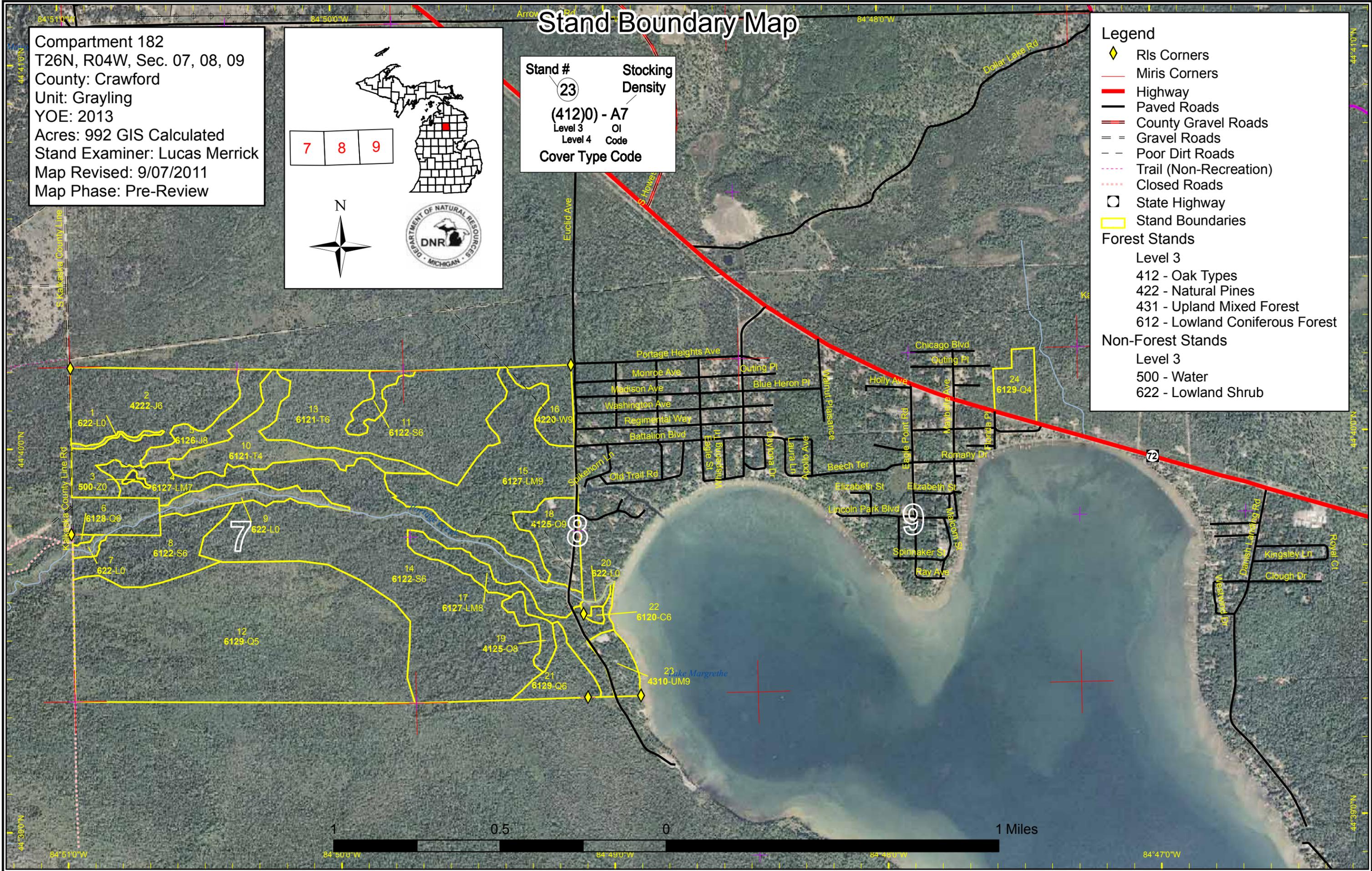
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Non-Forest Stands

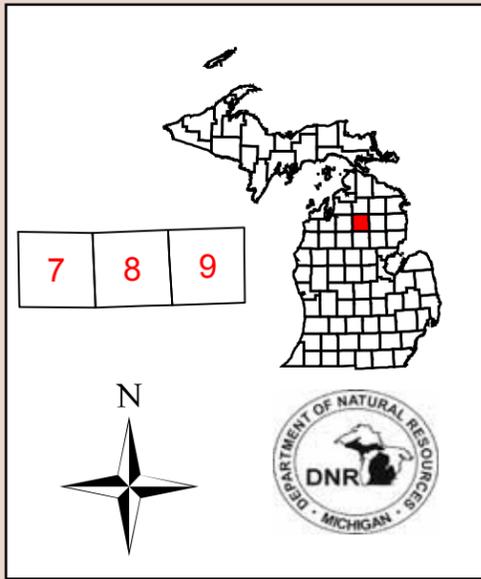
Level 3

- 500 - Water
- 622 - Lowland Shrub



Dedicated & Proposed Special Conservation Area Map

Compartment 182
 T26N, R04W, Sec. 07, 08, 09
 County: Crawford
 Unit: Grayling
 YOE: 2013
 Acres: 992 GIS Calculated
 Stand Examiner: Lucas Merrick
 Map Revised: 9/07/2011
 Map Phase: Pre-Review



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
 - Research, Development, and Military Lands
 - ▲ Campgrounds
 - Natural Rivers Zoning District
 - Natural Rivers Vegetative Buffer
 - Forest Stands**
 - Level 3
 - 412 - Oak Types
 - 422 - Natural Pines
 - 431 - Upland Mixed Forest
 - 612 - Lowland Coniferous Forest
 - Non-Forest Stands**
 - Level 3
 - 500 - Water
 - 622 - Lowland Shrub

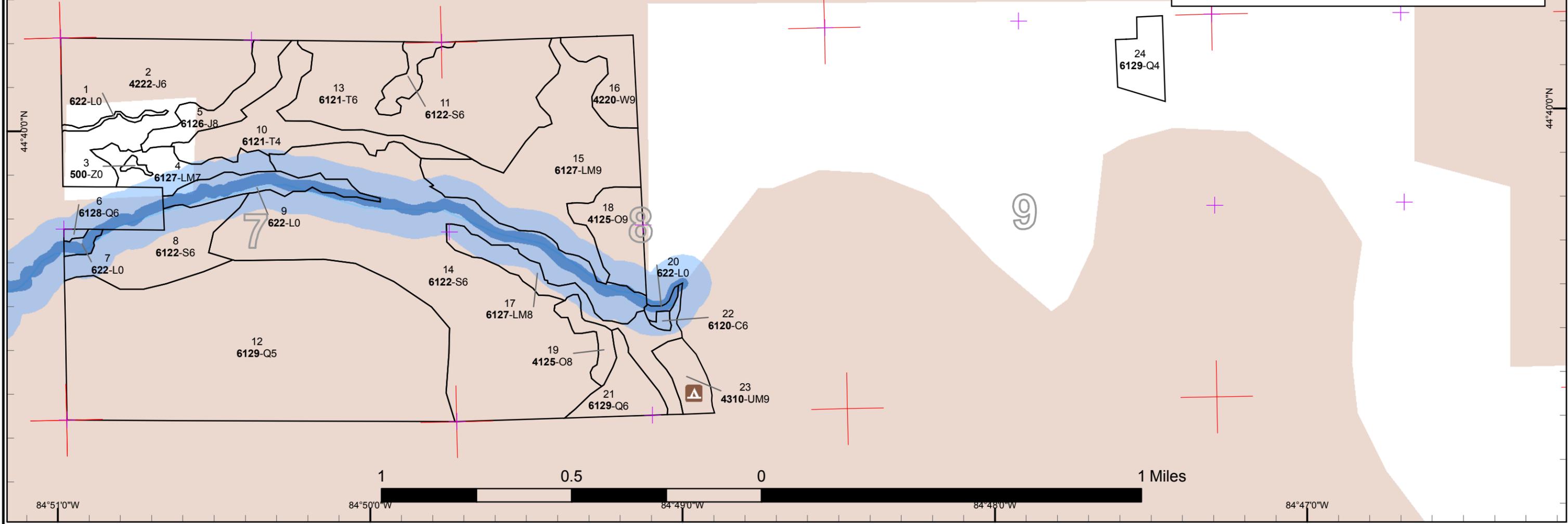


Table 1 – Total Acres by Cover Type and Age Class



	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
Cedar	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Jack Pine	0	0	0	0	0	79	0	0	0	18	0	0	0	0	0	98
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	260	0	27	121	0	408
Lowland Shrub	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	39	0	8	215	0	0	262
Oak	0	0	0	0	0	0	0	0	0	0	22	0	0	8	0	30
Tamarack	0	0	0	0	0	0	0	0	38	0	0	0	103	0	0	140
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
White Pine	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18
Total	24	0	0	0	0	79	0	0	38	57	300	21	345	129	0	992



Table 2 – Proposed Treatment Summaries

Grayling Mgt. Unit
Year of Entry 2013

Compartment 182
Total Compartment Acres: 991.9

Acres by Treatment Type

Commercial Harvest - 0	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
	#Error	#Error	#Error	#Error	#Error	#Error	#Error
Total	#Error	#Error	#Error	#Error	#Error	#Error	#Error

**Table 3 -- Treatments Prescribed
with No 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
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 0**

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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#Error

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: 182	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013	
2	42220 - Natural Jack Pine	High Density Pole	79.3	46	51-80		Poor quality jack pine stand.
4	6127 - Lowland Pine	Low Density Log	19.1	120	81-110		Large diameter white and red pine.
5	6126 - Lowland Jack Pine	Medium Density Log	18.4	80	51-80		Lowland jack pine stand. Plenty of excellent horizontal structure as a result from blowdown.
6	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	1.0	120	111-140		Nice looking pine. Some red pine and oak also present.
8	6122 - Black Spruce	High Density Pole	38.8	80			A mixed conifer stand.
10	6121 - Tamarack	Low Density Pole	37.7	74	1-50		Tamarack density varies throughout. Drainage...very wet.
11	6122 - Black Spruce	High Density Pole	8.2	100	81-110		Mixed conifer swamp.
12	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	245.7	90			Mixed conifer swamp.
13	6121 - Tamarack	High Density Pole	102.6	115	81-110		A nice looking mixed conifer swamp. Several deer runs.
14	6122 - Black Spruce	High Density Pole	214.6	117	51-80		Black spruce with mixed pine. Cedar and hemlock present closer to the stream.
15	6127 - Lowland Pine	High Density Log	84.5	120	51-80		Sawlog white and red pine w/ mixed hdwds and spruce. Dense under story of white pine and black spruce.
16	42200 - Natural White Pine	High Density Log	17.7	96	81-110		Great looking pine stand.
17	6127 - Lowland Pine	Medium Density Log	27.4	110	81-110		Super canopy white and red pine over a thick carpet of white pine regen 10-30' tall.
18	4125 - Black, N. Pin Oak	High Density Log	22.5	97	111-140		Dry in most areas -sandy ridges-but has a high water table. A few lowland areas found throughout.
19	4125 - Black, N. Pin Oak	Medium Density Log	7.7	120	51-80		Oak ridge
21	6129 - Mixed Coniferous Lowland Forest	High Density Pole	16.4	125	51-80		mixed cedar, spruce, and tamarack.
22	6120 - Lowland Cedar	High Density Pole	1.3	100			small cedar stand



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Grayling Mgt. Unit

5 – Forested Stands

Compartment: 182
Year of Entry: 2013



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4310 - Pine, Oak Mix	High Density Log	11.3	102	81-110	Lk Margarethe State Forest Campground.
24	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	14.2	91	1-50	Very wet...lots of tag alder.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6220 - Alder/willow	1.9	N/A	Unspecified	Drainage.
3	50 - Water	1.0	N/A	Unspecified	open water
7	6220 - Alder/willow	2.6	No	Unspecified	Portage Creek.
9	6220 - Alder/willow	16.5	No	Unspecified	Portage Ck.
20	6220 - Alder/willow	1.6	No	Unspecified	Adjacent to water control structure for the lake



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.
SCA	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.