



Sault Ste Marie Forest Management Unit
Compartment Review Presentation
Compartment #159 Entry Year: 2013
Compartment Acreage: 1,983 County: Mackinac

Revision Date: 7/19/2011

Stand Examiner: Cory Luoto

Legal Description: T43N R8W Sections: 3, 4, 9, & 10 Hudson Township

RMU (if applicable): Strickler Aspen

Management Goals: This compartment is four miles west of Rexton. The town of Garnet is on the west side of Garnet Lake. It is located at the intersection of H-40 and the Borgstrom Road. Aspen is the predominate timber type while other timber types within this compartment include; northern hardwoods, cedar, spruce – fir, other lowlands, grassy openings, upland brush and a red pine plantation. The aspen, and spruce – fir types are regenerating nicely and the hardwood needs regular treatment to promote health and growth. Most of the aspen is about the same age. It was part of a very large timber sale that was cut in 1975.

Soil and Topography: The uplands are generally Amadon-Rock outcrop complex, Menominee loamy sand, Wallace sands, and Paquin sand. Lowlands and swamps consist primarily of Markey and Carbondale mucks, with Spot-Finch and Markey-Spot-Finch Complexes. Level lowlands to rolling uplands.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Section 10 is entirely state owned. Most of Section 3 is state owned except for the Hudson Township property, which is about 15 acres. The Hudson Township Fire Hall and a recreational area are located on this property. Approximately half of Sections 4 & 9 is privately owned. There is private land along the west edge, while the remainder of the compartment is surrounded by state land with a few scattered holdings of private. The town of Garnet is located along the north edge of Section 4.

Unique, Natural Features: Garnet Lake and the headwaters of the Black River are in this compartment.

Archeological, Historical, and Cultural Features: There is a cedar shingle mill located in Garnet that has been operated by the same family for nearly a century.

Special Management Designations or Considerations: The Garnet Lake State Forest Campground is under a land use permit to Hudson Township. The campground is managed and maintained by the Hudson Township Board. The southeastern portion of Section 10 is part of the Strickler Grouse Management Area.

Watershed and Fisheries Considerations: Fisheries Values Marginal. Fisheries Division had previously stocked black crappies into Garnet Lake, to produce a fishery consisting of them, bass, panfish and pike. The continuing drought, however, has lowered the lake level such that we could not launch a survey boat last summer. The lake is very clear, with apparently little phyto- or zooplankton. When lake levels come back up, this lake should be looked at quite extensively to determine the best way to produce a desirable fishery. The East Branch of the Black River, SQCW, flows through the

southeast corner of section 10. At this point, however, it is very much a headwater stream and too small to conduct any management effort. Even so, it would be desirable to convert a buffer within the neighboring aspen stands to coniferous species.

Wildlife Habitat Considerations: This compartment lies north of the Strickler Grouse Management Area, and mainly consists of a mix of aspen, hardwood pockets, and lowland conifer swamp. Although aspen is a dominant cover type, little age class diversity currently exists between stands. Hardwoods have been managed to increase stand diversity. Cedar and other lowland conifer swamp has been protected.

Wildlife objectives include retaining the integrity of lowland conifer stands, increasing age class diversity in aspen, and maintaining species and structural diversity in northern hardwoods. Recent management activities have resulted in some increase in age class diversity, but more will continue to enhance habitat for ruffed grouse, snowshoe hare, woodcock, and white-tailed deer. Snags, coarse woody debris, and some large wolfy trees will be left in northern hardwoods.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel and coarse-textured glacial till. The glacial drift thickness varies between 10 and 50 feet. The Silurian Engadine Group subcrops below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. The nearest gravel pit is in Section 2. There appears to be gravel potential in Section 4. There is no economic oil and gas production in the UP.

Vehicle Access: H-40 and Park Road border the north of the compartment. H-40 is a paved county road while Park Road is a gravel county road. The Borgstrom Road is a paved county road that runs along the west edge. Access to the south is from the Strickler Road, which is a gravel DNR road and several two – tracks. Rocky Ridge Road, a two – track, enters the center of the compartment off of the Borgstrom Road. The eastern portion can be accessed from the Crawfin Lake Road, which is another gravel DNR road, and a couple of two – tracks.

Survey Needs: None identified at this time.

Recreational Facilities and Opportunities: The Garnet Lake State Forest campground, which is managed by Hudson Township, lies within this compartment. Also a portion of the Strickler Grouse Management Area lies within Section 10.

Fire Protection: This is a low fire danger area.

Additional Compartment Information:

➤ **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

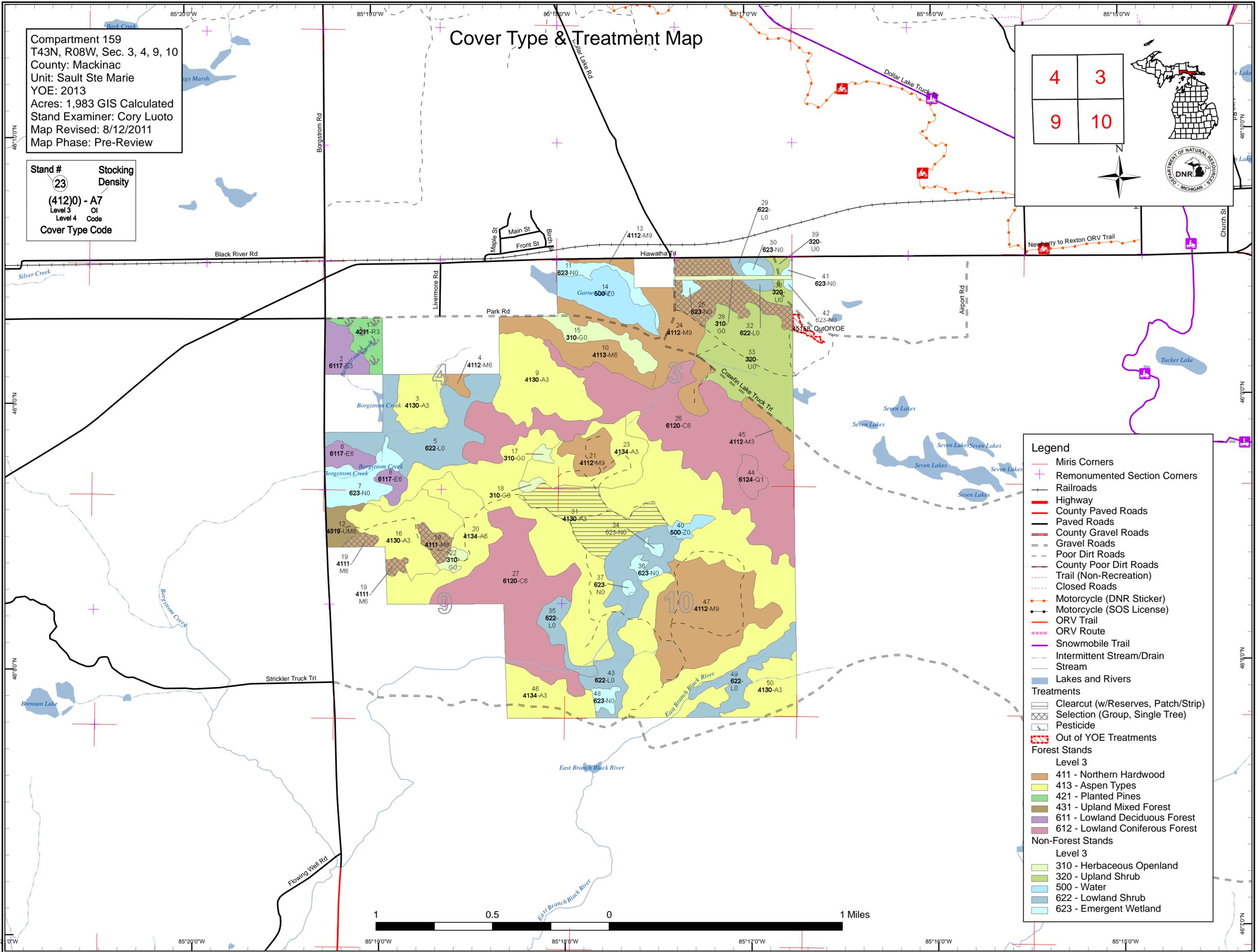
Compartment 159
 T43N, R08W, Sec. 3, 4, 9, 10
 County: Mackinac
 Unit: Sault Ste Marie
 YOE: 2013
 Acres: 1,983 GIS Calculated
 Stand Examiner: Cory Luoto
 Map Revised: 8/12/2011
 Map Phase: Pre-Review

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

4	3
9	10





Legend

- Miris Corners
- + Remonumented Section Corners
- Railroads
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)
- Pesticide
- Out of YOE Treatments

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

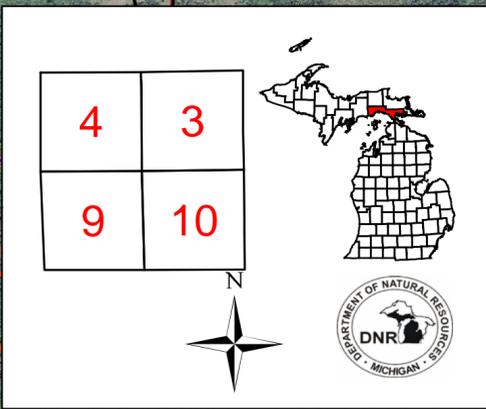
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland



Stand Boundary Map

Compartment 159
 T43N, R08W, Sec. 3, 4, 9, 10
 County: Mackinac
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 Map Revised: 8/12/2011
 Map Phase: Pre-Review

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



Legend

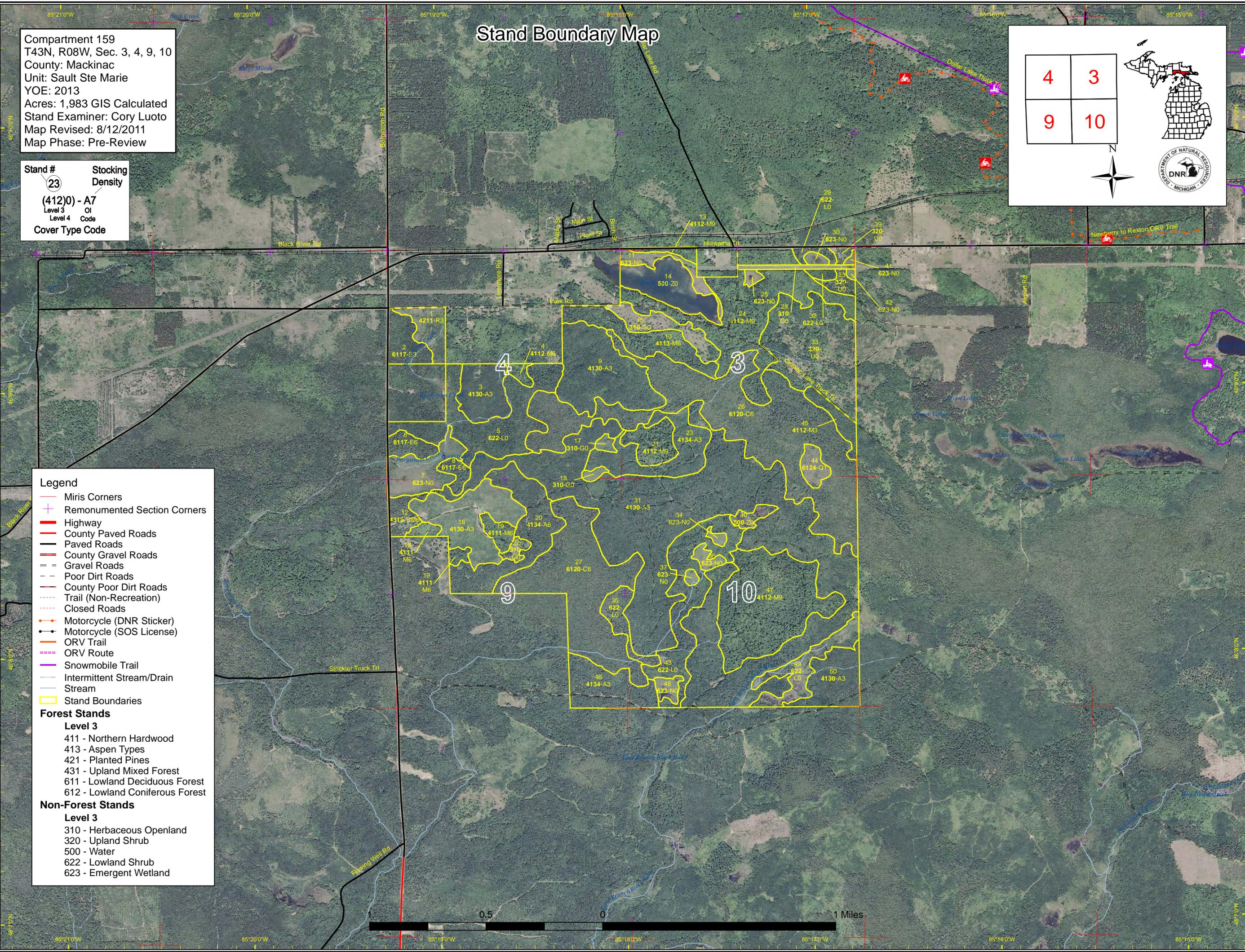
- Miris Corners
- + Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Motorcycle (DNR Sticker)
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- ORV Trail
- ORV Route
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands

- Level 3**
- 411 - Northern Hardwood
 - 413 - Aspen Types
 - 421 - Planted Pines
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
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Non-Forest Stands

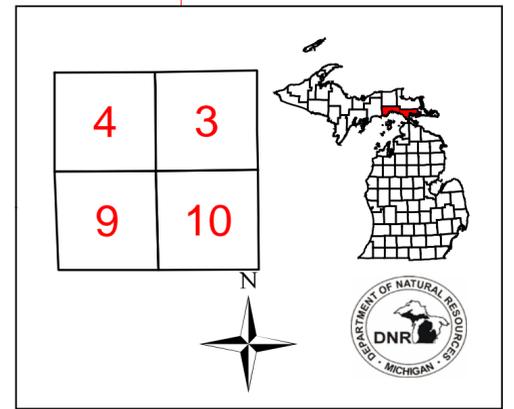
- Level 3**
- 310 - Herbaceous Openland
 - 320 - Upland Shrub
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland



Dedicated & Proposed Special Conservation Area Map

Compartment 159
 T43N, R08W, Sec. 3, 4, 9, 10
 County: Mackinac
 Unit: Sault Ste Marie
 YOE: 2013
 Acres: 1,983 GIS Calculated
 Stand Examiner: Cory Luoto
 Map Revised: 8/12/2011
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- ⊕ Remonumented Section Corners
- Stand Boundaries
- Dedicated Special Conservation Areas**
- ▲ Campgrounds
- Cold Water Streams
- Deer Wintering Areas
- Forest Stands**
- Level 3**
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Stands**
- Level 3**
- 310 - Herbaceous Openland
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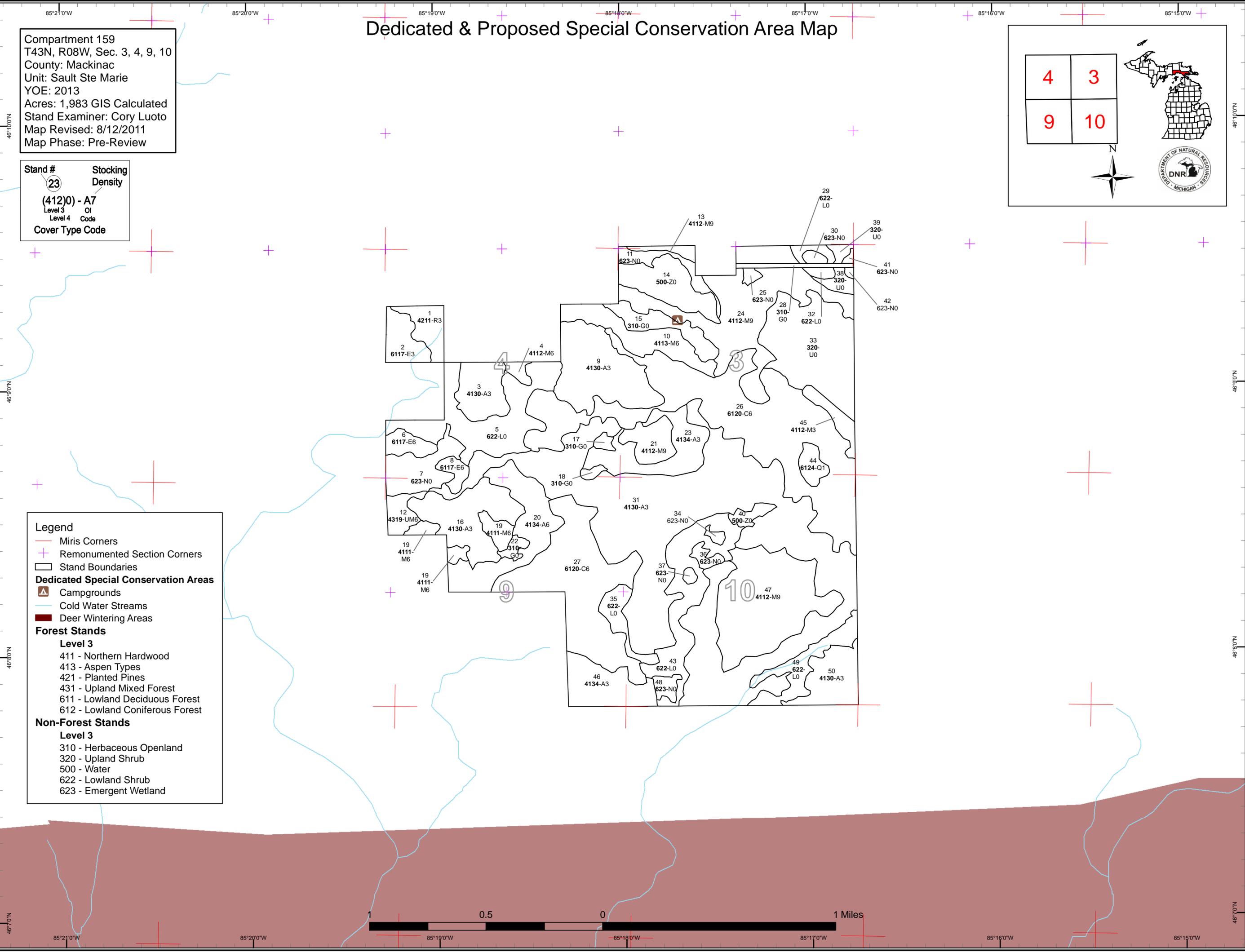


Table 1 – Total Acres by Cover Type and Age Class



	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 +		Uneten Age
Aspen	0	57	45	74	533	59	0	0	0	0	0	0	0	0	0	768
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	354	0	354
Herbaceous Openland	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10
Lowland Deciduous	0	0	0	0	20	0	0	20	0	0	0	0	0	0	0	40
Lowland Shrub	196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	196
Marsh	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70
Northern Hardwood	0	0	0	12	0	0	39	22	135	118	0	0	0	0	0	326
Red Pine	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	19
Upland Mixed Forest	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	13
Upland Shrub	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105
Water	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
Total	455	57	64	86	553	71	39	41	135	118	0	0	0	364	0	1983



Table 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2013

Compartment 159
Total Compartment Acres: 1983

Acres by Treatment Type

Commercial Harvest - 121	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 19	

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>
Aspen	57	0	0	0	0	0	57
Northern Hardwood	0	64	0	0	0	0	64
Total	57	64	0	0	0	0	121



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	45159019-Cut	17.1	4111 - S.Maple, Hard Mast Association	High Density Pole	61	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some larger canopy gaps may be desirable to enhance the advanced regeneration present.

Other
Comments:

Next
Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, cherry, beech, paper and yellow birch, basswood, aspen and ironwood.

24	45159024_sm all-Cut	47.0	4112 - Maple, Beech, Cherry Association	High Density Log	72	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
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Prescription Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some larger canopy gaps may be desirable to enhance the advanced regeneration present.
Specs: WLD: Also, leave dead and downed.

Other
Comments:

Next
Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, cherry, beech, paper and yellow birch, basswood, aspen and ironwood.

31	45159031_sm all_1-Cut	57.2	4130 - Aspen	High Density Sapling	30	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
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Prescription Cut all deciduous 2" or more and conifer 4" or more. Leave one representative tree every 100'.
Specs:

Other
Comments:

Next
Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and paper birch, ironwood, balsam fir, white spruce and white pine.

1	45159001- Spray	18.5	42110 - Planted Red Pine	High Density Sapling	14	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal
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Prescription
Specs:

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 139.9**

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
45158_OutOfY OE-Cut	2.5				Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription:</u> Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some larger canopy gaps may be desirable to enhance the advanced regeneration present. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and paper birch, ironwood, balsam fir, white spruce, black spruce and white pine.								
NF_45134015- NonFor	4.7	Unspecified		0	Non-Forest Management	Patch or Strip Clearcut	31021 - Cool Season Grass	Cmpt. Review Proposal
<u>Prescription:</u> Treat with C149 s 63. Opening maintenance removing jack pine seedlings and saplings. <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u>								
Total Treatment Acreage Proposed:		7.2						



Stand	Sault Ste. Marie Mgt. Unit			5 – Forested Stands		Compartment: 159 Year of Entry: 2013	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:	
1	42110 - Planted Red Pine	High Density Sapling	18.5	14		Red pine doing pretty good, monitor for spraying.	
2	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	20.2	32		Decent lowland aspen, balsam not to heavy.	
3	4130 - Aspen	High Density Sapling	30.7	30		Decent aspen stand, some clones seem larger than others.	
4	4112 - Maple, Beech, Cherry Association	High Density Pole	4.6	63	81-110	Poor quality maple, adds diversity to the area.	
6	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	11.7	61		Very wet aspen. Look at cutting in ten years.	
8	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.8	66		Very wet aspen and bam. Look at cutting in ten yrs.	
9	4130 - Aspen	High Density Sapling	74.2	26		Nice aspen stand. Not that much balsam or spruce in the stand.	
10	4113 - R.Maple, Conifer	High Density Pole	39.4	54	51-80	Decent, young maple. Heavy conifer component.	
12	4319 - Mixed Upland Forest	High Density Pole	12.6	42		Upland mackinac mix stand. look at cutting in 10 yrs.	
13	4112 - Maple, Beech, Cherry Association	High Density Log	5.6	83	81-110	Buffer along north side of Garnet Lake.	
16	4130 - Aspen	High Density Sapling	57.2	4		Aspen regen is doing great. about 8' tall	
19	4111 - S.Maple, Hard Mast Association	High Density Pole	17.1	61	111-140	This stand is made up by three small harwood patches. they are ready to thin.	
20	4134 - Aspen, Spruce/Fir	High Density Pole	58.7	40		Nice aspen, just barely makes a pole stand, small diameters.	
21	4112 - Maple, Beech, Cherry Association	High Density Log	20.5	77	81-110	Stand was thinned last entry. nice regen, look at thinning again in ten yrs.	
23	4134 - Aspen, Spruce/Fir	High Density Sapling	45.1	15		Nice young aspen, stand has some wet areas.	
24	4112 - Maple, Beech, Cherry Association	High Density Log	114.0	72	111-140	The area around the campground was thinned last entry. the area along the powerline can be thinned now. The southeast finger has a nice patch of hemlock.	
26	6120 - Lowland Cedar	High Density Pole	229.4	123		Wet cedar stand, has a ridge of red maple in it.	

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Sault Ste. Marie Mgt. Unit

5 – Forested Stands

Compartment: 159
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	6120 - Lowland Cedar	High Density Pole	124.2	130		Nicer cedar stand, pretty open understory in places.
31	4130 - Aspen	High Density Sapling	427.8	30		Could cut a portion of stand to add age class distribution to the aspen in the area.
44	6124 - Lowland Spruce- Fir	Low Density Sapling	10.2	149		
45	4112 - Maple, Beech, Cherry Association	High Density Sapling	12.1	26		Red maple is out competing everything.
46	4134 - Aspen, Spruce/Fir	High Density Sapling	39.4	36		Nice aspen stand, almost a pole stand.
47	4112 - Maple, Beech, Cherry Association	High Density Log	112.1	87	81-110	This stand was thinned in 2001. Look at thinning in the next entry.
50	4130 - Aspen	High Density Sapling	34.8	32		Really nice aspen, very little conifer component.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	622 - Lowland Shrub	76.7	N/A	Unspecified	
7	623 - Emergent Wetland	32.0	N/A	Unspecified	
11	623 - Emergent Wetland	13.4	N/A	Unspecified	
14	50 - Water	38.7	N/A	Unspecified	
15	310 - Herbaceous Openland	22.8	N/A	Unspecified	
17	310 - Herbaceous Openland	3.1	N/A	Unspecified	
18	310 - Herbaceous Openland	2.7	N/A	Unspecified	
22	310 - Herbaceous Openland	4.8	N/A	Unspecified	
25	623 - Emergent Wetland	2.7	N/A	Unspecified	
28	310 - Herbaceous Openland	5.9	N/A	Unspecified	
29	622 - Lowland Shrub	5.3	N/A	Unspecified	
30	623 - Emergent Wetland	3.0	N/A	Unspecified	
32	622 - Lowland Shrub	3.4	N/A	Unspecified	
33	320 - Upland Shrub	94.4	N/A	Unspecified	
34	623 - Emergent Wetland	2.4	N/A	Unspecified	
35	622 - Lowland Shrub	16.1	N/A	Unspecified	
36	623 - Emergent Wetland	5.4	N/A	Unspecified	
37	623 - Emergent Wetland	2.1	N/A	Unspecified	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
38	320 - Upland Shrub	6.8	N/A	Unspecified	
39	320 - Upland Shrub	3.5	N/A	Unspecified	
40	50 - Water	6.8	N/A	Unspecified	
41	623 - Emergent Wetland	1.2	N/A	Unspecified	
42	623 - Emergent Wetland	1.0	N/A	Unspecified	
43	622 - Lowland Shrub	64.0	N/A	Unspecified	
48	623 - Emergent Wetland	6.3	N/A	Unspecified	
49	622 - Lowland Shrub	30.3	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.
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.