



Sault Ste. Marie Forest Management Unit
Compartment Review Presentation
Compartment # 180 **Entry Year: 2012**
Compartment Acreage: 1,773 **County: Mackinac**

Revision Date: 7/14/2010

Stand Examiner: Ryan Mattila

Legal Description: T 44 N R 10 W SECTIONS 5, 6, 7 & 18 (Garfield Township)

Management Goals: This area is located west of M-117 along the Luce county border. Good hardwood – aspen compartment. Many of the stands within the compartment have seen some management activity within the last 10 to 20 years. The hardwoods and pine need regular treatment to maintain health and growth. A few high quality red pine stands have been thinned at least twice. Wildlife Division, in the early 1980’s, constructed many openings with a root rake. Many of these openings are starting to fill in with birch, cherry and blackberries. These openings should be maintained if feasible.

Soil and Topography: The area is mostly level uplands, occasionally rolling. The majority of the compartment consists of Adams sandy loam, Wallace sand and Wallace-Alcona complex. Minor associates are Springlake loamy coarse sand and Paquin sand.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment has three blocks of private in-holdings within its’ boundaries. Luce County borders the north with state and private lands. To the west is mainly state lands with some private in-holdings. The south is private land along the Sandtown Road and state land bordering the compartment in section 8. East of M-117 is a tier of private lands before it becomes state land again.

Unique, Natural Features: McAlpine Creek and Skunk Creek run through the compartment.

Archeological, Historical, and Cultural Features: Maple sap collection area.

Special Management Designations or Considerations: The ORV trail winds through many stands to be treated. ORV trails must be signed and kept clean while logging operations are ongoing. Winter access may be restricted due to the presence of the snowmobile trail. Buffers must be maintained when logging along McAlpine Creek and Skunk Creek.

Watershed and Fisheries Considerations: This compartment contains the upper reaches of McAlpine Creek. McAlpine Creek is a high-quality, groundwater fed stream. Previous fisheries surveys have captured brook trout, brook stickleback, central mudminnow, creek chub, fathead minnow, Iowa darter, Northern redbelly dace, and mottled sculpins. Implementation of BMP’s will aid in preventing sediment input from upland areas are critically important to protect spawning areas for trout and other stream-resident fishes. Buffering the river is also critical to ensure future inputs of woody material to the stream channel, discourage aspen regeneration close to the stream channel, and provide shading to protect water temperature from warming to a degree that will inhibit trout survival.

Wildlife Habitat Considerations: Compartment 180 lies just south of the Mackinac/Luce county line west of M-117. Northern hardwoods are dominant. Aspen, red pine plantations, and mixed stands comprise most remaining cover. McAlpine Creek flows across the north part of the compartment while Skunk Creek flows across the southern end. The McAlpine Pond site is located along McAlpine Creek, but water is no longer being impounded at the pond. The stream has re-established, and the former pond bottom now supports a variety of sedges and other herbaceous vegetation characteristic of a wet meadow. Wildlife objectives include providing age class, structural, and species diversity in northern hardwoods; maintaining wetland habitats; and providing early successional habitat. Cherry, conifers, and 3-5 beech per acre as well as some large wolfy trees will be left where present to maintain diversity. Streams and any vernal wetlands will be buffered. Wildlife species utilizing this habitat include wolf, white-tailed deer, black bear, red-shouldered hawk, and vireos and other migratory songbirds.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel and clay and silt. There is insufficient data to determine the Glacial Drift thickness. The Silurian Burnt Bluff Group and Cabothead Shale subcrop below the Glacial Drift. The Burnt Bluff is quarried for stone/limestone thirteen miles to the east (Hendricks quarry). The nearest gravel pit is located in Section 18. There appears to be gravel potential in the compartment. There is no economic oil and gas production in the UP.

An old sandpit is located along M-117 (stand 406). A new sandpit, located to the south of stand 7, will be used for a county road project nearby.

Vehicle Access: Access to and through this compartment is very good. M-117, a class A road, borders the east. Two county roads border the north and west. Luce County maintains County Road 468 along the north, while Mackinac County maintains the Hayes Road. Several trail roads provide access to most every stand needed.

Survey Needs: Corners are pretty well represented around the private in-holdings in the compartment. No trespasses observed.

Recreational Facilities and Opportunities: An ORV trailhead parking lot is located along Hayes Road, approximately ½ mile north of Sandtown Road. The ORV trail winds throughout many stands within the compartment. Good deer, rabbit, grouse and duck hunting, fishing, and wildlife viewing opportunities.

Fire Protection: Low fire area.

Additional Compartment Information: Grassy openings need maintenance or will be lost.

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

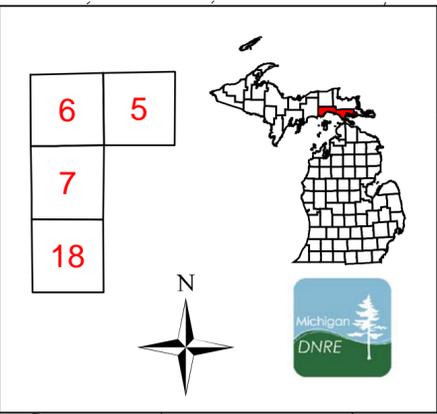
- ◆ **Total Acres by Cover Type and Age Class**
- ◆ **Proposed Treatment Summary**
- ◆ **Proposed Treatments – No Limiting Factors**
- ◆ **Proposed Treatments – With Limiting Factors**
- ◆ **Stand Details (Forested and Nonforested)**
- ◆ **Dedicated and Proposed Special Conservation Areas**

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

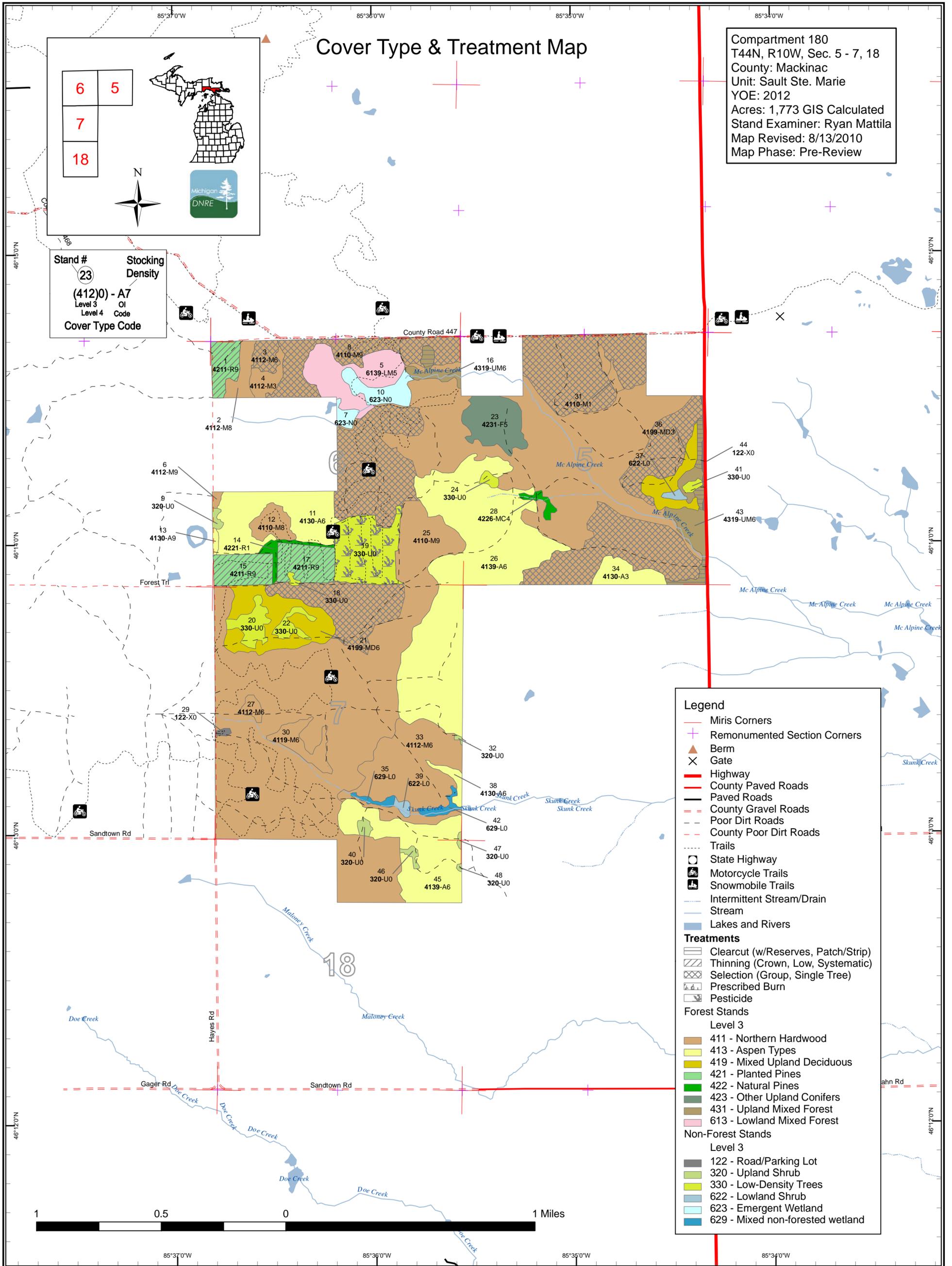
- ◆ **Base feature information, stand boundaries, cover types, and numbers**
- ◆ **Proposed treatments**
- ◆ **Details on the road access system**

Cover Type & Treatment Map

Compartment 180
 T44N, R10W, Sec. 5 - 7, 18
 County: Mackinac
 Unit: Sault Ste. Marie
 YOY: 2012
 Acres: 1,773 GIS Calculated
 Stand Examiner: Ryan Mattila
 Map Revised: 8/13/2010
 Map Phase: Pre-Review



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



Legend

- Miris Corners
- Remonumented Section Corners
- Berm
- Gate
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trails
- State Highway
- Motorcycle Trails
- Snowmobile Trails
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Prescribed Burn
- Pesticide

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 613 - Lowland Mixed Forest

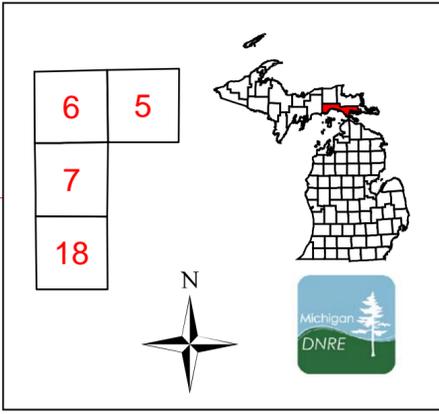
Non-Forest Stands

Level 3

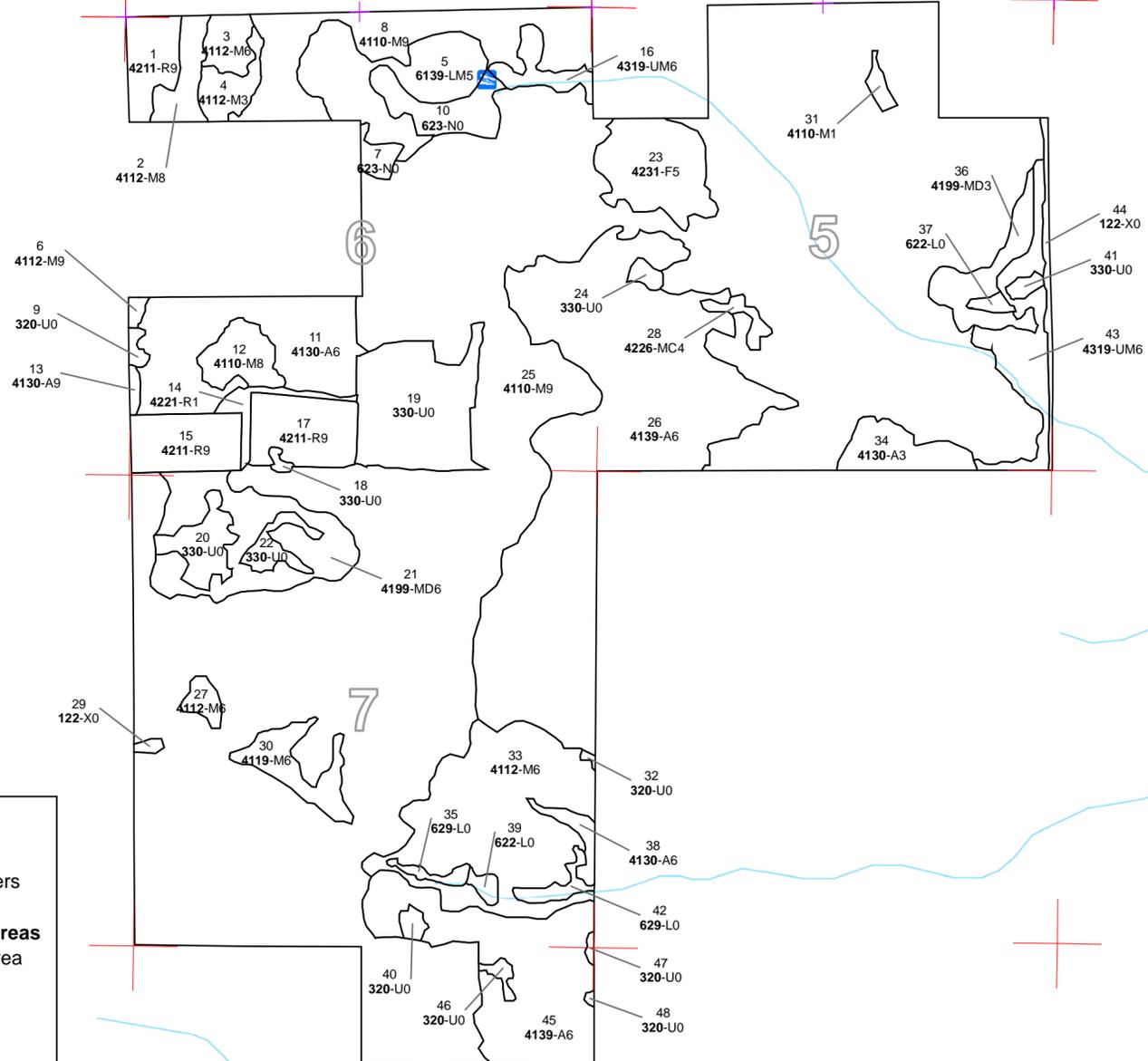
- 122 - Road/Parking Lot
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

Dedicated & Proposed Special Conservation Area Map

Compartment 180
 T44N, R10W, Sec. 5 - 7, 18
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2012
 Acres: 1,773 GIS Calculated
 Stand Examiner: Ryan Mattila
 Map Revised: 8/13/2010
 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
 - Proposed Special Conservation Areas**
 - ▨ SCA - Special Conservation Area
 - ▩ SCA Removal
 - Cold Water Streams**
 - Cold Water Streams
 - ▭ Boat Access Sites
 - Forest Stands**
 - Level 3**
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 431 - Upland Mixed Forest
 - 613 - Lowland Mixed Forest
 - Non-Forest Stands**
 - Level 3**
 - 122 - Road/Parking Lot
 - 320 - Upland Shrub
 - 330 - Low-Density Trees
 - 622 - Lowland Shrub
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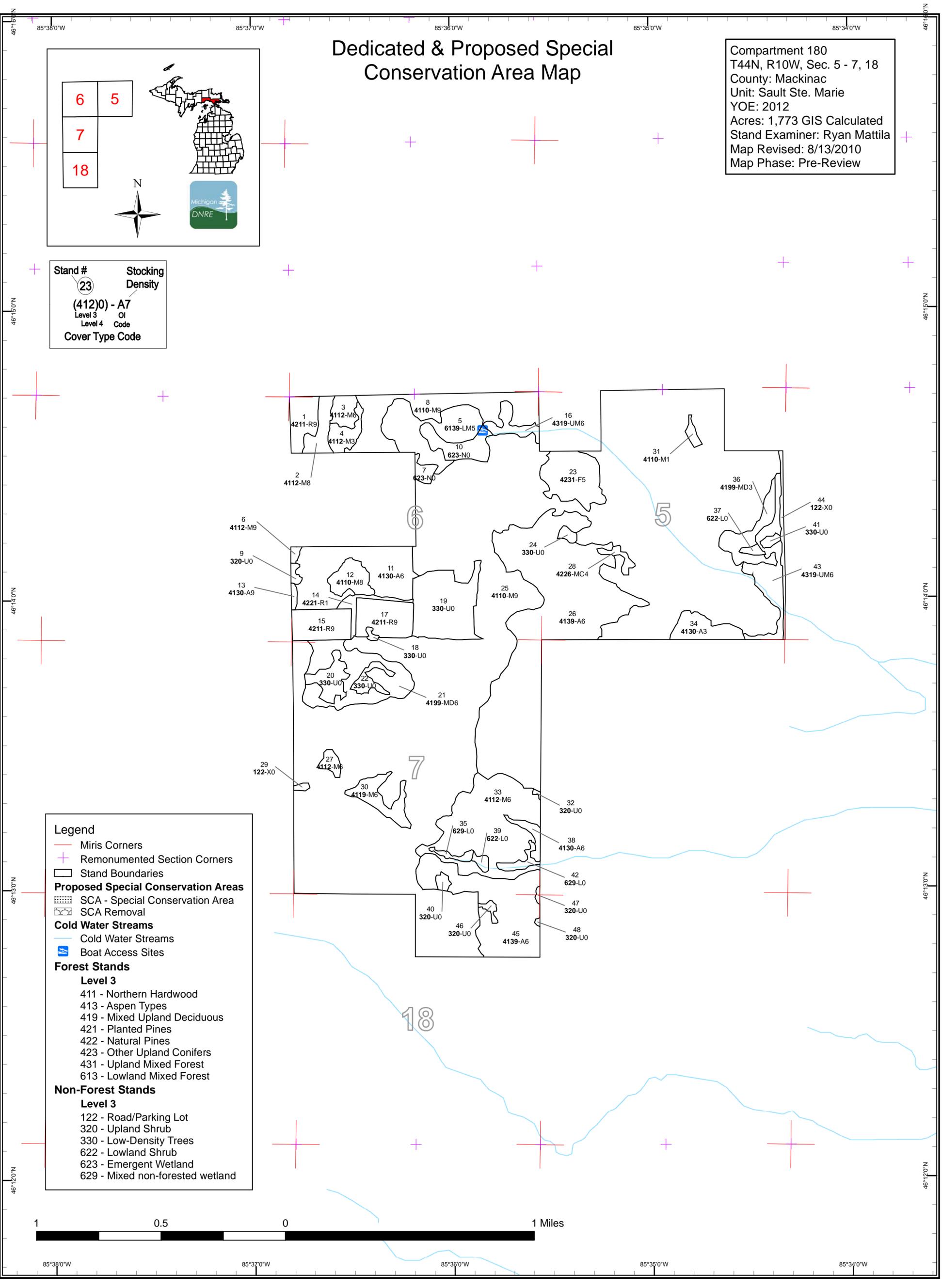
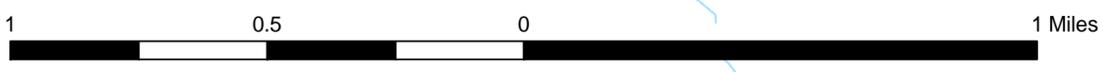


Table 1 – Total Acres by Cover Type and Age Class

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	0	14	306	0	0	4	1	0	0	0	0	0	0	0	326
Low-Density Trees	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
Lowland Mixed Forest	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	37
Lowland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Marsh	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Mixed Upland Deciduous	0	0	16	0	39	0	0	0	0	0	0	0	0	0	0	55
Natural Mixed Pines	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Northern Hardwood	0	2	0	17	9	0	77	0	8	0	1018	0	0	0	0	1131
Red Pine	0	0	5	0	0	0	53	0	0	0	0	0	0	0	0	58
Upland Mixed Forest	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	31
Upland Shrub	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Upland Spruce/Fir	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	28
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	105	2	35	324	51	65	166	1	8	0	1018	0	0	0	0	1773



Sault Ste. Marie Mgt. Unit
Year of Entry 2012

Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Compartment 180
Total Compartment Acres: 1773

Acres by Treatment Type

Commercial Harvest - 430	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 1	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 42	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Northern Hardwood	0	367	0	0	0	0	367
Red Pine	0	0	0	0	53	0	53
Upland Mixed Forest	10	0	0	0	0	0	10
Total	10	367	0	0	53	0	430



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	45180001-Cut	13.4	42110 - Planted Red Pine	High Density Log	55	Harvest	Crown Thinning	Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> harvest to remove larger poles and release potential poles, target ba 120-140 sq ft <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u></p>									
3	45180003-Cut	7.5	4112 - Maple, Beech, Cherry Association	High Density Pole	70	Harvest	Group Selection	Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Harvest, thin to release quality stems, create larger openings in areas with poor quality hardwoods and balsam fir or aspen to encourage regeneration target ave ba 70-80 <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, cedar, yellow and paper birch, basswood, balsam fir, white spruce, black spruce, hemlock, red pine, and white pine.</p>									
8	45180008-Cut	45.9	4110 - Sugar Maple Association	High Density Log	95	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription</u> Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some ironwood if present and all juneberry and conifer should be left. Some larger canopy gaps may be desirable to release the advanced regeneration and hemlock were 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, cedar, yellow and paper birch, basswood, balsam fir, white spruce, black spruce, hemlock, red pine, and white pine.</p>									
15	45180015-Cut	18.6	42110 - Planted Red Pine	High Density Log	55	Harvest	Crown Thinning	Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> harvest to remove poles and release potential poles, target ba 120-140 sq ft <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u></p>									
16	45180016-Cut	2.4	4319 - Mixed Upland Forest	High Density Pole	53	Harvest	Clearcut with Reserves	Mixed Upland Forest	Cmpt. Review Proposal
<p><u>Prescription</u> clearcut to regenerate, leave retention along south edge to buffer creek <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, cedar, yellow and paper birch, basswood, balsam fir, white spruce, black spruce, hemlock, red pine, and white pine.</p>									
17	45180017-Cut	21.1	42110 - Planted Red Pine	High Density Log	55	Harvest	Crown Thinning	Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription</u> harvest to remove larger poles and release potential poles, target ba 120-140 sq ft <u>Specs:</u> <u>Other Comments:</u> <u>Next Steps:</u></p>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
25	45180025-Cut	313.5	4110 - Sugar Maple Association	High Density Log	95	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
<p><u>Prescription:</u> Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some ironwood if present and all juneberry and conifer should be left. Some larger canopy gaps may be desirable to release the advanced regeneration and hemlock were present.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, basswood, balsam fir, white spruce, black spruce, hemlock, red pine, and white pine.</p>									
43	45180043-Cut	7.4	4319 - Mixed Upland Forest	High Density Pole	52	Harvest	Clearcut	Mixed Upland Forest	Cmpt. Review Proposal
<p><u>Prescription:</u> clearcut to regenerate leave buffer along creek no other retention is needed</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, basswood, balsam fir, white spruce, black spruce, hemlock, red pine, and white pine.</p>									
13	45180013-Burn	1.4	4130 - Aspen	High Density Log	62	Prescribed Burn	Mowing	Mixed N. Hardwood - Aspen	Cmpt. Review Proposal
<p><u>Prescription:</u> area designated for maple sap collection prescribe burn to stimulate morel mushroom growth</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p>									
19	NF_45180019-Spray	41.7	Non-Forested		0	Pesticide	Other - Specify in Comments	Planted Red Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Release planted red pine with proper herbicide and method as determined by the TMS. The site was burned 6/4/2008 and planted the next spring The stand is under FTP # 44-540 Pellet Pine</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u> Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.</p>									

**Total Treatment
Acreage Proposed: 472.7**



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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
Acres Proposed: 0

S t a n d	Sault Ste. Marie Mgt. Unit		5 – Forested Stands			Compartment: 180	
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012	
							General Comments:
1	42110 - Planted Red Pine	High Density Log	13.4	55	200+		
2	4112 - Maple, Beech, Cherry Association	Medium Density Log	10.0	97	51-80		
3	4112 - Maple, Beech, Cherry Association	High Density Pole	7.5	70	111-140	Harvest, thin to release quality stems, create larger openings in areas with poor quality hardwoods and balsam fir or aspen to encourage regeneration	
4	4112 - Maple, Beech, Cherry Association	High Density Sapling	8.5	30	1-50		
5	6139 - Mixed Lowland Forest	Medium Density Pole	36.9	40			
6	4112 - Maple, Beech, Cherry Association	High Density Log	1.4	95	111-140		
8	4110 - Sugar Maple Association	High Density Log	48.6	95	81-110	stand has areas of good regeneration	
11	4130 - Aspen	High Density Pole	52.9	24			
12	4110 - Sugar Maple Association	Medium Density Log	11.7	95	51-80		
13	4130 - Aspen	High Density Log	1.4	62			
14	42210 - Natural Red Pine	Low Density Sapling	5.2	13			
15	42110 - Planted Red Pine	High Density Log	18.6	55	200+		
16	4319 - Mixed Upland Forest	High Density Pole	8.1	53			
17	42110 - Planted Red Pine	High Density Log	21.1	55	171-200		
21	4199 - Other Mixed Upland Deciduous	High Density Pole	38.7	33			
23	42310 - Planted Spruce	Medium Density Pole	27.8	46			
25	4110 - Sugar Maple Association	High Density Log	946.0	95	81-110		
26	4139 - Aspen, Mixed Deciduous	High Density Pole	190.5	23			

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Sault Ste. Marie Mgt. Unit

5 – Forested Stands
Data updated before 2:00 PMCompartment: 180
Year of Entry: 2012

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	4112 - Maple, Beech, Cherry Association	High Density Pole	3.8	27		
28	42260 - Natural Pine, Mixed Deciduous	Low Density Pole	3.4	32		
30	4119 - Mixed Northern Hardwoods	High Density Pole	13.6	27		
31	4110 - Sugar Maple Association	Low Density Sapling	2.3	8		
33	4112 - Maple, Beech, Cherry Association	High Density Pole	77.2	56	51-80	
34	4130 - Aspen	High Density Sapling	14.1	18		
36	4199 - Other Mixed Upland Deciduous	High Density Sapling	15.9	16		
38	4130 - Aspen	High Density Pole	4.3	58		
43	4319 - Mixed Upland Forest	High Density Pole	23.0	52		
45	4139 - Aspen, Mixed Deciduous	High Density Pole	62.8	27		



Stand	Cover Type	Acres	Gen Cmts:
7	623 - Emergent Wetland	3.8	
9	320 - Upland Shrub	1.6	
10	623 - Emergent Wetland	14.0	
18	330 - Low-Density Trees	1.0	
19	330 - Low-Density Trees	41.7	
20	330 - Low-Density Trees	11.2	
22	330 - Low-Density Trees	5.7	
24	330 - Low-Density Trees	2.1	
29	122 - Road/Parking Lot	1.0	
32	320 - Upland Shrub	0.4	
35	629 - Mixed non-forested wetland	2.4	
37	622 - Lowland Shrub	1.8	
39	622 - Lowland Shrub	2.0	
40	320 - Upland Shrub	2.0	
41	330 - Low-Density Trees	1.8	
42	629 - Mixed non-forested wetland	4.0	
44	122 - Road/Parking Lot	5.2	
46	320 - Upland Shrub	1.8	



Stand	Cover Type	Acres	Gen Cmts:
47	320 - Upland Shrub	0.6	
48	320 - Upland Shrub	0.3	



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
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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.

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.