

**Revision Date:** 06/22/2010

Stand Examiner: Jason Caron

Legal Description: T42N R6E Secs. 21, 22, 27, 28, 33, 34 & T41N R6E Sec. 3 Drummond Island

Identified Planning Goals ('Management Area' or 'RMU', if applicable): Drummond Island

**Management Goals:** Generally an upland compartment with young aspen, upland cedar, and areas of shallow soil (alvar like) to the North. The southern and central part of the compartment consists of a sizeable northern hardwood component that has had some management. Most recent management has focused on aspen clearcuts and a larger hardwood thinning just NE of Marl Lake.

**Soil and Topography:** Summerville soils make up the majority of this compartment. The Summerville-Longrie complex underlies the northern hardwood areas in the central part of the compartment. These are generally good soils and produce good quality hardwood. Wind throw can be, and is, a problem. The Summerville-Rock outcrop complex in the northern part of is generally shallow soiled or has exposed bedrock. This area has many large cracks in the rock which can make for dangerous hiking. Most of compartment can be considered gently rolling.

**Ownership Patterns, Development, and Land Use in and Around the Compartment:** With the exception of the east side, virtually all of the rest of the compartment is surrounded by private land. A large resort facility is located on the northwest side of this compartment and private residences are located to the south. Only one 80 acre private parcels is located entirely within this compartment. This area contains a private residence and a hobby farm.

**Unique, Natural Features:** There are many unique features within this compartment but a few top my list as "very unique". A large grassy opening exists in section 27, just NE of the private 80 acres. This grassy opening is quite large and very impressive when standing on the edge of it while the frogs are calling in May. The opening had very little water in it in 2010 but in a wetter season I can imagine it fills up quite nicely. Another feature that was unique was the rocky, alvar like areas in the northern part of the compartment. A couple of these stands contained hardly any soil yet the vegetation found a way to survive. Yet another unique feature included the 3 lakes that were either on the edge or entirely within the compartment. While completing an inventory of the compartment I noticed both loons and geese on the lakes.

**Archeological, Historical, and Cultural Features**: The only significant archeological item I found within the compartment was a small opening amongst the hardwoods that contained a few small pieces of iron. I assume this was once either a homestead or logging camp but I did not find any evidence of a foundation or structure.

Special Management Designations or Considerations: None known.

**Watershed and Fisheries Considerations:** Portions of Marl Lake and Loyal Lake are in this compartment. Where possible, access roads (two-tracks) to lakes on Drummond Island should be created. A landing area could provide parking for carry-in access. The proposed treatments are appropriate for the protection of these resources.

**Wildlife Habitat Considerations:** Compartment 8 is located in the heart of Drummond Island east of the Maxton Cut-Across Road. It contains Nasi Lake on the south, and parts of Marl Lake Loyal Lake. The limestone bedrock common on Drummond Island influences the cover type and species richness, and provides diversity between different parts of the compartment. A number of ecological reference areas are located within the compartment, and relate to the geology. The compartment contains a mix of aspen, white pine, northern hardwoods, and both upland and lowland mixed stands. It provides habitat for species including hawks, waterfowl, white-tailed deer, black bear, neotropical migratory birds, and others. Habitat management over the next 10 years will focus on enhancing age class and structural diversity in northern hardwoods by thinning a northern hardwood stand while retaining others, maintaining lowland conifer habitat, maintaining buffers around lakes, and protecting other features. In thinned hardwoods, oak and yellow birch will be retained as well as most basswood and some large wolfy trees.

**Mineral Resource and Development Concerns and/or Restrictions: :** Surface sediments consist of thin to discontinuous glacial till over bedrock. The glacial drift thickness varies between 10 and 50 feet. The Silurian Engadine and Manistique Groups subcrop below the thin glacial drift. The Engadine is quarried for stone/dolomite five miles to the southwest. The nearest gravel pit is located near the center of Section 3, T41N-R6E. Gravel potential is considered to be good on the uplands. There is no economic oil and gas production in the UP, currently.

**Vehicle Access:** Access within this compartment is suitable for logging and recreational purposes. Roads within the compartment consist of small two tracks that are maintained only during logging operations. Vehicle access from the north (off of Maxton Rd.) is decent with roads heading both east and north east. Vehicle access in the southern end of the compartment is decent with Second Lake road going from east to west through state ownership.

**Survey Needs:** A potential trespass exists in section 3 of T41-R6E. Surveyors have been notified and are going to perform a survey to verify.

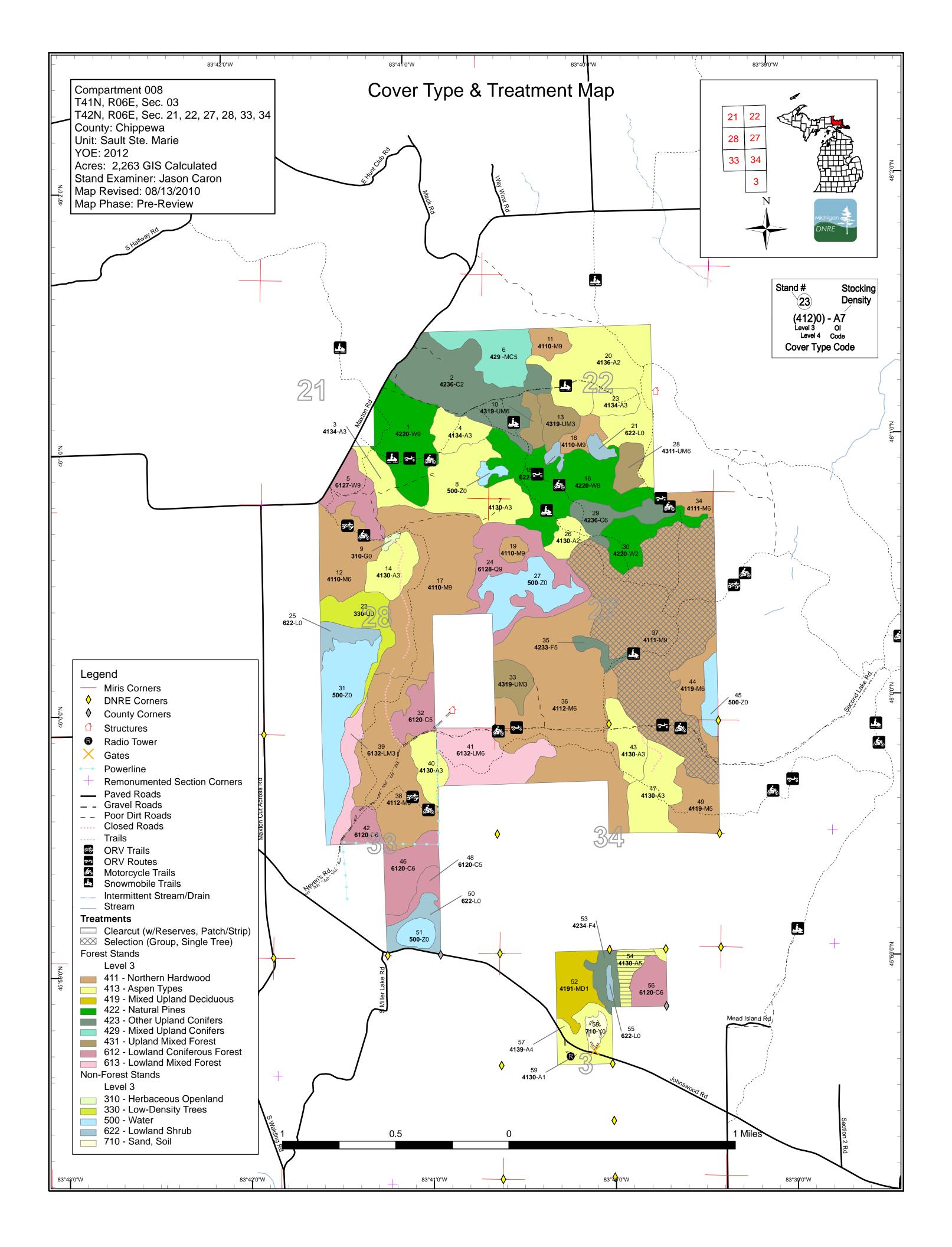
**Recreational Facilities and Opportunities:** A considerable amount of orv and snowmobile trails make their way through this compartment. Other recreational activities include hunting and mushroom picking.

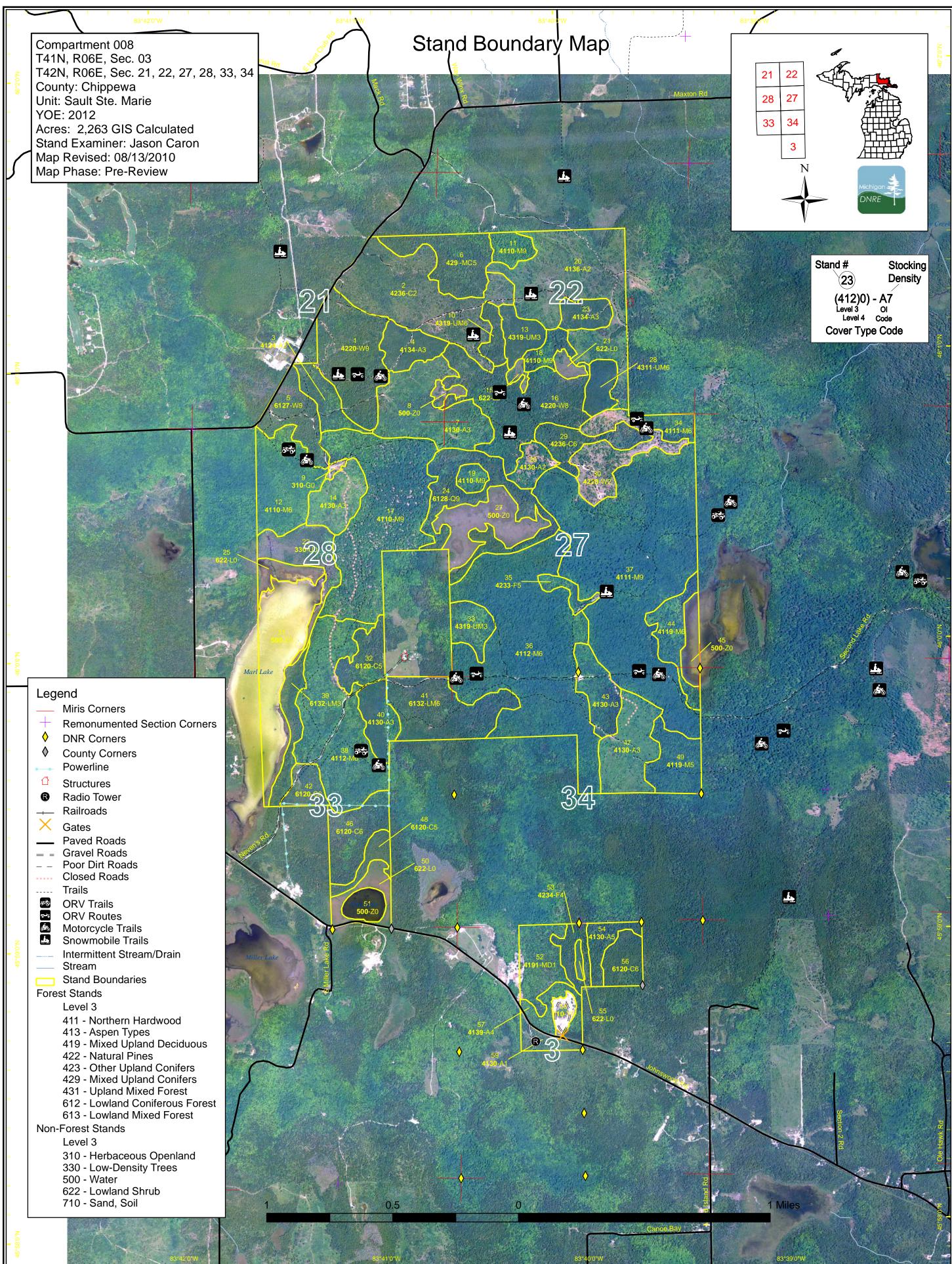
**Fire Protection:** Access is decent within the compartment and with a large composition of hardwood species this compartment does not pose a high risk for a large fire. Fire equipment would need to take caution when driving into certain areas as the roads can consist of either shale type rock or are very muddy and rough.

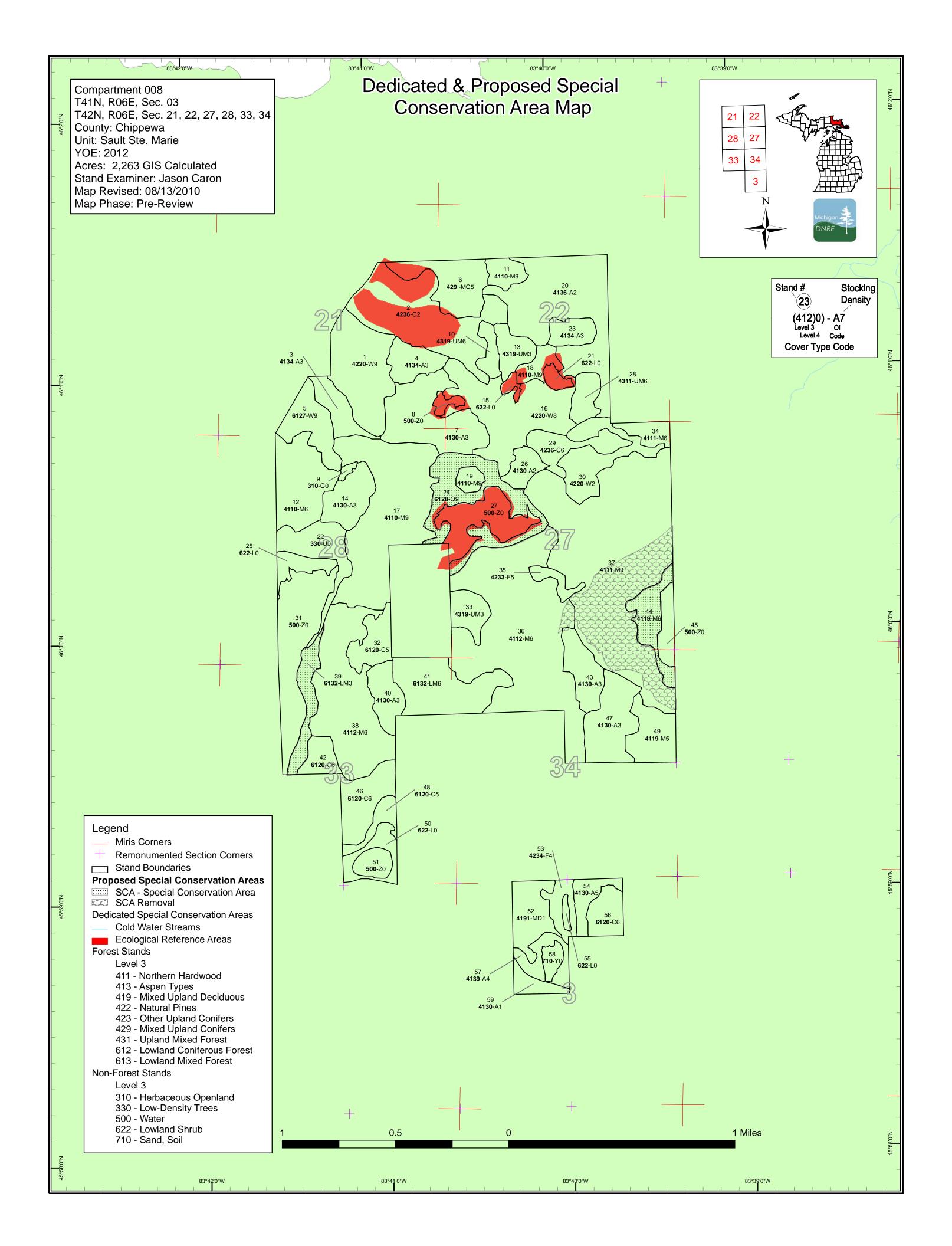
### **Additional Compartment Information:**

- > 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







# Table 1 – Total Acres by Cover Type and Age Class

Sault Ste. Marie Mgt. Unit

Data updated before 2:00 PM

### Compartment 008 Year of Entry 2012



	Age Class																
	1														/		, 5 <sup>30</sup>
Aspen	0	14	256	46	58	0	28	0	0	15	0	0	0	0	0	418	
Cedar	0	0	0	0	0	0	14	102	0	0	91	0	0	0	22	230	
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Low-Density Trees	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	
Lowland Conifers	0	0	0	0	0	0	0	0	32	0	0	0	0	60	0	91	
Lowland Mixed Forest	0	0	0	0	22	0	59	0	0	0	0	0	0	0	0	81	
Lowland Shrub	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	31	
Northern Hardwood	0	0	0	0	0	0	0	57	0	12	780	0	12	0	0	861	
Sand, Soil	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
Upland Conifers	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0	42	
Upland Mixed Forest	0	0	18	0	32	0	0	0	0	0	11	0	0	0	0	61	
Upland Spruce/Fir	0	0	0	0	0	8	0	0	0	0	0	14	0	0	0	23	1
Water	144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144	
White Pine	0	0	0	0	0	0	0	0	0	197	0	0	0	0	0	197	]
Total	229	14	274	46	113	8	101	158	63	223	924	14	12	60	22	2263	

# Table 2 – Proposed Treatment Summaries

NRE	Sault Ste. Marie Mgt. Unit Year of Entry 2012	D	Compartment Total Compartment Acres:			
			Acres by Treatment Type			
	Commercial Harvest - 273	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0	
	Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0		
		3	Cover Type by Harvest M	B. J.		
	Aspen	13	0 0 0 0	0 <b>13</b>		
	Northern	n Hardwood 0	260 0 0 0	0 <b>260</b>		
		Total 13	260 0 0 0	0 273		

S t	Sault Ste. Marie Mgt. Unit Data updated before 2:00 PM					atments Pre .imiting Fac	Compartment: 008 Year of Entry 2012	Michigan	
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
37	45008037-Cut	260.1	4111 - S.Maple, Hard Mast Association	High Density Log	90	Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal

Prescription Thin to 70-80 sq. ft. Do not mark oak or yellow birch. Only mark basswood if necessary. Create regeneration gaps where timber possible. Specs:

# <u>Other</u> Comments:

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

**Total Treatment** 

260.1 Acreage Proposed:

S t			Marie Mgt. Unit ed before 2:00 Pl			ents Prescrib ng Factor	ed with	Compartment: 008 Year of Entry 2012	
a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
54	45008054-Cut	13.3	4130 - Aspen	Medium Density Pole	88	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir	Cmpt. Review Proposal
<u>Spec</u> Othe	<u>S:</u>	with rese	erves. Do not cut cec	lar, oak, hemlock, y	ellow birc	h if they exist with	nin the sale.		
<u>Next</u> Steps			ent with a regeneration im fir, white spruce,			ructions. Accepta	able regeneration is a	ispen, maple, cherry, ceo	dar, yellow and
-	ing Factor and No ment Reason	– Sta	4D: Low volume (small acreage) Stand would be hard to access from State land due to small wetland and road work needed from the state gravel pit to the sale. If by chance landowner to the South would cut this create an opportunity to cut. Landowner only has a small trail back to state						
	Total Treatmen	t							

Total Treatment Acreage Proposed: 13.3

S t	Sault Ste. Mari	Sault Ste. Marie Mgt. Unit		• • •	orested Sta	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42200 - Natural White Pine	High Density Log	68.6	84		Stand of good quality white pine with other species mixed in. Ground is rocky. Aspen is poor quality, balsam understory is thick.
2	42360 - Upland Cedar	Medium Density	101.6	63		Stand is growing on next to no soil, alvar like. Multiple ages. Juniper is thick in some areas. Overall size class of stand is sapling due to the shallow soil and harsh growing conditions here.
3	4134 - Aspen, Spruce/Fir	High Density Sapling	20.0	20		Nice stand of aspen regeneration.
4	4134 - Aspen, Spruce/Fir	High Density Sapling	21.4	34		Stand of aspen and balsam regeneration. Timber is smaller diameter due to shallow soils. Regeneration is thick especially the balsam.
5	6127 - Lowland Pine	High Density Log	31.8	79		Natural white pine with cedar underneath. Balsam is thick in understory. White pine is nice quality. Cedar is poor quality. Aspen is poor quality.
6	429 - Mixed Upland Conifers	Medium Density Pole	41.8	98		Stand of poor quality cedar and aspen. A thick understory of balsam exists. Aspen is poor quality, ground is rocky. Do not cut
7	4130 - Aspen	High Density Sapling	66.8	12		Nice stand of young aspen with a mix of other species. Regeneration has come back nicely.
10	4319 - Mixed Upland Forest	High Density Pole	10.6	94		Stand is very rocky in some areas. Poor quality stand. Clumps of cedar exist here and there. Do not manage, keep for age diversity.
11	4110 - Sugar Maple Association	High Density Log	12.4	90	1-50	Stand of hardwood highgraded many moons ago. Understory is thick with ironwood. basal area is low. Stand is very poor quality.
12	4110 - Sugar Maple Association	High Density Pole	54.5	90	51-80	Stand of decent hardwood. Basal area is low. Stand was cut hard awhile back, some nice hard maple poles and future logs within stand.
13	4319 - Mixed Upland Forest	High Density Sapling	17.3	34		Decent stand of aspen regeneration. The stand is small diameter for it's age, probably due to shallow soil. OI says stand was cut for wildlife in 1976.
14	4130 - Aspen	High Density Sapling	28.2	12		Stand of nice aspen regeneration. Stand was cut in 1998.
16	42200 - Natural White Pine	Medium Density Log	86.5	89		Stand was cut but no white pine or cedar was cut. Stand has turned into a white pine stand with an understory of aspen.
17	4110 - Sugar Maple Association	High Density Log	132.5	90	51-80	Stand was thinned in 2005. Check sale records, stand looks good, Hardwood is decent for drummond, Remaining beech in stand looks healthy. Southernmost end of stand has some top dieback on the sugar maple and beech?

S t	Sault Ste. Marie Mgt. Unit			<b>5 – For</b> Data update	rested Sta		Compartment: 008 Year of Entry: 2012		
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	DARE 1	
18	4110 - Sugar Maple Association	High Density Log	11.8	110	51-80	drummond hardwood appears to have been br	2006. Stand quality is ok Aspen regeneration along owsed by a moose a lot o oken off 2-3' up	north edge	
19	4110 - Sugar Maple Association	High Density Log	7.4	90	51-80		d is poor quality but unique anage. Ground is very roc		
20	4136 - Aspen, Mixed Conifer	Medium Density	116.3	15		Stand is coming bac	k to a mix of aspen and sp	ruce/fir.	
23	4134 - Aspen, Spruce/Fir	High Density Sapling	15.0	34			oks 10 yrs. old, very poor c Small diameter.	ual. for it's	
24	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	59.7	143			ge wetland. Mostly cedar w e white pine and white spru		
26	4130 - Aspen	Medium Density	13.7	4		Stand clearcut in 2006	Aspen regeneration is co nicely.	ming back	
28	4311 - Pine, Aspen Mix	High Density Pole	14.9	34			pruce,fir Stand is healthy and is rocky in some areas		
29	42360 - Upland Cedar	High Density Pole	24.7	95			left out of the surrounding for a good corridor.	clearcut	
30	42200 - Natural White Pine	Medium Density	41.4	89		heavy overstory of whit underneath the mature w	white pine was cut which r te pine Aspen has regene hite pine. I am calling this to the current overstory.	erated well	
32	6120 - Lowland Cedar	Medium Density Pole	22.4	Uneven Age		pockets of regeneration is very poor, cedar is a	over along time ago. What with pockets of decadent v ilso. Do not manage, let st ound is very wet.	/ood. Aspen	
33	4319 - Mixed Upland Forest	High Density Sapling	17.9	15		diameter. OI sheet says	of conifer and maple. Timl stand was cut in 1995, har nd Timber looks like it is thin soil	d to believe	
34	4111 - S.Maple, Hard Mast Association	High Density Pole	12.2	80	51-80		od. Stand is poor quality wi white pine mixed in.	th cedar and	
35	42330 - Upland Fir	Medium Density Pole	8.2	40		opening. I found a few pi	nomestead area, balsam is eces of metal which make an old homestead.		
36	4112 - Maple, Beech, Cherry Association	High Density Pole	206.0	90	1-50	were highgraded many	and maple combined. Par yrs. ago. Overall BA. is lov t least another 10 years.		

S t	Sault Ste. Marie Mgt. Unit				orested Sta	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	4111 - S.Maple, Hard Mast Association	High Density Log	260.1	90	81-110	Stand contains a decent stocking of sugar maple and beech with a few yellow birch and red oak here and there. Timber is quite large in some areas. Basal area is high enough to support a thinning.
38	4112 - Maple, Beech, Cherry Association	High Density Pole	107.4	90	1-50	Stand of poorer quality hardwood. Basal area is low. More beech within stand than hard maple.
39	6132 - Mixed Lowland Forest with Cedar	High Density Sapling	22.1	38		Stand was picked over along time ago, what remains are pockets of smaller timber amongst pockets of older. Ground is low. This stand makes for a good buffer along the lake. Saw 2 loons and 2 geese!
40	4130 - Aspen	High Density Sapling	22.0	36		Stand of very thick aspen and balsam regeneration. Stand is healthy and looks good. A small patch of hardwood exists on the SE corner of stand, it was too small to make it's own stand.
41	6132 - Mixed Lowland Forest with Cedar	High Density Pole	59.1	58		Stand is a mix of younger balsam/spruce and pole sized cedar mixed w/ large aspen here and there. Stand contains a few low pockets that look to hold water in the spring.
42	6120 - Lowland Cedar	High Density Pole	14.3	50		Stand has some very nice cedar regeneration within it. Most of it is still sapling size. Some larger white spruce and tamarack within the canopy as well.
43	4130 - Aspen	High Density Sapling	26.5	25		Decent stand with a mix of young aspen and scattered pole sized maple.
44	4119 - Mixed Northern Hardwoods	High Density Pole	25.8	60		Stand of young hardwood makes for a good buffer along lake. Do not manage. Some aspen clumps cut from stand along time ago. Check OI for age.
46	6120 - Lowland Cedar	High Density Pole	35.3	95		Mixed stand of cedar, spruce, balsam. Some large junky aspen scattered throughout. Balsam understory gets extremely thick on the West side of stand.
47	4130 - Aspen	High Density Sapling	45.1	14		Cut in 1996. Regeneration is coming back fairly well
48	6120 - Lowland Cedar	Medium Density Pole	11.7	95		Gnarly swamp with alot of blowdown. Cedar are in very poor condition. Tops are thin and water table is very very high.
49	4119 - Mixed Northern Hardwoods	Medium Density Pole	30.8	60	1-50	Very poor quality stand. Paper birch has mostly fallen out of stand. What remains is low quality aspen w/ some smaller diameter sugar maple w/in the understory.
52	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	31.2	72		Stand is growing on flat rock and is very poor quality. Trees are Suppressed and stunted. Hard stand to type out. West side may have a potential trespass, Papins sawmill.

S t	Sault Ste. Marie Mgt. Unit			• • •	orested Star		Compartment: 008 Year of Entry: 2012	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range		General Comments:	
53	42340 - Upland Spruce/Fir	Low Density Pole	14.4	106		shape, what remairs is Ground is rocky and slo	Aspen and spruce are in ve balsam and spruce in the u pes towards the wetland. S od buffer along wetland.	understory.
54	4130 - Aspen	Medium Density Pole	14.7	88		•	n some cedar clumps and th ery poor quality, if prescribe an issue	
56	6120 - Lowland Cedar	High Density Pole	19.7	96			nixed with tamarack and bla mber is ok quality.	ack spruce.
57	4139 - Aspen, Mixed Deciduous	Low Density Pole	17.0	50		poor quality aspen ar	ounding the gravel pit. Stand Id sugar maple. A thick und t. Shallow soil. Poor quality cut.	erstory of
59	4130 - Aspen	Low Density Sapling	10.8	53		, , ,	ty stand. Soil is shallow. A v am, cedar, and white spruc	

Sault Ste. Marie Mgt. Unit

# 6 – Nonforested Stands

Compartment: 008 Year of Entry: 2012



Stand	Cover Type	Acres	Gen Cmts:
8	50 - Water	4.7	
9	310 - Herbaceous Openland	2.1	
15	622 - Lowland Shrub	3.9	
21	622 - Lowland Shrub	5.6	
22	3302 - Low Density Conifer Trees	33.7	Stand swapped from Forested to Non-Forested.
25	622 - Lowland Shrub	13.5	
27	50 - Water	41.9	
31	50 - Water	71.8	
45	50 - Water	14.0	
50	622 - Lowland Shrub	15.9	
51	50 - Water	11.9	
55	622 - Lowland Shrub	2.7	
58	710 - Sand, Soil	7.4	



### 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 initiatlves (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
multiple - see	SCA Removal	45008_SCA_removal	103.1	Stand was potential old growth but does not meet criteria. I would like to selectively harvest stand to promote better quality and regeneration.
24	Unique Site - SCA	45008024	59.7	Stand that surrounds a wetland/grassland. Do not manage and keep for riparian area.
39	Unique Site - SCA	45008039	22.1	Riparian area along Marl Lake. Do not manage.
44	Unique Site - SCA	45008044	25.8	Riparian area along Loyals Lake. Do not manage.



### **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.

Conservati Area	on Type	Data updated before 2:00 PM Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area	
ERA	Ecological Reference Areas	identified as Element Occurrences (EOs) by the Michigan N context of their natural community classification system. Ele (Excellent) or B (Good) and a Global (G) or State (S) element threatened (2), or rare (3) serve as an initial base of ERAs. the State. The system is comprised of individual or associat managed for restoration and maintenance of natural ecologi	gical Reference Areas (ERAs) are high quality examples of natural communities that have been ied as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the ct of their natural community classification system. Element Occurrences with viability ranks of A lent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), ened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in ate. The system is comprised of individual or associations of natural community types that are ged for restoration and maintenance of natural ecological processes and values. The public may t recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.	
SCA	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous animals, several of which are endemic or largely restricted t isolation, islands provide good examples of many Great Lak ecosystems, and thus have potential to provide insights for disturbance on the increasingly fragmented ecosystems of t	o the Great Lakes region. Due to their es-associated natural communities and understanding the consequences of human	