



Sault Ste Marie Forest Management Unit
Compartment Review Presentation
Compartment #198 Entry Year: 2013
Compartment Acreage: 1,651 County: Mackinac

Revision Date: 7/12/2013

Stand Examiner: Katie Armstrong and Cory Luoto

Legal Description: T41N R11W Sections 5 and 6, T42N R11W Sections 31 and 32; Newton Township

RMU (if applicable): Battydoe Deer Yard

Management Goals: The primary management goal for this compartment will be to maintain healthy, productive forest stands while providing habitat for a variety of wildlife. This compartment is at the east end of high use winter deer yard, the proposed Batty Doe Deer Yard Management Area. Large continuous cedar stands will remain intact to provide thermal cover during winter. Timber harvests have been prescribed for winter months so that tops will provide a food source for deer. Aspen and birch stands will be managed to promote age class diversity to benefit a variety of wildlife species. The northern hardwood stands within this compartment have a high component of beech and beech bark disease is present. Management of these stands will attempt to retain a component of healthy beech while ensuring that other species are able to regenerate despite the dense beech brush that will develop after any cutting. The southern portions of prescribed stands in the northern hardwoods are currently mapped within the Wooded Dune and Swale ERA Layer. This layer should be reviewed and adjusted to more accurately fit the on the ground occurrence.

Soil and Topography: The predominant soils in this compartment are: Guardlake fine sandy loam, Kalkaska sand, Paquin sand, Markey and Carbondale mucks, and Leafriver-Croswell-Wainola complex. Other soils present include: Amadon-Rock outcrop complex, Angelica muck, Battydoe fine sandy loam, Bowers silt loam, Eastport sand, Eastport-Leafriver complex, Heinz sandy loam, Histols and Aquents, ponded, Iosco sand, Leafriver mucky peat, Mattix sandy loam, Paquin-Finch sands, Pickford silty clay loam, Solona loam, Spot-Finch complex, Springlake loamy coarse sand, and Superior fine sandy loam. The topography of the compartment is relatively level ground including both low-lying wet ground and slightly higher dry ground. The southern part of Section 6 contains some steep, narrow ridges running east-west that are part of the Wooded Dune and Swale complex.

Ownership Patterns, Development, and Land Use in and Around the Compartment: There is a block of private land along Leveille Road. The Forestland Group owns much of the property north of this compartment and it is enrolled in the Commercial Forest program. The State of Michigan owns the land to the east, west and south.

Unique, Natural Features: The Wooded Dune and Swale complex extends from the Lake Michigan shoreline into the southern part of this compartment. The ERA layer should be reviewed for accuracy adjustment. An intermittent stream runs through the compartment along the north edge of section 32. This stream shows evidence of underground flow and may contain karst features. This compartment contains a known occurrence of a state threatened animal species. There are also rare species animal records adjacent to this compartment.

Archeological, Historical, and Cultural Features: The Newton Township Cemetery (approximately 12 acres) is located along Leveille Road in Section 32.

Special Management Designations or Considerations: Since this compartment is entirely within the Batty Doe Lake Deeryard, cedar stands will not be managed in order to maintain the thermal cover. Hardwood stands in this compartment contain a high component of beech and beech bark disease is present. Management should be directed toward maintaining a component of healthy beech, if possible, while attempting to ensure that beech brush does not outcompete other hardwood regeneration.

Watershed and Fisheries Considerations: Fisheries Values

Good. Hudson Creek is classified as SQCW. Similar to Patterson Creek, it probably supports seasonal runs of spawning fish, as well as native brook trout. This is a small stream with a small watershed, and protection from active erosion is a critical factor. New erosion in this area, with its relatively minor spring flooding, may take hundreds of years to make its way to Lake Michigan, inundating and destroying critical habitat during its trip.

Wildlife Habitat Considerations: Compartment 198 is located south of Gould City in the St. Ignace subsection of the Niagaran Escarpment and Lake Plain. Northern hardwoods dominate much of the eastern side. The southwest is primarily consists of cedar and other lowland conifers, while the northwest transitions through aspen and mixed upland deciduous between the northern hardwoods further east and cedar swamp to the northwest. The area is used heavily by wintering white-tailed deer. Lowland conifers provide important cover from winter conditions. Northern hardwoods provide habitat for red-shouldered hawks and other birds. Beech bark disease is prevalent within hardwood stands, causing most beech to die out. Hudson Creek flows through the southwest, and Bruders Lake is located in the southeast.

Wildlife objectives will focus on protecting lowland conifer areas that provide suitable cover for wintering white-tailed deer, maintaining diversity in northern hardwood stands, protecting riparian habitats, and maintaining age class diversity in aspen stands. Timber harvests will occur during the winter months to provide an additional source of browse to deer during the critical winter months. Raptor nests will be buffered appropriately. Snags and coarse woody debris will be retained to provide habitat for cavity nesters and amphibians. A component of beech will be left in hardwood stands, including any healthy trees found. Deer, black bear, coyote, hawks and other birds are a few of the species that will benefit from this management.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine sand and gravel, peat and muck, 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 Inland Quarry, Burnt Bluff Group, is located six miles to the northwest. The nearest gravel pit is located in Section 32. There appears to be gravel potential in the compartment. There is no economic oil and gas development in the UP, currently.

Vehicle Access: Access to this compartment is primarily from South Gould City Road, a paved county road running along the eastern edge of the compartment, and Leveille Road, a gravel county road running east-west through the center of the compartment. Numerous other woods roads and two-tracks run from these roads into other areas of the compartment. Construction of new roads for timber sale access will be minimized, with any new roads being closed to vehicular traffic after harvesting is complete. Access to timber sales just west of Hudson Creek will require a portable bridge.

Survey Needs: None identified at this time.

Recreational Facilities and Opportunities: The primary form of recreation in this compartment is hunting, both deer and small game. An unofficial campsite has been established at the end of the woods road near Hudson Creek. There is moderate ORV/snowmobile use of woods roads in and around the compartment.

Fire Protection: Since so much of this compartment is either lowland or hardwood types, fire protection is not a major concern in this compartment. Access to the southern portion of section 6 would be difficult but all other areas are reasonably accessible. Prescribed burning could be used for opening maintenance.

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**

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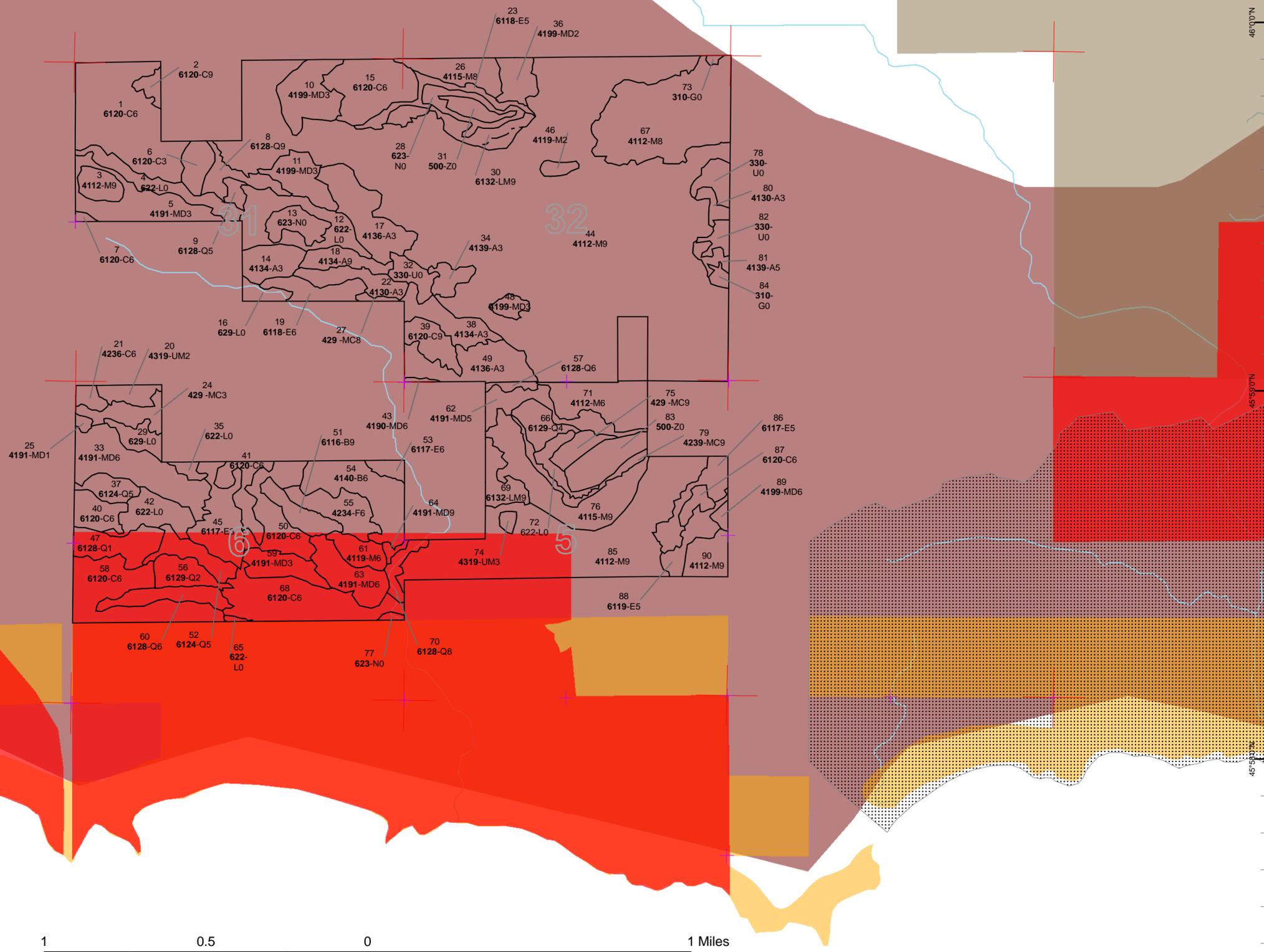
Dedicated & Proposed Special Conservation Area Map

Compartment 198
 T42N, R11W, Sec. 31, 32
 T41N, R11W, Sec. 5, 6
 County: Mackinac
 Unit: Sault Ste Marie
 YOE: 2013
 Acres: 1,651 GIS Calculated
 Stand Examiner: Katie Armstrong
 Map Revised: 8/12/2011
 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
- Stand Boundaries
- Proposed Special Conservation Areas**
 - SCA - Special Conservation Area
 - SCA Removal
- Dedicated Special Conservation Areas**
 - Ecological Reference Areas
 - Dedicated Management Areas
 - Deer Wintering Areas
 - Cold Water Streams
 - Non-Dedicated Natural Areas and National Natural Landmarks
- Forest Stands**
 - Level 3**
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 414 - Other Upland Deciduous
 - 419 - Mixed Upland Deciduous
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
 - Non-Forest Stands**
 - Level 3**
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - 623 - Emergent Wetland
 - 629 - Mixed non-forested wetland




85°46'0"W 85°45'0"W 85°44'0"W 85°43'0"W 85°42'0"W 85°41'0"W 85°40'0"W

46°0'0"N

45°58'0"N

45°56'0"N

46°0'0"N

45°58'0"N

45°56'0"N

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 +		Unretn Age
Aspen	0	11	32	56	0	9	0	0	0	0	0	0	0	0	0	108
Cedar	0	0	0	0	0	0	0	0	0	66	5	24	92	37	0	225
Herbaceous Openland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Low-Density Trees	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Lowland Conifers	0	15	0	0	28	0	0	0	0	18	12	0	2	9	0	85
Lowland Deciduous	0	0	0	0	21	0	4	0	10	32	0	0	0	0	0	66
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	14	10	0	0	0	0	24
Lowland Shrub	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Marsh	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Mixed Upland Deciduous	0	28	20	38	33	0	0	2	17	2	12	0	0	0	0	152
Northern Hardwood	0	0	3	9	0	0	0	0	43	690	25	0	0	0	0	769
Paper Birch	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	37
Upland Conifers	0	0	0	10	0	0	0	0	7	8	0	0	0	0	0	25
Upland Mixed Forest	0	7	2	0	0	0	0	0	0	0	0	0	0	0	0	8
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	15
Water	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	136	62	56	112	82	9	4	2	113	846	63	24	94	47	0	1651



Table 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2013

Compartment 198
Total Compartment Acres: 1651

Acres by Treatment Type

Commercial Harvest - 268	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
Aspen	9	0	0	0	0	0	9
Lowland Mixed Forest	0	10	0	0	0	0	10
Mixed Upland Deciduous	17	0	0	0	0	0	17
Northern Hardwood	0	195	0	0	0	0	195
Paper Birch	37	0	0	0	0	0	37
Total	63	205	0	0	0	0	268



S t a n d	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	45198018-Cut	9.2	4134 - Aspen, Spruce/Fir	High Density Log	47	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clearcut with reserves following the retention guideline. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <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.									
44	45198044-Cut	38.4	4112 - Maple, Beech, Cherry Association	High Density Log	88	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 <u>Specs:</u> enhance the advanced regeneration present. WLD: Also, WLD: Winter cut. Leave snags and coarse woody debris. Retain species diversity. Consider planting oak or disease-resistant beech. <u>Other</u> <u>Comments:</u> <u>Next</u> Wildlife Division may plant oak after harvest. Follow-up treatment with a regeneration survey as per the work instructions. Acceptable <u>Steps:</u> regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.									
51	45198051-Cut	10.0	4193 - Birch, Aspen	High Density Log	77	Harvest	Clearcut with Reserves	4193 - Birch, Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clearcut with reserves following the retention guideline. Some paper birch should be retained for seed trees and future snags. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, cherry, beech, paper and yellow <u>Steps:</u> birch, basswood, aspen and ironwood.									
54	45198054-Cut	27.0	4140 - Other Upland Deciduous	High Density Pole	76	Harvest	Clearcut with Reserves	4193 - Birch, Aspen	Cmpt. Review Proposal
<u>Prescription</u> Clearcut with reserves following the retention guideline. Some paper birch should be retained for seed trees and future snags. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and <u>Steps:</u> paper birch, ironwood, balsam fir, white spruce and white pine.									
63	45198063-Cut	16.9	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	77	Harvest	Clearcut with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal
<u>Prescription</u> Cut all deciduous 2" or more and conifer 4" or more except leave all Hemlock, yellow Birch, cedar and white pine. Also mark some paper birch to <u>Specs:</u> be left. <u>Other</u> <u>Comments:</u> <u>Next</u> Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and <u>Steps:</u> paper birch, ironwood, balsam fir, white spruce and white pine.									

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
69 45198069-Cut	10.0	6132 - Mixed Lowland Forest with Cedar	High Density Log	91	Harvest	Single Tree Selection	6113 - Lowland Maple	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 aspen, maple, cherry, beech, yellow and paper birch, ironwood, balsam fir, white spruce and white pine.

76 45198076-Cut	35.1	4115 - Y.Birch, Hemlock NH	High Density Log	78	Harvest	Single Tree Selection	4111 - S.Maple, Hard Mast 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.
WLD: Winter cut. Leave snags and coarse woody debris. Retain species diversity.

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.

85 45198085-Cut	103.5	4112 - Maple, Beech, Cherry Association	High Density Log	81	Harvest	Single Tree Selection	4111 - S.Maple, Hard Mast 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.
WLD: Winter cut. Leave snags and coarse woody debris. Retain species diversity.
WLD: A

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.

90 45198090-Cut	10.6	4112 - Maple, Beech, Cherry Association	High Density Log	95	Harvest	Single Tree Selection	4111 - S.Maple, Hard Mast 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.

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.

**Total Treatment
Acreage Proposed: 260.7**

Table 4 -- Treatments Prescribed with
a Limiting FactorS
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	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	45198003-Cut	7.7	4112 - Maple, Beech, Cherry Association	High Density Log	75	Harvest	Single Tree Selection	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Specs: 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 Comment:

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.

Limiting Factor and No Treatment Reason 2G: Blocked by physical obstacle
Blocked by large, wet cedar stand.

**Total Treatment
Acreage Proposed: 7.7**

**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_OutOfYOE-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: 198
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013
						General Comments:
1	6120 - Lowland Cedar	High Density Pole	54.1	87		Lots of blowdown and dead cedar in understory. Difficult to walk through.
2	6120 - Lowland Cedar	High Density Log	3.7	92		Mostly cedar with some large yellow birch and red maple, but they look unhealthy. More open understory than adjacent stand. Lots of tag alder and smaller cedar at edges.
3	4112 - Maple, Beech, Cherry Association	High Density Log	7.7	75	81-110	Poor quality northern hardwood stand. Beech has BBD. OI (M6): limiting factored (inadequate volume due to small acreage, too wet, existing bridge out or unsafe).
5	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	23.4	24		Poor quality stand. Beech has BBD. Heavy browse on understory saplings.
6	6120 - Lowland Cedar	High Density Sapling	8.0	85		Dense cedar saplings/poles and tag alder. Very wet. Contains headwaters tributary of Hudson Creek.
7	6120 - Lowland Cedar	High Density Pole	1.0	97		
8	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	9.4	122		More tamarack along the river corridor than other parts of the stand. Stand contains tributary of Hudson Creek but it is not mapped correctly. Could not get a good sense of how wet stand is because of snow.
9	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	3.0	82		Stand contains tributary of Hudson Creek but it is not mapped correctly.
10	4199 - Other Mixed Upland Deciduous	High Density Sapling	19.7	13		Lost Radiator sale, cut in 1997. WLD planted 200-300 white pine in areas where regeneration is not as thick and these are present in subcanopy. Overall upland but with some areas of standing water. Aspen regeneration is patchy.
11	4199 - Other Mixed Upland Deciduous	High Density Sapling	13.5	5		Regenerating clearcut (saplings) with overstory paper birch. Part of Hawk Hardwood Sale, 45-129-04-01, Unit 9. B6. Finished cutting ~12/2005.
14	4134 - Aspen, Spruce/Fir	High Density Sapling	11.8	12		Part of Lost Radiator sale, cut in 1998. Includes small areas of poor regen that are either grassy openings or contain more spruce than aspen. Part of stand south of road contains patches of tag alder. White pine canopy includes saplings and supercanopy white pine in Log/XL class (~8%).
15	6120 - Lowland Cedar	High Density Pole	26.6	120		High BA cedar with relatively open understory.
17	4136 - Aspen, Mixed Conifer	High Density Sapling	24.6	24		Aspen is mostly sapling-sized with occasional pole-size tree.
18	4134 - Aspen, Spruce/Fir	High Density Log	9.2	47		Left for age class diversity at last inventory. Aspen still appears healthy, but will meet age requirements this cycle.





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	6118 - Lowland Deciduous with Cedar	High Density Pole	10.5	87		West half of stand is more hardwood (especially yellow birch) and drier, east half is more cedar and wetter.
20	4319 - Mixed Upland Forest	Medium Density	6.6	2		Part of Lost Radiator II sale, 45-130-04-01, Unit 1 (B6). Clearcut. Finished 3/2008. Regenerating clearcut with overstory retention scattered and in clumps. Includes some recent large blow-downs. Contains turnaround at end of county-plowed section of Leveille Road.
21	42360 - Upland Cedar	High Density Pole	3.6	103		Overall upland but with some wet spots (sphagnum).
22	4130 - Aspen	High Density Sapling	11.4	3		Part of Hawk Hardwood Sale, 45-129-04-01, Unit 12. F6 clearcut. Finished cutting 5/2007.
23	6118 - Lowland Deciduous with Cedar	Medium Density Pole	8.9	83		Tall trees at mostly at (drier) edges. Interior is mostly smaller cedar.
24	429 - Mixed Upland Conifers	High Density Sapling	10.1	22		Very dense spruce/fir but small diameter trees.
25	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	1.4	2		Heavy browse on regen.
26	4115 - Y.Birch, Hemlock NH	Medium Density Log	14.3	95	51-80	Hawk Hardwood Sale, 45-129-04-01, Unit 2. M6 thinning. Finished cutting 2/15/07. BBD is present.
27	429 - Mixed Upland Conifers	Medium Density Log	1.3	86		Narrow strip between clearcut and private property.
30	6132 - Mixed Lowland Forest with Cedar	High Density Log	13.9	87		Hemlock is dying.
33	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	32.8	32		Poor quality stand. Aspen is in patches. Contains some slash and blowdowns.
34	4139 - Aspen, Mixed Deciduous	High Density Sapling	6.0	13		Nicely regenerating aspen. A few scattered large white pine in overstory.
36	4199 - Other Mixed Upland Deciduous	Medium Density	9.5	3		Hawk Hardwood Sale, 45-129-04-01, Unit 1. A6 clearcut. Finished cutting 3/1/07.
37	6124 - Lowland Spruce- Fir	Medium Density Pole	7.5	32		tall stumps, patchy canopy
38	4134 - Aspen, Spruce/Fir	High Density Sapling	14.3	13		Stand contains open areas with sparse regen.
39	6120 - Lowland Cedar	High Density Log	10.5	101		Probably wet but hard to tell because of snow.

Stand	Sault Ste. Marie Mgt. Unit		5 – Forested Stands			Compartment: 198
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2013
						General Comments:
40	6120 - Lowland Cedar	High Density Pole	9.9	107		
41	6120 - Lowland Cedar	High Density Pole	10.8	123		Wet cedar stand, more spruce to the west.
43	4190 - Mixed Upland Deciduous with Cedar	High Density Pole	0.7	89		Stand is just a narrow strip between road and A3 behind it. LF in OI: Delayed treatment for age-size class diversity.
44	4112 - Maple, Beech, Cherry Association	High Density Log	497.6	88	111-140	Northwest part is part of Hawk Hardwood Sale, 45-129-04-01, Units 3, 4, 6, 10, 11. M6 or M9 thinning. Finished cutting ~2005. Southeast corner around cemetery is part of Lone Track Hardwood Sale, 45-109-03-01, Units 4, 5, 6, 7, and 8. M9 thinning. Finished cutting ~2006. Cut the north east part of stand. Only portion untreated last entry. Red oak planted around the cemetery by the Engadine Science class.
45	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	20.8	32		
46	4119 - Mixed Northern Hardwoods	Medium Density	2.9	12		Small stand. Probably an overgrown opening. Shows as opening in OI and 1998 DOQ imagery. Would just treat with surrounding stand.
47	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Sapling	15.4	2		At least part is ridge and swale. White pine growing on ridges. Wetter in between.
48	4199 - Other Mixed Upland Deciduous	High Density Sapling	3.9	5		Part of Hawk Hardwood Sale, 45-129-04-01, Unit 5. Finished cutting ~2005. Regenerating clearcut. No living overstory but some snags.
49	4136 - Aspen, Mixed Conifer	High Density Sapling	23.4	23		Contains overstory white pine and hemlock.
50	6120 - Lowland Cedar	High Density Pole	21.2	119		Southeastern tail of stand contains clumps of large hemlock. North end is mostly cedar with some pockets of Q types.
51	6116 - Lowland Birch	High Density Log	10.0	77		Leveille Road Birch, sale 45-107-10-01 (part 2 of 2)
52	6124 - Lowland Spruce-Fir	Medium Density Pole	10.5	32		Scattered openings (where ground is wetter?). Part of ridge and swale complex. Stumps from last cut are very evident.
53	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	3.6	53		Remnant from timber sale 45-107-10-01, Leveille Road Birch. On compartment boundary.
54	4140 - Other Upland Deciduous	High Density Pole	27.0	76		Leveille Road Birch, sale 45-107-10-01 (part 1 of 2)
55	42340 - Upland Spruce/Fir	High Density Pole	15.3	83		





Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
6129 - Mixed Coniferous Lowland Forest	Medium Density	10.3	32		Short (~15ft tall) and dense trees. Forest cover is patchy. Scattered wet areas contain cattails. Tag alder is part of canopy in many places. Cedar appears to have successfully regenerated after clearcut.
6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	2.3	110		Probably wet but hard to tell because snow.
6120 - Lowland Cedar	High Density Pole	35.0	115		Small, dense cedar. Part of ridge and swale complex.
4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	11.8	92		Steep ridge runs east-west through stand. Young aspen along adges, but not large enough to make own stand.
6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	11.7	92		Dense, low volume.
4119 - Mixed Northern Hardwoods	High Density Pole	8.5	22		Map G0 around road turnaround?
4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	14.8	25		Dense balsam understory in many places. Extremely variable stand. Wet at north end. OI stand 57. Real mix. Areas of more A3 than M3. Young aspen dying in areas? Why?
4191 - Mixed Upland Deciduous with Conifer	High Density Pole	16.9	77		Ridge runs east-west in southern section.
4191 - Mixed Upland Deciduous with Conifer	High Density Log	1.6	83		Remnant from timber sale 45-107-10-01, Leveille Road Birch. excluded bc of stream, hemlock?
6129 - Mixed Coniferous Lowland Forest	Low Density Pole	9.6	86		Interesting mix of lowland and upland species but stand is definitely wet. Open and bog-like in many areas. Dense cedar in others.
4112 - Maple, Beech, Cherry Association	Medium Density Log	65.5	84	51-80	Part of Lone Track Hardwood Sale, 45-109-03-01, Units 1, 2, 3. M6 or M9 thinning. Finished cutting ~1/2007. BBD is heavy and beech snap has started. Intermittent stream along north edge, outside of sale area.
6120 - Lowland Cedar	High Density Pole	35.8	117		
6132 - Mixed Lowland Forest with Cedar	High Density Log	10.0	91		Some mortality across larger conifers. Cannot tell how wet stand is because of snow.
6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Log	5.4	83		Hudson Creek runs through stand.
4112 - Maple, Beech, Cherry Association	High Density Pole	23.5	87	81-110	Some areas are predominantly log-sized but most parts are pole-sized. The opening shown in OI around the road has grown in (more conifer than rest of stand).

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Sault Ste. Marie Mgt. Unit

5 – Forested Stands

Compartment: 198

Year of Entry: 2013



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
74	4319 - Mixed Upland Forest	High Density Sapling	1.9	12		Poor quality stand.
75	429 - Mixed Upland Conifers	High Density Log	6.6	72	81-110	Red maple in understory is stump sprouts and poor quality.
76	4115 - Y.Birch, Hemlock NH	High Density Log	35.1	78	111-140	Heavy infestation of BBD although little mortality so far. Little to no conifer in understory. Contains at least one pocket of paper birch on west side.
79	42390 - Mixed Non-Pine Upland Conifers	High Density Log	6.8	88		Stand provides nice buffer for lake.
80	4130 - Aspen	High Density Sapling	3.6	25		Strange stand. Only a very small portion is log-sized aspen. Some is dense sapling-sized.
81	4139 - Aspen, Mixed Deciduous	Medium Density Pole	3.9	25		Poor quality mixture of aspen and hardwood.
85	4112 - Maple, Beech, Cherry Association	High Density Log	103.5	81	111-140	Thinned in 1998. Heavy browse on saplings. Stand contains BBD. Balsam fir includes 3-5' saplings and 20-30' poles. Additional BA: 120.
86	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	12.5	88		Probably wet but hard to tell because of snow. Lots of deer activity. Variable stand.
87	6120 - Lowland Cedar	High Density Pole	4.2	80		
88	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	9.8	74		Low basal area in many spots -- possible wet areas? Contains at least one unmapped pond.
89	4199 - Other Mixed Upland Deciduous	High Density Pole	1.9	68		Poor quality stand. Real mix of sizes in aspen. Possibly wet in spots.
90	4112 - Maple, Beech, Cherry Association	High Density Log	10.6	95	111-140	A lot of logs and XL logs within hardwoods but few poles and saplings. Stand has moderate to heavy BBD and some beech tops have already snapped off.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	622 - Lowland Shrub	14.1	No	Unspecified	
12	622 - Lowland Shrub	24.0	No	Unspecified	Shrubby vegetation including tag alder and with a buffer of sapling/pole sized trees along outer edge. Tree species include balsam fir, paper birch, black cherry, red maple, and white spruce.
13	623 - Emergent Wetland	9.6	No	Unspecified	
16	629 - Mixed non-forested wetland	4.5	No	Low (NonForested)	
28	623 - Emergent Wetland	9.3	No	Low (NonForested)	
29	629 - Mixed non-forested wetland	7.1	No	Low (NonForested)	Interior is wet shrubby vegetation including tag alder and cattails. Edges are somewhat forested: balsam poplar, paper birch, cedar. Shows signs of beaver activity in multiple locations along stream.
31	50 - Water	5.7	No	Low (NonForested)	
32	3303 - Mixed Low Density Trees	7.2	No	Low (NonForested)	
35	622 - Lowland Shrub	2.5	No	Unspecified	Appears to be flooded by beavers. Lots of tag alder, cattails, and standing dead trees. Some living cedar and spruce.
42	622 - Lowland Shrub	14.2	No	Low (NonForested)	Lots of tag alder, some living conifers. Flooded by beavers. Stumps from last cut are very evident. At least one visible beaver lodge. There is a patch of Phragmites (point in IFMAP Field Notes). It's probably native but is worth checking during the growing season.
65	622 - Lowland Shrub	0.7	N/A	Unspecified	
72	622 - Lowland Shrub	6.6	No	Low (NonForested)	High density of tag alder and an unknown shrub.
73	3102 - Grass	0.7	No	Low (NonForested)	Within proposed BSA.
77	623 - Emergent Wetland	1.0	N/A	Unspecified	
78	3303 - Mixed Low Density Trees	7.1	No	Low (NonForested)	
82	330 - Low-Density Trees	4.1	No	Low (NonForested)	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
83	50 - Water	15.2	No	Low (NonForested)	Aerial photo shows floating aquatic vegetation, but field survey was snow-limited. Lake has at least 1 beaver lodge.
84	310 - Herbaceous Openland	2.1	No	Low (NonForested)	



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.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.
SCA	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.