



Sault Forest Management Unit
Compartment Review Presentation
Compartment #191 **Entry Year: 2012**
Compartment Acreage: 1,971 **County: Mackinac**

Revision Date: July 13, 2010

Stand Examiner: Katie Armstrong

Legal Description: T42N-R12W Sections 16, 17, and 21; Newton Township

Identified Planning Goals ('Management Area' or 'RMU', if applicable): Batty Doe Deer Yard

Management Goals: This compartment is at the northwest end of a 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 the winter. Timber harvests have been prescribed for the winter months so that tops will provide a food source for deer. Most of the aspen stands have been cut within the past 5-20 years. Regeneration has been good and these young stands provide good habitat for grouse and other wildlife. The compartment contains little acreage of aspen and mixed aspen stands in older ages classes. Harvest of stands that will remain healthy for another 10 years has been delayed to increase age and size class diversity within the compartment.

Soil and Topography: The majority of the compartment consists of poorly drained soils: Angelica Muck or Markey and Carbondale Mucks. Others soils present include: Amadon-Rock Outcrop Complex, Cozy Cobbly Fine Sandy Loam, Ensign Fine Sandy Loam, Graveraet Fine Sandy Loam, Guardlake Fine Sandy Loam, Heinz Sandy Loam, ponded Histosols and Aquents, Mattix Sandy Loam, Paquin Sand, Solona Loam, and Wallace Sand. Most of this compartment consists of relatively level ground, especially low-lying wet ground punctuated with slightly higher dry ground. Small elevation changes have a significant effect on moisture regime.

Ownership Patterns, Development, and Land Use in and Around the Compartment: All of the land within the compartment boundary is owned by the State of Michigan. Land north of the compartment is owned by Michigan Limestone Company, which operates an active quarry. Land to the east is owned by The Forestland Group. The State of Michigan also owns the land to the south and west of this compartment.

Unique, Natural Features: Unique, natural features are known to exist in an adjacent compartment. These may affect management of some of the stands in this compartment. Follow management guidelines for any species requiring special management considerations.

Archeological, Historical, and Cultural Features: Remnants of some old foundations are visible within the compartment.

Special Management Designations or Considerations: The southern three-quarters of this compartment lie within the Deer Wintering Area Special Conservation Area (SCA).

Watershed and Fisheries Considerations: This compartment contains reaches of the north and main branches of the Milakokia River. The Milakokia River supports a cool/warm-water fish community of northern pike, rock bass, suckers, and central mudminnow. Implementation of BMPs will aid in preventing sediment input at road crossings. Upland areas are critically important to protect spawning areas for stream-resident fishes. Information in the files indicates that Batty Doe Lake has supported northern pike and yellow perch in the past. No active fisheries management is being implemented at this time.

Wildlife Habitat Considerations: This compartment is located nearly 2 ½ miles north of the Lake Michigan shoreline and approximately 1 mile east of the Mackinac/Schoolcraft county line. It is mainly comprised of mix of aspen of various age classes and lowland conifer swamp dominated by cedar. Two openings are also located in the northern portion. Most of the compartment is in deer yard. The Milakokia River weaves through. The upper reaches provide an inlet to Heinz Lake located just to the southwest, and the outlet reaches back up to a western corner of the compartment as the river heads toward Lake Michigan. This system provides habitat for beaver, waterfowl, and other wetland wildlife. Aspen stands provide age class and structural diversity favorable for ruffed grouse, American woodcock, and white-tailed deer, while nearby cedar swamp provides winter cover. Wildlife objectives include maintaining the young early-successional habitat in various age classes, protecting riverine and wetland areas by buffering these systems, retaining the openings present, and maintaining lowland conifer stands for cover. All harvests will take place during the winter to provide browse for wintering deer.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel, peat and muck and coarse-textured till. The glacial drift thickness is at or near the surface. The Silurian Manistique Group subcrops below the glacial drift. The Manistique could be used for stone/limestone. The Inland Quarry, Burnt Bluff Group, is located one mile to the north. The nearest gravel pit is located one mile to the southwest. There appears to be gravel potential in the upland areas. There is no economic oil and gas production in the UP, currently.

Vehicle Access: Vehicle access to this compartment is primarily from Batty Doe Lake Road, a gravel road which connects Schoolcraft County Road P433 and Leveille Road. The Well Casing Road runs from the west side of Section 17, off the Batty Doe Lake Road, into Section 16. Logging roads also reach the south end of Section 21. Access to Section 16 might be possible via winter logging roads if The Forestland Group offered permission to cross their property. Management activities will be restricted by the limited access to portions of this compartment.

Survey Needs: None needed.

Recreational Facilities and Opportunities: The primary form of recreation in this compartment is hunting, especially for deer and small game. There are numerous illegal shooting lanes, permanent blinds, established trails, and at least one established camp. ORV and snowmobile use is most likely limited to that associated with hunting. There may also be opportunities for trapping.

Fire Protection: Fire protection is not a major concern since this compartment contains so much low, wet ground and relatively fire-resistant timber types. However, evidence of past fires was found. If a fire did occur in this compartment, access would be an issue. Some prescribed burning has been done to promote aspen regeneration.

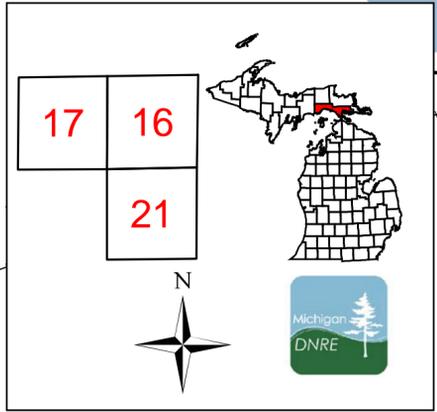
Additional Compartment Information: None.

- **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**

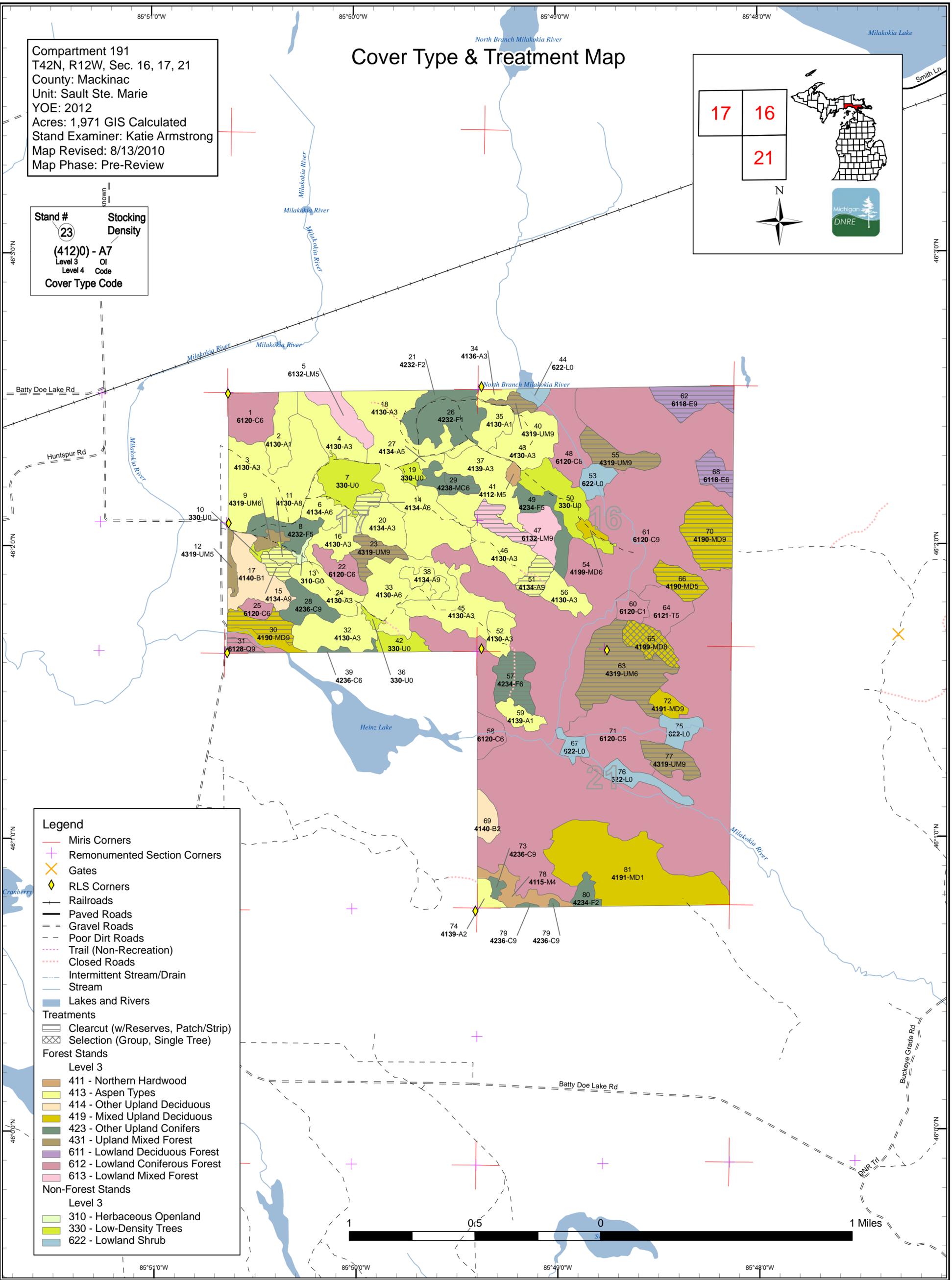
- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand boundaries, cover types, and numbers**
 - ◆ **Proposed treatments**
 - ◆ **Details on the road access system**

Cover Type & Treatment Map

Compartment 191
 T42N, R12W, Sec. 16, 17, 21
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2012
 Acres: 1,971 GIS Calculated
 Stand Examiner: Katie Armstrong
 Map Revised: 8/13/2010
 Map Phase: Pre-Review



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



Legend

- Miris Corners
- Remonumented Section Corners
- Gates
- RLS Corners
- Railroads
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)

Forest Stands

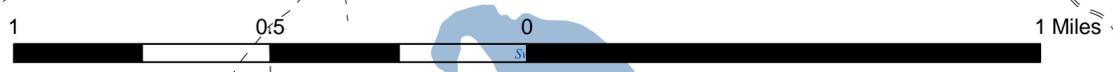
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

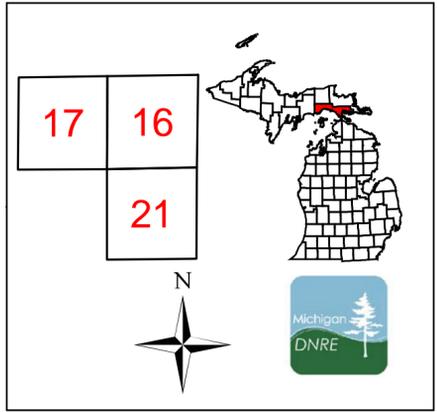
Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub

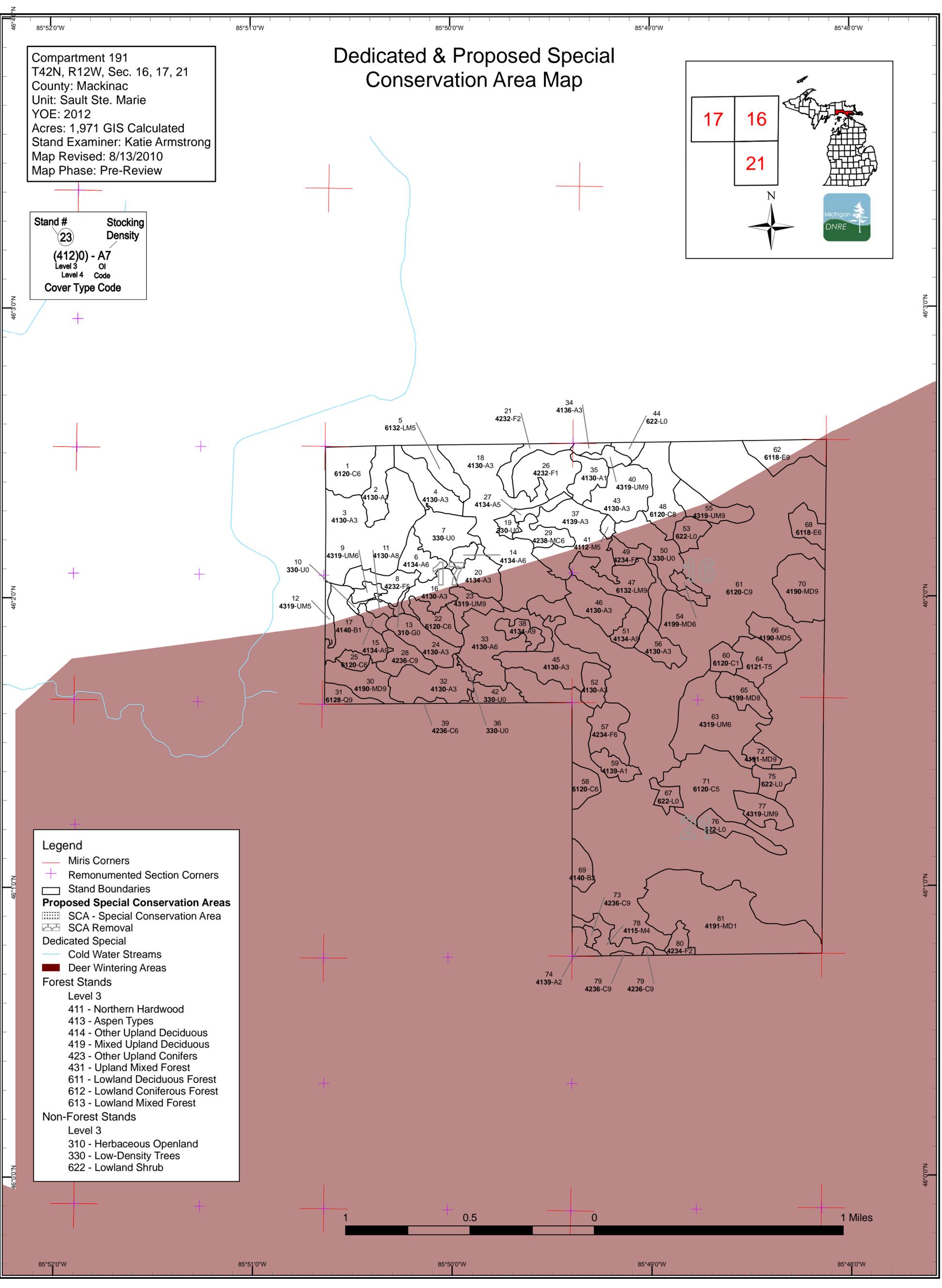


Dedicated & Proposed Special Conservation Area Map

Compartment 191
 T42N, R12W, Sec. 16, 17, 21
 County: Mackinac
 Unit: Sault Ste. Marie
 YOE: 2012
 Acres: 1,971 GIS Calculated
 Stand Examiner: Katie Armstrong
 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
 - Dedicated Special**
 - Cold Water Streams
 - Deer Wintering Areas
 - Forest Stands**
 - Level 3
 - 411 - Northern Hardwood
 - 413 - Aspen Types
 - 414 - Other Upland Deciduous
 - 419 - Mixed Upland Deciduous
 - 423 - Other 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
 - 622 - Lowland Shrub



85°52'0"W 85°51'0"W 85°50'0"W 85°49'0"W 85°48'0"W

46°30'N 46°20'N 46°10'N 46°0'N

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	126	129	217	5	8	8	17	0	0	9	0	0	0	0	519
Cedar	0	0	0	0	0	0	9	47	0	23	2	13	44	685	0	823
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Low-Density Trees	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
Lowland Conifers	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8
Lowland Deciduous	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	30
Lowland Mixed Forest	0	0	0	0	0	0	0	0	25	0	0	0	14	0	0	39
Lowland Shrub	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Mixed Upland Deciduous	0	92	0	0	0	0	0	0	46	19	0	17	0	0	0	174
Northern Hardwood	0	0	0	0	0	0	0	0	12	0	3	0	0	0	0	15
Paper Birch	0	26	9	0	0	0	0	0	0	0	0	0	0	0	0	35
Tamarack	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	16
Upland Conifers	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11
Upland Mixed Forest	0	0	0	4	0	4	0	0	5	0	30	11	0	52	0	107
Upland Spruce/Fir	0	0	0	0	55	0	14	18	0	0	0	0	0	0	0	87
Total	107	244	137	222	60	12	32	82	89	90	43	58	58	737	0	1971



Sault Ste. Marie Mgt. Unit
Year of Entry 2012

Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Compartment 191
Total Compartment Acres: 1971

Acres by Treatment Type

Commercial Harvest - 255	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	21	0	0	0	0	0	21
Lowland Conifers	4	0	0	0	0	0	4
Lowland Deciduous	30	0	0	0	0	0	30
Lowland Mixed Forest	11	0	0	0	0	0	11
Mixed Upland Deciduous	53	14	0	0	0	0	66
Upland Conifers	6	0	0	0	0	0	6
Upland Mixed Forest	98	0	0	0	0	0	98
Upland Spruce/Fir	18	0	0	0	0	0	18
Total	241	14	0	0	0	0	255



Data updated before 2:00 PM

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
14 45191014-Cut	4.3	4134 - Aspen, Spruce/Fir	High Density Pole	62	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal

Prescription Clearcut with reserves following retention guidelines. Retain some large aspen along edges. Winter cut only since stand is in the deer yard.
Specs:

Other Treatment of this stand was delayed from previous inventory.
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper
Steps: birch, balsam fir, white and black spruce, and white pine.

23 45191023-Cut	11.3	4319 - Mixed Upland Forest	High Density Log	102	Harvest	Clearcut with Reserves	Aspen, Birch	Cmpt. Review Proposal
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Prescription Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar or white pine.
Specs: Leave cedar clumps intact. Winter cut only since stand is in deeryard and is wet.

Other Treatment of this stand was delayed from previous inventory.
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper
Steps: birch, balsam fir, white and black spruce, and white pine.

29 45191029-Cut	5.7	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	80	Harvest	Clearcut with Reserves	Aspen, Birch	Cmpt. Review Proposal
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Prescription Clearcut with reserves following retention guidelines. Retain some large birch seed trees and aspen along edges. Do not cut cedar. Winter cut only since stand is in the deer yard.
Specs:

Other Treatment of this stand was delayed from previous inventory.
Comments:

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper
Steps: birch, balsam fir, white and black spruce, and white pine.

30 45191030-Cut	12.2	4190 - Mixed Upland Deciduous with Cedar	High Density Log	78	Harvest	Clearcut with Reserves	Aspen, Birch	Cmpt. Review Proposal
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Prescription Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar
Specs: clumps intact. Maintain forested cover over vernal ponds by including them in retention areas or buffering by about 1 tree length. Winter cut only since stand is in deeryard and is wet in spots.

Other Treatment boundary has been adjusted to exclude 100' buffer along Milakokia River and adjacent wetland based on best available data. Actual
Comments: treatment area may need to be adjusted to ensure 100' buffer.

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper
Steps: birch, balsam fir, white and black spruce, and white pine.

31 45191031-Cut	4.3	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	80	Harvest	Clearcut with Reserves	Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
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Prescription Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar
Specs: clumps intact. Maintain forested cover over vernal ponds by including them in retention areas or buffering by about 1 tree length. Winter cut only since stand is in deeryard and is wet in spots.

Other Treatment boundary has been adjusted to exclude 100' buffer along Milakokia River and adjacent wetland based on best available data. Actual
Comments: treatment area may need to be adjusted to ensure 100' buffer.

Next Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper
Steps: birch, balsam fir, white and black spruce, and white pine.



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	45191040-Cut	5.1	4319 - Mixed Upland Forest	High Density Log	79	Harvest	Clearcut with Reserves	Aspen, Birch	Cmpt. Review Proposal

Prescription: Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Winter cut only since stand is in the deer yard.

Other: Treatment of this stand was delayed from previous inventory. Stand slopes slightly downward toward adjacent beaver pond/wetland area.
Comments: Treatment boundary should stay on top of this slope.

Next: Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.
Steps:

47	45191047-Cut	11.4	6132 - Mixed Lowland Forest with Cedar	High Density Log	79	Harvest	Clearcut with Reserves	Mixed Lowland Forest with Cedar	Cmpt. Review Proposal
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Prescription: Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar clumps intact. Winter cut only since stand is in deer yard and is wet in spots.

Other: Harvest with Stand 51.

Comments:

Next: Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.
Steps:

51	45191051-Cut	9.0	4134 - Aspen, Spruce/Fir	High Density Log	94	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal
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Prescription: Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Winter cut only since stand is in the deer yard.

Other: Treatment of this stand was delayed from previous inventory. Harvest with Stand 47.

Comments:

Next: Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.
Steps:

**Total Treatment
Acreage Proposed: 63.4**



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
11	45191011-Cut	3.6	4130 - Aspen	Medium Density Log	57	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some large aspen along edges. Winter cut only since stand is in the deer yard.</p> <p><u>Other Comment:</u> Harvest with Stand 15.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 5E: Age / size class diversity Delay treatment to improve age class diversity of aspen stands within compartment.</p>									
15	45191015-Cut	4.6	4134 - Aspen, Spruce/Fir	High Density Log	57	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some large aspen along edges. Winter cut only since stand is in the deer yard.</p> <p><u>Other Comment:</u> Harvest with Stand 11.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 5E: Age / size class diversity Delay treatment to improve age class diversity of aspen stands within compartment.</p>									
55	45191055-Cut	16.1	4319 - Mixed Upland Forest	High Density Log	90	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Cedar	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut yellow birch or cedar. Leave cedar clumps intact. Maintain forested cover over vernal ponds by including them in retention areas or buffering by about 1 tree length. Winter cut only since stand is in deeryard and is wet in spots.</p> <p><u>Other Comment:</u> Stand may contain intermittent or ephemeral streams which would need to be buffered.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed Harvest would require building a road through mature cedar swamp and access through TFG property to the east.</p>									
57	45191057-Cut	18.1	42340 - Upland Spruce/Fir	High Density Pole	63	Harvest	Clearcut with Reserves	Aspen	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen trees along edges. Winter cut only since stand is in the deer yard.</p> <p><u>Other Comment:</u></p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 5E: Age / size class diversity Delaying harvest will improve age/size class diversity of compartment and satisfy green-up requirements since this is next to a slowly regenerating clearcut.</p>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
62	45191062-Cut	19.2	6118 - Lowland Deciduous with Cedar	High Density Log	88	Harvest	Clearcut with Reserves	Lowland Deciduous with Cedar	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar clumps intact. Winter cut only since stand is in deer yard and is wet.</p> <p><u>Other Comment:</u> Treatment of this stand was delayed from previous inventory. Harvest with Stands 66, 68, and 70, if possible. Consider including as an optional unit with stand most likely to be harvested.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed Harvest would require building a winter road through mature cedar swamp and access via TFG property to the east. Harvest may be affected by species requiring special management considerations.</p>									
63	45191063-Cut	51.9	4319 - Mixed Upland Forest	High Density Pole	125	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Cedar	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar clumps intact. Winter cut only since stand is in deer yard and is wet in spots.</p> <p><u>Other Comment:</u> Harvest with Stand 65 if/when possible.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed Access would require road through mature cedar swamp and bridge across North Branch of Milakokia River.</p>									
65	45191065-Thin	13.7	4199 - Other Mixed Upland Deciduous	Medium Density Log	100	Harvest	Single Tree Selection	Mixed Northern Hardwoods	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Thin to average BA of 80-90 sf/ac following Compleat Marker guidelines. Do not cut aspen, white pine or cedar.</p> <p><u>Other Comment:</u> Hardwood basal area is variable across stand. Only thin areas with greater than target BA. Harvest with Stand 63 if/when possible.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes maple, yellow birch, paper birch, white pine and cedar.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed Access would require road through mature cedar swamp and bridge across North Branch of Milakokia River.</p>									
66	45191066-Cut	12.2	4190 - Mixed Upland Deciduous with Cedar	Medium Density Pole	87	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Cedar	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar or white pine. Leave cedar clumps intact. Winter cut only since stand is in deer yard and contains wet spots.</p> <p><u>Other Comment:</u> Harvest with Stands 62, 68, and 70. Consider including as an optional unit with stand most likely to be harvested.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed Harvest of this stand would require building a winter road through mature cedar swamp and access via TFG property to the east.</p>									



Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
68	45191068-Cut	10.5	6118 - Lowland Deciduous with Cedar	High Density Pole	87	Harvest	Clearcut with Reserves	Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar clumps intact. Winter cut only since stand is in deer yard and is wet.</p> <p><u>Other Comment:</u> Treatment of this stand was delayed from previous inventory. Harvest with Stands 62, 66, and 70. Western part of stand contains at least one ephemeral/intermittent stream which might require 100' buffer per BMPs. Consider including as an optional unit with stand most likely to be harvested.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed The most likely access is through TFG property to the east but new road is also needed. Harvest may be affected by species requiring special management considerations.</p>									
70	45191070-Cut	28.2	4190 - Mixed Upland Deciduous with Cedar	High Density Log	78	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Cedar	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar. Leave cedar clumps intact. Winter cut only since stand is in deer yard and is wet.</p> <p><u>Other Comment:</u> Harvest with Stands 62, 66, and 68.</p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2A: Adjacent landowner denies access Harvest would require building a winter road through mature cedar swamp and access via TFG property. Harvest may be affected by species requiring special management considerations.</p>									
77	45191077-Cut	13.6	4319 - Mixed Upland Forest	High Density Log	95	Harvest	Clearcut with Reserves	Mixed Upland Deciduous with Cedar	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Clearcut with reserves following retention guidelines. Retain some birch seed trees and large aspen along edges. Do not cut cedar or white pine. Leave cedar clumps intact. Winter cut only since stand is in deer yard and is wet.</p> <p><u>Other Comment:</u></p> <p><u>Next Steps:</u> Check for regeneration after harvest per work instructions. Acceptable regeneration includes aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white and black spruce, and white pine.</p> <p><u>Limiting Factor and No Treatment Reason:</u> 2D: Road needed Access would require road through mature cedar swamp and bridge(s) across branch(es) of Milakokia River.</p>									
Total Treatment Acreage Proposed:		191.6							

S t a n d	Sault Ste. Marie Mgt. Unit		5 – Forested Stands			Compartment: 191
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012
Data updated before 2:00 PM						
General Comments:						
1	6120 - Lowland Cedar	High Density Pole	22.9	85		
2	4130 - Aspen	Low Density Sapling	15.8	5		alder is at edges; interior regeneration is good
3	4130 - Aspen	High Density Sapling	69.2	22		Was 2 stands in previous inventory; east half was cut in 1988, west half was cut in 1983; no discernable difference now
4	4130 - Aspen	High Density Sapling	19.9	8		5-point Foothold sale - cut 2002
5	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	14.1	115		Aspen/birch are dying out; also includes red maple, white pine
6	4134 - Aspen, Spruce/Fir	High Density Pole	12.6	62		balsam fir understory is thick/limby; also contains juneberry
8	42320 - Upland Spruce	Medium Density Pole	14.2	38		used to be an opening and parts are still just starting to fill in
9	4319 - Mixed Upland Forest	High Density Pole	4.4	40		balsam understory is dense in pockets; moderate slash in places
11	4130 - Aspen	Medium Density Log	3.6	57		dead beech in pocket of maple; dense balsam understory in isolated pockets
12	4319 - Mixed Upland Forest	Medium Density Pole	4.3	25		variable stand
14	4134 - Aspen, Spruce/Fir	High Density Pole	4.3	62	111-140	aspen is starting to die out; significant softwood volume in understory; BA by species: 1: 80 - 80, 98 - 20 2: 80 - 30, 98 - 110 3: 80 - 140, 98 - 40
15	4134 - Aspen, Spruce/Fir	High Density Log	4.6	57		open areas contain pole/log size aspen; closed/dense areas contain spruce and fir, very limby; aspen starting to die; cedar pocket in narrow part between younger aspen stands; wetter southeast of cedar band
16	4130 - Aspen	High Density Sapling	14.4	6		regenerating aspen clearcut with reserved cedar in patches and some scattered individual trees; less BAM than other aspen stands in this compartment; some paper birch in regen
17	4140 - Other Upland Deciduous	Low Density Sapling	26.3	5		
18	4130 - Aspen	High Density Sapling	85.1	15		regenerating aspen stand with scattered spruce and fir and occasional spruce/fir clumps; north half cut in 1994 and south half cut in 1995, contains pockets of denser, larger spruce
20	4134 - Aspen, Spruce/Fir	High Density Sapling	16.5	26		balsam is scattered individual trees and in patches with spruce - mostly shorter than aspen; moderate aspen slash



S t a n d	Sault Ste. Marie Mgt. Unit		5 – Forested Stands			Compartment: 191
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012
						General Comments:
21	42320 - Upland Spruce	Medium Density	9.7	31		lots of loose rock on soil surface and bare patches with moss; areas of better aspen regen (in southern tip) but stand is mostly spruce now
22	6120 - Lowland Cedar	High Density Pole	12.7	150		also contains white spruce, large diameter white pine
23	4319 - Mixed Upland Forest	High Density Log	11.3	102		large diameter quaking aspen snags; also contains white pine; overall upland, but wet in spots; canopy is very variable - patches of almost 100% cedar; moderate slash in parts
24	4130 - Aspen	High Density Sapling	17.9	22		
25	6120 - Lowland Cedar	High Density Pole	5.0	100		has some very wet areas
26	42320 - Upland Spruce	Low Density Sapling	24.7	31		loose rock on soil surface; scattered openings with less than 25% tree cover
27	4134 - Aspen, Spruce/Fir	Medium Density Pole	5.1	38		stand is variable
28	42360 - Upland Cedar	High Density Log	13.7	110		lots of blowdown along edges and younger stands
29	42380 - Non Pine Upland Conifer, Mixed Deciduous	High Density Pole	11.0	80		larger aspen has mostly died out
30	4190 - Mixed Upland Deciduous with Cedar	High Density Log	18.0	78		stand also contains mountain ash
31	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	7.6	80		more conifer than stand North of river (especially spruce); stand also contains black ash; tag alder near river; heavy blow down along southern edge, next to clearcut
32	4130 - Aspen	High Density Sapling	26.3	15		
33	4130 - Aspen	High Density Pole	38.7	25		balsam is heavy in pockets
34	4136 - Aspen, Mixed Conifer	High Density Sapling	3.5	24		a few overstory 8" aspen; clumps of cedar/fir
35	4130 - Aspen	Low Density Sapling	12.7	24		loose rock at soil surface; unevenly regenerated, contains patches with no aspen
37	4139 - Aspen, Mixed Deciduous	High Density Sapling	38.5	5		regenerating aspen stand; also contains pin cherry and clumps of spruce/fir at edge; part of 5-point Foothold timber sale (2005); scattered overstory paper birch at north end



S t a n d	Sault Ste. Marie Mgt. Unit		5 – Forested Stands			Compartment: 191
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2012
						General Comments:
38	4134 - Aspen, Spruce/Fir	High Density Log	8.1	47		
39	42360 - Upland Cedar	High Density Pole	2.0	93		lots of windthrow at edge
40	4319 - Mixed Upland Forest	High Density Log	5.1	79		some aspen are dying out, others seem short; very little understory in heart of stand; rock at soil surface, rocky ledges; moderate slope; western "tail" of mapped stand has no log-size aspen; cedar is scattered; some areas are all softwood
41	4112 - Maple, Beech, Cherry Association	Medium Density Pole	2.6	90	51-80	beech has scale; also contains juneberry
43	4130 - Aspen	High Density Sapling	27.0	24		at least 1 red maple in clump with balsam/spruce
45	4130 - Aspen	High Density Sapling	28.9	6		Supercanopy paper birch and paper birch snags; Well Casing II sale cut in 2004
46	4130 - Aspen	High Density Sapling	21.3	22		
47	6132 - Mixed Lowland Forest with Cedar	High Density Log	25.1	79		char on stumps - was adjacent aspen stand burned?; heavy slash - especially at west end; east end contains vernal ponds/wet spots with tag alder
48	6120 - Lowland Cedar	Medium Density Log	26.6	115		slash is lots of windthrow and tip-ups less cedar and more open to the north small canopy gaps large dead yellow birch streams through and standing water difficult to move around
49	42340 - Upland Spruce/Fir	Medium Density Pole	14.5	50		contains large white pine in overstory; drier in northern part; more black spruce in southern part variable - wet areas contain more spruce, dry areas contain more aspen; found old red line?
51	4134 - Aspen, Spruce/Fir	High Density Log	9.0	94		aspen starting to die; significant softwood volume in understory - heavier in pockets; scattered individual cedar - just a few
52	4130 - Aspen	High Density Sapling	10.4	25		some supercanopy quaking aspen
54	4199 - Other Mixed Upland Deciduous	High Density Pole	3.5	100	111-140	moderately dense understory; heard ruffed grouse; poor quality hardwoods; contains openings with less BA than plots - no HW regeneration; BA by species: 1: 80 - 0, 98 - 20, 99 - 60 2: 80 - 30, 98 - 50, 99 - 60 3: 80 - 10, 98 - 10, 99 - 120





	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
55	4319 - Mixed Upland Forest	High Density Log	16.1	90		open understory - easy to walk around; middle of stand contains more BAM, large yellow birch; central and eastern parts are wet, lots of slash, more cedar scattered openings; lots of cedar in most of stand north-central section of stand contains patch of red maple; heard barred owl
56	4130 - Aspen	High Density Sapling	12.1	15		regenerating aspen - cut 2005
57	42340 - Upland Spruce/Fir	High Density Pole	18.1	63		variable stand; overall upland but with some wet spots; some openings and wet spots with tag alder; spruce and fir have lots of dead limbs in understory; some aspen starting to die out
58	6120 - Lowland Cedar	High Density Pole	9.4	57		
59	4139 - Aspen, Mixed Deciduous	Low Density Sapling	8.3	5		regenerating clearcut with reserves (5-point Foothold, 2005); individual, scattered log-size paper birch and clumps of balsam/spruce; browse on aspen spp. along deer trails
60	6120 - Lowland Cedar	Low Density Sapling	8.0	102		flooded beaver pond, barely 25% live tree cover, lots of dead cedar; shrub ID is uncertain
61	6120 - Lowland Cedar	High Density Log	672.4	125		variable stand, contains areas of other types (Q, P) but they aren't large enough to be their own stands; aspen and birch are starting to die out in many of these areas; Small patch of hardwoods at end of Well Casing Rd near North Branch of Milakokia River; Stand also contains: scattered large white pine in overstory, black ash, yellow birch, red maple, hemlock, tamarack; North Branch of the Milakokia River is not mapped correctly, especially northern and southern sections, central section is mapped more accurately; contains numerous other unmapped stream segments and wet areas, including moderately large stream in section south of Milakokia River; ground is uneven, wet spots contain sphagnum, ferns and wetland shrubs (e.g. labrador tea); higher ground supports white pine etc slash is dense and windthrow is heavy in many areas, especially at edges of the stand dense understory in many places
62	6118 - Lowland Deciduous with Cedar	High Density Log	19.2	88		birch is starting to die out
63	4319 - Mixed Upland Forest	High Density Pole	51.9	125		variable stand, contains pockets of almost all cedar (central section) and at least 1 small black spruce bog (southeast corner)
64	6121 - Tamarack	Medium Density Pole	16.5	107		wet, possibly flooded by adjacent beaver pond; lots of grasses on forest floor
65	4199 - Other Mixed Upland Deciduous	Medium Density Log	13.7	100	111-140	thick limby balsam in understory; aspen in understory is dense in patches; cedar at edges; hilly topography; short regen is heavily browsed; aspen heavier in some pockets, birch in others



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
66	4190 - Mixed Upland Deciduous with Cedar	Medium Density Pole	12.2	87		overall upland but with wet spots and small, drier ridges; red maple regen is dense in places; at least 1 large yellow birch
68	6118 - Lowland Deciduous with Cedar	High Density Pole	10.5	87		variable stand, black ash in patches
69	4140 - Other Upland Deciduous	Medium Density	8.6	11		heavy browse on red maple in sub-canopy; part of Heinz Lake timber sale (1999); softwood inclusion in northern half contains larger diameter fir, spruce & BAM (6") and a little cedar and paper birch average diameter in rest of stand is 1-2" for all species
70	4190 - Mixed Upland Deciduous with Cedar	High Density Log	28.2	78		aspen starting to die out; overall upland but w/ wet spots
71	6120 - Lowland Cedar	Medium Density Pole	46.9	65		
72	4191 - Mixed Upland Deciduous with Conifer	High Density Log	6.5	87		Overall upland but with wet spots, especially at edges; Black spruce bog to southwest; Variable stand, extremely heavy balsam understory in places; Aspen and birch are starting to die out
73	42360 - Upland Cedar	High Density Log	2.3	118		large diameter yellow birch trees at west edge of stand next to Stand 60; also contains white spruce retention from Soggy Stalks Hardwood sale (2003); some slash but not major blowdowns of other stands
74	4139 - Aspen, Mixed Deciduous	Medium Density	5.1	13		low deer browse
77	4319 - Mixed Upland Forest	High Density Log	13.6	95		Birch and aspen starting to die; dense red maple regen in @ least 1 spot
78	4115 - Y.Birch, Hemlock NH	Low Density Pole	12.4	79		part of Soggy Stalks Hardwood TS (2003); birch was retention; also contains red maple
79	42360 - Upland Cedar	High Density Log	1.5	115		2-part stand; part of cedar stand in Comp 194
80	42340 - Upland Spruce/Fir	Medium Density	6.0	36		variable stand; line in 2009 NAIP photo = old ice road?; most of stand was previously typed as F3; wetter and more small cedar west of line
81	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	92.1	7		regenerating clearcut with retention (Soggy Stalks Hardwood, cut 2003); scattered log-size white pine (and white pine snags) in supercanopy, more numerous on west end; scattered grassy openings



Stand	Cover Type	Acres	Gen Cmts:
7	330 - Low-Density Trees	23.0	
10	330 - Low-Density Trees	1.7	
13	310 - Herbaceous Openland	1.8	mostly aspen regen North of road mostly grassy South of road
19	3303 - Mixed Low Density Trees	4.0	
36	3301 - Low Density Deciduous Tree	1.9	One clump of aspen and scattered spruce and fir trees
42	3301 - Low Density Deciduous Tree	8.6	sale = Fine Nine, finished cutting 3/09
44	622 - Lowland Shrub	3.9	beaver pond/flooded area
50	3303 - Mixed Low Density Trees	26.3	
53	622 - Lowland Shrub	8.9	
67	622 - Lowland Shrub	6.2	Area flooded by beavers, lots of standing dead cedar
75	622 - Lowland Shrub	9.5	Area flooded by beavers. Lots of standing dead cedar.
76	622 - Lowland Shrub	11.7	Close to 25% live tree canopy Area flooded by beavers Includes some dead cedar, but not as much as other beaver ponds in this compartment



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.
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.