



Compartment Review Presentation

Sault Ste. Marie Forest Management Unit

Compartment 45028

Entry Year 2020

Acreage: 1,205

County Mackinac

Management Area: Huron Patterned Outcrop

Revision Date: 2018-08-07

Stand Examiner: Jeff Wise

Legal Description:

T42N R1E Sec 15, 16, 21, & 22

Identified Planning Goals:

To develop an optimal age class distribution of aspen stands for sustainable forestry and wildlife values. To rotate hardwood treatments for optimum regeneration and stocking of all age classes. Maintain current openings as needed for diversity and enhancement of wildlife benefits. To provide reasonable public access for multiple use benefits such as hunting, trail riding, camping, and hiking, while protecting the natural resources. Most accessible areas have had treatments in the past. All prescribed treatments for this YOE are factor limited due to access and survey. The main access road into the last remaining mature timber is on private land with a bridge rated for snowmobile use only.

Soil and topography:

Markey-Battydoe-Shelter Association, nearly level to steep, very deep soils that are very poorly drained to somewhat excessively drained. Pickford-Rudyard Association, nearly level to rolling, very deep soils that are very poorly drained to moderately well drained. Land is generally rolling, low to higher ground with areas of boulders, some very large. The compartment is split NW to SE by Mc Kay Creek with large areas of swamp.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

This compartment is essentially land locked from the public. Private land borders the north and north-west, with corporate land, Michigan Limestone, bordering on the south, east, and west. The DNR has easily obtained permission to access for management. Land use around the compartment is largely quarried for limestone products, with limited access for hunting by quarry employees, and private land owners.

Unique Natural Features:

Huge rock out-crops occur in the north-west part of the compartment. MNFI lists no element occurrences in this compartment but the potential may exist for limestone boulder loving species such as Walking Fern.

Archeological, Historical, and Cultural Features:

Nothing known at this time.

Special Management Designations or Considerations:

Nothing this YOE.

Watershed and Fisheries Considerations:

This compartment contains a large portion of McKay Creek and the headwaters of Prentiss Creek. These streams are classified as cold transitional streams. No treatments are scheduled near waterbodies in this compartment for YOE 2020, so Fisheries has no comments at this time.

Wildlife Habitat Considerations:

This compartment is part of the Huron Patterned Outcrop Management Area, where featured wildlife species include pileated woodpecker, ruffed grouse, snowshoe hare, and white-tailed deer. The compartment contains a mix of types ranging from a northern hardwood and an upland mixed stand to lowland poplar and wetlands. Most aspen and lowland poplar stands were treated, regenerated, and offer habitat for ruffed grouse, snowshoe hare, woodcock, and a variety of other species. Cedar and lowland conifer stands offer cover for deer, bear, and other wildlife. They will be left to continue offering cover and related habitat for these species. A hardwood stand will be thinned to increase age and structural diversity within it, and some mature mixed stands will be treated to continue providing young early successional habitat for grouse, hare, deer, and other species. Wetland and riparian areas will be protected for wetland wildlife and as travel corridors for other species.

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 Group subcrops below the glacial drift. The Engadine is quarried for stone/dolomite in the UP. A gravel pit is located in Section 17 and there may be potential on the uplands. There is no current economic oil and gas production in the UP.

Vehicle Access:

The Quarry Road is the only main access to this compartment. It is a private road owned and operated by the quarry for moving material with the large off road dump trucks. One two track enters the compartment through quarry property from the Quarry Road. The snow trail borders the compartment on the south side but has limited vehicle access.

Survey Needs:

Section 16 and 22.

Recreational Facilities and Opportunities:

No facilities. The snow trail runs the south border of the compartment. With no legal access to the public, there are no ORV trails. Hunting and trapping are predominant, with the possibility of other nature watching activities.

Fire Protection:

The Quarry Road is the main access to this area for fire suppression. Water sources vary with several drainages and swamps. Lake Huron is about two miles away.

Additional Compartment Information:

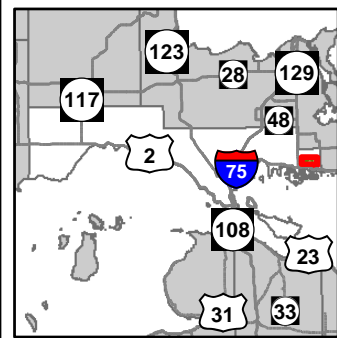
The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

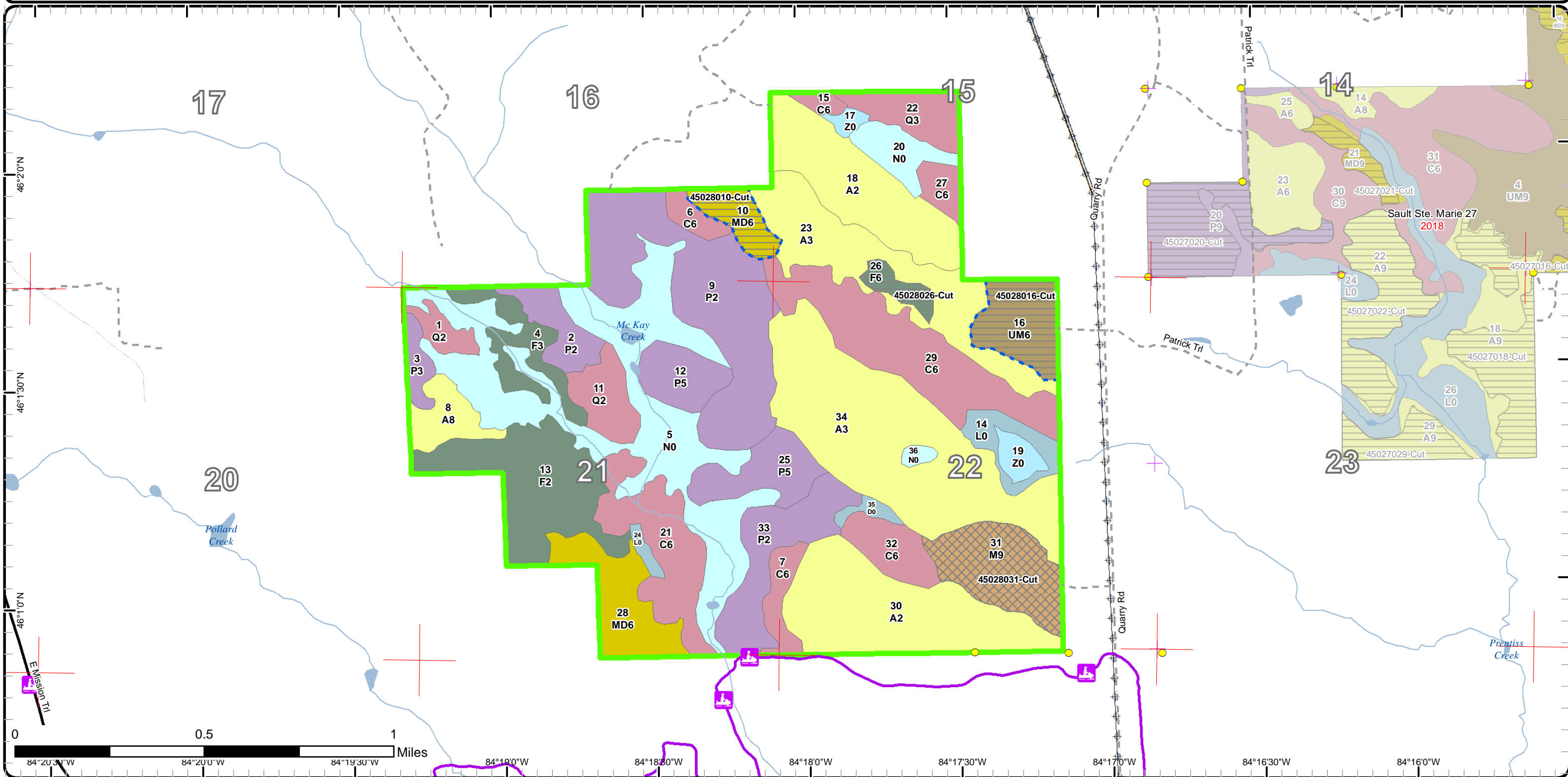
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map



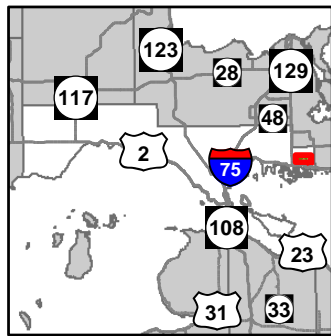
Compartment: 28
 T42N, R01E, Sec: 15, 16, 21, 22
 County: Mackinac
 Unit: Sault Ste. Marie
 Mgmt Area: Huron Patterned
 Outcrop
 YOE: 2020
 Acres: 1,205 GIS Calculated
 Examiner: Jeff Wise
 Map Revised: 12/7/2018
 Map Phase: Post Review

- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Counties
- Federal / State / County - Paved Road
- Private - Dirt / Gravel Road
- Snowmobile Trails
- Designated Snowmobile Trails
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Pipeline
- Powerline
- Compartment Boundary
- Treatments with Site Conditions
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes

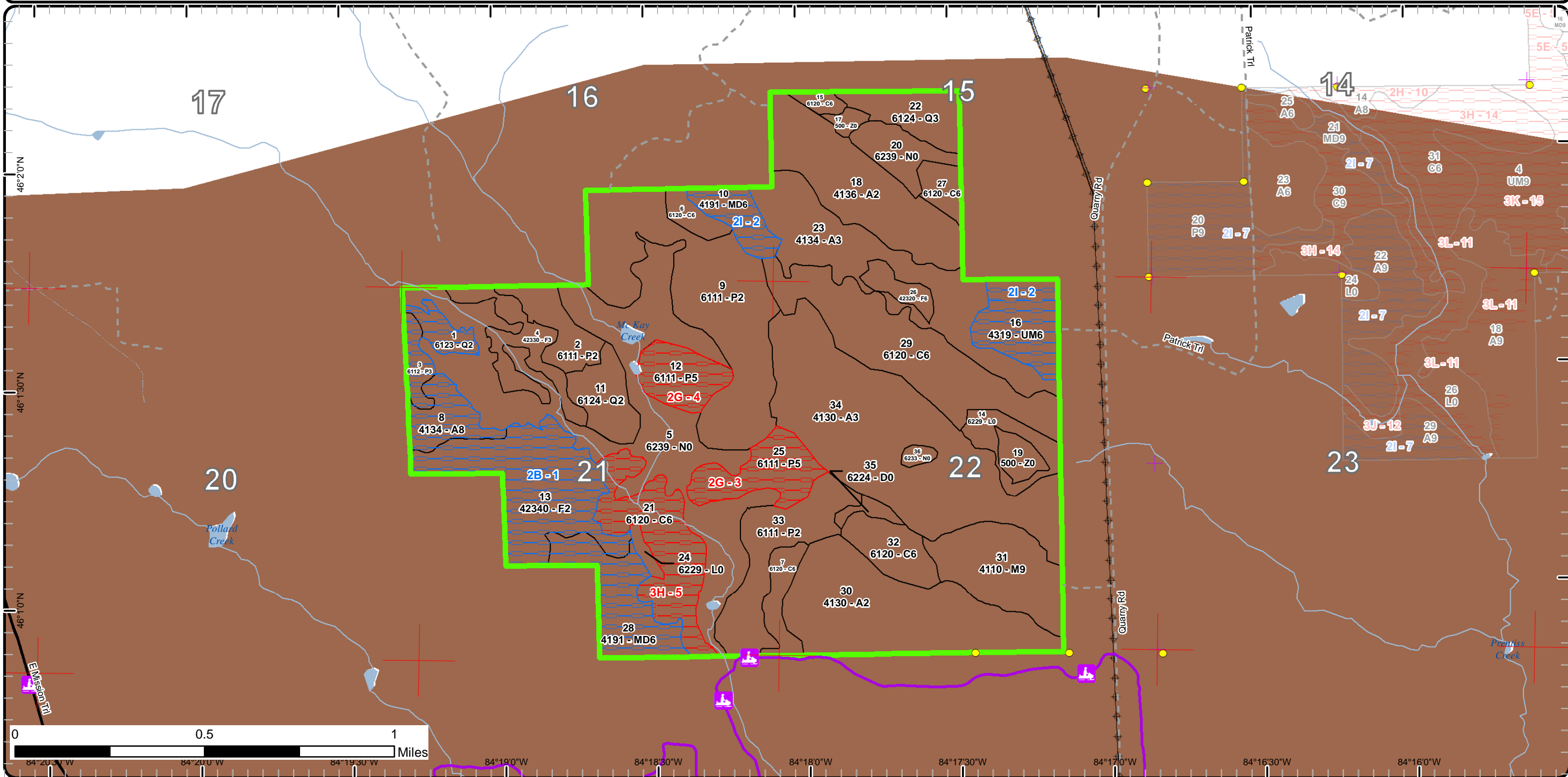


Special Conservation Areas & Site Conditions Map

Compartment: 28
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- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Pipeline
- ⊕ Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2I: Survey needed
- 2G: Too wet (sensitive soils, does not include access issues)
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- Deer Winter Range



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	147	67	154	0	0	0	0	0	0	0	0	0	0	0	0	0	368
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	169
Lowland Aspen/Balsam Poplar	0	0	102	0	8	0	0	0	0	0	0	0	0	0	0	0	0	104	214
Lowland Conifers	0	0	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Lowland Shrub	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Marsh	156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	49
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	42
Treed Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	29
Upland Spruce/Fir	0	0	0	23	65	0	0	0	0	0	0	0	0	0	0	0	0	8	96
Water	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total	188	0	249	139	227	0	0	0	0	0	0	0	0	0	0	0	0	401	1204



Report 2 – Treatment Summary

Sault Ste. Marie Mgt. Unit
Year of Entry: 2020

Acres of Harvest

Compartment 28
Total Compartment Acres: 1,205

Commercial Harvest - 50
Harvests with Site Condition - 44
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Mixed Upland Deciduous	15	0	0	0	0	0	0	0	0	15
Northern Hardwood	0	42	0	0	0	0	0	0	0	42
Upland Mixed Forest	29	0	0	0	0	0	0	0	0	29
Upland Spruce/Fir	8	0	0	0	0	0	0	0	0	8
Total	52	42	0	0	0	0	0	0	0	94

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	94	0	0	0	0	0	0	0	0	94
Next Step	0	0	0	0	0	0	94	0	0	94
Total	94	0	0	0	0	0	94	0	0	189



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
10	45028010-Cut	14.7	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	83	81-110	Harvest	Clearcut with Retention	4199 - Other Mixed Upland Deciduous	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition: Survey Needed

Prescription Cut all trees that are greater than 4" in DBH. Do not cut cedar, hemlock, pine, oak or yellow birch. Stay out of cedar patches and areas closed canopy conifers. Leave at least one retention patch. Winter cut (Dec. 1 - Mar. 31) so tops are available as browse for wintering deer. Create some brush piles when processing where practical to benefit hare, particularly along edges.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Regen: Acceptable regen includes aspen, birch, maple, spruce, fir, cedar and pine.

Other Comment:

Proposed Start Date: 10/3 /2018

16	45028016-Cut	29.4	4319 - Mixed Upland Forest	Poletimber Well	48	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No Site Condition: Survey Needed

Prescription Cut all trees greater than 4" in DBH. Do not cut cedar, hemlock, pine, yellow birch or oak. Stay out of patches of cedar or areas of closed canopy conifers. Leave a patch of retention focusing on areas with little or no spruce/fir. Winter cut (Dec. 1 - Mar. 31) so tops are available as browse for wintering deer. Create some brush piles when processing where practical to benefit hare, particularly along edges.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Regen: Acceptable regen includes aspen, birch, maple, spruce, fir, pine and cedar.

Other Comment: 2017- MiFI, south part may be a good place for retention, timber smaller diameter, however, there are no areas with no spruce fir, that is why it is not a cedar stand.

Proposed Start Date: 10/3 /2018

26	45028026-Cut	8.0	42320 - Upland Spruce	Poletimber Well	75	1-50	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary
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Habitat Cut: No Site Condition:

Prescription Cut all trees greater than 4" in DBH. leave all cedar, pine, hemlock, oak and yellow birch. Stay out of cedar patches and areas of closed canopy conifers. Winter Cut. Create some brush piles when processing where practical to benefit hare, particularly along edges.

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Regen: Acceptable regen includes, aspen, birch, maple, spruce, fir, pine, cedar.

Other Comment:

Proposed Start Date: 10/3 /2018

31	45028031-Cut	42.2	4110 - Sugar Maple Association	Sawtimber Well	110	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No Site Condition:

Prescription Mark trees to remove to 80 basal area. Do not mark yellow birch and oak if any found, but mark around any oak to release seedlings. Allow salvage of blow down from 2017 wind storm. Winter cut (Dec. 1 - Mar. 31) so tops are available as browse for wintering deer.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Regen: present species

Other Comment:

Proposed Start Date: 10/3 /2018

Total Treatment Acreage Proposed: 94.3

Report 4 – Site Conditions

Sault Ste. Marie Mgt. Unit

Jeff Wise : Examiner

Compartment: 28

Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	2B	2I	2G	3H
		With Condition	Not Available					
368	351	17	0	Aspen	17			
169	123	0	46	Cedar				46
214	159	8	46	Lowland Aspen/Balsam Poplar	8		46	
48	40	9	0	Lowland Conifers	9			
17	17	0	0	Lowland Shrub				
156	156	0	0	Marsh				
49	0	49	0	Mixed Upland Deciduous	35	15		
42	42	0	0	Northern Hardwood				
4	4	0	0	Treed Bog				
29	0	29	0	Upland Mixed Forest		29		
96	31	65	0	Upland Spruce/Fir	65			
11	11	0	0	Water				
1,205	935	178	92	Total Forested Acres	134	44	46	46
	78%	15%	8%	Relative Percent				

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Available	2B: Unknown if access through adjacent landowner(s) is possible	134	2I: Survey needed	5C: Delay treatment for age/size class diversity or exceptional site quality	Unspecified	Unspecified
Comments:							
2	Available	2I: Survey needed	44	5F: Evaluated for Forest Health Considerations	2B: Unknown if access through adjacent landowner(s) is possible	Unspecified	Unspecified
Comments: Quarry will have to grant access to loggers							

Report 4 – Site Conditions

Sault Ste. Marie Mgt. Unit

Jeff Wise : Examiner

Compartment: 28

Year of Entry: 2020

3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	46	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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.

S t a n d	Sault Ste. Marie Mgt. Unit		Report 7 – Forested Stands			Compartment: 28	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2020	
1	6123 - Lowland Fir	Sapling Medium	8.5	20	Immature		Low and wet, was typed as L but has trees.
2	6111 - Lowland Balsam Poplar	Sapling Medium	17.5	19	Unspecified		Cut in 1999
3	6112 - Lowland Aspen	Sapling Well	8.2	32	Unspecified		cut in 1985, wet, some cedar regen
4	42330 - Upland Fir	Sapling Well	23.2	20	1-50		Cut in 1998, white pine and cedar reserved, was managed for aspen but beavers have destroyed all aspen regen along swamp edge and stand has converted to thick balsam fir.
6	6120 - Lowland Cedar	Poletimber Well	7.6	112	Unspecified		
7	6120 - Lowland Cedar	Poletimber Well	12.1	87	Unspecified		some understory cut in 2005
8	4134 - Aspen, Spruce/Fir	Sawtimber Medium	17.4	32	Immature		Two age, cut in 1985 with rocky areas left out, some mature timber remains but white birch is dying out, beavers have destroyed all aspen regen along wetland edge and are moving inland, was in fact typed as B4 last YOE.
9	6111 - Lowland Balsam Poplar	Sapling Medium	101.8	19	Immature		cut in 1999, a lot of tag alder and wet areas.
10	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	14.7	83	81-110		Could be cut but is too small for the effort.
11	6124 - Lowland Spruce- Fir	Sapling Medium	19.2	20	Immature		Cut in 1998, some black spruce poles still standing.
12	6111 - Lowland Balsam Poplar	Poletimber Medium	20.4	119	Unspecified		patchy timber tag alder and balm swamp
13	42340 - Upland Spruce/Fir	Sapling Medium	65.1	32	Immature		Cut in 1985, rocky ground with boulders.
15	6120 - Lowland Cedar	Poletimber Well	4.1	131	Unspecified		too many blow downs, wet and flooded from beaver pond on east end., no deer or tracks seen
16	4319 - Mixed Upland Forest	Poletimber Well	29.4	48	81-110		Cut in 1969, north part more mature than south part.
18	4136 - Aspen, Mixed Conifer	Sapling Medium	61.5	12	Unspecified		Cut in 2002, cedar reserved, south part of cut is lowland with cedar, north part is high ridge with w birch.
21	6120 - Lowland Cedar	Poletimber Well	45.9	119	Unspecified		No evidence of wintering deer, wet area, beavers have destroyed all other species that could be surveyed on site.
22	6124 - Lowland Spruce- Fir	Sapling Well	20.7	25	Immature		cut in 1992



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Sault Ste. Marie Mgt. Unit

Report 7 – Forested Stands

Compartment: 28
Year of Entry: 2020

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4134 - Aspen, Spruce/Fir	Sapling Well	67.2	25	Immature	Cut in 1992, south east end has nice open areas and illegal blind in the "bottle neck" as seen on photos.
25	6111 - Lowland Balsam Poplar	Poletimber Medium	25.9	119	Unspecified	timber patchy, tag alder and balm swamp
26	42320 - Upland Spruce	Poletimber Well	8.0	75	1-50	Fir and spruce subject to SBW.
27	6120 - Lowland Cedar	Poletimber Well	8.8	131	Unspecified	Birch and aspen are on a small ridge on west side of stand, stand is a swamp.
28	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	34.6	85	51-80	Very rocky areas with boulders, contains some operable ground, cedar and white pine older than 75 years.
29	6120 - Lowland Cedar	Poletimber Well	72.0	100	Unspecified	Same as last inventory.
30	4130 - Aspen	Sapling Medium	85.6	14	Unspecified	cut in 2003, was part of 45 but has residual mature oak left in stand, looking good fully stocked.
31	4110 - Sugar Maple Association	Sawtimber Well	42.2	110	81-110	Heavy blowdown from a storm summer of 2017. Many large good quality maple and basswood down. Four wood permits given summer 2017.
32	6120 - Lowland Cedar	Poletimber Well	18.8	100	Unspecified	no deer or tracks seen
33	6111 - Lowland Balsam Poplar	Sapling Medium	40.1	12	Unspecified	cut in 2005, cedar reserved, and a pocket of retention in NE corner of wet ground.
34	4130 - Aspen	Sapling Well	136.8	33	Immature	cut in 1984, looking good, approaching pole size.



Stand	Cover Type	Acres	Managed Site	General Comments:
5	6239 - Mixed Emergent Wetland	137.6	No	One large drainage system through the compartment.
14	6229 - Mixed lowland shrub	13.9	No	
17	500 - Water	3.4	No	Beaver pond
19	500 - Water	7.5	No	
20	6239 - Mixed Emergent Wetland	15.9	No	
24	6229 - Mixed lowland shrub	3.1	No	
35	6224 - Treed Bog	4.0	No	
36	6233 - Wet Meadow	2.6	No	