



Compartment Review Presentation

Sault Ste. Marie Forest Management Unit

Compartment 45134

Entry Year 2022

Acreage: 1,873

County Mackinac

Management Area: Mackinac Mix

Revision Date: 2020-07-27

Stand Examiner: Andrew Krugh

Legal Description:

T44N R7W Sections 20, 21, 29

Identified Planning Goals:

This compartment is located between Caffey Corners and Fiborn Quarry. The majority of the compartment consists of a vast mixed conifer swamp, with a couple small islands of higher ground. Approximately half of section 29 is upland consisting of aspen, productive red pine and spruce plantations, and a grassy opening complex. Some aspen clones exist within the opening complex. The red pine and spruce stands need regular thinnings to promote growth and health. The small hardwood stand in the northwest corner of section 20 is part of a larger hardwood complex and is being treated with the adjacent compartments. A portable bridge will be needed to access this hardwood area. Regeneration has occurred in the lowland conifer stands where harvesting has taken place. The regeneration in these areas are becoming larger healthy areas and this process should be repeated.

Soil and topography:

Upland areas are level to slightly rolling consisting of Springlake loamy coarse sand. The associated soils on the upland islands within the swamp are Crowell sand and Paquin sand. The lowland swamps and bogs consist of Markey and Carbondale mucks, and Dawson and Loxley peats. The transitional hardwood stand is slightly rolling and consists of Markey-Spot-Finch complex.

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

The majority of the compartment is state owned with two private inholdings. Michigan Karst Conservancy owns the old Fiborn Quarry to the north. Some private camps and residences are to the south. The remaining surrounding ownership is state lands.

Unique Natural Features:

Fiborn Quarry lies adjacent to the north (and the NENE section 21). This area consists of karst features.

Archeological, Historical, and Cultural Features:

Lies adjacent to Fiborn Quarry and the old town of Fiborn

Special Management Designations or Considerations:

Harvesting operations may be limited to non-winter months along the snowmobile trail. ORV trails will be signed and kept clear daily during harvesting operations

Watershed and Fisheries Considerations:

Fisheries Concerns: No surface water is present in this compartment.

Wildlife Habitat Considerations:

Compartment 134 is part of the Mackinac Mix MA where featured wildlife species include black bear, pileated woodpecker, ruffed grouse, snowshoe hare, and white-tailed deer. Most of the compartment is lowland forest, primarily cedar-dominated swamp. The cedar swamp as well as the bog on the southern edge both are parts of larger systems, both of which have upland islands or pockets in places. The primary uplands are on the south end of the compartment and include a larger opening that is slowly filling in through the process of succession, red pine plantation stands, and upland mixed forest. The far eastern portion of the compartment is part of deer wintering complex.

Wildlife objectives include maintaining the integrity of the swamp and the bog, lowland conifer cover in the swamp, and food sources for wildlife. The opening is in a good break-out location for wintering deer although it contains sandy soils and herbaceous resources are limited. It will be included as a site for treatment consideration although limited resources may mean such activities are conducted at other, higher priority sites. Sources of hard and soft mast, including oak, will be retained to provide food sources for deer, bear, and other species. Portions of the cedar swamp were treated historically and there is cedar regeneration that is established. Although this is not far from deer wintering complex, there

is little evidence of deer browse here currently. Limited treatment has been proposed in an area with evidence of historic treatments to help release some of the regeneration and encourage new growth.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial oil & gas production in this part of the state, and there is no known metallic mineral potential in this area. Multiple active sand/gravel pits are within one mile south of the compartment. The former Fiborn Limestone Quarry is just northeast of the compartment. There is potential for both sand & gravel and high-purity bedrock limestone within the compartment. However, much of the compartment is covered by wetlands, which could inhibit surface development. There is potential for karst features in this area (e.g., caves, sinkholes). The mineral rights, including all sand & gravel and bedrock limestone, in the southern portion of the compartment were sold to Graymont in 2015. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Access is limited to Fiborn Quarry Road, a fair to good county road along the east side of section 21; and Cobe Road, which is a county road east of the compartment to Hiawatha Trail and a good DNR road through the compartment, accessing section 29. Cobe Road widened to accommodate the snowmobile trail

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

The snowmobile trail follows the Cobe Road, and the ORV trail winds through the upland portions of Section 29. The snowmobile and ORV trails run through the upland area of the compartment. Primarily a deer and grouse hunting area. Good wildlife viewing area.

Fire Protection:

This is a low fire area due to the lowland swamps.

Additional Compartment Information:

The following reports from the Inventory are attached:

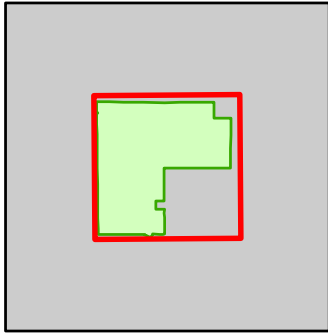
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

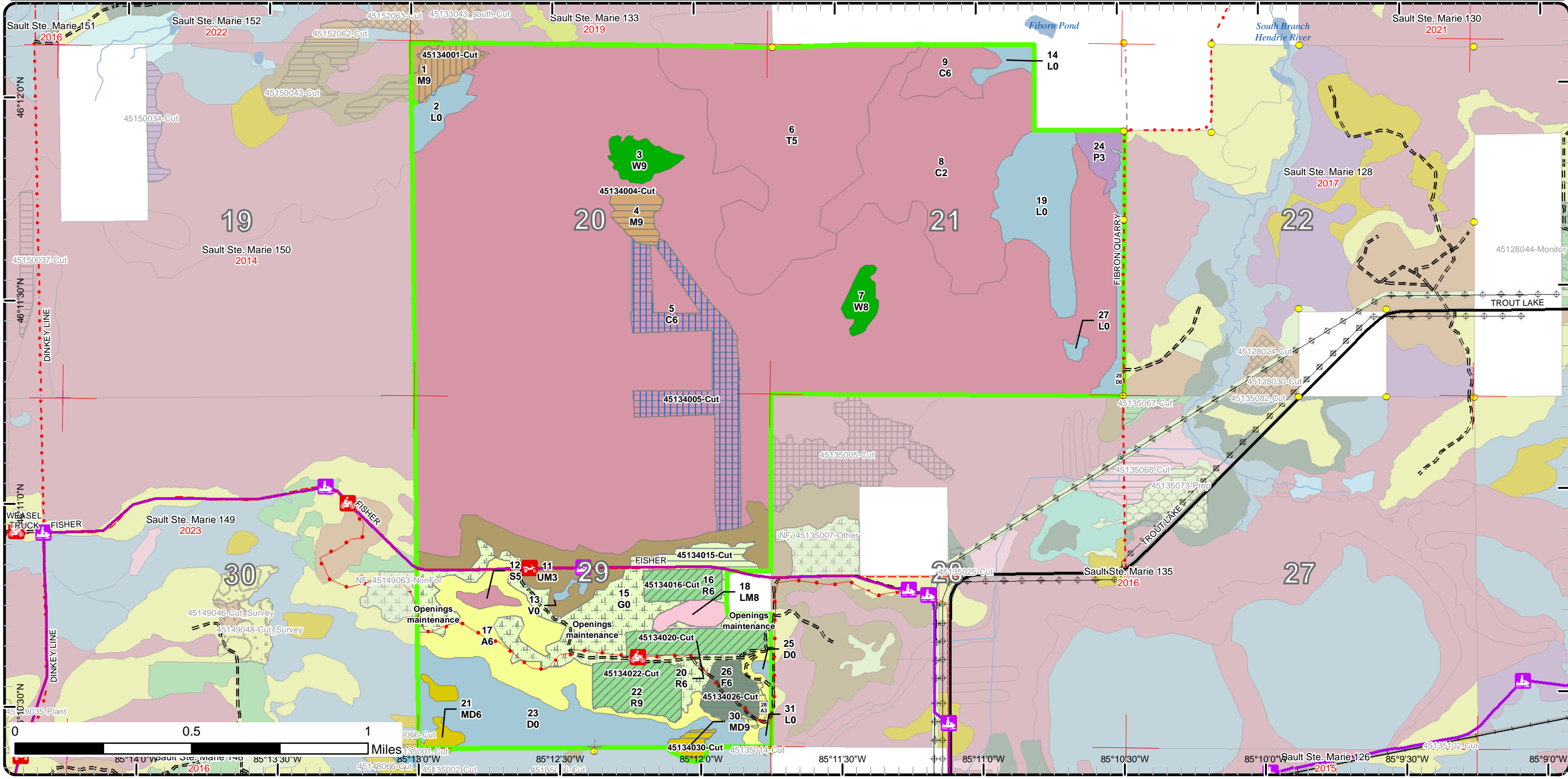
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 134
 T44N, R07W, Sec. 20, 21, 29
 County: Mackinac
 Unit: Sault Ste. Marie
 Mgmt Area: Mackinac Mix
 YOE: 2022
 Acres: 1,873 GIS Calculated
 Examiner: Andrew Krugh
 Map Revised: 8/13/2020
 Map Phase: Web Post

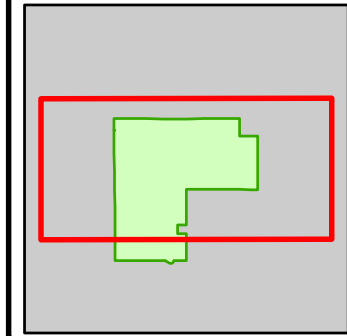


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- 🏍️ Motorcycle Trails (DNR License)
- 🛵 ORV Routes
- 🛷 Snowmobile Trails
- ORV License & Trail Permit
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- Designated Snowmobile Trails
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- Perennial River
- Lakes and Rivers
- Powerline
- Compartment Boundary
- Other Treatment - See Comments
- Clearcut (w/Reserves)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 310 - Herbaceous Openland
- 622 - Lowland Shrub

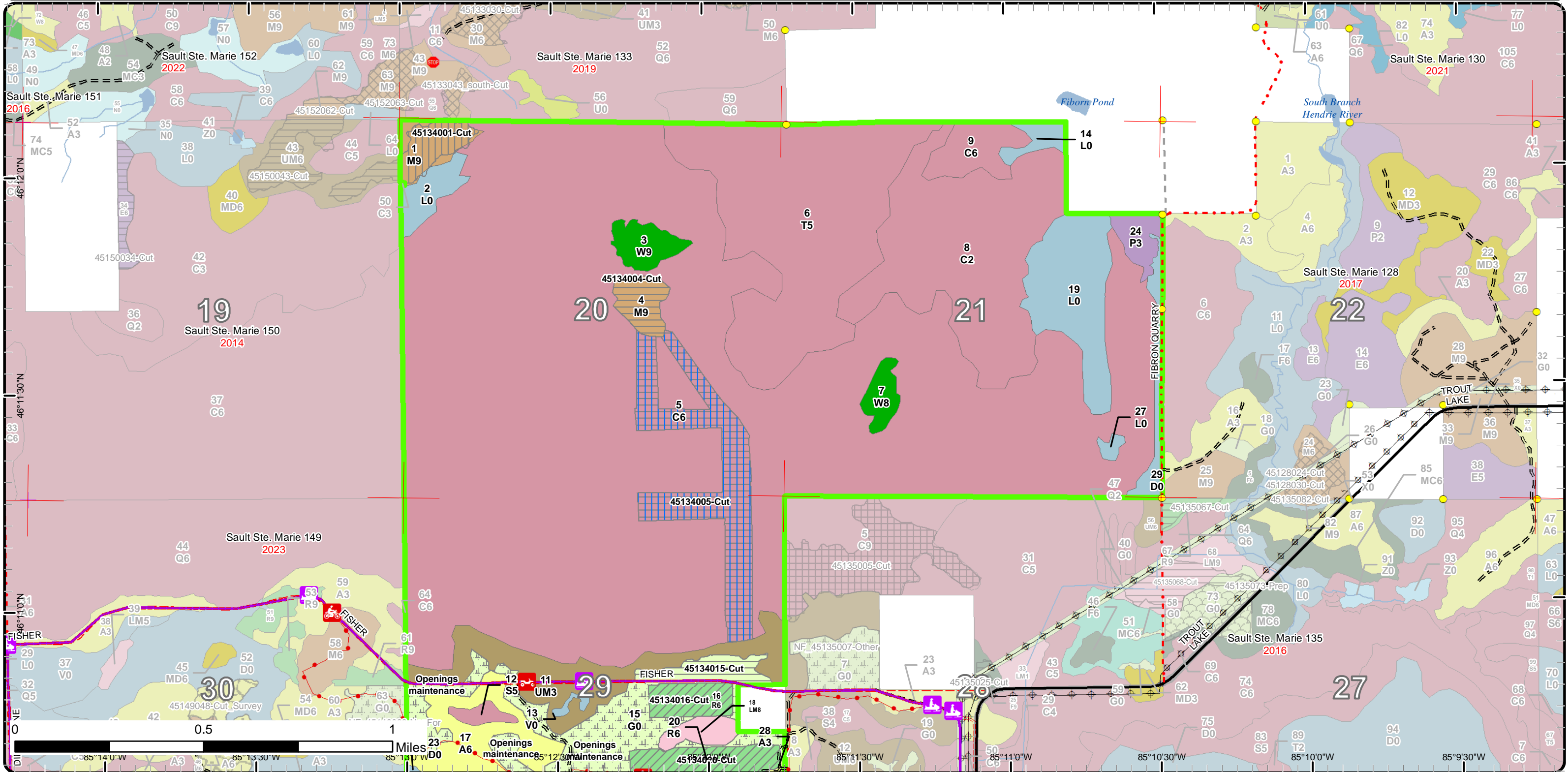


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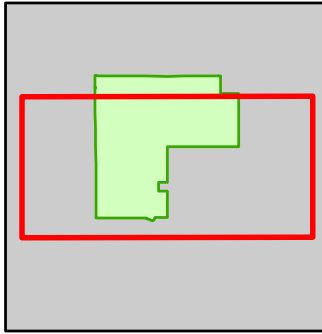


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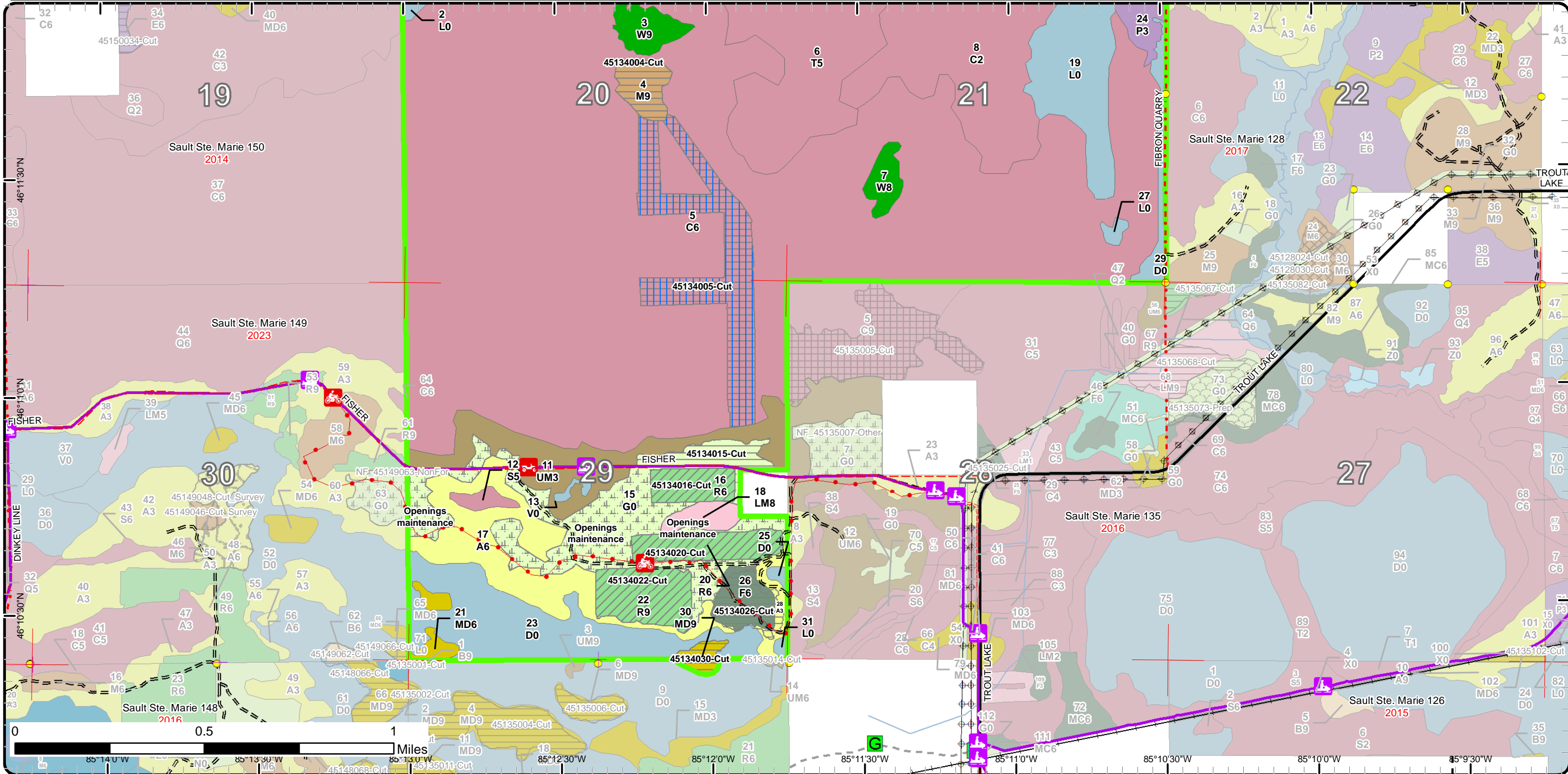


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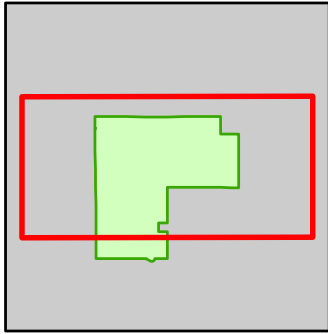


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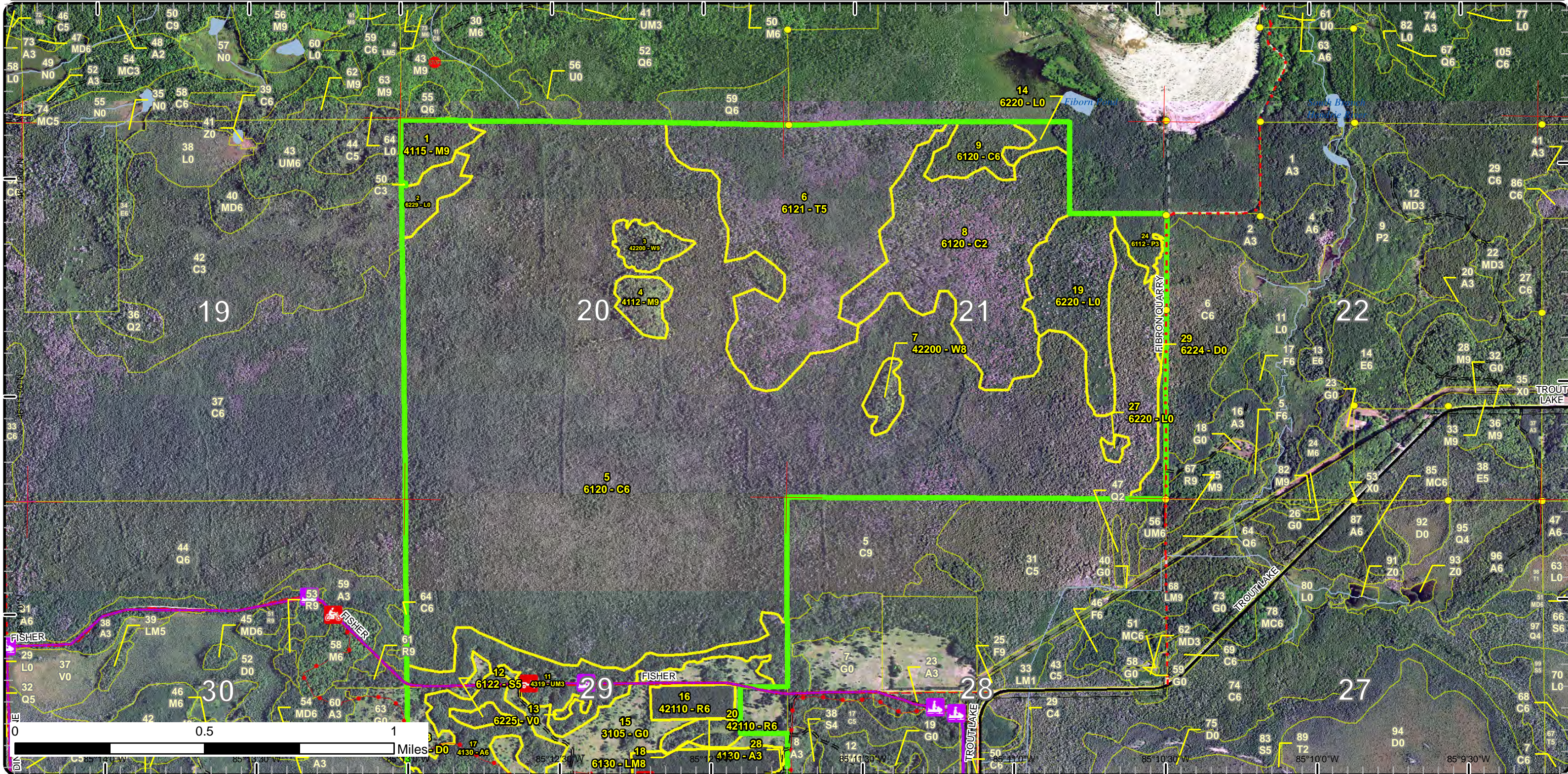
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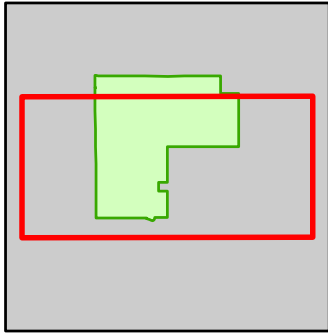
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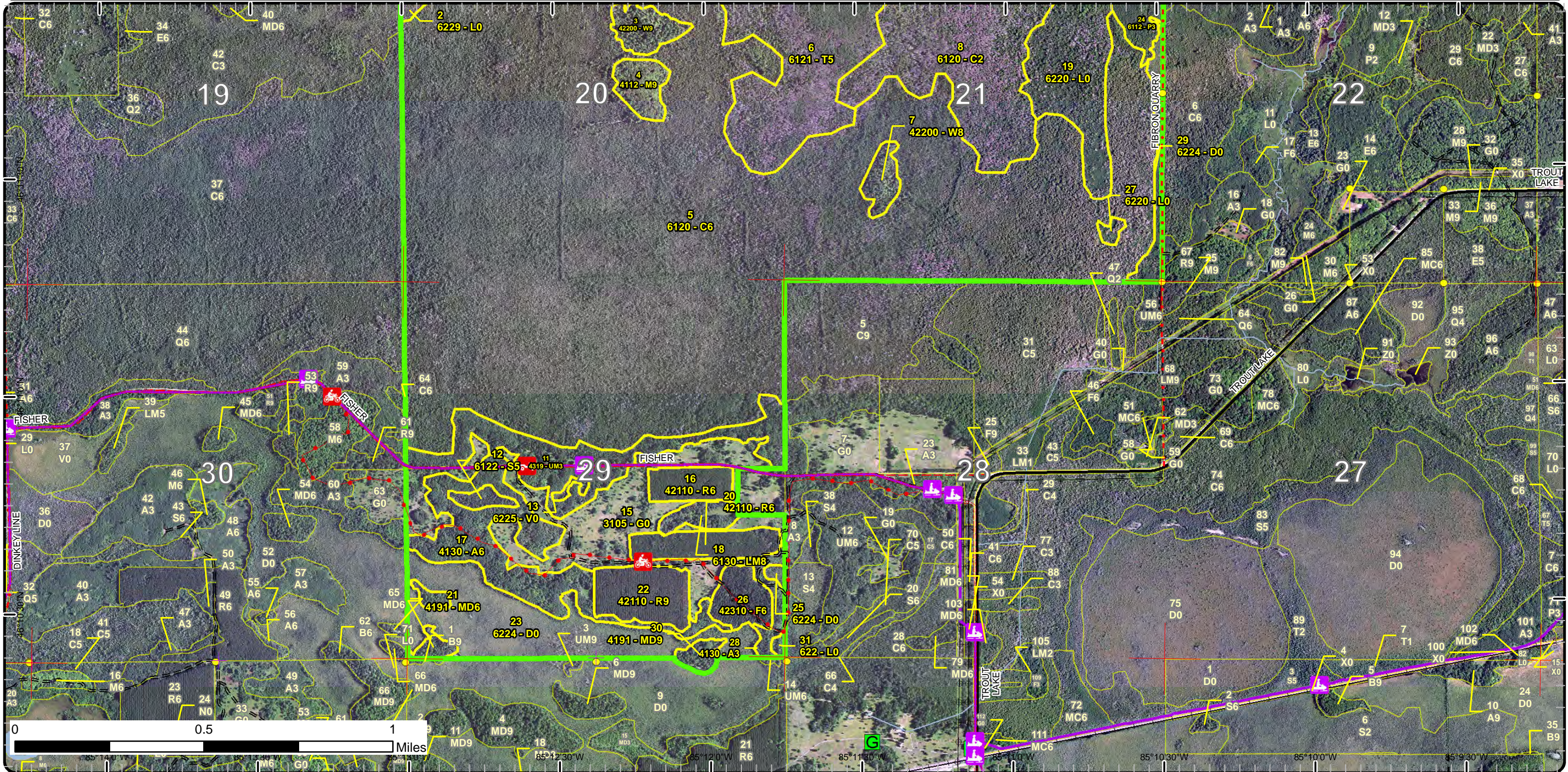


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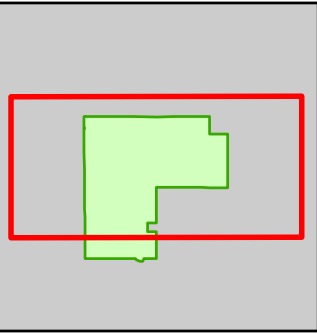


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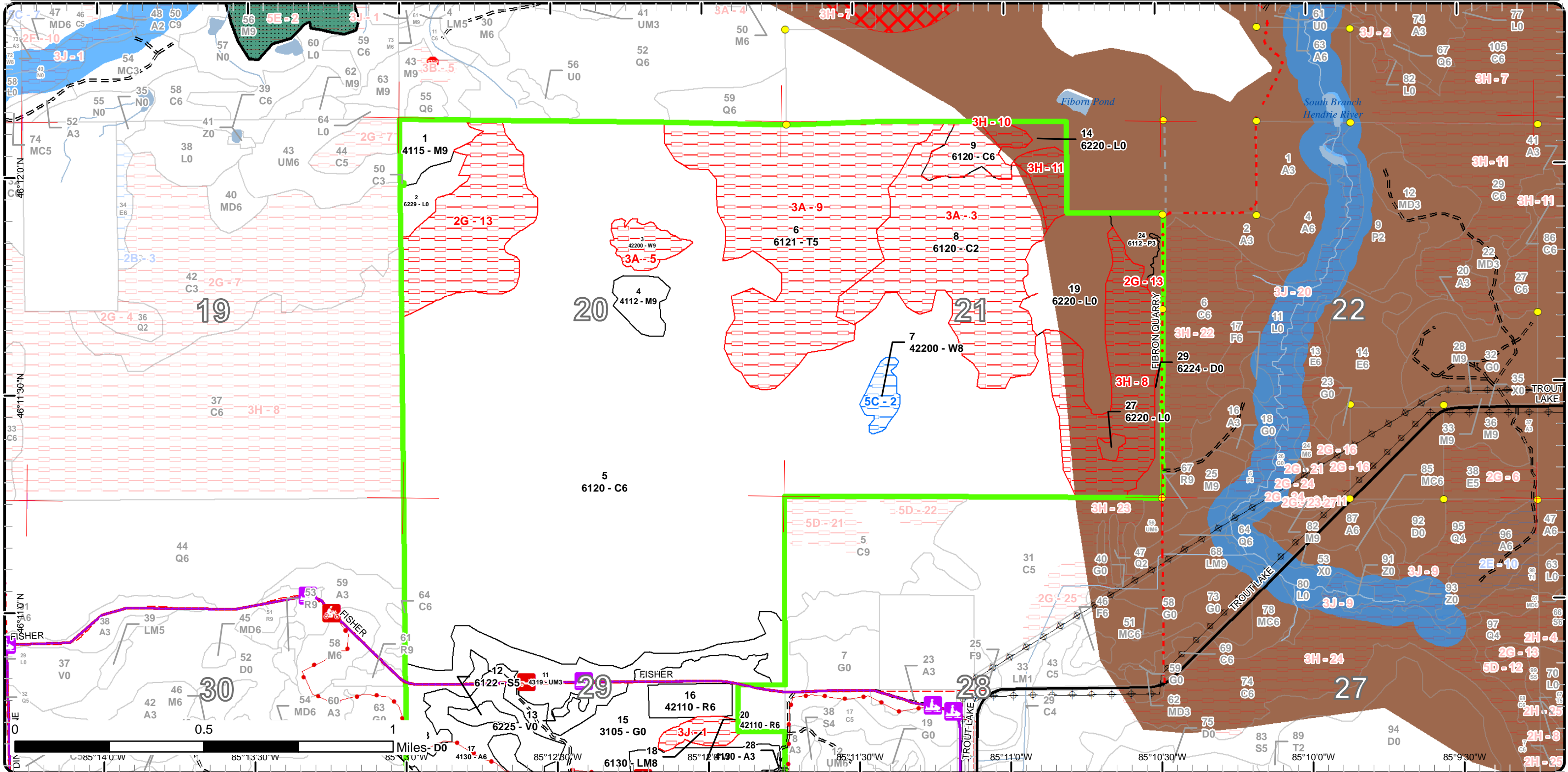


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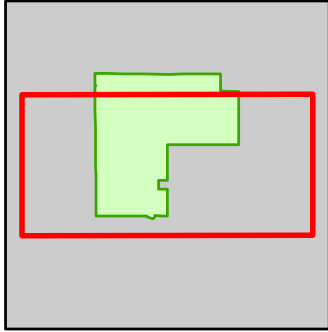


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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries
- SCA
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Northern Long-Eared Bat Hibernacula Buffers
- Deer Winter Range
- Habitat Corridor

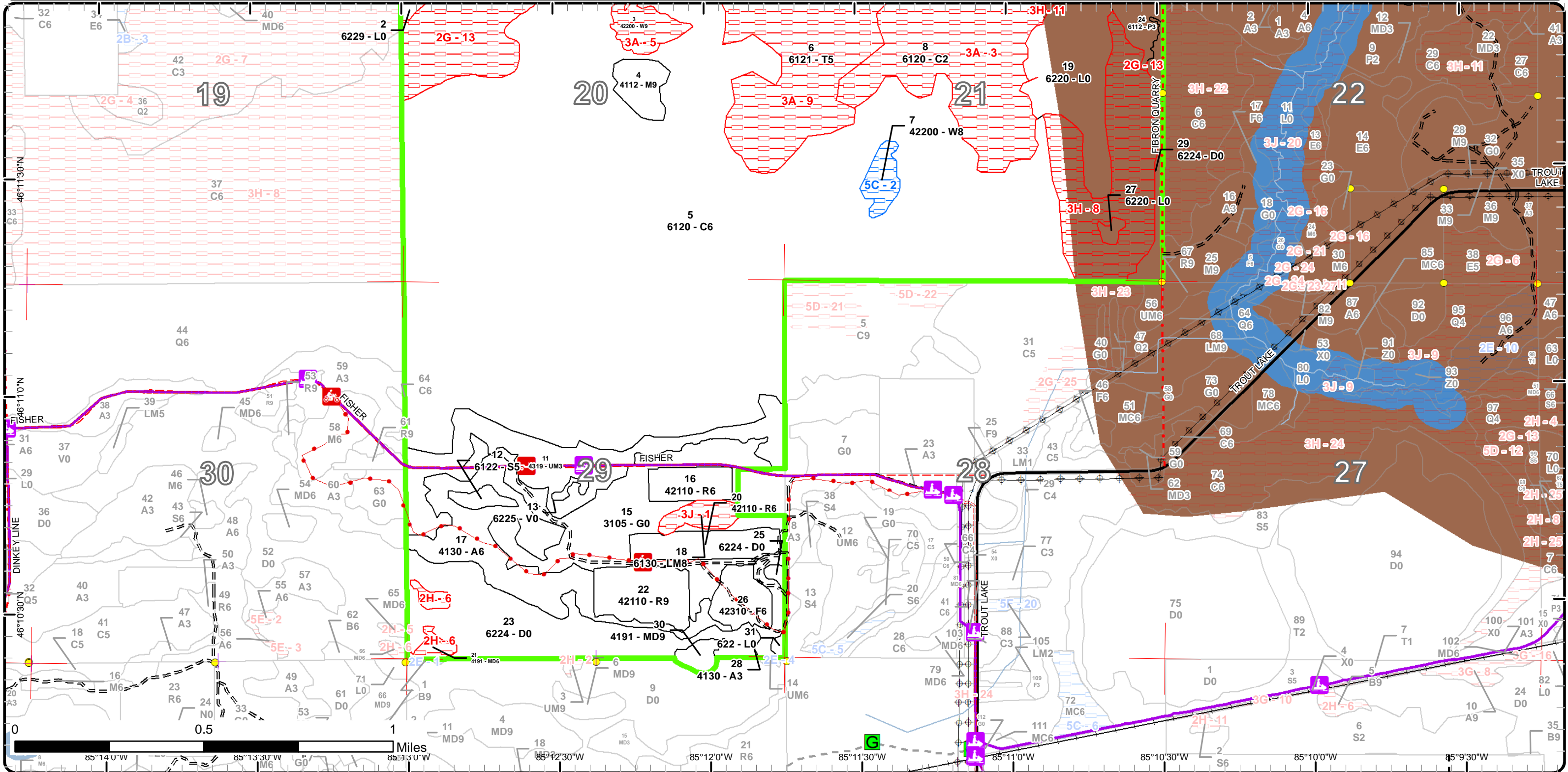


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 - Unavailable
 - Stand Boundaries
 - Cold Water Streams
 - High Priority Trout Stream Buffer
 - Deer Winter Range
- 2G: Too wet (sensitive soils, does not include access issues)
 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
 3A: Conservation Values incompatible with harvest at this time
 3J: Water quality / BMPs (stream, river, or lake)
 5C: Delay treatment for age/size class diversity or exceptional site quality



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	8	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	66
Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Cedar	0	0	0	0	0	0	0	0	0	0	0	1173	0	0	0	0	18	0	1191
Herbaceous Openland	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
Lowland Aspen/Balsam Poplar	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Lowland Mixed Forest	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	8
Lowland Shrub	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	7	5	0	0	0	0	0	0	0	11
Northern Hardwood	0	0	0	0	0	0	0	0	0	15	11	0	0	0	0	0	0	0	26
Red Pine	0	0	0	0	31	0	23	0	0	0	0	0	0	0	0	0	0	0	54
Tamarack	0	0	0	0	0	0	0	0	0	0	170	0	0	0	0	0	0	0	170
Treed Bog	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88
Upland Mixed Forest	0	0	0	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Upland Spruce/Fir	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	14
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20
Total	246	0	8	0	152	0	23	22	4	22	186	1173	0	0	20	0	18	0	1873



Report 2 – Treatment Summary

Sault Ste. Marie Mgt. Unit
Year of Entry: 2022

Acres of Harvest

Compartment 134
Total Compartment Acres: 1,873

Commercial Harvest - 161
Harvests with Site Condition - 5
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
Cedar	0	0	0	58	0	0	0	0	0	58
Herbaceous Openland	12	0	0	0	0	0	0	0	0	12
Mixed Upland Deciduous	5	0	0	0	0	0	0	0	0	5
Northern Hardwood	11	0	0	0	12	0	0	0	0	23
Red Pine	0	0	0	0	0	54	0	0	0	54
Upland Spruce/Fir	14	0	0	0	0	0	0	0	0	14
Total	42	0	0	58	12	54	0	0	0	166

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	166	0	0	0	0	0	72	0	0	239
Next Step	0	14	14	0	14	28	129	0	12	211
Total	166	14	14	0	14	28	129	72	12	450



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	Habitat Cut
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Proposed Treatments:

4	45134004-Cut	11.3	4112 - Maple, Beech, Cherry Association	Sawtimber Well	95	141-170	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	No
<p><u>Prescription</u> Cut all deciduous and fir 2 inches and greater at dbh. Cut all spruce 4 inches and greater at dbh. Leave all white pine, hemlock, and cedar.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Moderate to fully socked Maple, Fir, Spruce, White Pine.</p> <p><u>Regen:</u></p> <p><u>Other</u> Leave no retention because of leave species and small size.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											
5	45134005-Cut	58.2	6120 - Lowland Cedar	Poletimber Well	107	81-110	Harvest	Seed Tree with Retention	6120 - Lowland Cedar	Even-Aged	No
<p><u>Prescription</u> Treatment method of seed tree with reserves for cedar management objective. Leave patches of 4-8 cedar trees throughout the stand, not further than 4 tree lengths apart. Acreage may change depending on site prep decisions. If there is a significant reduction in acres it should be ok.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> Moderate to fully stocked Cedar, tamarack, and spruce. Short term objective will be a mix of lowland conifer.</p> <p><u>Regen:</u></p> <p><u>Other</u> Road to hardwood stand will not have leave trees within it. Long term goal is cedar. It is ok if short term there is a higher mix of species.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											
15	45134015-Cut	11.7	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	Harvest	Clearcut	310 - Herbaceous Openland		No
<p><u>Prescription</u> Harvest all trees 2 inches and greater.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> NonForestMgt, Other - Specify</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> none</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											



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	Habitat Cut
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16	45134016-Cut	12.6	42110 - Planted Red Pine	Poletimber Well	36	171- 200	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	No
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Prescription Third row thin, removing all deciduous if accessible.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2021

20	45134020-Cut	18.3	42110 - Planted Red Pine	Poletimber Well	36	171- 200	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	No
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Prescription Third row thin removing all deciduous where accessible

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2021

22	45134022-Cut	23.3	42110 - Planted Red Pine	Sawtimber Well	59	141- 170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
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Prescription Thin stand to 120 targeting poor form and larger trees most likely to be out of mill size class before future final harvest.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2021

30	45134030-Cut	4.9	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	90	171- 200	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	No
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Prescription Final harvest all species 2 inches and greater at DBH. Mark 1-2 white pine per acre where present to leave. This stand should be winter harvested only due to crossing wet area for access. no retention due to small size

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Moderate to fully stocked Birch, Aspen, Maple, Fir, Spruce, and White Pine

Regen:

Other

When setting up stand make sure to red line some larger trees on the edge for diversity.

Comment:

Site Condition Road Needed

Proposed Start Date: 10/1 /2021



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
15	Openings maintenance	72.4	3105 - Mixed Upland Herbaceous	Nonstocked		Unspecified	Other	Other	310 - Herbaceous Openland		No
<p><u>Prescription</u> Mechanical, chemical, Rx burn, or other appropriate method to maintain the opening. Herbaceous planting or planting of some mast-bearing trees or shrubs may also occur.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2021</p>											

Approved Treatments:

1	45134001-Cut	11.9	4115 - Y.Birch, Hemlock NH	Sawtimber Well	84	171-200	Harvest	Shelterwood	4115 - Y.Birch, Hemlock NH	Two-Aged	No
<p><u>Prescription</u> Reduce basal area to 50 to promote yellow birch and hemlock regeneration. Designate 1 hemlock per 5 acres to be felled as a nurse log for hemlock regeneration. Actual treatment size may vary depending on what conditions are found on the ground.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Any mix of maple, birch, aspen, hemlock, balsam fir, spruce, pine, cedar, cherry, or cedar.</p> <p><u>Other</u> cut with adjacent compartment.</p> <p><u>Comment:</u> Variance-There have been some changes requested to the treatment prescription proposed. The new prescription will be in stands: 45152063-cut, 45133043-south-cut and 45134001-cut, will be changed to clearcut with retention to cut all trees 2 inches in DBH or more, while leaving all white pine, hemlock, cedar and yellow birch and one to three quality hardwood trees where present to the acre. Also leave 3% to 10% retention for the whole area and place 5 chain no-cut buffer around the nest. Actual treatment size may vary depending on what conditions are found on the ground. Old next step comments: Check for regeneration in 4-5 years. Acceptable regeneration will include red maple, yellow birch, hemlock, white pine, black cherry, sugar maple, aspen, ash, beech, and balsam fir.</p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2018</p>											
26	45134026-Cut	14.1	42310 - Planted Spruce	Poetimber Well	60	111-140	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Clear cut, burn, trench and plant with Red pine.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Burn, Slash; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Pesticide, (Inactive)Aerial; Monitoring, Treatments: Artificial Regen(3yr); Monitoring, Herbicide Use; Pesticide, (Inactive)Aerial</p> <p><u>Acceptable Regen:</u> Red pine</p> <p><u>Other</u> Approved through Ch 7 4/11/17</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2017</p>											

Total Treatment Acreage Proposed: 238.7

Report 4 – Site Conditions

Sault Ste. Marie Mgt. Unit

Andrew Krugh : Examiner

Compartment: 134

Year of Entry: 2022

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions	Dominant Site Conditions								
		With Condition				2E	5C	2G	2H	3A	3H	3J		
66	66	0		0	Aspen									
2	2	0		0	Bog									
1191	897	0		294	Cedar			69			137	89		
84	84	0		0	Herbaceous Openland									
10	10	0		0	Lowland Aspen/Balsam Poplar									
8	0	0		8	Lowland Mixed Forest									8
72	72	0		0	Lowland Shrub						0			
4	4	0		0	Lowland Spruce/Fir									
11	3	2		7	Mixed Upland Deciduous	2				7				
26	26	0		0	Northern Hardwood									
54	54	0		0	Red Pine									
170	0	0		170	Tamarack						170			
88	88	0		0	Treed Bog					0				
53	53	0		0	Upland Mixed Forest									
14	14	0		0	Upland Spruce/Fir									
20	0	8		12	White Pine		8				12			
1,873	1,372	10		491	Total Forested Acres	2	8	69	7	319	89	8		
	73%	1%		26%	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	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Sault Ste. Marie Mgt. Unit

Andrew Krugh : Examiner

Compartment: 134

Year of Entry: 2022

3	Unavailable	3A: Conservation Values incompatible with harvest at this time	137	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3A: Conservation Values incompatible with harvest at this time	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	74	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Obligate deer yard.							
9	Unavailable	3A: Conservation Values incompatible with harvest at this time	170	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Sault Ste. Marie Mgt. Unit

Andrew Krugh : Examiner

Compartment: 134

Year of Entry: 2022

10	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	4	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
11	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	69	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 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.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																				
1	4115 - Y.Birch, Hemlock NH	Sawtimber Well	14.8	84	171-200	N/A	This stand is already set up and out for bid in 2020																																																				
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4	4112 - Maple, Beech, Cherry Association	Sawtimber Well	11.3	95	141-170	N/A	Red Maple island could be cut if accessible. Hemlock and white Pine Concentrated in pockets. Stand is located in the middle of an immense swamp and access will be tough.																																																				
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5	6120 - Lowland Cedar	Poletimber Well	1,039.1	107	81-110	N/A	Cedar mixed with scattered pockets of tamarack and black spruce. There was a high water table present throughout this stand. If you look on the aerial imagery the lines are old cuts that filled in great with a mix of spruce, tamarack and cedar.																																																				
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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6	6121 - Tamarack	Poletimber Medium	170.2	99	51-80	N/A	Standing water. Stand entrance requires Hummock Hopping. Also observed an occasional Black Cherry Sapling Growing out of larger hummocks.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	2	Pole	5	
Paper Birch	3	Pole	5	
Balsam Fir	10	Pole/Sapling	5	
Black Spruce	15	Pole/Sapling	5	
Northern White Cedar	10	Pole/Sap/Log	5	
Tamarack	60	Pole	6	99

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	5 - 10 feet	Sapling
Black Spruce	Low	< 5 feet	Sapling
Northern White Cedar	Medium	< 5 feet	Sapling
Labrador Tea	Medium	Variable	Tall Shrub
Alder	Medium	5 - 10 feet	Tall Shrub

7	42200 - Natural White Pine	Sawtimber Medium	8.4	130	141-170	N/A	This stand is a small upland island in the middle of a large swamp. Large white pine with red maple and upland black spruce underneath. Increment borer not long enough to reach core.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	15	Log/Pole	10	
Black Spruce	5	Pole	6	
White Pine	78	XLog/Log	20	130
Hemlock	2	Log	16	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	Variable	Sapling

8	6120 - Lowland Cedar	Sapling Medium	133.9	101	51-80	N/A	Stand has alot of snags of spruce and tamarack. There are no fine branches in the trees to suggest the tamarack are living. This stand has converted to a sapling ceader stand where all other species seem to be dying out. This stand will most likely become a monoculture or ceader in the next 50 years .
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Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	2	Pole/Log	8	
Balsam Fir	12	Pole	6	
Black Spruce	12	Sapling/Pole	4	
Northern White Cedar	64	Sapling/Pole	4	101
Tamarack	10	Pole	7	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling
Black Spruce	Low	< 5 feet	Sapling
Labrador Tea	Medium	< 5 feet	Tall Shrub

9	6120 - Lowland Cedar	Poletimber Well	18.3	150	51-80	N/A	Cedar mixed with Tamarack and Black spruce. lots of standing water present.
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Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	10	Pole/Log	8	
Balsam Fir	10	Pole	6	
Black Spruce	10	Pole	6	
Northern White Cedar	60	Pole	8	150
Tamarack	10	Pole/Log	10	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Low	< 5 feet	Sapling
Black Spruce	Low	< 5 feet	Sapling
Labrador Tea	Medium	< 5 feet	Tall Shrub

11	4319 - Mixed Upland Forest	Sapling Well	52.8	32	111-140	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	40	Sapling	4	32
Black Spruce	40	Pole/Sapling	6	
Red Maple	10	Sapling	4	
Tamarack	10	Pole	6	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																								
12	6122 - Black Spruce	Poletimber Medium	4.3	73	81-110	N/A	Black spruce bog with moss and labrador tea covering the ground. stand is not ready for harvest yet.																																																								
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13	6225 - Bog	Nonstocked	1.6		Unspecified	No	Small bog with spotty tamarack Surrounded By young aspen stand																																																								
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14	6220 - Alder/willow	Nonstocked	6.8			No																																																									
15	3105 - Mixed Upland Herbaceous	Nonstocked	84.1		Unspecified	No	Area is open grassland with Scattered cherry trees spruce And Clumps of young aspen beginning to Colonize throughout																																																								
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16	42110 - Planted Red Pine	Poletimber Well	12.6	36	171-200	N/A																																																									
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17	4130 - Aspen	Poletimber Well	58.0	37	111-140	N/A	Young aspen stand with scattered spruce, fir and the occasional white pine. No treatments are needed at this time.																																																								
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18	6130 - Fir, Aspen, Maple	Sawtimber Medium	8.1	61	81-110	N/A	Forested area that surrounds a small wetland leave to shelter wetland.																																																								
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19	6220 - Alder/willow	Nonstocked	49.8			No	Tag Alder with scattered trees																																	
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20	42110 - Planted Red Pine	Poletimber Well	18.3	36	171-200	N/A																																		
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21	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	6.5	89	111-140	N/A	Mackinac Mix harvestable if ice road is Built would have to cross an Area of Bog Containring sensitive species (pitcher plant).																																	
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22	42110 - Planted Red Pine	Sawtimber Well	23.3	59	141-170	N/A	1/3 live crown. Thin stand one more time then start thinking about restarting the stand.																																	
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23	6224 - Treed Bog	Nonstocked	73.7			No	Black spruce Bog No Merchantable trees Also observed patches of pitcher plant																																	
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24	6112 - Lowland Aspen	Sapling Well	9.6	34	171-200	N/A	aspen wet Ground																																	
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25	6224 - Treed Bog	Nonstocked	1.5		Unspecified	No	Black spruce Bog w/ Labrador tea, moss, and Alder pockets dispersed through out.																																	
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26	42310 - Planted Spruce	Poletimber Well	13.7	60	111-140	N/A	Part of earsplitting spruce 45-122-19 timber sale																																	
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27	6220 - Alder/willow	Nonstocked	2.1			No	Small alder pocket surrounded by cedar.																									
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28	4130 - Aspen	Sapling Well	8.0	11	Immature	N/A																										
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29	6224 - Treed Bog	Nonstocked	12.4		Unspecified	No	Stand is mostly tag alder with a smattering of coniferous and deciduous trees intermixed.																									
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30	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	4.9	90	171-200	N/A	Mature mackinac mix clearcut to Regenerate. Stand continues to the south cut entire stand if possible. Stand is surrounded by black spruce bog making access difficult. Low volumes and quality.																									
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31	622 - Lowland Shrub	Nonstocked	1.3			No	mix of balsam fir, Tamarack, red maple, white pine, Alder and paper birch.																									
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