



# Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12071

Entry Year: 2027

Acreage: 1,933

County: Dickinson

Management Area: Cassidy Creek

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**Stand Examiner:** Andrew Church

**Legal Description:**

T41N, R29W, Sections 1, 2, 11 and 12 T42N, R29W, Section 36

**Identified Planning Goals:**

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Protect riparian areas during management activity implementing Best Management Practices guidelines.

**Soil and topography:**

Sandy soils are found with large rocks and high rocky bluffs. Some of the higher sites have fair, but often shallow, hardwood soils.

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

Private ownership is prevalent throughout this compartment. The topography is mixed with rock bluffs and lowland swamps. Hunting, fishing, trapping, and camping are the main recreational use patterns.

**Unique Natural Features:**

The West Branch of Sturgeon River, and Mitchell Creek are present.

**Archeological, Historical, and Cultural Features:**

None known.

**Special Management Designations or Considerations:**

This area has an Ecological Reference Area.

**Watershed and Fisheries Considerations:**

Wet areas contribute to local creeks. This compartment contains headwater areas of Mitchell Creek and feeder streams that flow into the West Branch of the Sturgeon River and a portion of the WB Sturgeon River to the north. Both of these waterbody (including unnamed headwater and feeder streams) of designated Type 1 trout streams less than 50' in width. A 300' buffer is recommended for the areas susceptible to Aspen regeneration (specifically stands 3,48). For areas not susceptible to Aspen regeneration, 100' plus 5' per 1% increase in slope.

**Wildlife Habitat Considerations:**

Wood turtle occurrence to the south of the compartment. Loon to north and great blue heron rookery to the west. Potential for goshawk, moose, gray wolf, great blue heron rookery, and wood turtle. This is a natural area that is good habitat for deer, wolves, fisher, rabbits and general wildlife. Deer wintering area so functional cover is crucial. Contains game fund lands.

**Mineral Resource and Development Concerns and/or Restrictions**

No known potential exists for commercial oil & gas production in this part of the state. The closest known active sand/gravel pit is roughly three miles northeast. Bedrock is at or near the surface across the compartment, and there may be limited potential for development of sand & gravel. Abandoned iron mines occur within a couple miles of the compartment, and there is high potential for the occurrence iron-bearing formations beneath the southern portion of the compartment, as well as the potential for other metallic and/or critical minerals. State-owned mineral rights in and around the compartment have recently been leased for metallic mineral exploration and development; some mineral rights in the compartment were conveyed to Keweenaw Land Association in 2024 as part of a large exchange of mineral rights. There is moderate potential for new exploration activities within the compartment, and because the State does not own all the mineral rights within the compartment, and the mineral estate is the dominant estate, the department will need to provide the owner of the mineral rights reasonable access to the surface for mineral exploration and development.

**Vehicle Access:**

Poor, rough roads blocked by private gates.

**Survey Needs:**

Multiple corners needed.

**Recreational Facilities and Opportunities:**

Hunting, hiking, trapping, and fishing are some of the recreational opportunities.

**Fire Protection:**

Fire response will be from the Felch or Norway Field office.

**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: 12071  
T41N,R29W sec. 1-3, 9-12  
County: Dickinson  
Unit: Crystal Falls  
Mgmt. Area: Cassidy Creek  
YOE: 2027  
Acres: 1,933 GIS Calculated  
Examiner: Andrew Church  
Date Exported: 08/22/2025  
Map Phase: Web Post



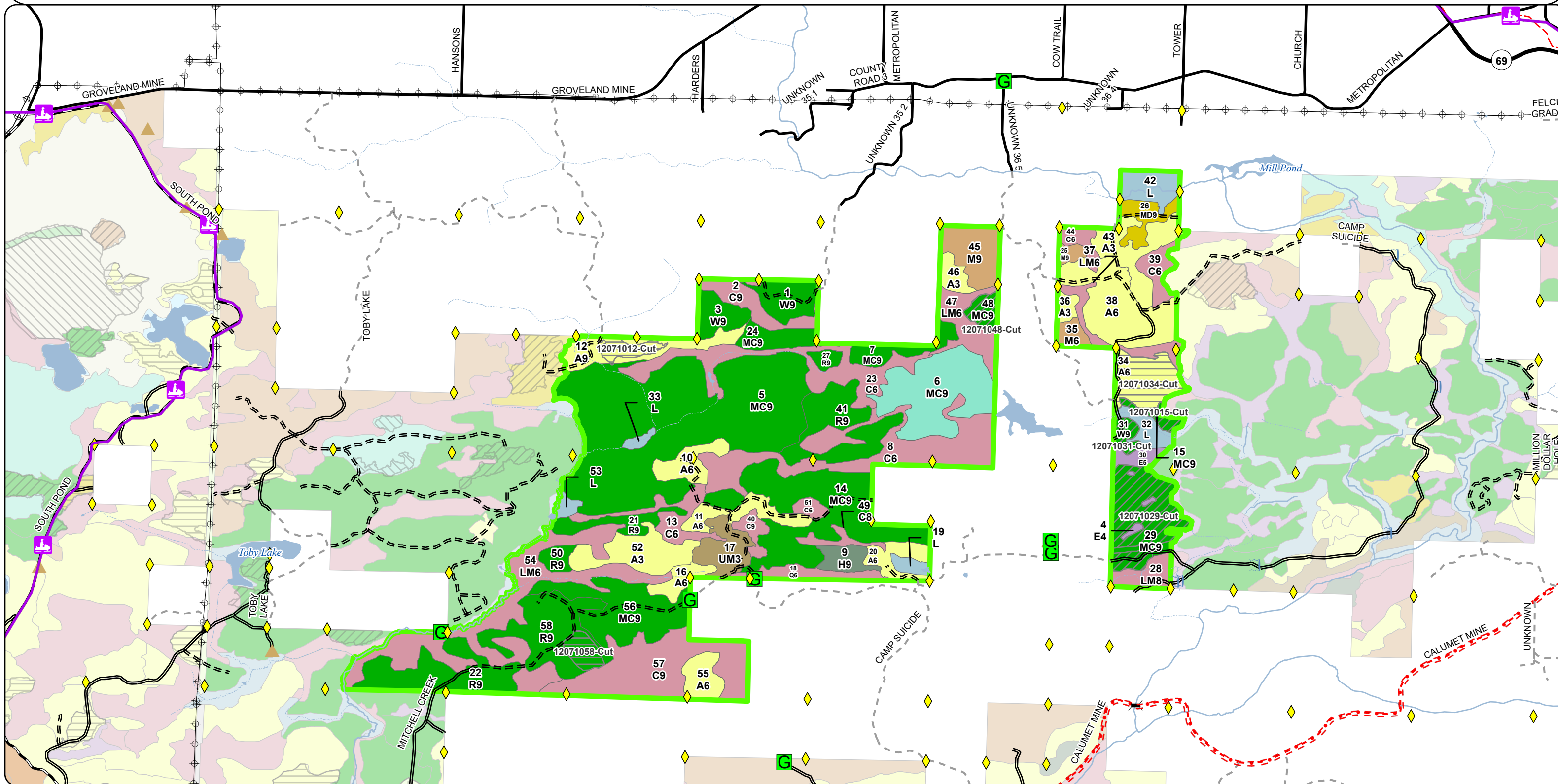
0 0.5 1 Miles

- Survey Grade Corners
- Berms
- Gate
- Bridges
- Culvert
- Designated ORV Routes
- Designated Snowmobile Trails
- DNR - Primary Forest Road

- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State Highway
- Federal / State / County - Paved Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Paved Road
- Private - Dirt / Gravel Road
- Intermittent Stream

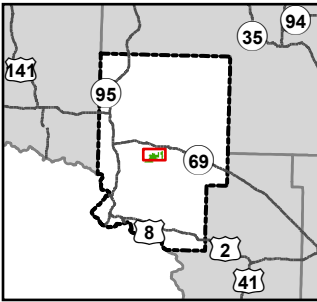
- Perennial River
- Powerline
- Lakes and Rivers
- Counties
- Compartment Boundary
- Clearcut
- Thinning
- 411 - Northern Hardwood
- 413 - Aspen

- 419 - Mixed Upland Deciduous
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 622 - Lowland Shrub



# Cover Type & Treatments Map

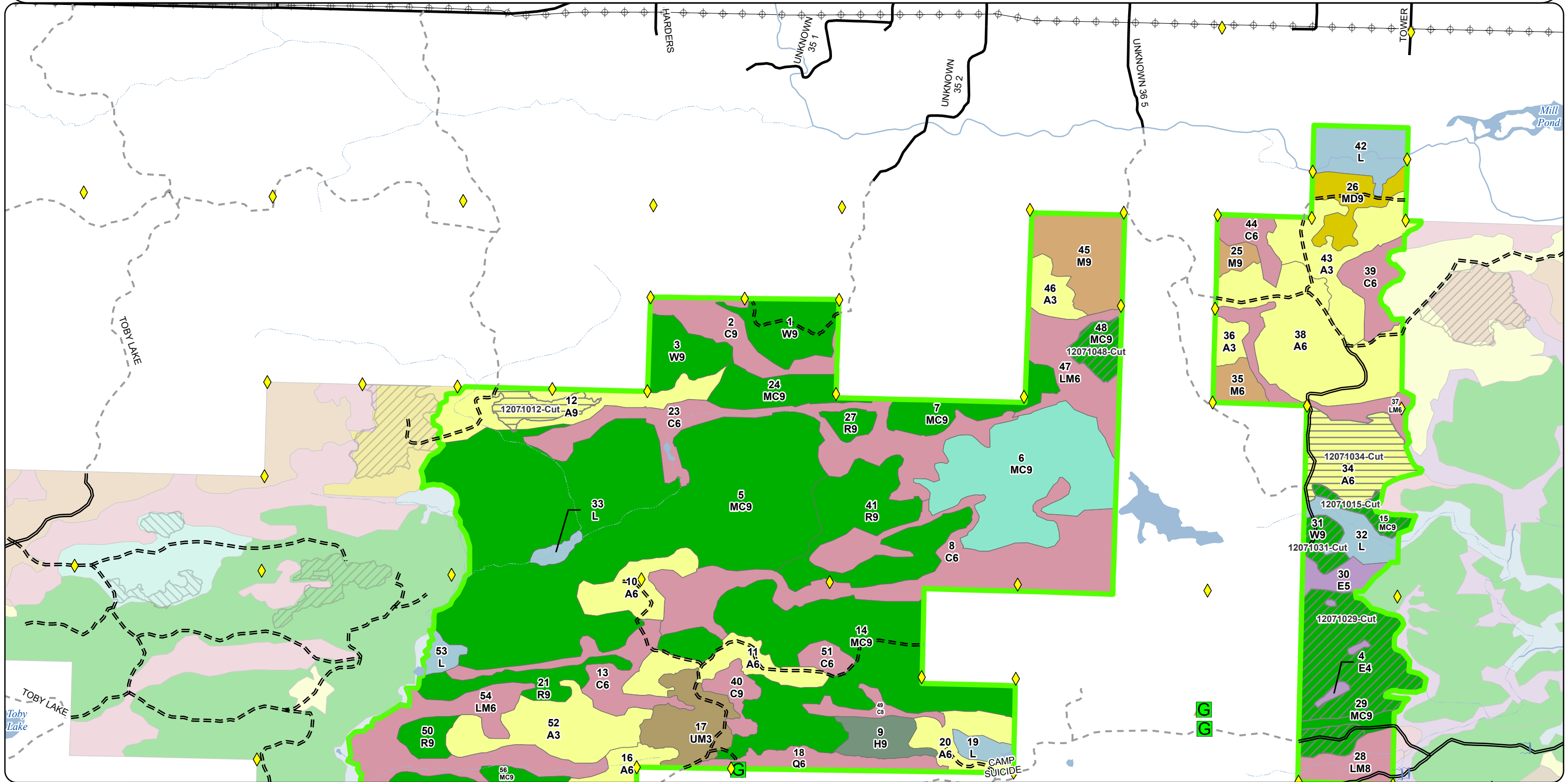
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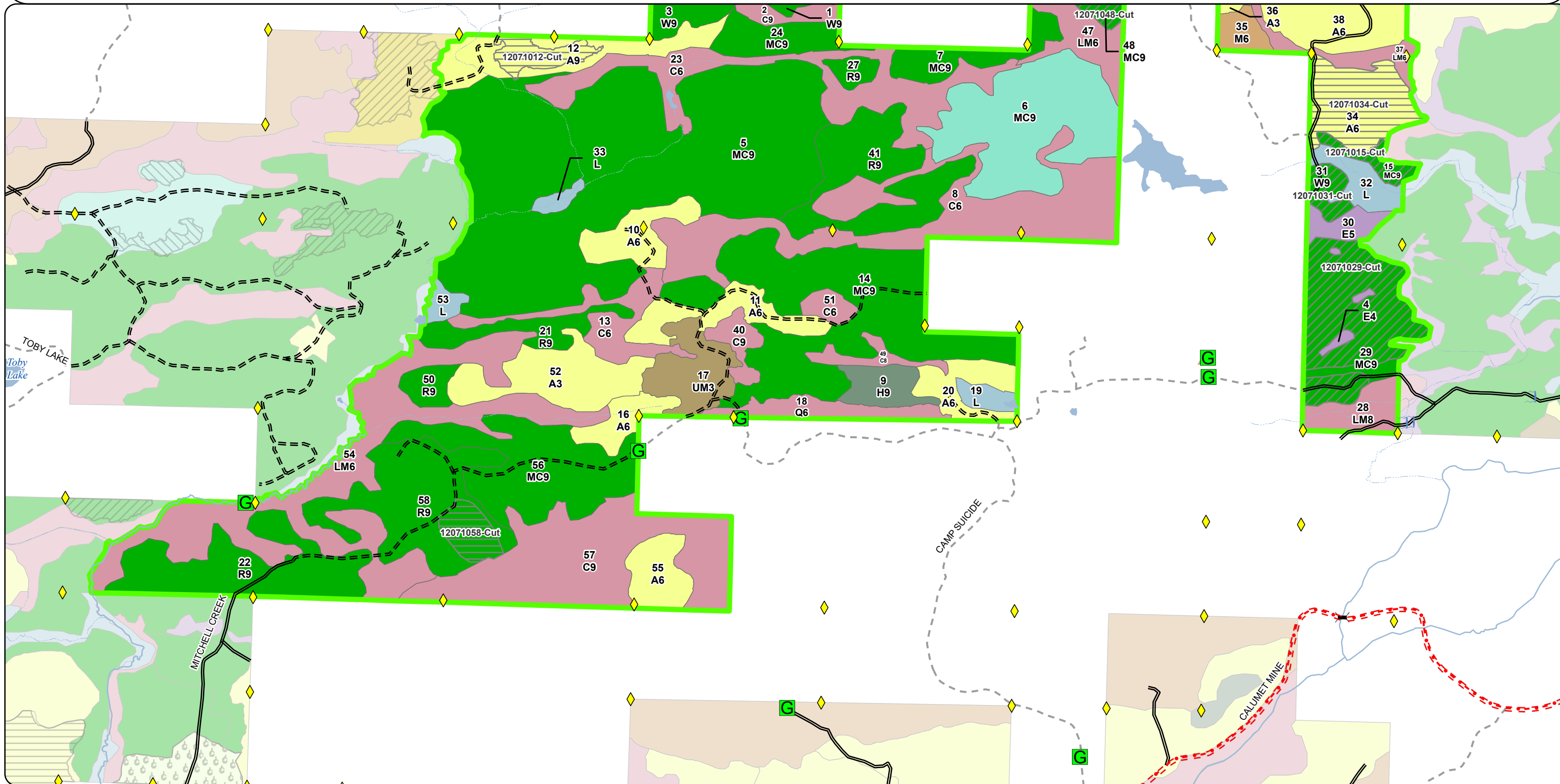
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- Culvert
- Designated ORV Routes

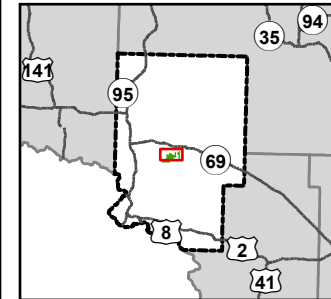
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# Stand Boundary Map



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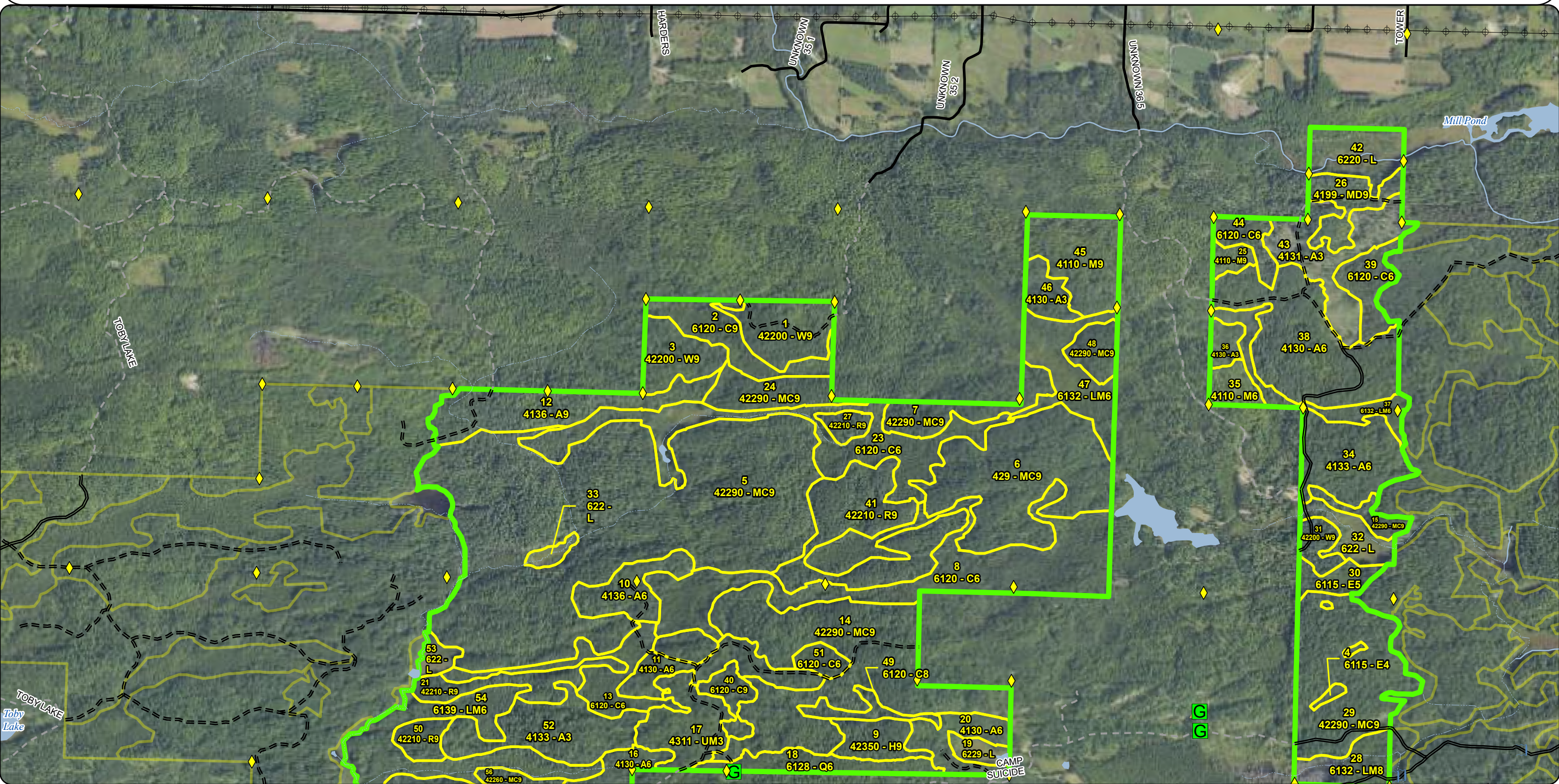
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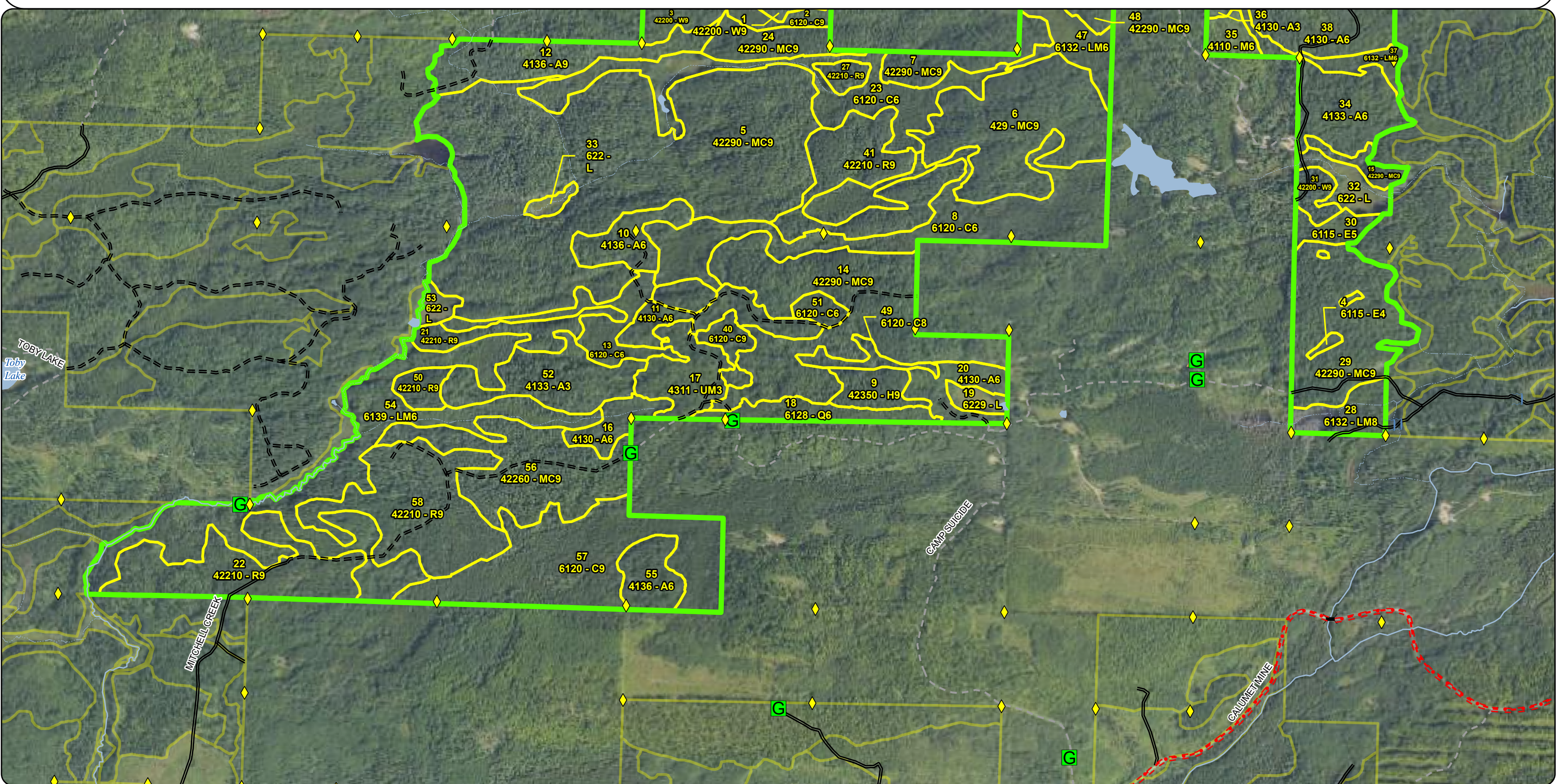
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- DNR - Forest Access Route



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# Special Conservation Areas & Site Conditions Map

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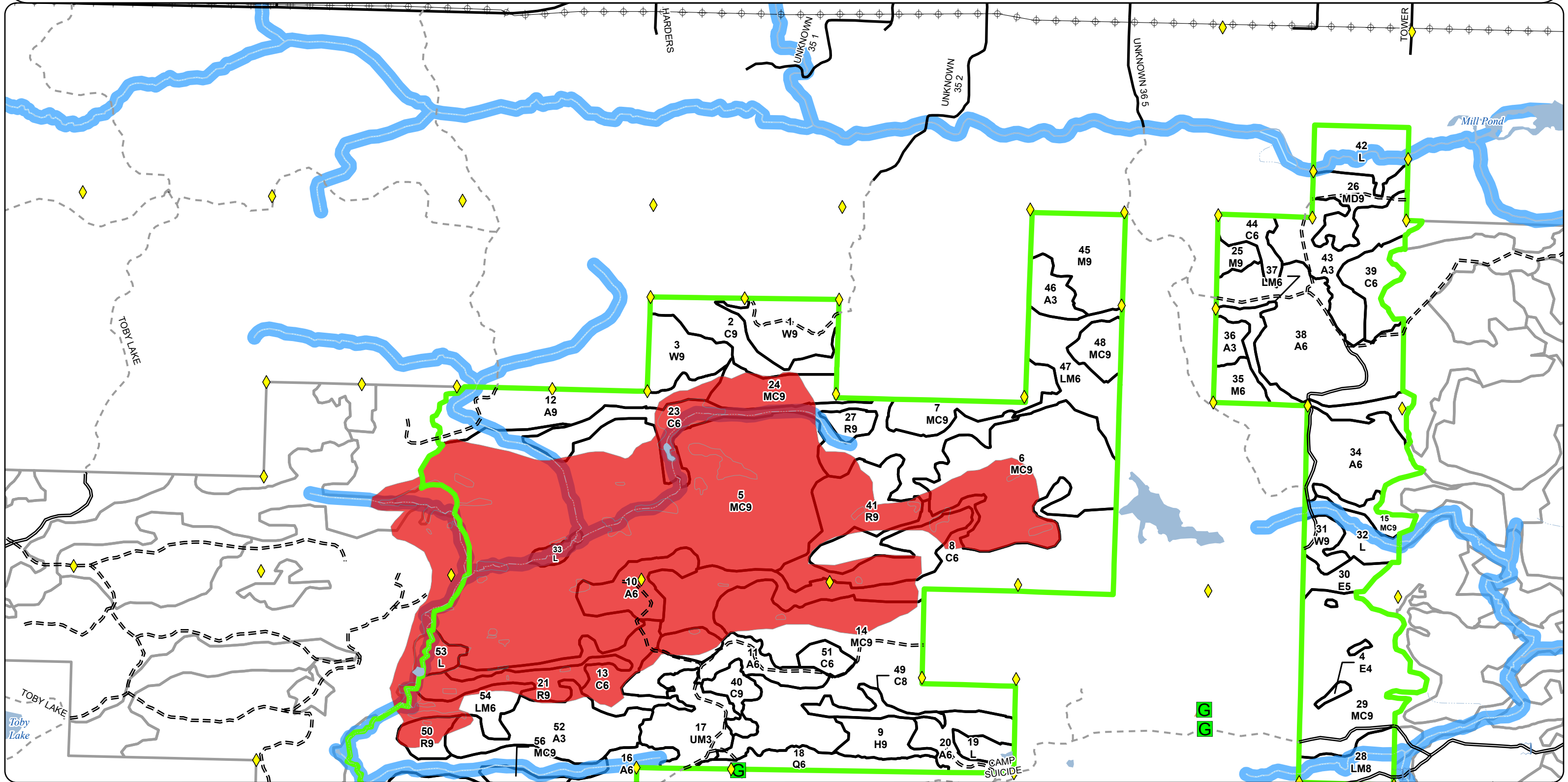
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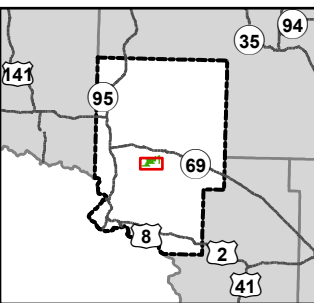
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- Compartment Boundary
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



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Berms

Gate

Bridges

Culvert

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Intermittent Stream

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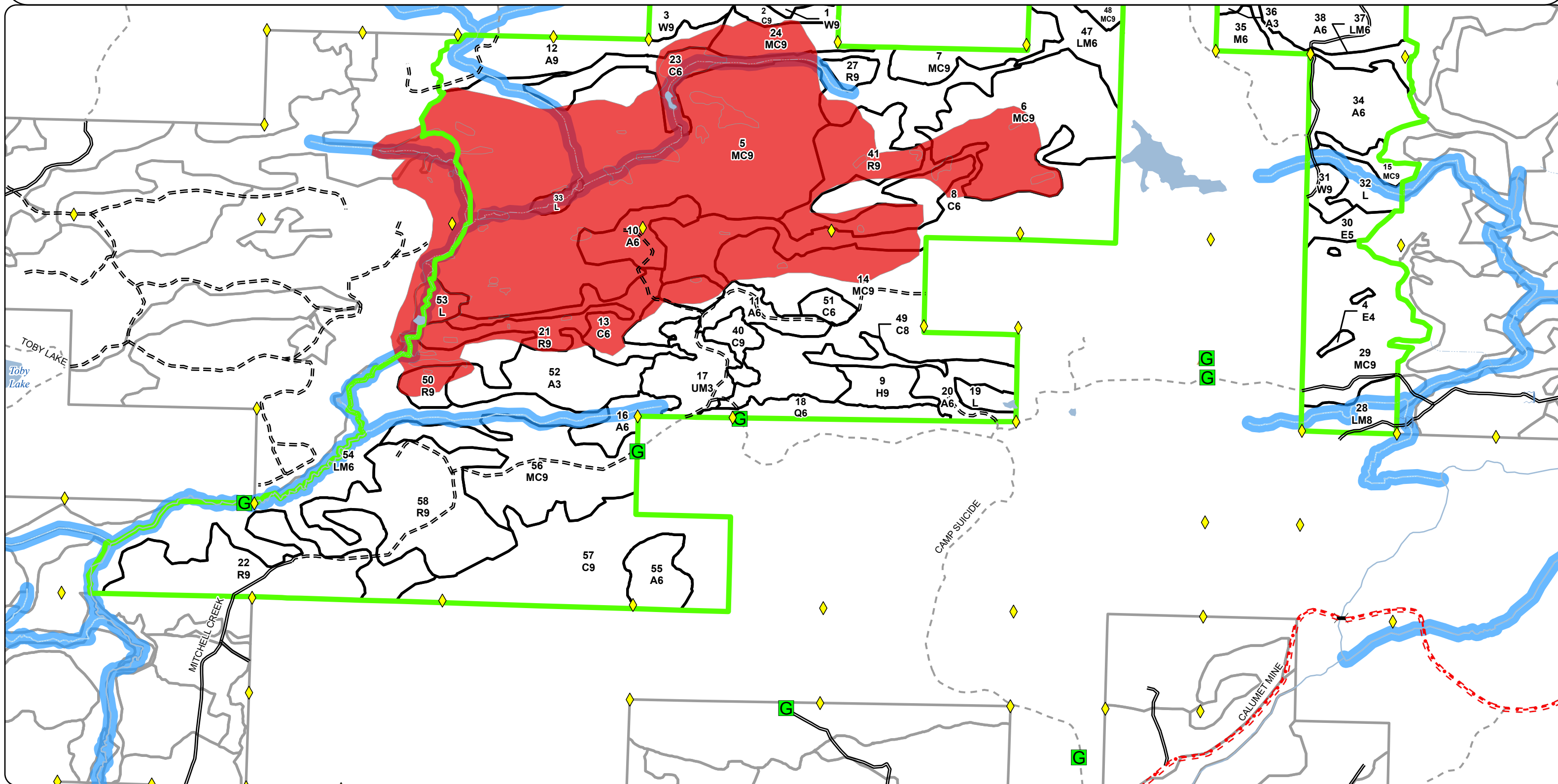
Compartment Boundary

Stand Boundaries

Ecological Reference Areas

Cold Water Streams

High Priority Trout Stream Buffer



# 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	35	16	38	0	126	64	0	39	0	0	0	0	0	0	0	0	0	318
Cedar	0	0	0	0	0	0	0	0	0	0	0	91	38	113	97	0	0	0	339
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	17
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	0	0	11
Lowland Mixed Forest	0	0	0	0	0	0	118	0	0	0	0	28	0	17	0	16	0	0	179
Lowland Shrub	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	16
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	64	0	0	514	0	0	0	578
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	37	45
Red Pine	0	0	0	0	0	0	0	0	0	0	0	125	0	0	82	0	0	0	207
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	80
Upland Mixed Forest	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	0	0	0	51
Total	49	61	16	38	0	126	182	0	39	0	0	332	55	144	827	25	0	37	1930



## Report 2 – Treatment Summary

Crystal Falls Mgt. Unit  
Year of Entry: 2027

Acres of Harvest

Compartment 71  
Total Compartment Acres: 1,933

Commercial Harvest - 284  
Harvests with Site Condition - 0  
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
Aspen	45	0	0	0	0	0	0	0	0	45
Natural Mixed Pines	0	0	0	0	0	77	0	0	0	77
Red Pine	12	0	0	0	0	0	0	0	0	12
White Pine	0	0	0	0	0	8	0	0	0	8
Total	57	0	0	0	0	85	0	0	0	142

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	142	0	0	0	0	0	0	0	0	142
Next Step	0	0	0	0	0	0	142	0	0	142
Total	142	0	0	0	0	0	142	0	0	284



Standard

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:**

<b>15</b>	<b>12071015-Cut</b>	7.1	42290 - Natural Mixed Pine	9	139	171-200	Harvest	Thinning	429 - Mixed Upland Conifers	Cutting Record	No
<u>Prescription</u> Utilize Variable Density Thinning method. Mark to target residual BA of 60-100. Release and expand existing advanced regeneration gaps of <u>Specs:</u> Pine. No gap shall be greater than 1 acre. Leave all Cedar, Hemlock, and Oak if found. Leave trees greater than <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Pine, Aspen, Mixed conifers, Mixed deciduous <u>Regen:</u> <u>Other</u> This treatment should establish a Pine sapling layer by installing holes in the canopy. Once saplings are established, the majority of the remaining <u>Comment:</u> overstory should be harvested to release the saplings. <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
<b>29</b>	<b>12071029-Cut</b>	59.8	42290 - Natural Mixed Pine	9	139	141-170	Harvest	Thinning	429 - Mixed Upland Conifers	Cutting Record	No
<u>Prescription</u> Utilize Variable Density Thinning method. Mark to target residual BA of 60-100. Release and expand existing advanced regeneration gaps of <u>Specs:</u> Pine. No gap shall be greater than 1 acre. Leave all Cedar, Hemlock, and Oak if found. Exclude non-operable area <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Pine, Aspen, Mixed conifers, Mixed deciduous <u>Regen:</u> <u>Other</u> This treatment should establish a Pine sapling layer by installing holes in the canopy. Once saplings are established, the majority of the remaining <u>Comment:</u> overstory should be harvested to release the saplings. <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
<b>31</b>	<b>12071031-Cut</b>	8.0	42200 - Natural White Pine	9	139	141-170	Harvest	Thinning	429 - Mixed Upland Conifers	Cutting Record	No
<u>Prescription</u> Utilize Variable Density Thinning method. Mark to target residual BA of 60-100. Release and expand existing advanced regeneration gaps of <u>Specs:</u> Pine. No gap shall be greater than 1 acre. Leave all Cedar, Hemlock, and Oak if found. Leave trees greater than <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Pine, Aspen, Mixed conifers, Mixed deciduous <u>Regen:</u> <u>Other</u> This treatment should establish a Pine sapling layer by installing holes in the canopy. Once saplings are established, the majority of the remaining <u>Comment:</u> overstory should be harvested to release the saplings. <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
<b>34</b>	<b>12071034-Cut</b>	34.3	4133 - Aspen, Mixed Pine	6	51		Harvest	Clearcut	413 - Aspen	Planting Record	No
<u>Prescription</u> Final harvest using 4" spec. Leave all Cedar, Hemlock, Pine and Oak if found. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Aspen, Pine, Mixed conifers, Mixed deciduous <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											



Standard

Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
<b>48 12071048-Cut</b>	10.4	42290 - Natural Mixed Pine	9	139	141-170	Harvest	Thinning	429 - Mixed Upland Conifers	Cutting Record	No
<u>Prescription</u> Utilize Variable Density Thinning method. Mark to target residual BA of 60-100. Release and expand existing advanced regeneration gaps of <u>Specs:</u> Pine. No gap shall be greater than 1 acre. Leave all Cedar, Hemlock, and Oak if found. Leave trees greater than <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Pine, Aspen, Mixed conifers, Mixed deciduous <u>Regen:</u> <u>Other</u> This treatment should establish a Pine sapling layer by installing holes in the canopy. Once saplings are established, the majority of the remaining <u>Comment:</u> overstory should be harvested to release the saplings. <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026										
<b>58 12071058-Cut</b>	11.5	42210 - Natural Red Pine	9	105	81-110	Harvest	Clearcut	429 - Mixed Upland Conifers	Planting Record	No
<u>Prescription</u> Final harvest using 2" spec due to insect and disease concerns. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Pine, Aspen, Mixed deciduous, Mixed conifers <u>Regen:</u> <u>Other</u> 2 pocket of mortality were found. This is more of a sanitation harvest than a salvage harvest. <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026										

**Approved Treatments:**

<b>12 12071012-Cut</b>	10.7	4136 - Aspen, Mixed Conifer	9	73	81-110	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Planting Record	No
<u>Prescription</u> Cut all trees 2 inches and greater at DBH. Do not cut pine, oak, cedar and hemlock. Do not cut sub-merchantable spruce and fir. Buffer Stream <u>Specs:</u> 300ft. <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> Aspen, maple, birch and pine <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition:</u> <u>Proposed Start Date:</u> 02/03/2022										

**Total Treatment** 141.8  
**Acreage Proposed:**

# Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church: Examiner

Compartment: 71  
Year of Entry: 2027



## Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Conditions						
Acres	Available	With Condition	Not Available		2F	2G	3A	3J	5A	5E
260	206	0	54	Aspen	13		25		12	4
339	0	0	339	Cedar		29	78		233	
14	0	0	14	Hemlock					14	
17	0	0	17	Lowland Conifers					17	
12	0	0	12	Lowland Deciduous		12				
179	0	0	179	Lowland Mixed Forest		45	8	126		
49	40	0	9	Lowland Shrub			9			
2	0	0	2	Mixed Upland Deciduous						2
438	82	0	357	Natural Mixed Pines	29		312		16	
45	45	0	0	Northern Hardwood						
204	125	0	79	Red Pine	17		62			
80	0	0	80	Upland Conifers	49		31			
26	26	0	0	Upland Mixed Forest						
51	51	0	0	White Pine						
1,716	575		1,140	Total Forested Acres	109	86	523	126	291	6
	34%		66%	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	Dominant Site Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3A: Conservation values incompatible with harvest at this time	525	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Part of Groveland Mines ERA Complex. Large high quality dry-mesic northern forest occurring on rugged topography and shallow soils over bedrock.								
2	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>								



3	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	110	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Mitchell Creek and various intermittent streams within site condition. In addition, many wet areas outside of stream buffers.							
4	Unavailable	5A: Not able to obtain desirable regeneration	91	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	58	3J: Water quality/BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Very wet and stream toward South end of stand.							
6	Unavailable	2F: Too steep	104	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Steep terrain with no access.							
7	Unavailable	5A: Not able to obtain desirable regeneration	48	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
8	Unavailable	5A: Not able to obtain desirable regeneration	39	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							

# Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church: Examiner

Compartment: 71  
Year of Entry: 2027



9	Unavailable	5A: Not able to obtain desirable regeneration	22	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
10	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Rough Terrain							
11	Unavailable	5A: Not able to obtain desirable regeneration	14	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Hemlock regeneration issues.							
12	Unavailable	5A: Not able to obtain desirable regeneration	17	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
13	Unavailable	5A: Not able to obtain desirable regeneration	9	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
14	Unavailable	5A: Not able to obtain desirable regeneration	9	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
15	Unavailable	5A: Not able to obtain desirable regeneration	7	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							

# Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church: Examiner

Compartment: 71  
Year of Entry: 2027



16	Unavailable	5A: Not able to obtain desirable regeneration	6	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
17	Unavailable	5A: Not able to obtain desirable regeneration	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regen difficulties.							
18	Unavailable	5A: Not able to obtain desirable regeneration	10	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regeneration concerns.							
19	Unavailable	5A: Not able to obtain desirable regeneration	15	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Cedar regeneration concerns.							
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

# Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church: Examiner

Compartment: 71  
Year of Entry: 2027



22	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Treatment says do not cut pine. This is a pine pocket that was red lined out.							
23	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	16	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Very wet stand with a stream.							
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
25	Unavailable	2F: Too steep	5	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Rock bluff							
27	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
43	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Steep hill that drops off to the West Branch of the Sturgeon River.							
44	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Retention for 99 year old MD9 (2019)							

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
Comments				



MICHIGAN

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
1	42200 - Natural White Pine	Sawtimber Well	24.4	139	51-80	N/A	Cedar is primarily on the southern edge of the stand and dissipates as the grade climbs to the north. Aspen and Red Maple sapling found in gaps. Wet areas throughout the stand. Harvested 2024 with Jungle Crumble sale.
<div>Canopy Species% CoverSize ClassDBH Age</div>		<div>Sub-Canopy SpeciesDensityAvg. HeightSize</div>					
<div>White Pine7018139</div>		<div>White PineLowVariableVariable</div>					
<div>Red Pine2018</div>		<div>White SpruceLowVariableVariable</div>					
<div>Northern White Cedar10Seedling8</div>		<div>Red MapleHigh&gt;20 feet&gt;20 feet</div>					
		<div>Quaking AspenHighVariableVariable</div>					
2	6120 - Lowland Cedar	Sawtimber Well	22.9	123	171-200	N/A	Trace amounts of paper birch and black spruce.
<div>Canopy Species% CoverSize ClassDBH Age</div>		<div>Sub-Canopy SpeciesDensityAvg. HeightSize</div>					
<div>Northern White Cedar8511123</div>		<div>Black AshLowVariableVariable</div>					
<div>White Pine516</div>		<div>Tag AlderMedium5 - 10 feet5 - 10 feet</div>					
<div>Red Pine1016</div>							
3	42200 - Natural White Pine	Sawtimber Well	18.7	139	51-80	N/A	Aspen and Red Maple saplings found in gaps. Wet areas throughout the stand. Harvested 2024 with Jungle Crumble sale.
<div>Canopy Species% CoverSize ClassDBH Age</div>		<div>Sub-Canopy SpeciesDensityAvg. HeightSize</div>					
<div>Red Pine2018</div>		<div>White PineLowVariableVariable</div>					
<div>White Pine7018139</div>		<div>White SpruceLowVariableVariable</div>					
<div>Northern White Cedar10Seedling8</div>		<div>Quaking AspenHighVariableVariable</div>					
		<div>Red MapleHigh&gt;20 feet&gt;20 feet</div>					
4	6115 - Lowland Ash	Poletimber Poor	2.5	139	1-50	N/A	Small pockets of Black Ash in the rock outcroppings. Majority of Ash is dead.
<div>Canopy Species% CoverSize ClassDBH Age</div>		<div>Sub-Canopy SpeciesDensityAvg. HeightSize</div>					
<div>Black Ash1008139</div>		<div>White PineMedium&lt; 5 feet&lt; 5 feet</div>					
		<div>Tag AlderLowVariableVariable</div>					
		<div>Red MapleMediumVariableVariable</div>					
5	42290 - Natural Mixed Pine	Sawtimber Well	282.8	139	141-170	N/A	Trace amounts of cedar, aspen, hemlock, and paper birch. Mix of upland ridges with small lowland drainages. Cedar and black ash found in the canopy of the low areas, primarily towards the west portion of the stand.
<div>Canopy Species% CoverSize ClassDBH Age</div>		<div>Sub-Canopy SpeciesDensityAvg. HeightSize</div>					
<div>Northern White Cedar58</div>		<div>Red MapleLowVariableVariable</div>					
<div>Red Pine5016139</div>		<div>Black AshLowVariableVariable</div>					
<div>White Pine2516</div>		<div>Tag AlderLow5 - 10 feet5 - 10 feet</div>					
<div>Black Ash10Seedling5</div>		<div>Red PineLow&lt; 5 feet&lt; 5 feet</div>					
<div>Red Maple59</div>		<div>Balsam FirLowVariableVariable</div>					
<div>Red Oak515</div>		<div>White SpruceMediumVariableVariable</div>					
		<div>White PineMedium&lt; 5 feet&lt; 5 feet</div>					
		<div>Cherry (spp.)LowVariableVariable</div>					
		<div>IronwoodLowVariableVariable</div>					



MICHIGAN

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments			
6	429 - Mixed Upland Conifers	Sawtimber Well	80.4	139	171-200	N/A	The terrain is rocky and rugged. Black ash found in various sinks and small drainages.			
<div>Canopy Species</div>		<div>% Cover</div>	<div>Size Class</div>	<div>DBH</div>	<div>Age</div>	<div>Sub-Canopy Species</div>		<div>Density</div>	<div>Avg. Height</div>	<div>Size</div>
Red Pine		20		14		Ironwood		Low	Variable	Variable
White Ash		10		14		White Pine		Low	< 5 feet	< 5 feet
Northern White Cedar		5	Seedling	8		White Ash		Low	Variable	Variable
Paper Birch		5		12		Sugar Maple		Low	Variable	Variable
Sugar Maple		5		12		White Spruce		Low	Variable	Variable
White Spruce		5		12						
Red Maple		10		10						
Hemlock		5		10						
Red Oak		5		14						
White Pine		30		18	139					
7	42290 - Natural Mixed Pine	Sawtimber Well	18.7	139	171-200	N/A	More Pine to the West. Large portion of the stand has thick cedar poles under a pine canopy.			
<div>Canopy Species</div>		<div>% Cover</div>	<div>Size Class</div>	<div>DBH</div>	<div>Age</div>	<div>Sub-Canopy Species</div>		<div>Density</div>	<div>Avg. Height</div>	<div>Size</div>
Balsam Fir		2	Seedling	7		White Ash		Low	Variable	Variable
Red Maple		2		10		Balsam Fir		Low	Variable	Variable
Bigtooth Aspen		2		14		Northern White Cedar		High	>20 feet	>20 feet
Northern White Cedar		2		9		Paper Birch		Low	Variable	Variable
White Pine		34		18		White Pine		Low	Variable	Variable
Paper Birch		2		12						
Red Pine		56		18	139					
8	6120 - Lowland Cedar	Poletimber Well	97.0	136	81-110	N/A	Trace amounts of red maple, white pine, red pine, hemlock, paper birch and aspen. East side of stand contains a small upland inclusion composed mostly of ash, aspen, balsam, cedar and pine.			
<div>Canopy Species</div>		<div>% Cover</div>	<div>Size Class</div>	<div>DBH</div>	<div>Age</div>	<div>Sub-Canopy Species</div>		<div>Density</div>	<div>Avg. Height</div>	<div>Size</div>
Northern White Cedar		55		11	136	Balsam Fir		Low	Variable	Variable
Black Spruce		35	Seedling	5		White Pine		Trace	Variable	Variable
Black Ash		10	Seedling	6		Black Spruce		Low	Variable	Variable
						Black Ash		Medium	Variable	Variable
						Tag Alder		Medium	5 - 10 feet	5 - 10 feet
9	42350 - Upland Hemlock	Sawtimber Well	13.5	123	201+	N/A				
<div>Canopy Species</div>		<div>% Cover</div>	<div>Size Class</div>	<div>DBH</div>	<div>Age</div>	<div>Sub-Canopy Species</div>		<div>Density</div>	<div>Avg. Height</div>	<div>Size</div>
Hemlock		65		12	123	Balsam Fir		Trace	Variable	Variable
White Pine		15		20						
Red Pine		5		20						
Northern White Cedar		10		12						
Red Maple		5		10						



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																																										
10	4136 - Aspen, Mixed Conifer	Poletimber Well	19.2	46		N/A	Mix of upland and lowland.																																																																										
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11	4130 - Aspen	Poletimber Well	21.9	46		N/A	Various wet spots with Ash and BAM. Tag alder is concentrated to where the stream runs through the stand. Trace amounts of cedar.																																																																										
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12	4136 - Aspen, Mixed Conifer	Sawtimber Well	38.9	73	81-110	N/A	Larger spruce has fallen out of stand. Small rock nob with cedar/hemlock present.																																																																										
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																						
18	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	16.8	118	141-170	N/A	More Black ash to the East. Less stocking to East. Trace amounts of red maple, white birch and balsam poplar.																																																						
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Black Ash	High	Variable	Variable																																																										
Black Spruce	Medium	Variable	Variable																																																										
19	6229 - Mixed Lowland Shrub	None	5.9			No	OPIC - FMD: OI Stand Year Origin was																																																						
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20	4130 - Aspen	Poletimber Well	17.5	50		N/A	Trace amounts of paper birch, cedar, balsam, and pine.																																																						
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21	42210 - Natural Red Pine	Sawtimber Well	17.2	139	141-170	N/A	Large Pine trees situated on rock outcropping.																																																						
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22	42210 - Natural Red Pine	Sawtimber Well	56.1	105	81-110	N/A	More White Pine to the South.																																																						
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23	6120 - Lowland Cedar	Poletimber Well	58.5	124		N/A	Wet areas with Cedar and Black Ash pockets. Also areas of only Tag Alder.																																																						
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**HEINTZELMANC**



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																		
35	4110 - Sugar Maple Association	Poletimber Well	8.4	105	51-80	N/A	This stand is on a steep hillside. Rocky terrain with trace amounts of scattered hemlock, cedar, oak, white pine and red pine. Thinned 2024 with Jungle Crumble sale.																																																		
<table><tr><th>Canopy Species</th><th>% Cover</th><th>Size Class</th><th>DBH</th><th>Age</th></tr><tr><td>Sugar Maple</td><td>47</td><td></td><td>9</td><td>105</td></tr><tr><td>Basswood</td><td>38</td><td></td><td>15</td><td></td></tr><tr><td>Red Maple</td><td>11</td><td></td><td>9</td><td></td></tr><tr><td>Paper Birch</td><td>4</td><td></td><td>10</td><td></td></tr></table>			Canopy Species	% Cover	Size Class	DBH		Age	Sugar Maple	47		9	105	Basswood	38		15		Red Maple	11		9		Paper Birch	4		10		<table><tr><th>Sub-Canopy Species</th><th>Density</th><th>Avg. Height</th><th>Size</th></tr><tr><td>White Pine</td><td>Low</td><td>Variable</td><td>Variable</td></tr><tr><td>Ironwood</td><td>Low</td><td>Variable</td><td>Variable</td></tr><tr><td>White Spruce</td><td>Low</td><td>Variable</td><td>Variable</td></tr></table>			Sub-Canopy Species	Density	Avg. Height	Size	White Pine	Low	Variable	Variable	Ironwood	Low	Variable	Variable	White Spruce	Low	Variable	Variable										
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36	4130 - Aspen	Sapling Well	6.0	13	Immature	N/A	Harvested 2012 with Matamoosy sale #12-009-10-01.																																																		
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37	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	16.8	127	81-110	N/A	Ash saplings to the North. Wet Standing water but no movement Some trace pines and pine regen on higher ground.																																																		
<table><tr><th>Canopy Species</th><th>% Cover</th><th>Size Class</th><th>DBH</th><th>Age</th></tr><tr><td>Black Ash</td><td>44</td><td>Sapling</td><td>6</td><td></td></tr><tr><td>Black Spruce</td><td>2</td><td>Pole</td><td>4</td><td></td></tr><tr><td>Red Maple</td><td>2</td><td></td><td>10</td><td></td></tr><tr><td>Northern White Cedar</td><td>45</td><td></td><td>9</td><td>127</td></tr><tr><td>Hemlock</td><td>5</td><td></td><td>12</td><td></td></tr><tr><td>Balsam Poplar</td><td>2</td><td>Seedling</td><td>9</td><td></td></tr></table>			Canopy Species	% Cover	Size Class	DBH		Age	Black Ash	44	Sapling	6		Black Spruce	2	Pole	4		Red Maple	2		10		Northern White Cedar	45		9	127	Hemlock	5		12		Balsam Poplar	2	Seedling	9		<table><tr><th>Sub-Canopy Species</th><th>Density</th><th>Avg. Height</th><th>Size</th></tr><tr><td>Pines (spp.)</td><td>Low</td><td>Variable</td><td>Variable</td></tr><tr><td>White Spruce</td><td>Low</td><td>Variable</td><td>Variable</td></tr><tr><td>Balsam Fir</td><td>Low</td><td>Variable</td><td>Variable</td></tr></table>			Sub-Canopy Species	Density	Avg. Height	Size	Pines (spp.)	Low	Variable	Variable	White Spruce	Low	Variable	Variable	Balsam Fir	Low	Variable	Variable
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38	4130 - Aspen	Poletimber Well	67.1	43		N/A	Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. Black ash, white spruce, paper birch, basswood and maple are present in the stand and occur mostly in small patches or sparsely scattered. Most maple located on small rock outcropping only a few acres in size. Aspen size variable in some areas.																																																		
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39	6120 - Lowland Cedar	Poletimber Well	14.9	127	111-140	N/A	Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. Wet soils trace amounts of black spruce and white birch and balsam poplar.																																																		
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
55	4136 - Aspen, Mixed Conifer	Poletimber Well	17.5	48	81-110	N/A	Edges of stand hold more mature Aspen. Center is still filling in with saplings of BAM, Cherry, Spruce and Fir. Stream located on far Southern side.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Quaking Aspen	45		10	48	White Spruce	Low		Variable	Variable
Red Pine	5	Seedling	8		Thimbleberry	Medium		5 - 10 feet	5 - 10 feet
Sugar Maple	5		10		Ironwood	Medium		Variable	Variable
Balsam Poplar	15	Sapling	6		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Red Maple	5		10		White Pine	Low		Variable	Variable
Black Cherry	5	Sapling	6						
White Pine	5		20						
Balsam Fir	15		8						
56	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	64.4	105	81-110	N/A	More Sugar Maple and Ironwood to the East. Aspen located along Northern edges of stand near an intermittent stream. Pockets of Cedar and Tag Alder mixed throughout.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
White Pine	50		20	105	Ironwood	Medium		Variable	Variable
Red Pine	15		16		Balsam Fir	Medium		5 - 10 feet	5 - 10 feet
Paper Birch	10		8		Tag Alder	Low		5 - 10 feet	5 - 10 feet
Sugar Maple	10	Seedling	6		White Spruce	Medium		10 - 20 feet	10 - 20 feet
Northern White Cedar	5		10		Sugar Maple	Low		10 - 20 feet	10 - 20 feet
Quaking Aspen	10		10						
57	6120 - Lowland Cedar	Sawtimber Well	91.4	101	171-200	N/A	Very thick Cedar swamp. Pine regeneration along upland edges.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Ash	10	Sapling	6		Tag Alder	High		5 - 10 feet	5 - 10 feet
Northern White Cedar	75		11	101	White Spruce	Low		Variable	Variable
Paper Birch	5		8		White Pine	Low		Variable	Variable
Black Spruce	5	Seedling	6		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Quaking Aspen	5	Seedling	8						
58	42210 - Natural Red Pine	Sawtimber Well	68.7	105	81-110	N/A	More White Pine to the North. Cut in 1992. Cut in 2015 under Too Many Cooks Pine #12-073-12		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Sugar Maple	2	Sapling	6		White Pine	Low		Variable	Variable
Red Pine	65		18	105	Sugar Maple	Low		5 - 10 feet	5 - 10 feet
Paper Birch	8		9		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
White Pine	25		18						