



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12071

Entry Year 2027

Acreage: 1,933

County: Dickinson

Management Area: Cassidy Creek

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:

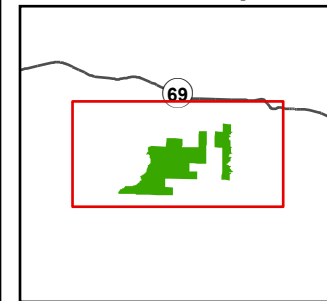
The following reports from the Inventory are attached:

- 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**

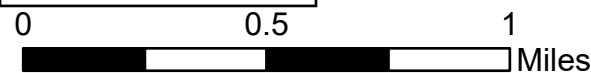
The following information is displayed, where pertinent, on the attached compartment maps:

- 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: 11/14/2025
Map Phase: Post Review

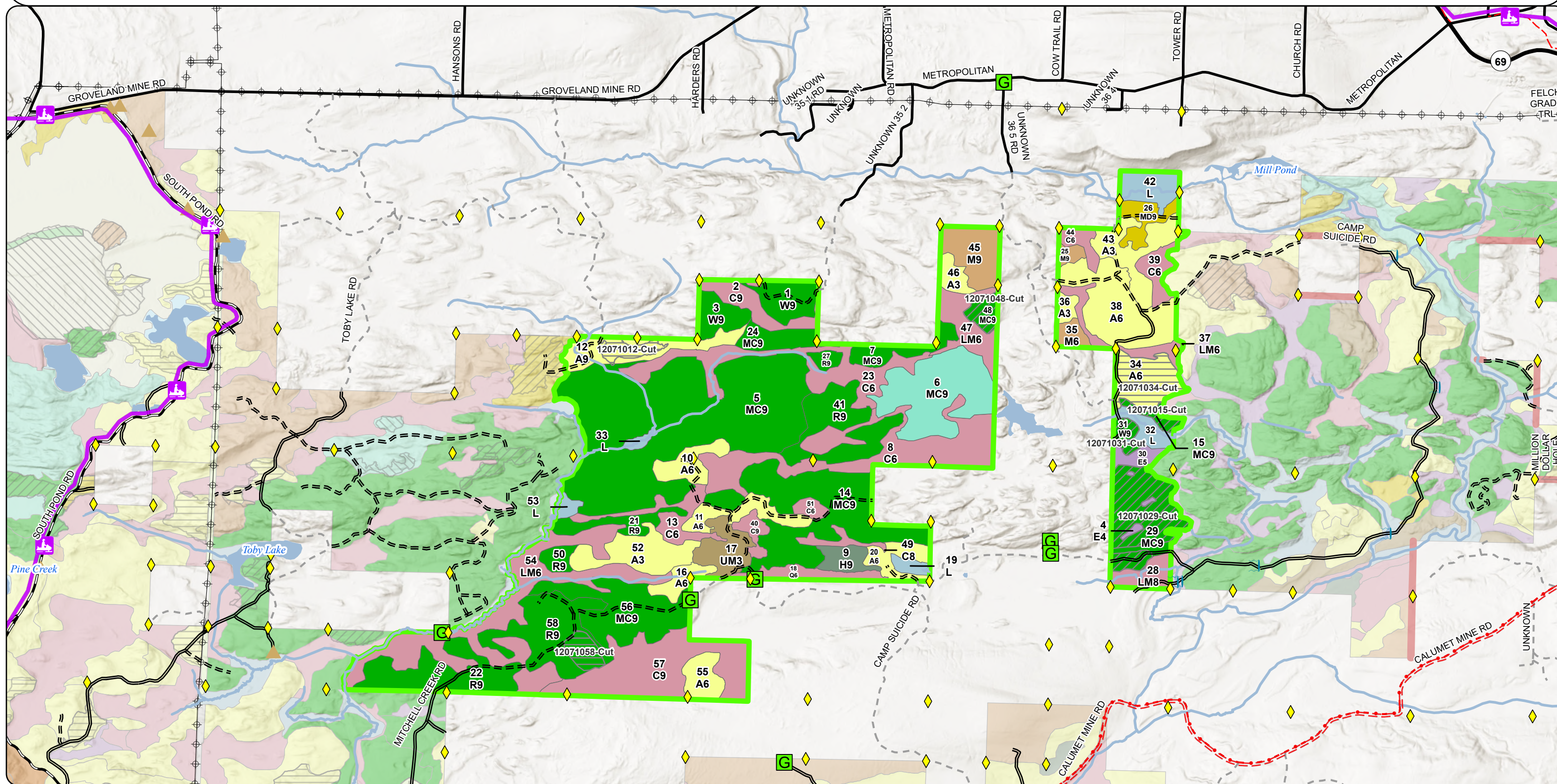


- Survey Grade Corners
- Berm
- Gate
- Culvert
- Designated ORV Routes
- Designated Snowmobile
- DNR - Primary Forest Road
- DNR - Secondary Forest Road

- 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
- Electric

- Streams
- Lakes and Rivers
- Compartment Boundary
- Clearcut
- Thinning
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Decidous

- 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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0 0.5 1 Miles

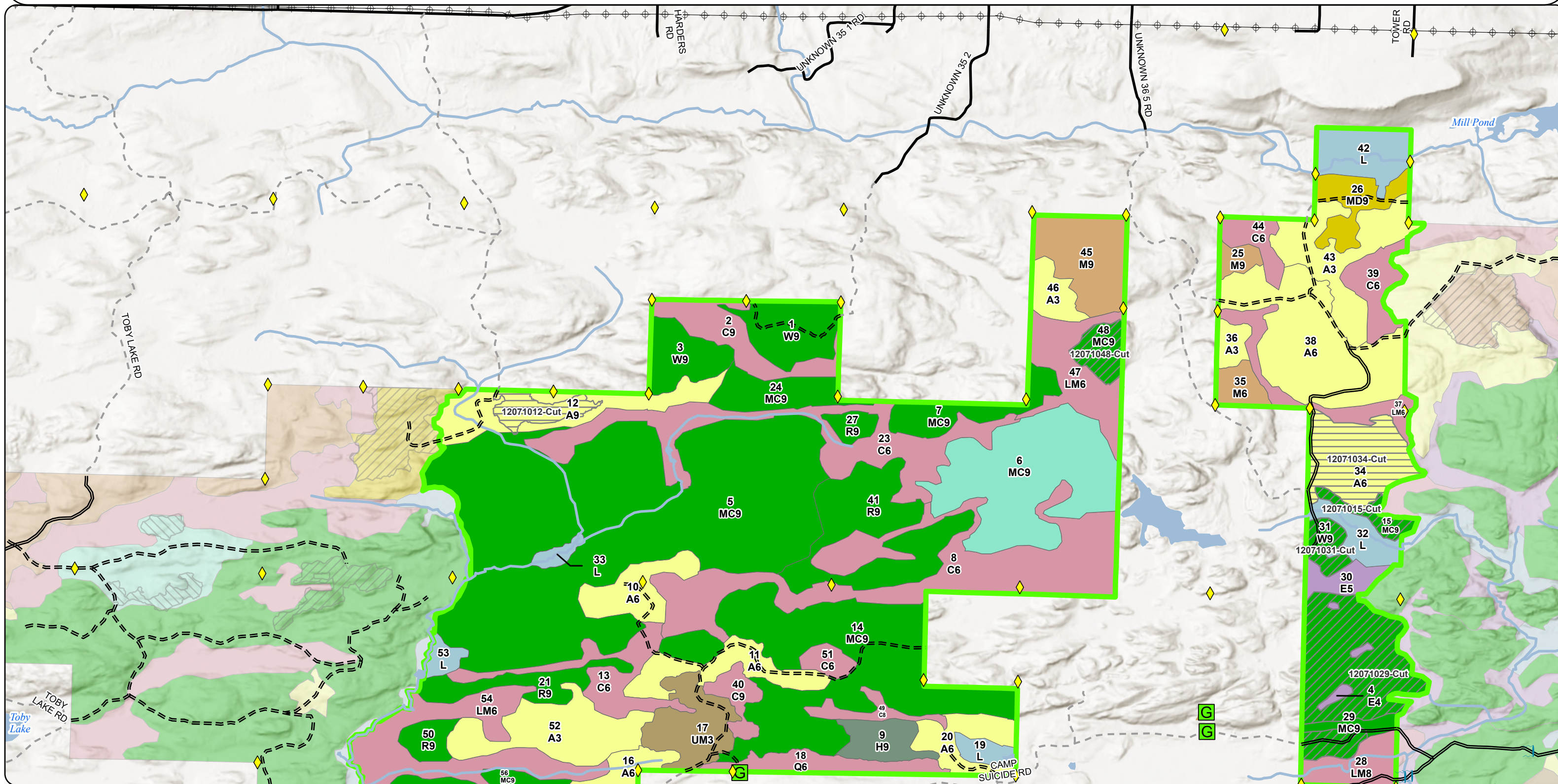
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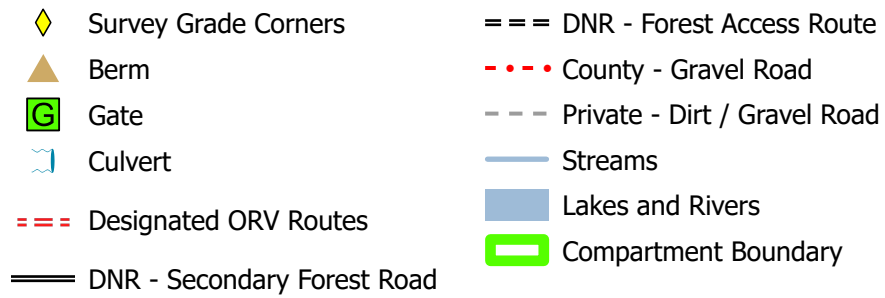
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- DNR - Forest Access Route

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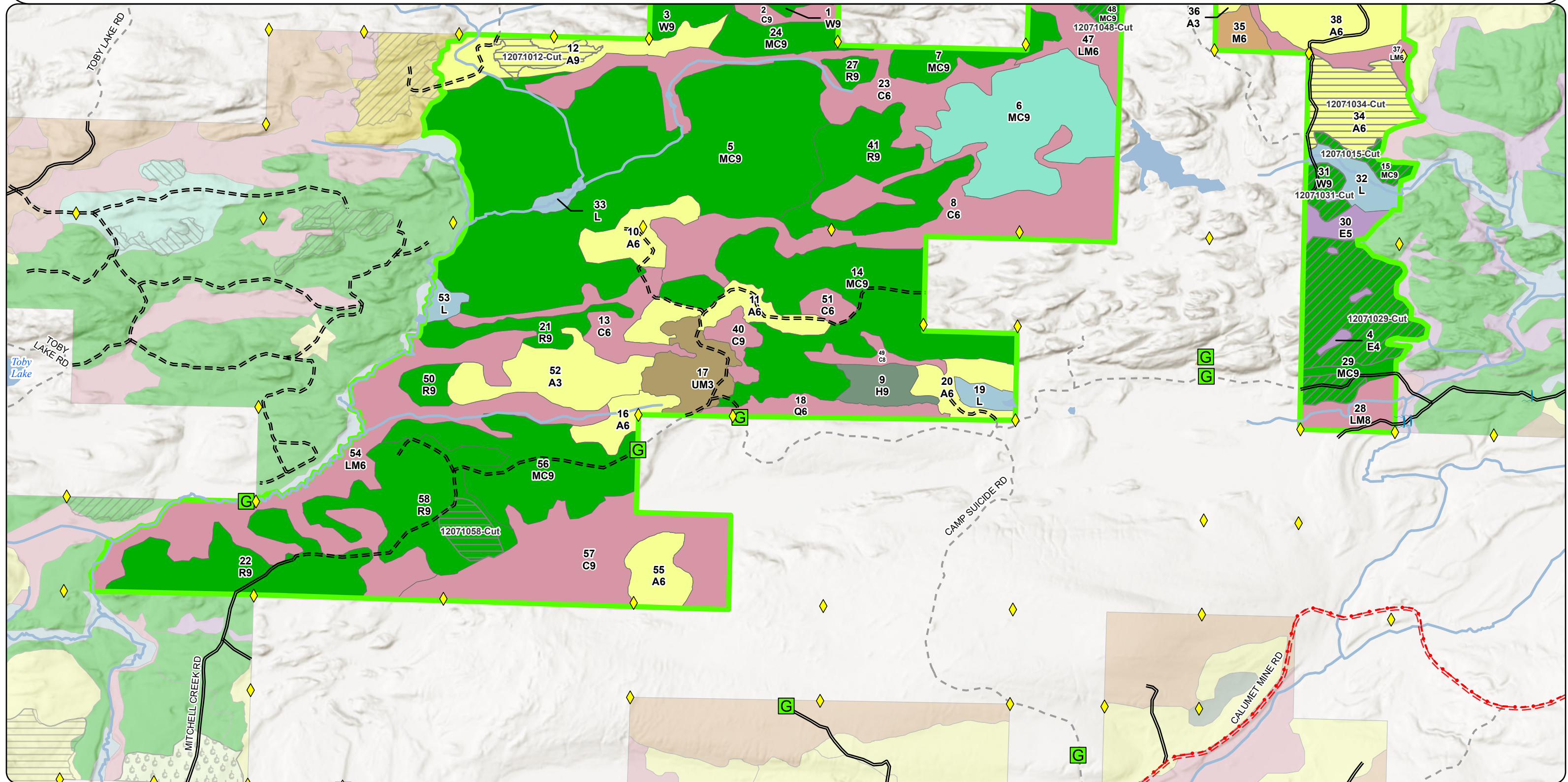
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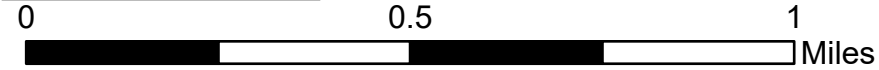
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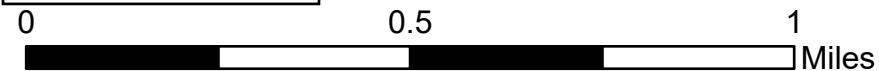
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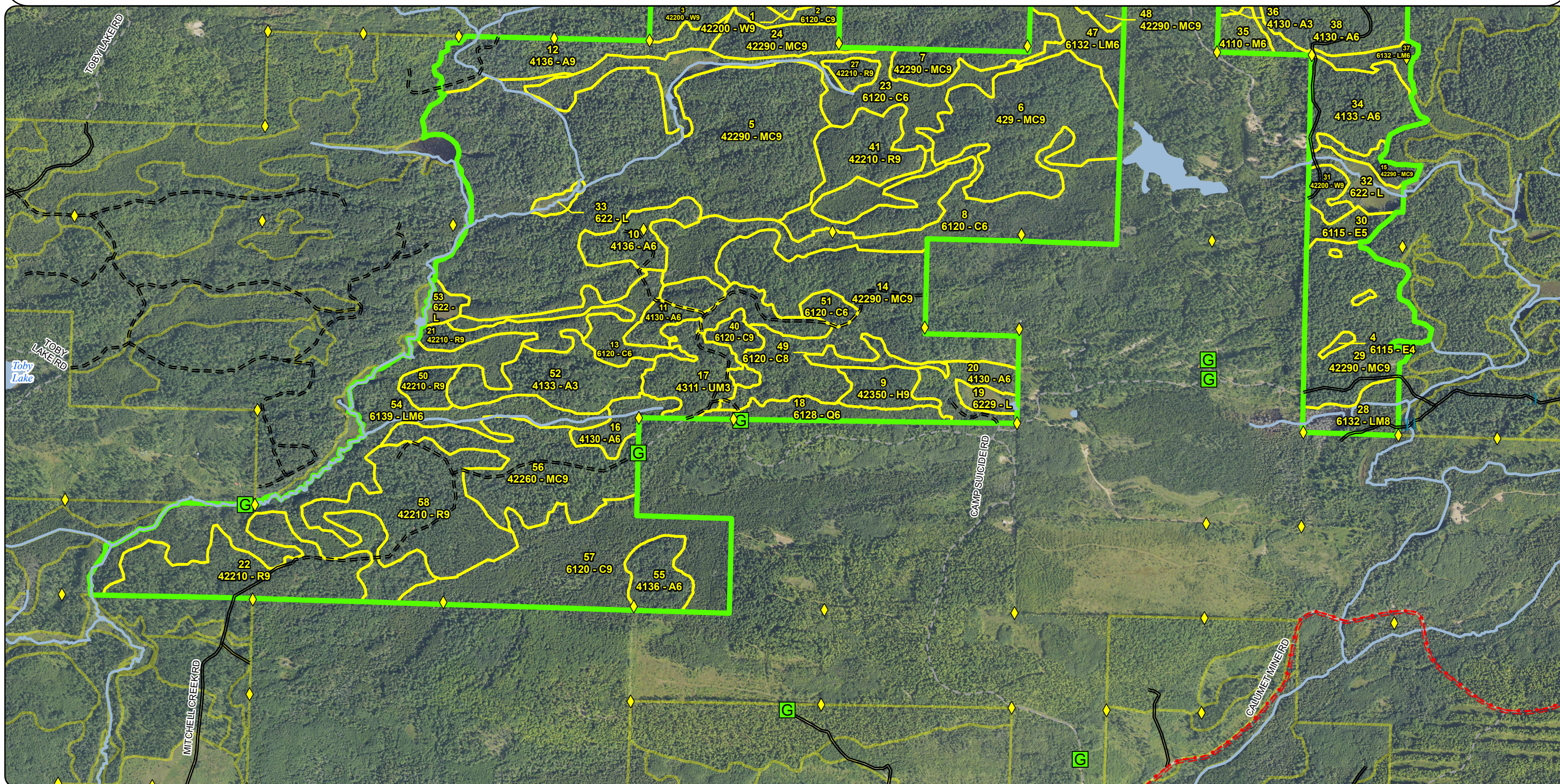
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|---|-----------------------------|---|---------------------------------------|
|  | Survey Grade Corners |  | Federal / State / County - Paved Road |
|  | Berm |  | Private - Paved Road |
|  | Gate |  | Private - Dirt / Gravel Road |
|  | Culvert |  | Electric |
|  | DNR - Secondary Forest Road |  | Streams |
|  | DNR - Forest Access Route |  | Lakes and Rivers |
| | |  | Compartment Boundary |

- | | |
|------------------------------|---------------------------------|
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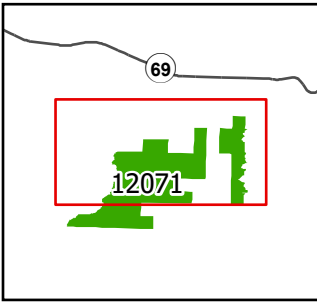
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Special Conservation Areas & Site Conditions Map

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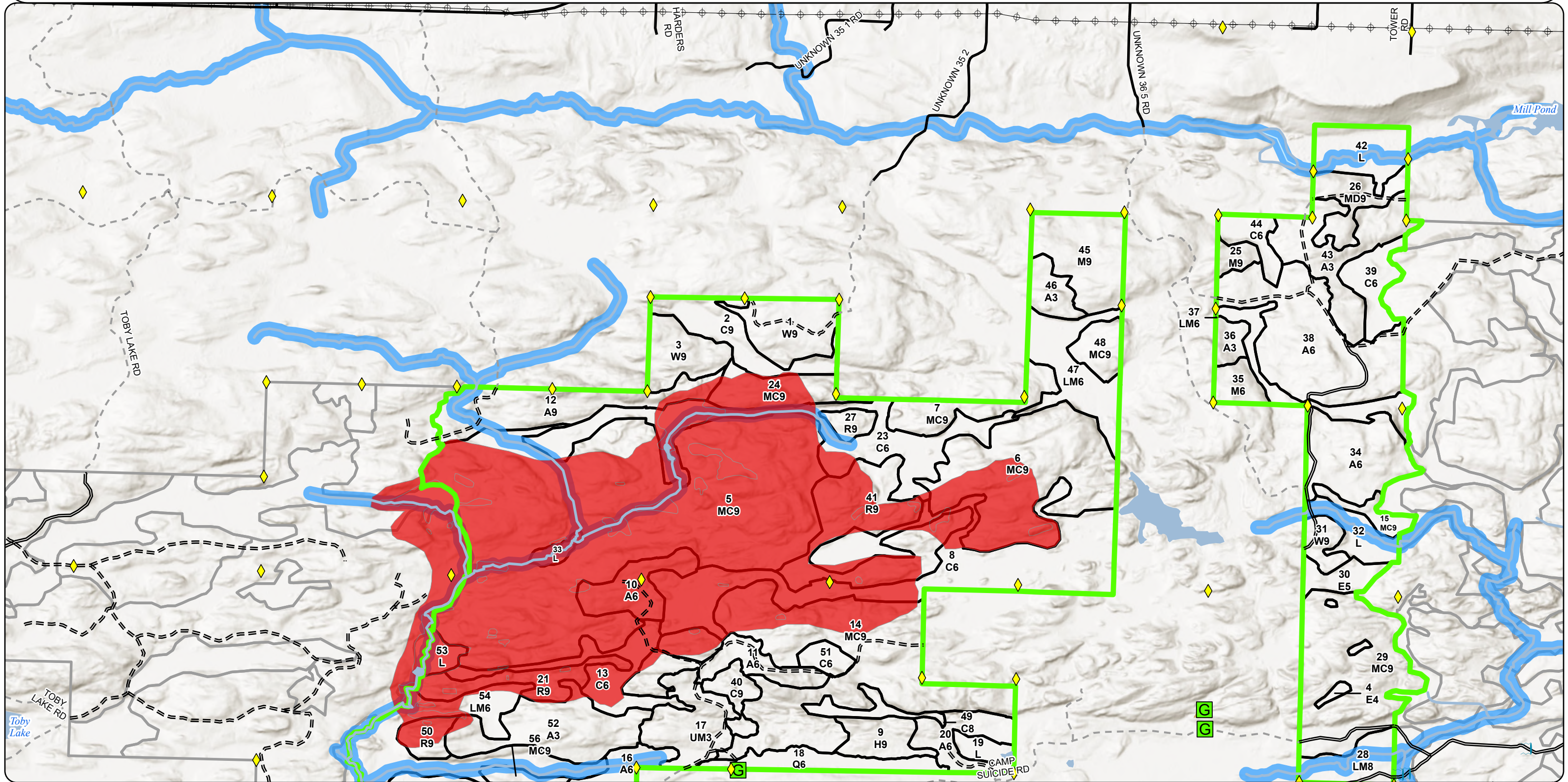


0 0.5 1 Miles

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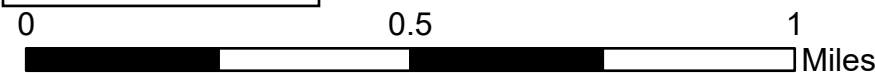
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- Compartment Boundary
- Stand Boundaries
- Ecological Reference Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



Special Conservation Areas & Site Conditions Map

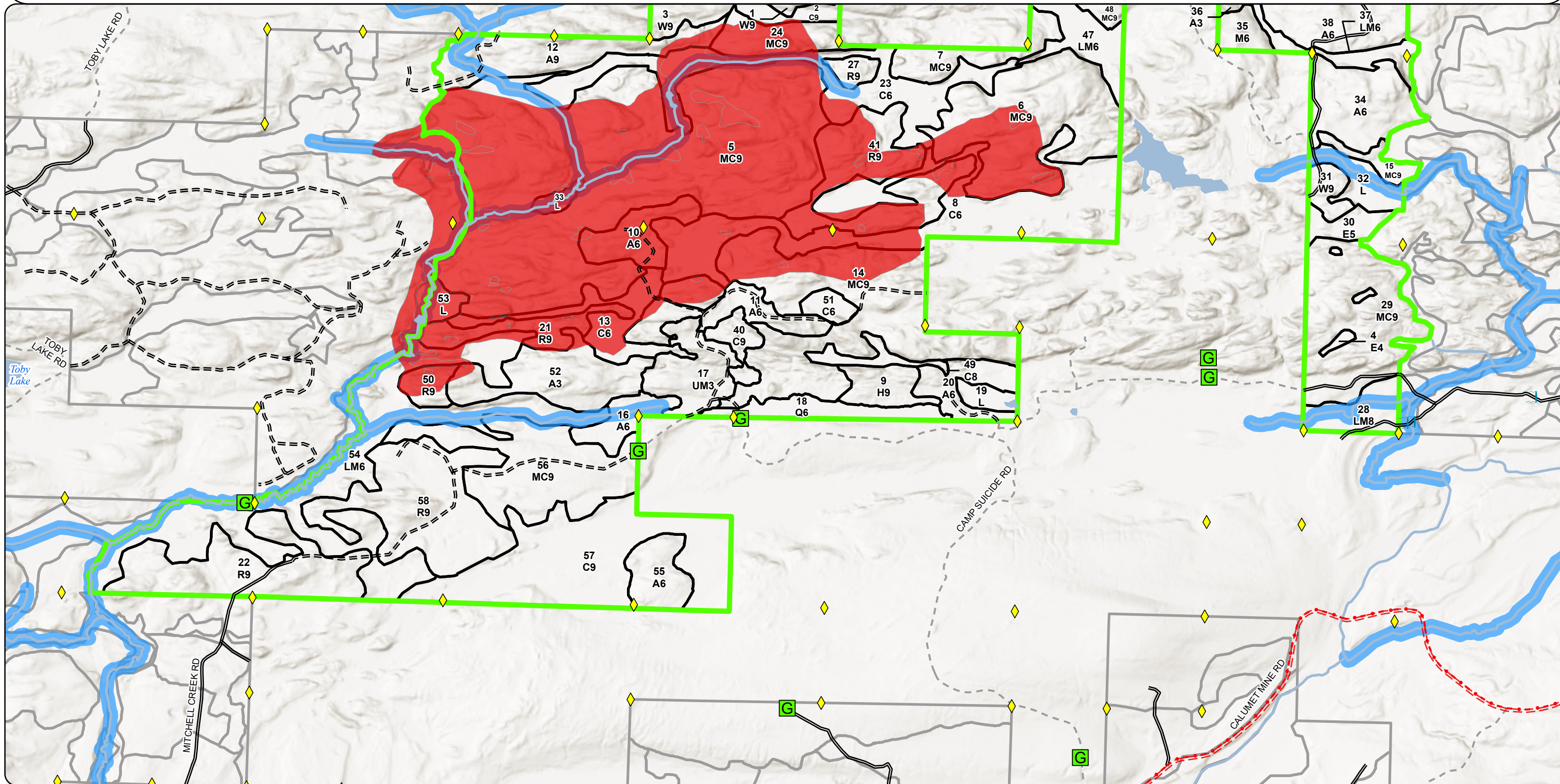
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Report 1 – Total Acres by Cover Type and Age Class



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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Approved Treatments:

12	12071012-Cut	10.7	4136 - Aspen, Mixed Conifer	9	73	81-110	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Planting Record	No
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Prescription Specs: 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 300ft.

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

Treatments:

Acceptable Regen: Aspen, maple, birch and pine

Other:

Comment:

Site Condition:

Proposed Start Date: 02/03/2022

15	12071015-Cut	7.1	42290 - Natural Mixed Pine	9	139	171-200	Harvest	Thinning	429 - Mixed Upland Conifers	Cutting Record	No
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Prescription Specs: Utilize Variable Density Thinning method. Mark to target residual BA of 60-100. Release and expand existing advanced regeneration gaps of Pine. No gap shall be greater than 1 acre. Leave all Cedar, Hemlock, and Oak if found. Leave trees greater than

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

Treatments:

Acceptable Regen: Pine, Aspen, Mixed conifers, Mixed deciduous

Other:

Comment: This treatment should establish a Pine sapling layer by installing holes in the canopy. Once saplings are established, the majority of the remaining overstory should be harvested to release the saplings.

Site Condition:

Proposed Start Date: 10/01/2026

29	12071029-Cut	59.8	42290 - Natural Mixed Pine	9	139	141-170	Harvest	Thinning	429 - Mixed Upland Conifers	Cutting Record	No
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Prescription Specs: Utilize Variable Density Thinning method. Mark to target residual BA of 60-100. Release and expand existing advanced regeneration gaps of Pine. No gap shall be greater than 1 acre. Leave all Cedar, Hemlock, and Oak if found. Exclude non-operable area

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

Treatments:

Acceptable Regen: Pine, Aspen, Mixed conifers, Mixed deciduous

Other:

Comment: This treatment should establish a Pine sapling layer by installing holes in the canopy. Once saplings are established, the majority of the remaining overstory should be harvested to release the saplings.

Site Condition:

Proposed Start Date: 10/01/2026



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
31	12071031-Cut	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 <u>Specs:</u> of 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 <u>Comment:</u> remaining overstory should be harvested to release the saplings. <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
34	12071034-Cut	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											
48	12071048-Cut	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 <u>Specs:</u> of 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 <u>Comment:</u> remaining overstory should be harvested to release the saplings. <u>Site Condition:</u> <u>Proposed Start Date:</u> 10/01/2026											
58	12071058-Cut	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											

S
t
a
n
dTreatment
Name

Acres

Stand
CoverTypeSize
DensityStand
AgeBA
RangeTreatment
TypeTreatment
MethodCover Type
ObjectiveAge
StructureHabitat
Cut

Total Treatment
Acreage Proposed: 141.8

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 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	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
Comments: 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
Comments:								



3	Unavailable	3J: Water quality/BMPs (stream, river, or lake)	110	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: 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
Comments: 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
Comments: Very wet and stream toward South end of stand.							
6	Unavailable	2F: Too steep	104	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Steep terrain with no access.							
7	Unavailable	5A: Not able to obtain desirable regeneration	48	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regen difficulties.							
8	Unavailable	5A: Not able to obtain desirable regeneration	39	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 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
Comments: Cedar regen difficulties.							
10	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain							
11	Unavailable	5A: Not able to obtain desirable regeneration	14	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hemlock regeneration issues.							
12	Unavailable	5A: Not able to obtain desirable regeneration	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regen difficulties.							
13	Unavailable	5A: Not able to obtain desirable regeneration	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regen difficulties.							
14	Unavailable	5A: Not able to obtain desirable regeneration	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regen difficulties.							
15	Unavailable	5A: Not able to obtain desirable regeneration	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 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
Comments: Cedar regen difficulties.							
17	Unavailable	5A: Not able to obtain desirable regeneration	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regen difficulties.							
18	Unavailable	5A: Not able to obtain desirable regeneration	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regeneration concerns.							
19	Unavailable	5A: Not able to obtain desirable regeneration	15	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar regeneration concerns.							
20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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
Comments: 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
Comments: Very wet stand with a stream.							
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
25	Unavailable	2F: Too steep	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rock bluff							
27	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
43	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Steep hill that drops off to the West Branch of the Sturgeon River.							
44	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 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.																																																																								
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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.																																																																								
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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.																																																																								
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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.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Sugar Maple	5	Log/Pole	12		White Ash	Low		Variable	Variable
Red Maple	10	Log/Pole/Sap	10		Sugar Maple	Low		Variable	Variable
White Ash	10	Log/Pole	14		White Pine	Low		< 5 feet	< 5 feet
Red Oak	5	Log/Pole	14		White Spruce	Low		Variable	Variable
Paper Birch	5	Log/Pole	12		Ironwood	Low		Variable	Variable
White Spruce	5	Log/XLog	12						
Northern White Cedar	5	Pole	8						
White Pine	30	XLog/Log	18	139					
Red Pine	20	Log/Pole	14						
Hemlock	5	Log/Pole	10						
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.	
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height		Size
Red Maple	2	Log/Pole	10		Northern White Cedar	High	>20 feet		>20 feet
Paper Birch	2	Log/Pole	12		White Ash	Low	Variable		Variable
Bigtooth Aspen	2	Log/Pole	14		Balsam Fir	Low	Variable		Variable
Balsam Fir	2	Pole	7		Paper Birch	Low	Variable		Variable
Northern White Cedar	2	Pole/Log	9		White Pine	Low	Variable		Variable
White Pine	34	XLog/Log	18						
Red Pine	56	XLog/Log	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.		
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Black Spruce	35	Pole	5		Black Spruce	Low		Variable	Variable
Northern White Cedar	55	Log/Pole	11	136	Balsam Fir	Low		Variable	Variable
Black Ash	10	Pole	6		Tag Alder	Medium		5 - 10 feet	5 - 10 feet
					White Pine	Trace		Variable	Variable
					Black Ash	Medium		Variable	Variable
9	42350 - Upland Hemlock	Sawtimber Well	13.5	123	201+	N/A			
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density		Avg. Height	Size
Red Maple	5	Log/Pole	10		Balsam Fir	Trace		Variable	Variable
Northern White Cedar	10	Log/Pole	12						
White Pine	15	XLog/Log	20						
Red Pine	5	XLog/Log	20						
Hemlock	65	Log/Pole	12	123					



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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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13	6120 - Lowland Cedar	Poletimber Well	23.3	118	111-140	N/A																																																																												
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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.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Sugar Maple		47	Pole/Log	9	105	White Pine		Low	Variable	Variable	
Red Maple		11	Pole/Log	9		Ironwood		Low	Variable	Variable	
Basswood		38	Log/Pole	15		White Spruce		Low	Variable	Variable	
Paper Birch		4	Log/Pole	10							
36	4130 - Aspen	Sapling Well	6.0	13	Immature	N/A	Harvested 2012 with Matamoosy sale #12-009-10-01.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size		
Red Maple		5	Sapling	2		Hazelnut (Spp.)		High	5 - 10 feet	5 - 10 feet	
Quaking Aspen		90	Sapling	2	13						
White Pine		5	XLog/Log	20							
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.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size		
Red Maple		2	Log/Pole	10		Pines (spp.)		Low	Variable	Variable	
Balsam Poplar		2	Pole	9		Balsam Fir		Low	Variable	Variable	
Black Spruce		2	Sapling/Pole	4		White Spruce		Low	Variable	Variable	
Northern White Cedar		45	Pole/Log	9	127						
Hemlock		5	Log/Pole	12							
Black Ash		44	Pole/Sapling	6							
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.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size		
Sugar Maple		5	Pole/Sapling	6		Balsam Fir		Low	Variable	Variable	
White Ash		5	Pole/Sapling	6		Bracken Fern		Medium	Not Applicable	Not Applicable	
Quaking Aspen		80	Pole	7	43						
White Pine		5	XLog/Log	20	139						
Red Pine		5	Log/XLog	14							
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.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size		
Balsam Poplar		10	Log/Pole	13		Balsam Fir		Medium	Variable	Variable	
Northern White Cedar		85	Log/Pole	13	127						
Black Ash		5	Pole	5							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																											
40	6120 - Lowland Cedar	Sawtimber Well	8.9	118	111-140	N/A	Trace amounts of white spruce and paper birch. Most of tag alder is concentrated in the north east corner. Pine in super canopy.																																																											
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41	42210 - Natural Red Pine	Sawtimber Well	51.4	139	111-140	N/A	Trace amounts of paper birch, fir, and aspen. Cedar understory very thick below pine. Hemlock concentrated in the north west corner.																																																											
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42	6220 - Alder/Willow	None	20.9			No	Marsh area surrounding West Branch of Sturgeon River. Far north part of stand contains a mix of maple, pine, oak, aspen. Most of wooded area would be within a 300 foot buffer of the river.																																																											
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43	4131 - Aspen, Oak	Sapling Well	35.1	1	Immature	N/A	Harvested 2024 with Jungle crumble sale.																																																											
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44	6120 - Lowland Cedar	Poletimber Well	9.8	127	111-140	N/A	Intermittent stream runs through stand and disappears at the southern tip. Ground is very wet. High ground patches contain mature aspen but are close to the stream.																																																											
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
50	42210 - Natural Red Pine	Sawtimber Well	8.1	139	141-170	N/A	Large Pine trees situated on rock outcropping.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple		5	Pole/Sap/Log	8		Hazelnut (Spp.)	High	5 - 10 feet	5 - 10 feet
Paper Birch		5	Pole/Log	8		Red Maple	Low	Variable	Variable
White Pine		20	XLog/Log	18		White Spruce	Low	Variable	Variable
Red Pine		70	Log/Pole/XLog	16	139	Balsam Fir	Medium	Variable	Variable
51	6120 - Lowland Cedar	Poletimber Well	5.9	118	171-200	N/A			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Spruce		15	Pole	7		Tag Alder	Low	5 - 10 feet	5 - 10 feet
Northern White Cedar		80	Log/Pole	10	118	Black Spruce	Low	Variable	Variable
Black Ash		5	Pole	7		White Pine	Full	< 5 feet	< 5 feet
						Balsam Fir	Low	Variable	Variable
						Black Ash	Low	Variable	Variable
52	4133 - Aspen, Mixed Pine	Sapling Well	38.2	21	Immature	N/A	Many areas of stand are fully stocked with Pine logs.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen		75	Sapling	2	21	Bracken Fern	High	Not Applicable	Not Applicable
White Pine		15	XLog/Log	20	139	White Pine	Low	Variable	Variable
Red Pine		10	Log/XLog	16					
53	622 - Lowland Shrub	None	5.1			No			
54	6139 - Mixed Lowland Forest	Poletimber Well	117.6	56	81-110	N/A	Aspen, red maple with pine component. dense hazel understory. Areas of stand adjacent to pine are upland but transition to low ground with tag alder as near Mitchell Creek. Bluffs along creek.		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple		15	Pole/Log	9		Sugar Maple	Low	10 - 20 feet	10 - 20 feet
Paper Birch		10	Log/Pole	10		Hazelnut (Beaked)	Full	5 - 10 feet	5 - 10 feet
Quaking Aspen		20	Pole	9	56	Balsam Fir	Low	10 - 20 feet	10 - 20 feet
Balsam Fir		5	Pole	8		White Spruce	Low	5 - 10 feet	5 - 10 feet
White Spruce		5	Log/Pole	10					
Northern White Cedar		10	Pole/Log	9					
Tamarack		5	Log/Pole	10					
White Pine		10	XLog	18					
Red Pine		10	Log	14					
Black Ash		10	Pole/Sapling	6					



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
Sugar Maple	5	Log/Pole/Sap	10		White Pine	Low		Variable	Variable
Red Maple	5	Log/Pole/Sap	10		Thimbleberry	Medium		5 - 10 feet	5 - 10 feet
Quaking Aspen	45	Log/Pole	10	48	White Spruce	Low		Variable	Variable
Balsam Poplar	15	Pole/Sapling	6		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Balsam Fir	15	Pole/Sap/Log	8		Ironwood	Medium		Variable	Variable
White Pine	5	XLog/Log	20						
Red Pine	5	Pole	8						
Black Cherry	5	Pole/Sapling	6						
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
Sugar Maple	10	Pole	6		White Spruce	Medium		10 - 20 feet	10 - 20 feet
Paper Birch	10	Pole/Log	8		Balsam Fir	Medium		5 - 10 feet	5 - 10 feet
Quaking Aspen	10	Log/Pole	10		Ironwood	Medium		Variable	Variable
Northern White Cedar	5	Log/Pole	10		Sugar Maple	Low		10 - 20 feet	10 - 20 feet
White Pine	50	XLog/Log	20	105	Tag Alder	Low		5 - 10 feet	5 - 10 feet
Red Pine	15	Log	16						
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
Paper Birch	5	Pole/Log	8		White Spruce	Low		Variable	Variable
Quaking Aspen	5	Pole	8		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Black Spruce	5	Pole	6		White Pine	Low		Variable	Variable
Northern White Cedar	75	Log/Pole	11	101	Tag Alder	High		5 - 10 feet	5 - 10 feet
Black Ash	10	Pole/Sapling	6						
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	Pole/Sapling	6		White Pine	Low		Variable	Variable
Paper Birch	8	Pole/Log	9		Sugar Maple	Low		5 - 10 feet	5 - 10 feet
White Pine	25	XLog	18		Balsam Fir	Low		5 - 10 feet	5 - 10 feet
Red Pine	65	XLog/Log	18	105					