



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12071

Entry Year 2020

Acreage: 1,425

County Dickinson

Management Area: Groveland

Revision Date: 2018-07-31

Stand Examiner: Jacob Siler

Legal Description:

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

Identified Planning Goals:

Thin and improve quality hardwoods where accessible and maintain Aspen. This management area is in an active deer yard. Actual timber management is tempered by deer yard and topographic considerations. Management in this area should favor pines and other conifers.

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:

Mostly small ownership of scattered forties. The topography limits development. This is wild country mostly used for hunting.

Unique Natural Features:

High rock bluffs and swampy areas predominate.

Archeological, Historical, and Cultural Features:

None known.

Special Management Designations or Considerations:

This area has potential for deer yard improvement and for a wild, natural 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

Sand/gravel pits are located in the area and there may be some potential within the compartment. There are several abandoned iron mines in the area including the Groveland Mine two miles to the west. Lands encumbered by some of the waste rock piles from the former mine are currently leased for non-metallic mineral development. There has been past mineral leasing in this area, and there has been some iron ore exploration near the compartment. Some iron ore potential may still exist beneath the compartment, the best potential being in Sec 36 to the north and Section 12 at the south end. There is no economic oil and gas production in the UP. The state does not own all of the mineral rights within the compartment. Private mineral rights owners must be allowed reasonable access to the land should they choose to explore and/or develop the minerals.

Vehicle Access:

Poor, rough roads blocked by private gates.

Survey Needs:

Multiple corners needed.

Recreational Facilities and Opportunities:

Hunting, hiking, trapping

Fire Protection:

Very poor access. Some consideration should be given to “let burn” protecting private lands and camps.

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:

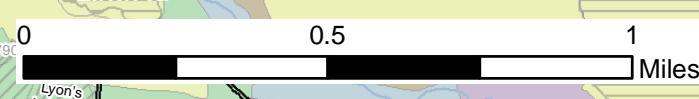
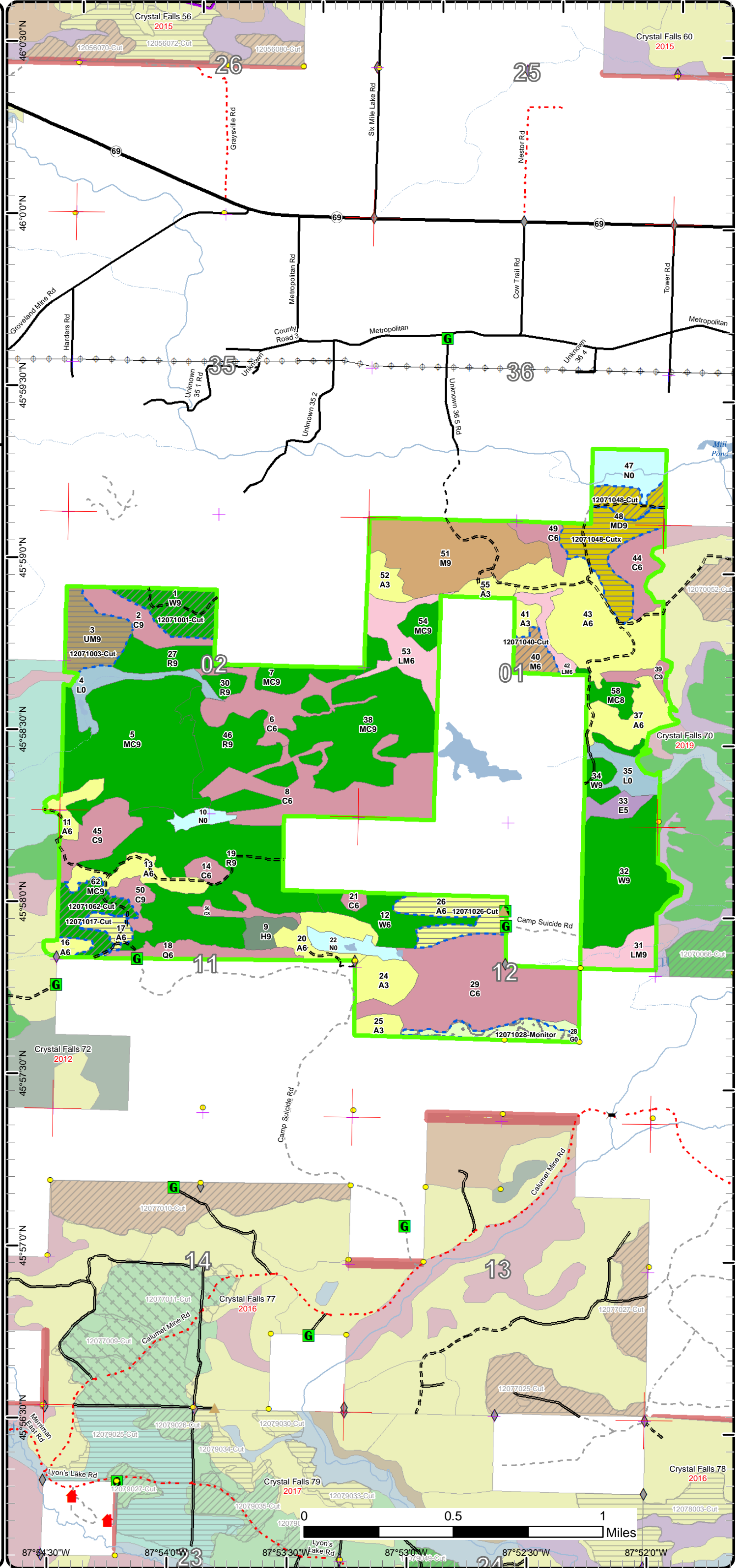
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 71
 T41N, R29W, Sec. 1, 2, 11, 12
 T42N, R29W, Sec. 36
 T41N, R28W, Sec. 6, 7
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Groveland
 YOE: 2020
 Acres: 1,425 GIS Calculated
 Examiner: Jacob Siler
 Map Revised: 12/17/2018
 Map Phase: Post-Review



- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
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- Lake/Pond
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- Lakes and Rivers All
- ▲ Berms
- G Gate
- Bridges
- Culvert
- Compartment Boundary
- Treatments with Site Conditions
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Regeneration Survey
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 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
- 623 - Emergent Wetland
- Lakes

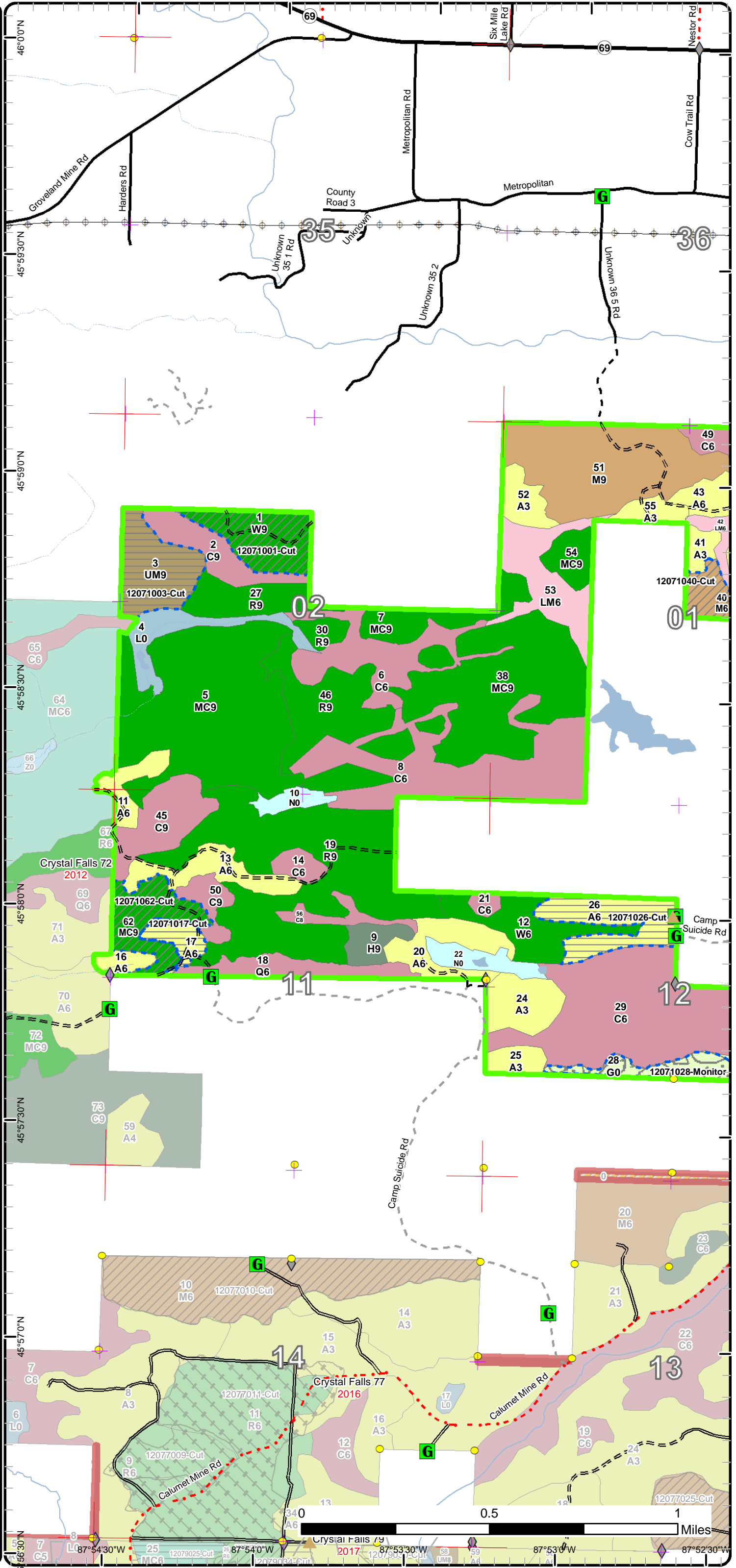


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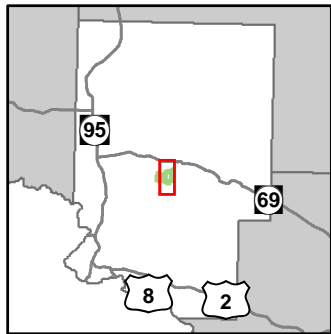
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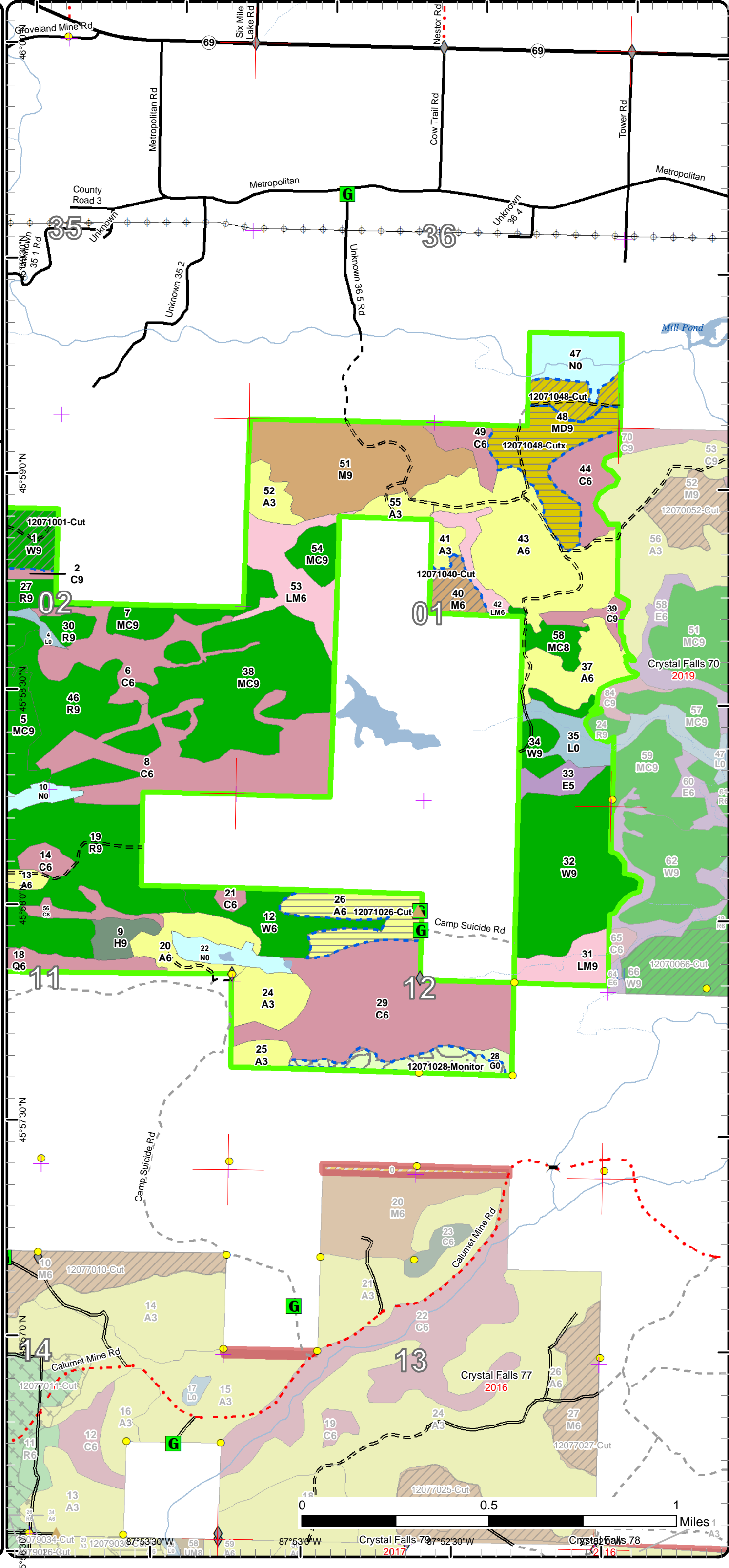
45°56'30"N 87°54'30"W 25 12079025-Cut 26 87°54'0"W 27 12079024-Cut 28 87°53'30"W 29 12079023-Cut 30 87°53'0"W 31 12079022-Cut 32 87°52'30"W

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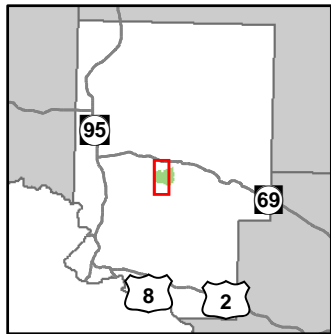


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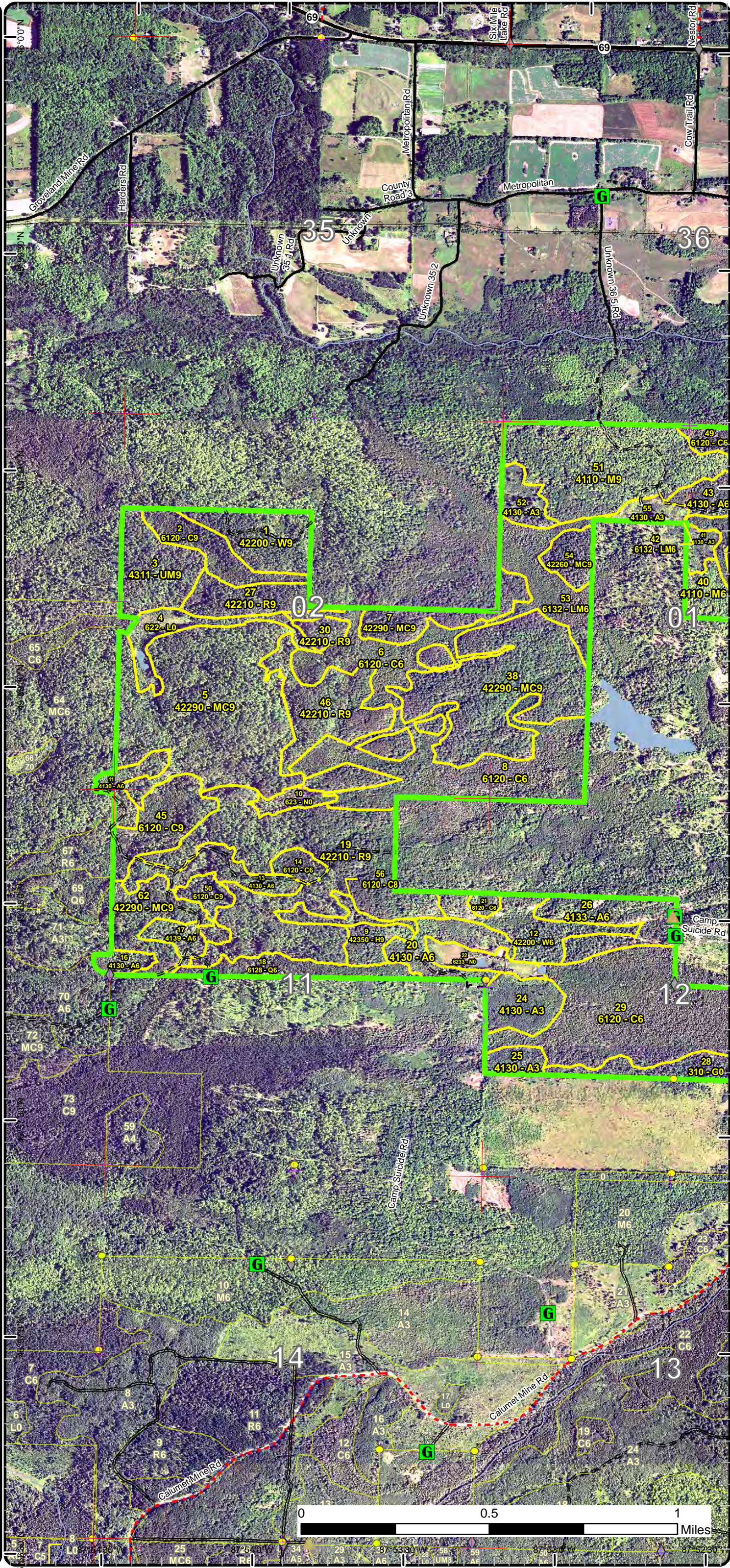


Stand Boundary Map

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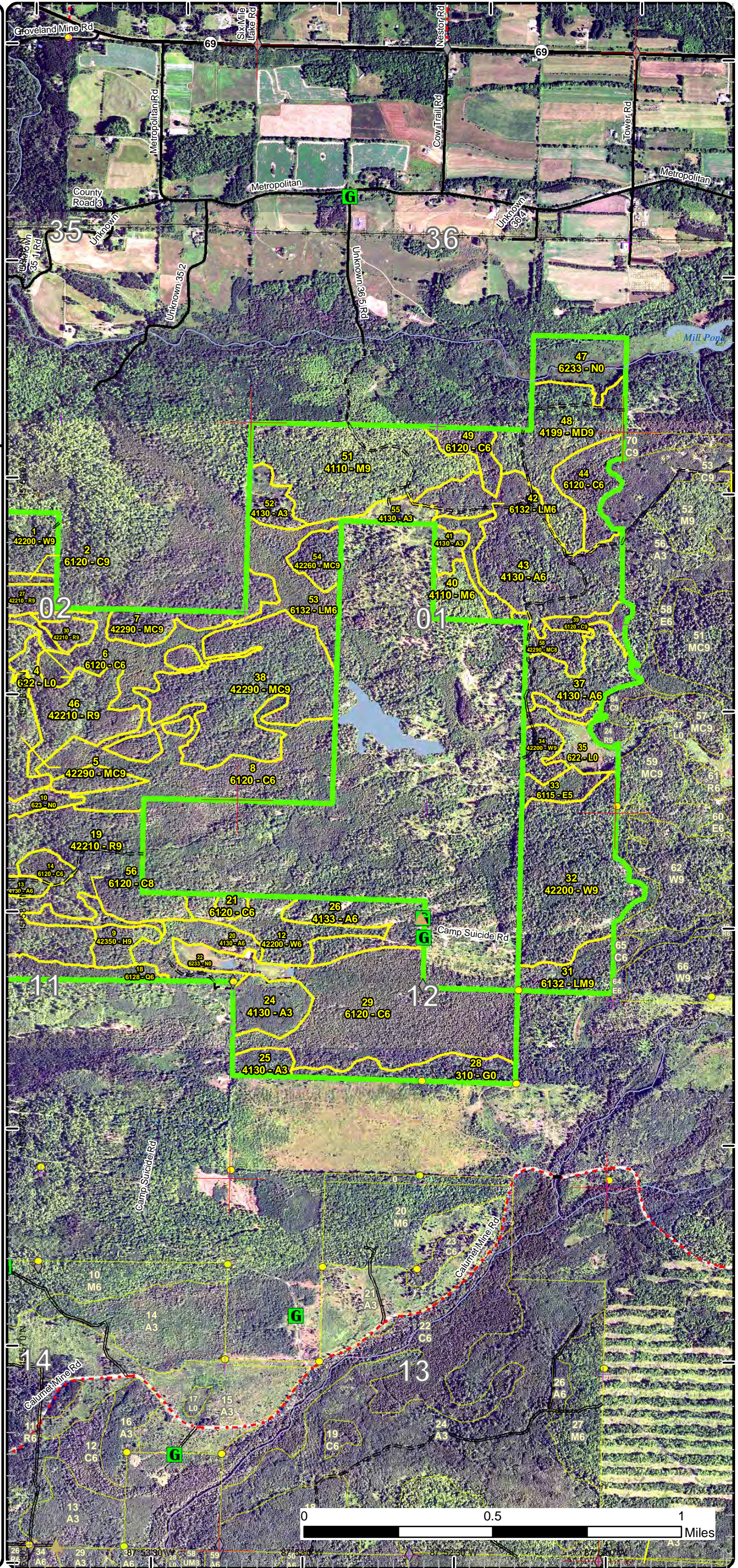


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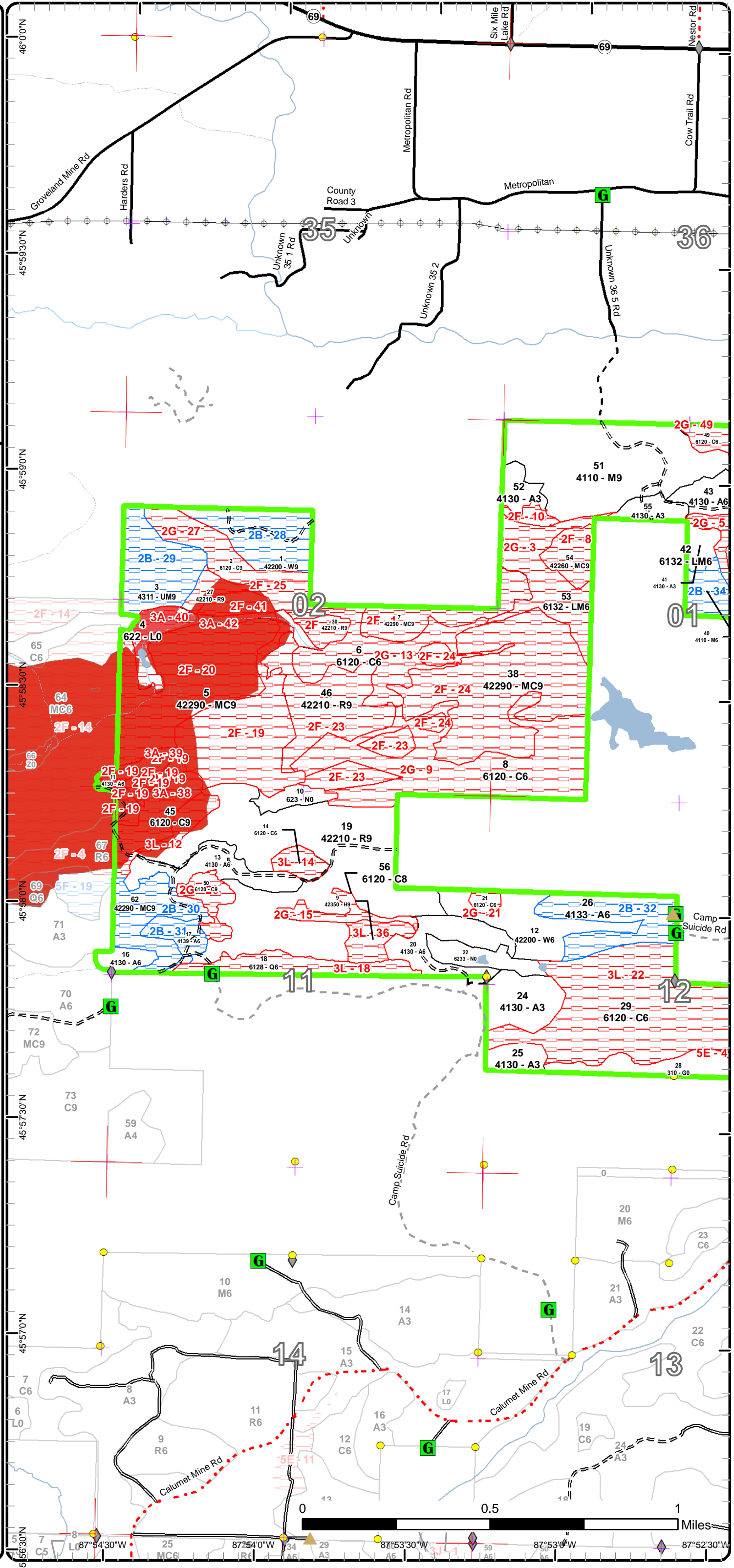


Special Conservation Areas & Site Conditions Map

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- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 3L: Other wildlife concerns
- Stand Boundaries
- Ecological Reference Areas
- Forest Habitat Core Interior
- Cold Water Streams
- Cold Water Lakes

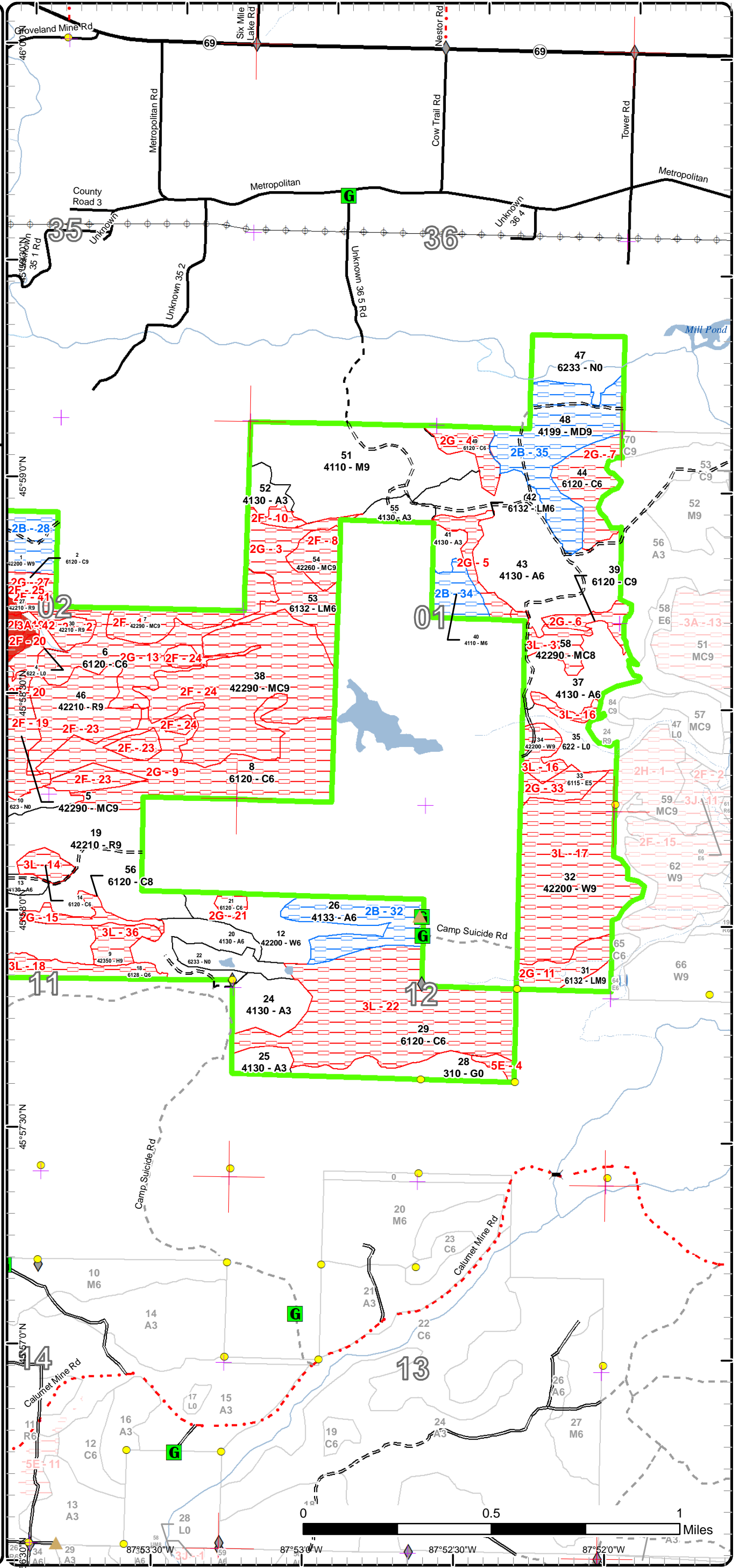


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- Available w/ Constraints
- Unavailable
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3L: Other wildlife concerns
- 5E: Long-Term Retention
- Stand Boundaries
- Ecological Reference Areas
- Forest Habitat Core Interior
- Cold Water Streams
- Cold Water Lakes



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	22	0	25	95	86	0	0	0	0	0	0	0	0	0	0	0	0	227
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	99	202	0	0	0	0	301
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
Herbaceous Openland	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
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	9	0	0	0	9
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	29	0	0	9	0	16	0	0	0	53
Lowland Shrub	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Marsh	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	46	0	0	0	0	0	0	0	46
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	256	0	0	0	0	256
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	69	80
Red Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	180	0	0	0	0	180
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	27
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	135	0	0	0	0	134
Total	85	22	0	25	95	86	0	0	0	0	86	0	125	809	9	16	0	69	1424



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2020

Acres of Harvest

Compartment 71
Total Compartment Acres: 1,425

Commercial Harvest -
Harvests with Site Condition - 166
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	34	0	0	0	0	0	0	0	0	34
Mixed Upland Deciduous	34	0	0	0	0	13	0	0	0	46
Natural Mixed Pines	0	0	0	0	0	23	0	0	0	23
Northern Hardwood	0	0	0	0	0	11	0	0	0	11
Upland Mixed Forest	27	0	0	0	0	0	0	0	0	27
White Pine	0	0	0	0	0	25	0	0	0	25
Total	95	0	0	0	0	71	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	14	0	0	180
Next Step	0	0	0	0	0	0	95	0	0	95
Total	166	0	0	0	0	0	109	0	0	275



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	12071001-Cut	25.2	42200 - Natural White Pine	Sawtimber Well	126	171-200	Harvest	Crown Thinning	4220 - Natural White Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition: Unknown Access**

Prescription Open up and expand canopy gaps (cut all red maple, aspen and paper birch using 2 inch spec). Throughout the rest of stand thin to a basal area
Specs: 120. Favor white pine for retention over red pine. Do not cut cedar and hemlock.

Next Step
Treatments:

Acceptable White pine and red pine
Regen:

Other BA may drop below designated targets in areas with high concentrations of cut all species. The latter will allow for opening and expansion of
Comment: gaps for regeneration. Avoid including areas on the edge of stand where cedar may be thick in understory. Stay out of wet ash area on the northern portion of stand.

Proposed Start Date: 10/1 /2019

3	12071003-Cut	27.2	4311 - Pine, Aspen Mix	Sawtimber Well	126	141-170	Harvest	Clearcut with Retention	4311 - Pine, Aspen Mix	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Cut all species using a 2 inch spec. Do not cut pine, cedar, oak and hemlock. Buffer stream to north and south 100 feet.
Specs:

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

Acceptable pine, birch, aspen
Regen:

Other Do not include lowland ash areas in sale. Try to exclude areas of pine where there are no cut species.
Comment:

Proposed Start Date: 10/1 /2019

17	12071017-Cut	7.9	4139 - Aspen, Mixed Deciduous	Poletimber Well	43	Unspec ified	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Cut all species with 2 inch spec. Do not cut cedar, pine or oak. Leave sub-merchantable spruce/fir.
Specs:

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

Acceptable aspen, birch, balsam poplar
Regen:

Other Should cut during winter or dry summer. younger aspen on the southern edge/east side of road can be excluded.
Comment:

Proposed Start Date: 10/1 /2019

26	12071026-Cut	26.4	4133 - Aspen, Mixed Pine	Poletimber Well	48	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition: Unknown Access**

Prescription Cut all species using 2 inch spec. Do not cut pine, cedar, hemlock and oak.
Specs:

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

Acceptable aspen, birch & pine
Regen:

Other Portion of stand may be inaccessible do to terrain. Pine will serve as retention.
Comment:

Proposed Start Date: 10/1 /2019



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
28	12071028-Monitor	13.8	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Monitoring	Natural Regen (Re-Inventory)	413 - Aspen	Even-Aged	Field Boundary

Habitat Cut: No **Site Condition:** Long-Term Retention

Prescription Regen check at next inventory

Specs:

Next Step

Treatments:

Acceptable Aspen, Mixed Hardwoods, Mixed Softwoods, Pine

Regen:

Other Percent to Treat = 100%

Comment:

Proposed Start Date: 10/1 /2019

40	12071040-Cut	10.7	4110 - Sugar Maple Association	Poletimber Well	98	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:** Unknown Access

Prescription Mark to a basal area of 80. Leave pine, hemlock, cedar and oak.

Specs:

Next Step

Treatments:

Acceptable Northern hardwoods associated species

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

48	12071048-Cut	12.5	4199 - Other Mixed Upland Deciduous	Sawtimber Well	98	111-140	Harvest	Crown Thinning	4117 - Mixed N. Hardwood - Pine	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:** Unknown Access

Prescription Thin to 70 BA. Concentrate on removing aspen and leaving oak if encountered. Do not cut pine.

Specs:

Next Step

Treatments:

Acceptable Pine Hardwood associates

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

48	12071048-Cutx	33.5	4199 - Other Mixed Upland Deciduous	Sawtimber Well	98	111-140	Harvest	Clearcut with Retention	4139 - Aspen, Mixed Deciduous	Even-Aged	Draft Field Boundary
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Habitat Cut: No **Site Condition:** Unknown Access

Prescription Cut all species using 2 inch spec. Do not cut pine and oak. Leave sub-merchantable spruce and fir.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, oak, northern hardwood associates

Regen:

Other Solid oak areas could be red lined out if encountered. Cut areas dominated by over mature aspen. Some of the poor quality hardwood will be included in this cut.

Comment:

Proposed Start Date: 10/1 /2019



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
62 12071062-Cut	22.9	42290 - Natural Mixed Pine	Sawtimber Well	126	141-170	Harvest	Crown Thinning	429 - Mixed Upland Conifers	Even-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition: Unknown Access**

Prescription Thin pine to 120 BA. Remove white pine only when red pine is not an option. Cut all other species using 2 inch spec. Do not cut cedar, oak and
Specs: hemlock. Leave sub-merchantable spruce and fir.

Next Step
Treatments:

Acceptable white pine, red pine
Regen:

Other Favor white pine for retention. Exclude small cedar/ash sink from sale.
Comment:

Proposed Start Date: 10/1 /2019

**Total Treatment
Acreage Proposed: 180.1**

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
Jacob Siler : Examiner

Compartment: 71
Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions						
		With Condition			2B	2F	2G	3A	3L	5E	
228	159	34		35	Aspen	34	10	15	10		
301	0	0		301	Cedar		0	175	16	110	
9	0	0		9	Hemlock			0		9	
18	14	0		4	Herbaceous Openland						4
17	0	0		17	Lowland Conifers					17	
9	0	0		9	Lowland Deciduous			9			
53	0	0		53	Lowland Mixed Forest			53			
30	16	0		14	Lowland Shrub				14		
37	37	0		0	Marsh						
46	0	46		0	Mixed Upland Deciduous	46		0			
256	0	23		233	Natural Mixed Pines	23	224			9	
80	0	11		69	Northern Hardwood	11	69				
180	106	0		73	Red Pine		70			3	
27	0	27		0	Upland Mixed Forest	27					
134	24	25		85	White Pine	25				85	
1,425	355	166		903	Total Forested Acres	166	373	252	40	234	4
	25%	12%		63%	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	2F: Too steep	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain							
2	Unavailable	2F: Too steep	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

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3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	29	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	2F: Too steep	10	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Comments: Portions of the stand are inoperable and access would be challenging.							

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9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	70	2F: Too steep	3L: Other wildlife concerns	Unspecified	Unspecified
Comments: Rough terrain sloping into wet ground. Other wildlife concern: Deer cover							
10	Unavailable	2F: Too steep	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain							
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
12	Unavailable	3L: Other wildlife concerns	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Deer cover.							
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	33	2F: Too steep	Unspecified	Unspecified	Unspecified
Comments: Rough terrain sloping into wet ground.							
14	Unavailable	3L: Other wildlife concerns	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Deer cover							

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15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: Deer cover							
16	Unavailable	3L: Other wildlife concerns	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Hold for deer cover. Should consider harvest to regenerate pines.							
17	Unavailable	3L: Other wildlife concerns	73	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Conditional deer yard. It was agreed on for 2020 year of entry that this stand would not be cut. Should be considered for harvest in the future.							
18	Unavailable	3L: Other wildlife concerns	17	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Deer cover							
19	Unavailable	2F: Too steep	46	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: Rough terrain and deer cover for wildlife concern							
20	Unavailable	2F: Too steep	65	3L: Other wildlife concerns	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified
Comments: Portion of stand to the west is in the Groveland Mine ERA (Dry-Mesic Northern Forest ERA). Other wildlife concern: Deer cover. Rough Terrain.							

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21	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
22	Unavailable	3L: Other wildlife concerns	96	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments: Other wildlife concern: Deer cover							
23	Unavailable	2F: Too steep	46	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain and Other Wildlife Concern: Deer Cover							
24	Unavailable	2F: Too steep	84	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain and Other Wildlife Concern: Deer Cover							
25	Unavailable	2F: Too steep	13	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: Rough Terrain. Good portion of stand is in ERA. Other wildlife concern: Deer cover							
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	2F: Too steep	3L: Other wildlife concerns	Unspecified	Unspecified
Comments: Rough terrain sloping into wet ground. Other Wildlife Concerns: Deer cover.							

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27	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	18	2F: Too steep	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified
Comments: Rough terrain sloping into wet ground.							
28	Available	2B: Unknown if access through adjacent landowner(s) is possible	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
29	Available	2B: Unknown if access through adjacent landowner(s) is possible	27	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
30	Available	2B: Unknown if access through adjacent landowner(s) is possible	23	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
31	Available	2B: Unknown if access through adjacent landowner(s) is possible	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

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32	Available	2B: Unknown if access through adjacent landowner(s) is possible	26	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
33	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
34	Available	2B: Unknown if access through adjacent landowner(s) is possible	11	2I: Survey needed	Unspecified	Unspecified	Unspecified
Comments:							
35	Available	2B: Unknown if access through adjacent landowner(s) is possible	46	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
36	Unavailable	3L: Other wildlife concerns	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Deer cover							
37	Unavailable	3L: Other wildlife concerns	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Delay treatment tell aspen is ready for cutting.							

Report 4 – Site Conditions

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38	Unavailable	3A: Conservation Values incompatible with harvest at this time	16	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
Comments: Stand is within Dry-Mesic Northern Forest ERA. Other Wildlife Concern: Deer Cover.							
39	Unavailable	3A: Conservation Values incompatible with harvest at this time	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand is within Dry-Mesic Northern Forest ERA							
40	Unavailable	3A: Conservation Values incompatible with harvest at this time	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Stand is within Northern Wet Meadows ERA							
41	Unavailable	2F: Too steep	6	3L: Other wildlife concerns	3A: Conservation Values incompatible with harvest at this time	Unspecified	Unspecified
Comments: Rough Terrain. Other wildlife concern: Deer cover. Dry-Mesic Northern Forest ERA.							
42	Unavailable	3A: Conservation Values incompatible with harvest at this time	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Dry Mesic Northern Forest ERA							

Report 4 – Site Conditions

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49	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	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
Comments				

**Report 6 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

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

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
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	General Comments:
1	42200 - Natural White Pine	Sawtimber Well	25.2	126	171-200	Trace amounts of paper birch, oak, white ash and black ash. Cedar density is primarily on the southern edge of the stand and dissipates as the grade climbs to the north. Red maple and bigtooth aspen occur in gaps and extend into the canopy. Wet ash area in the north east part of stand.
2	6120 - Lowland Cedar	Sawtimber Well	18.1	116	171-200	OPIC - FMD: OI Stand Year Origin was 1868 Trace amounts of paper birch and black spruce.
3	4311 - Pine, Aspen Mix	Sawtimber Well	27.3	126	141-170	Trace amount of oak and hemlock. BA poles are largely concentrated on south side of stand. Birch falling down.
5	42290 - Natural Mixed Pine	Sawtimber Well	110.7	123	141-170	OPIC - FMD: OI Stand Year Origin was 1895 Trace amounts of cedar, aspen, hemlock, and paper birch. Cedar and black ash make up the canopy when found together in low areas, primarily in the west portion of the stand.
6	6120 - Lowland Cedar	Poletimber Well	32.7	116	171-200	OPIC - FMD: OI Stand Year Origin was 1868 Trace amounts of pole/log sized red maple, paper birch and yellow birch. Intermittent stream runs through stand. Black ash occurs most frequently in fingers that drain into the cedar swamp. Very rocky with cliffs surrounding the majority of the stand.
7	42290 - Natural Mixed Pine	Sawtimber Well	18.7	126	171-200	East portion of stand, near Stand 53, has a large mix of species. Pine becomes more dominant as you move west. Large portion of the stand has thick cedar poles under a pine canopy.
8	6120 - Lowland Cedar	Poletimber Well	70.0	129	171-200	Trace amounts of red maple, white pine, red pine, hemlock, paper birch and aspen. Southeast corner of stand contains a small high area composed mostly of aspen, balsam, cedar and pine.
9	42350 - Upland Hemlock	Sawtimber Well	8.9	116	171-200	North east corner of stand has more red maple and SBW damage
11	4130 - Aspen	Poletimber Well	9.8	43	Unspecified	OPIC - FMD: OI Stand Year Origin was 1975
12	42200 - Natural White Pine	Poletimber Well	24.3	126	141-170	Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. All streams buffered 100 feet. white pine in super canopy. Trace sugar maple and paper birch Basal area can be highly variable due to salvage and terrain. Black ash primarily concentrated in one location.
13	4130 - Aspen	Poletimber Well	17.5	43	Unspecified	Stand primarily follows the road. Various wet spots where ash sap/poles are dominant. Tag alder is concentrated to where the stream runs through the stand. Trace amounts of cedar.
14	6120 - Lowland Cedar	Poletimber Well	5.9	111	171-200	



Stand	Crystal Falls Mgt. Unit		Report 7 – Forested Stands			Compartment: 71 Year of Entry: 2020
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	4130 - Aspen	Poletimber Well	5.1	43	Unspecified	OPIC - FMD: OI Stand Year Origin was 1975 East side of stand has a concentration of small pines and gray alder. Trace amounts of bigtooth, cedar, black spruce, and white spruce.
17	4139 - Aspen, Mixed Deciduous	Poletimber Well	7.9	43	Unspecified	OPIC - FMD: OI Stand Year Origin was 1975 Trace amounts of cedar and super canopy pine. Portion of stand on the west side of road is for the most part older probably 70.
18	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Well	17.1	111	141-170	Stand fades from cedar dominant to black ash as you go east. Basal area also decreases as you move into more ash. Trace amounts of red maple, white birch and balsam poplar.
19	42210 - Natural Red Pine	Sawtimber Well	109.4	126	141-170	Trace amounts of hemlock, white spruce, oak, sugar maple, and black ash. Most maple, oak and aspen occurring in sub-canopy run in patches. There is an increase in red maple and cedar south of the intermittent stream that runs through Stand 56. There is also some open patches from bud worm damage south of the stream. Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. All streams buffered 100 feet.
20	4130 - Aspen	Poletimber Well	19.4	43	Unspecified	OPIC - FMD: OI Stand Year Origin was 1975 Trace amounts of pole sized paper birch, log sized red pine, pole/log sized Bam, and pole sized balsam fir. Trace amounts of cedar also present. bf, ws, wp, and rp saplings/poles are present in dense pockets.
21	6120 - Lowland Cedar	Poletimber Well	2.8	111	171-200	OPIC - FMD: OI Stand Year Origin was 1894
24	4130 - Aspen	Sapling Well	17.5	23	Immature	OPIC - FMD: OI Stand Year Origin was 1995 Trace amounts of white pine, cedar, cherry, white spruce, and balsam fir.
25	4130 - Aspen	Sapling Well	7.0	23	Immature	OPIC - FMD: OI Stand Year Origin was 1995 Cedar in the super canopy with quaking aspen underneath. Mix of smaller saplings below aspen.
26	4133 - Aspen, Mixed Pine	Poletimber Well	26.4	48	Unspecified	OPIC - FMD: OI Stand Year Origin was 1970 Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. All streams buffered 100 feet. white pine in super canopy. Trace amounts of red maple, cedar, red pine, balsam poplar, big tooth, and black ash, paper birch and oak.
27	42210 - Natural Red Pine	Sawtimber Well	18.7	126	141-170	Trace amount of oak, bigtooth aspen. Some red maple and bigtooth aspen in canopy gaps. very rocky with cedar in portions of the understory. Good portion of stand in ERA.



Stand	Crystal Falls Mgt. Unit		Report 7 – Forested Stands			Compartment: 71 Year of Entry: 2020
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
29	6120 - Lowland Cedar	Poletimber Well	96.1	124	171-200	Trace amounts of balsam poplar and paper birch.
30	42210 - Natural Red Pine	Sawtimber Well	5.5	126	141-170	Very rocky. Cedar in portion of understory mostly around the perimeter of the stand.
31	6132 - Mixed Lowland Forest with Cedar	Sawtimber Well	16.0	140	111-140	OPIC - FMD: OI Stand Year Origin was 1878 Trace amounts of black spruce and cherry. Intermittent stream runs through center of stand. Ground gets drier as you head south east and cedar gets larger. South east corner of stand is primarily large diameter cedar, white ash poles and sparse basswood and trace hard maple.
32	42200 - Natural White Pine	Sawtimber Well	73.1	127	141-170	Trace amounts of oak and paper birch and cedar. Canopy gaps contain mostly red maple, bigtooth aspen and paper birch. A few vernal ponds are present and a couple black ash low pockets with pole sized trees. Portion of stand south of cliffs was harvested roughly 20 years ago and has a lower BA than the remainder of stand.
33	6115 - Lowland Ash	Poletimber Medium	8.6	139	81-110	OPIC - FMD: OI Stand Year Origin was 1879 Trace amounts of paper birch variable black ash size from poles to saplings. Very Wet. Thick Cedar pocket on the north side of stand and some cedar around the perimeter.
34	42200 - Natural White Pine	Sawtimber Well	11.9	127	171-200	Pockets full of red maple poles/saplings and mature big tooth aspen that reaches into the canopy.
37	4130 - Aspen	Poletimber Well	24.8	36	Unspecified	OPIC - FMD: OI Stand Year Origin was 1982 Trace amounts of white spruce, oak, and ash. Pine regen occurs in thick clumps. North eastern portion of stand is rocky and climbs in grade.
38	42290 - Natural Mixed Pine	Sawtimber Well	84.1	126	171-200	The terrain is rocky and rugged. Cedar poles in sub-canopy are thick around the perimeter of the stand and dissipate as the grade climbs. Red pine is the dominate canopy where cedar is thick in sub-canopy, primarily along the north edge and west side of stand. Black ash is found in various sinks and small drainages.
39	6120 - Lowland Cedar	Sawtimber Well	6.8	120	201+	OPIC - FMD: OI Stand Year Origin was 1982 Very Wet. Trace amounts of yellow birch and pine.
40	4110 - Sugar Maple Association	Poletimber Well	10.7	98	111-140	OPIC - FMD: This stand is on a steep hillside. It is marginally worth management. Rocky terrain with trace amounts of scattered hemlock, cedar, oak, white pine and red pine.
41	4130 - Aspen	Sapling Well	5.3	6	Immature	OPIC - FMD: HARVESTED WITH MATAMOOSY SALE 2012 #12-009-10-01
42	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	8.8	120	81-110	OPIC - FMD: The North end is E3Wet Standing water but no movement Some trace pines and pine regen on higher ground.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	4130 - Aspen	Poletimber Well	70.2	36	Unspecified	OPIC - FMD: OI Stand Year Origin was 1982 Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. All streams buffered 100 feet. White pine, 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.
44	6120 - Lowland Cedar	Poletimber Well	19.1	120	111-140	OPIC - FMD: OI Stand Year Origin was 1898 Spruce and Fir removed in portions of stand due to Spruce Budworm outbreak in 2016. All streams buffered 100 feet. Wet soils trace amounts of black spruce and white birch and balsam poplar
45	6120 - Lowland Cedar	Sawtimber Well	24.1	116	171-200	Trace amounts of paper birch and red maple. Pine is in the super canopy.
46	42210 - Natural Red Pine	Sawtimber Well	46.1	123	171-200	OPIC - FMD: OI Stand Year Origin was 1895 Trace amounts of paper birch and big tooth aspen. Cedar very thick below pine. Hemlock concentrated in the north west corner.
48	4199 - Other Mixed Upland Deciduous	Sawtimber Well	46.0	98	111-140	OPIC - FMD: Poor hardwood and oak on rocky thin soil. Rocky soil with variable overall sized timber. Hardwood dominated areas are primarily pole sized while some oak and aspen dominated areas are log sized. Trace amounts of white ash, red pine, balsam fir and white pine.
49	6120 - Lowland Cedar	Poletimber Well	10.0	120	171-200	OPIC - FMD: OI Stand Year Origin was 1898 Intermittent stream runs through stand and disappears at the southern tip. Soil gets progressively wet as you go north. Cedar thins and tag alder increases. High ground patches contain mature aspen but are within intermittent stream buffer.
50	6120 - Lowland Cedar	Sawtimber Well	8.7	111	141-170	Trace amounts of white spruce and paper birch. Most of tag alder is concentrated in the north east corner. Pine in super canopy.
51	4110 - Sugar Maple Association	Sawtimber Well	68.8	106	81-110	OPIC - FMD: Could use a thin, but not high priority. Thin with large canopy gaps to encourage white pine regeneration. HARVESTED WITH MATAMOOSY SALE 2012 #12-009-10-01 Trace amounts of white ash, cedar and pine. Steep hill side on the south side of stand contains a heavier amount of oak, white pine and mature aspen; to small of an area to breakout. Small area on east edge of stand not treated with MATAMOOSY SALE and has poor quality hardwood and oak on rocky soil.
52	4130 - Aspen	Sapling Well	10.0	6	Immature	OPIC - FMD: The stand grades into pine as the South slope steepens. It may not be feasible to cut much of the stand due to terrain. Retain and promote pine growth and reproduction. Some of the aspen on the North edge of the stand may be cut. HARVESTED WITH MATAMOOSY SALE 2012 #12-009-10-01 Pine on south side of stand is located on rock and is not practical to cut.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
53	6132 - Mixed Lowland Forest with Cedar	Poletimber Well	28.5	93	141-170	OPIC - FMD: This is a valley with steep rock walls covered with pine. Pole sized aspen and paper birch present in the stand are mostly around edges and in slightly higher areas of the drainage. Trace amounts of pine.
54	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	10.4	126	171-200	Lots of white birch poles and clumps of cedar along edge that slopes down into black ash/cedar stand. White pine saplings found in clumps scattered in the stand. Basal area variable dipping below the 171-200 range in some areas.
55	4130 - Aspen	Sapling Well	6.7	6	Immature	OPIC - FMD: Poor hardwood on rocky thin soil. HARVESTED WITH MATAMOOSY SALE 2012 #12-009-10-01 Trace amount of residual maple, oak and pine
56	6120 - Lowland Cedar	Sawtimber Medium	7.1	116	171-200	Open canopy with tag alder along portion of stream.
58	42290 - Natural Mixed Pine	Sawtimber Medium	9.4	126	111-140	Big tooth and quaking aspen poles occurring at varying densities.
62	42290 - Natural Mixed Pine	Sawtimber Well	22.9	126	141-170	Trace amounts of hemlock, white ash and large white spruce.



Stand	Cover Type	Acres	Managed Site	General Comments:
4	622 - Lowland Shrub	16.3	No	Portion of stand is in Groveland Mine ERA (Wet Meadow Upper Midwest Type)
10	623 - Emergent Wetland	5.9	No	
22	6233 - Wet Meadow	10.2	No	OPIC - FMD: OI Stand Year Origin was
28	310 - Herbaceous Openland	17.9		Some uncut wet areas throughout stand
35	622 - Lowland Shrub	13.3	No	Stand is primarily marsh with cedar on the perimeter. Intermittent stream runs through cedar patch in north west corner of stand.
47	6233 - Wet Meadow	20.7	No	OPIC - FMD: The banks of the Sturgeon river. Marsh area surrounding 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.