



# Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12105

Entry Year 2026

Acreage: 2,167

County Dickinson

Management Area: Cassidy Creek

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**Stand Examiner:** Rich Goupell

**Legal Description:**

T40N,R29W sections 23, 26 & 35

**Identified Planning Goals:**

To maintain the aspen type and continue to work on age class diversity, improve northern hardwood stands and the large amount of forest diversity that just abounds in this compartment. Also, to preserve and improve the recreational value here. Since this compartment is close to Norway and the Norway Truck trail has been vastly improved, this compartment gets a lot of trapping, hunting, fishing and trail use.

**Soil and topography:**

Soils are predominantly Emmet-rock outcrop and 6-18% slope with rolling hills and rock outcrops.

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

This compartment is solid state land with some private land on the edges of the compartment.

**Unique Natural Features:**

No Unique Natural Features known.

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

**Special Management Designations or Considerations:**

**Watershed and Fisheries Considerations:**

Fern Creek runs along the western edge of this compartment and is a trout stream.

**Wildlife Habitat Considerations:**

This compartment was historically dominated by Hemlock/White Pine forests. Aspen now represents more than 50% of the compartment. The presence of interspersed lowland conifer and lowland hardwoods stands and their associated transition zones make this area diverse and provides food and cover for deer, bear, and migratory songbirds. An active goshawk nest is located in the southern portion of stand 40 which was present 10 years ago. Mature forest conditions are necessary to provide adequate habitat requirements for this species.

**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 operations are approximately two miles east. Granite bedrock is at or near the surface across the compartment. Potential for development of sand & gravel in the compartment may be limited. In some cases, weathered granite can be a source of aggregate material, and it is mined as such in other parts of the western UP. The compartment is just north of the historic Norway-Iron Mountain iron mining district. The compartment, however, is unlikely to have any potential for iron ore deposits. Aeromagnetic survey data indicate that there may be some areas that are prospective for future testing/study for occurrences of metallic and/or critical minerals, and significant acreage of State-owned mineral rights are currently under lease or nominated for leasing in the north half of the compartment. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, the surface owner must provide the owner of the mineral rights reasonable access to the surface for mineral exploration and development

**Vehicle Access:**

There are many forest roads accessing this compartment. Some are open and some are bermed.

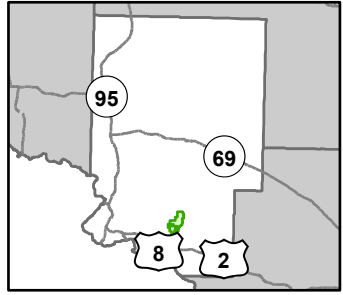
**Survey Needs:**

Some corners will be needed in the south of the compartment

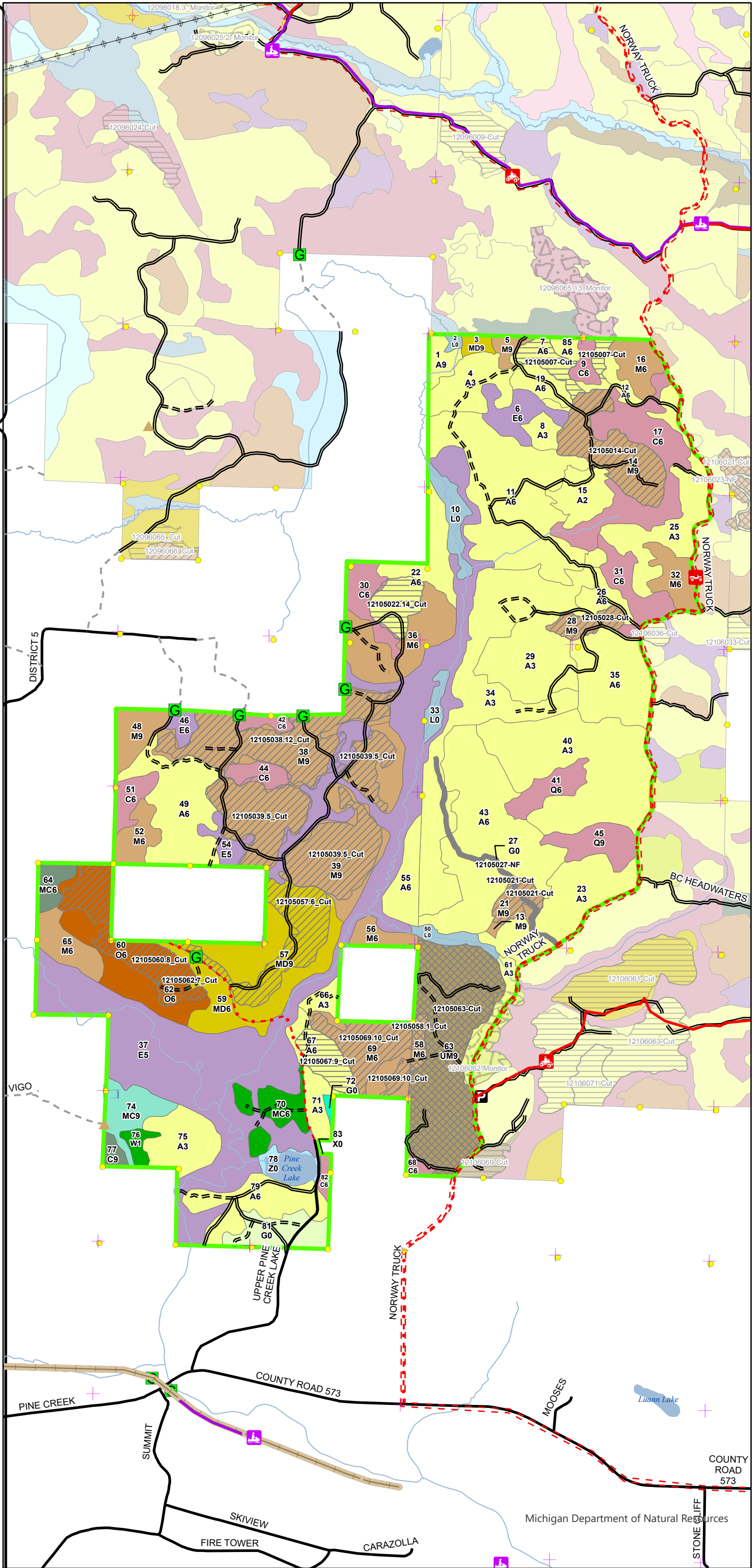
**Recreational Facilities and Opportunities:**

# Cover Type & Treatments Map

Compartment: 12105  
T40N,R29W sections 23, 26 & 35  
County: Dickinson  
Unit: Crystal Falls  
Mgmt Area: Cassidy Creek  
YOE: 2026  
Acres: 2166.6 GIS Calculated  
Examiner: Rich Goupell  
Map Revised: 08/13/2024  
Map Phase: Web Post

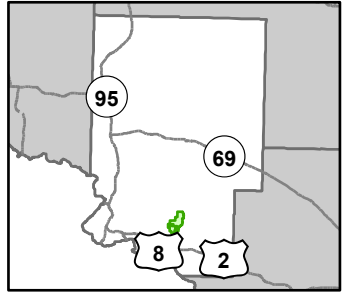


- ORV Trails
- ORV Routes
- Designated ORV Routes
- Designated ATV Trails
- Remonumented Section Corners
- Survey Grade Corners
- Counties
- Berms
- Gate
- Culvert
- Parking Lot
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
- Private - Dirt / Gravel Road
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Opening Maintenance
- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
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- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub

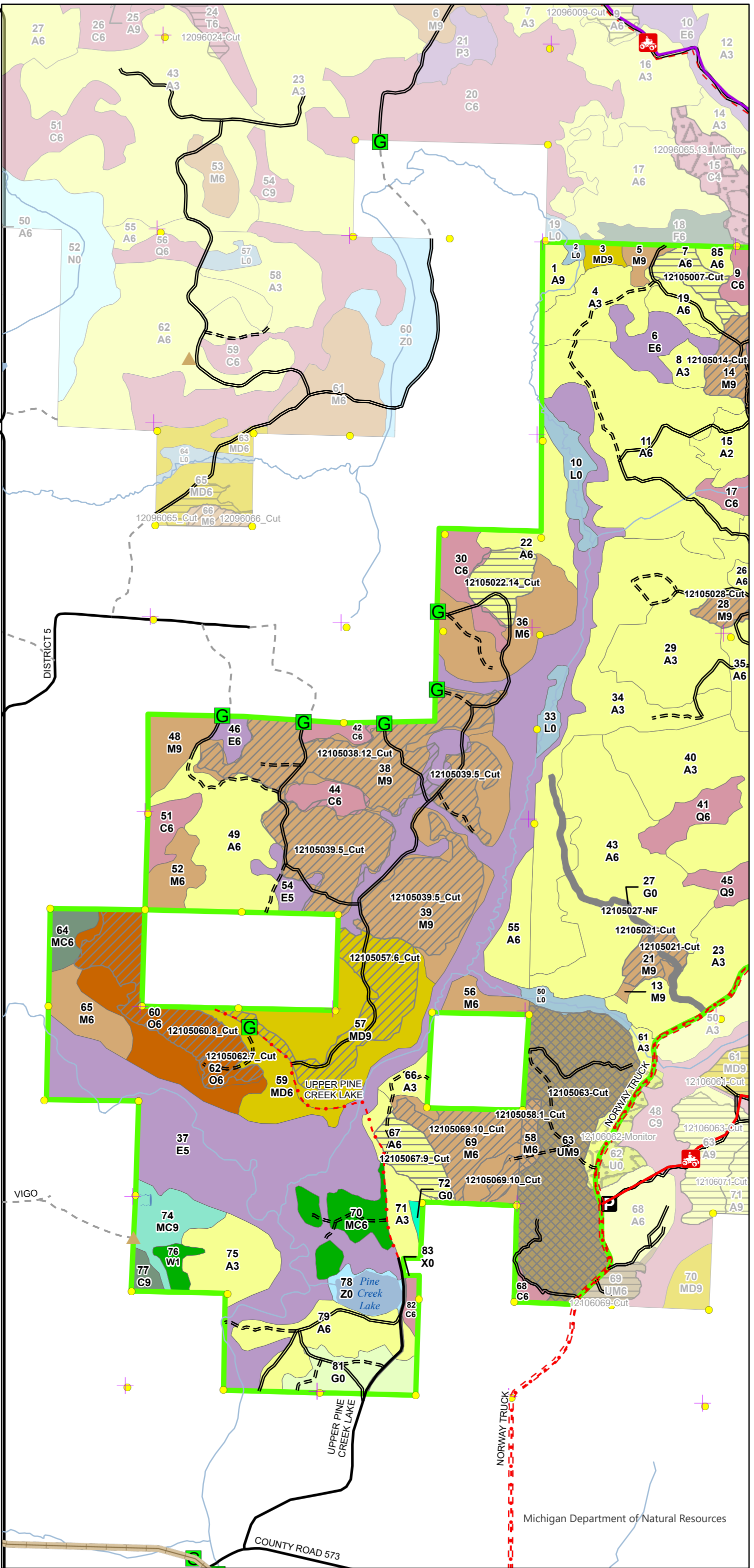


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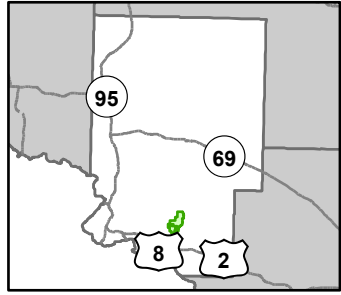


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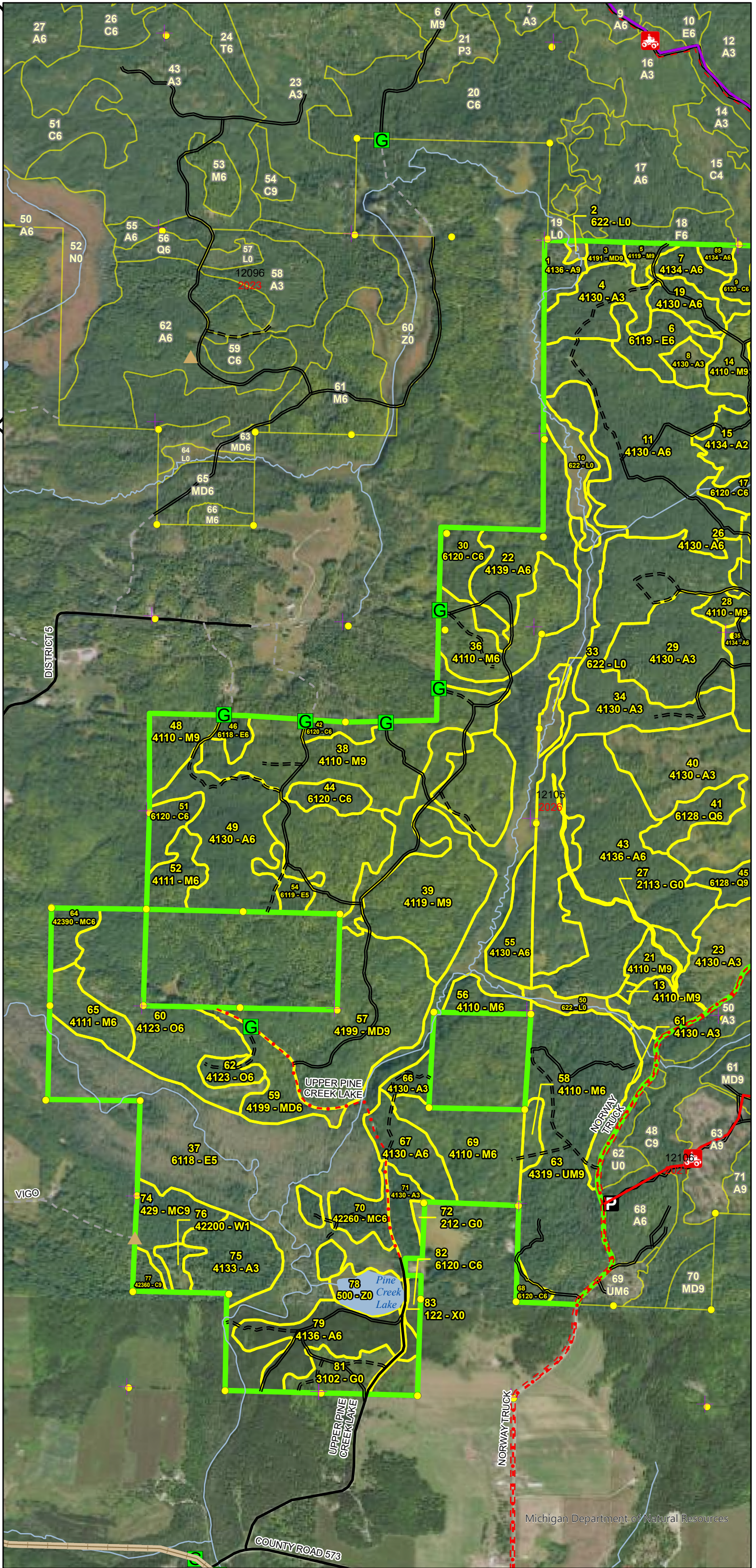


# Stand Boundary Map

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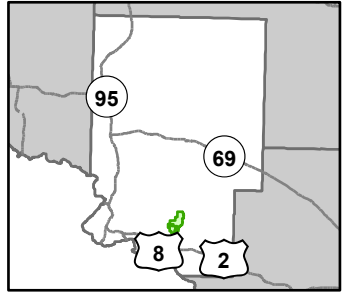


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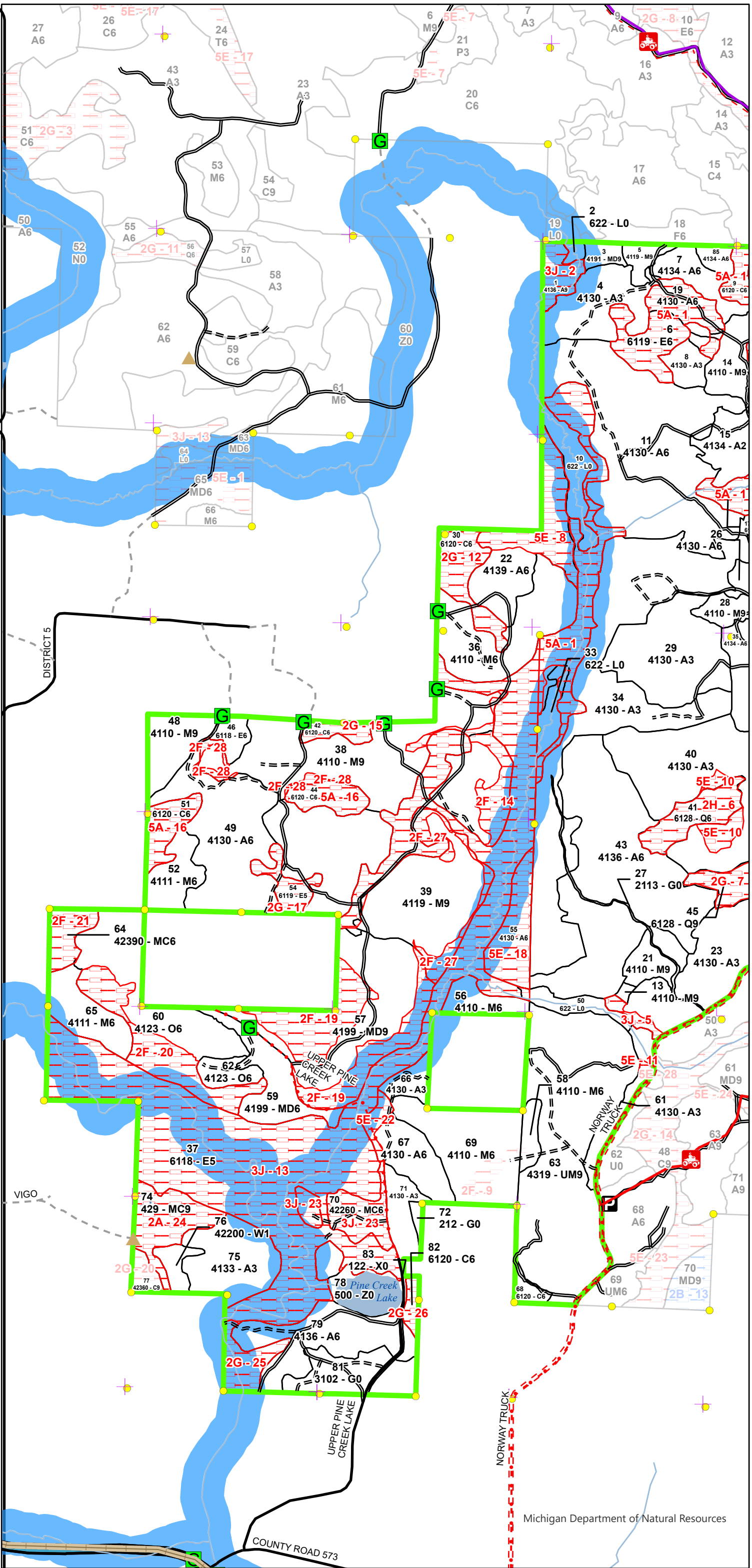


# Special Conservation Areas & Site Conditions Map

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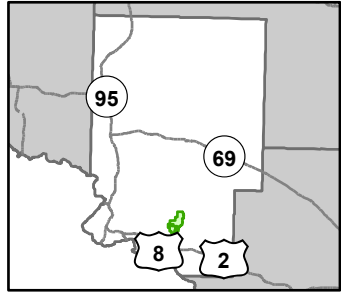


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- SCA
- Unavailable
- 2A: Adjacent landowner denied access
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3J: Water quality / BMPs (stream, river, or lake)
- 5A: Not able to obtain desirable regeneration
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- High Priority Trout Stream Buffer
- Trail - Trail Corridor

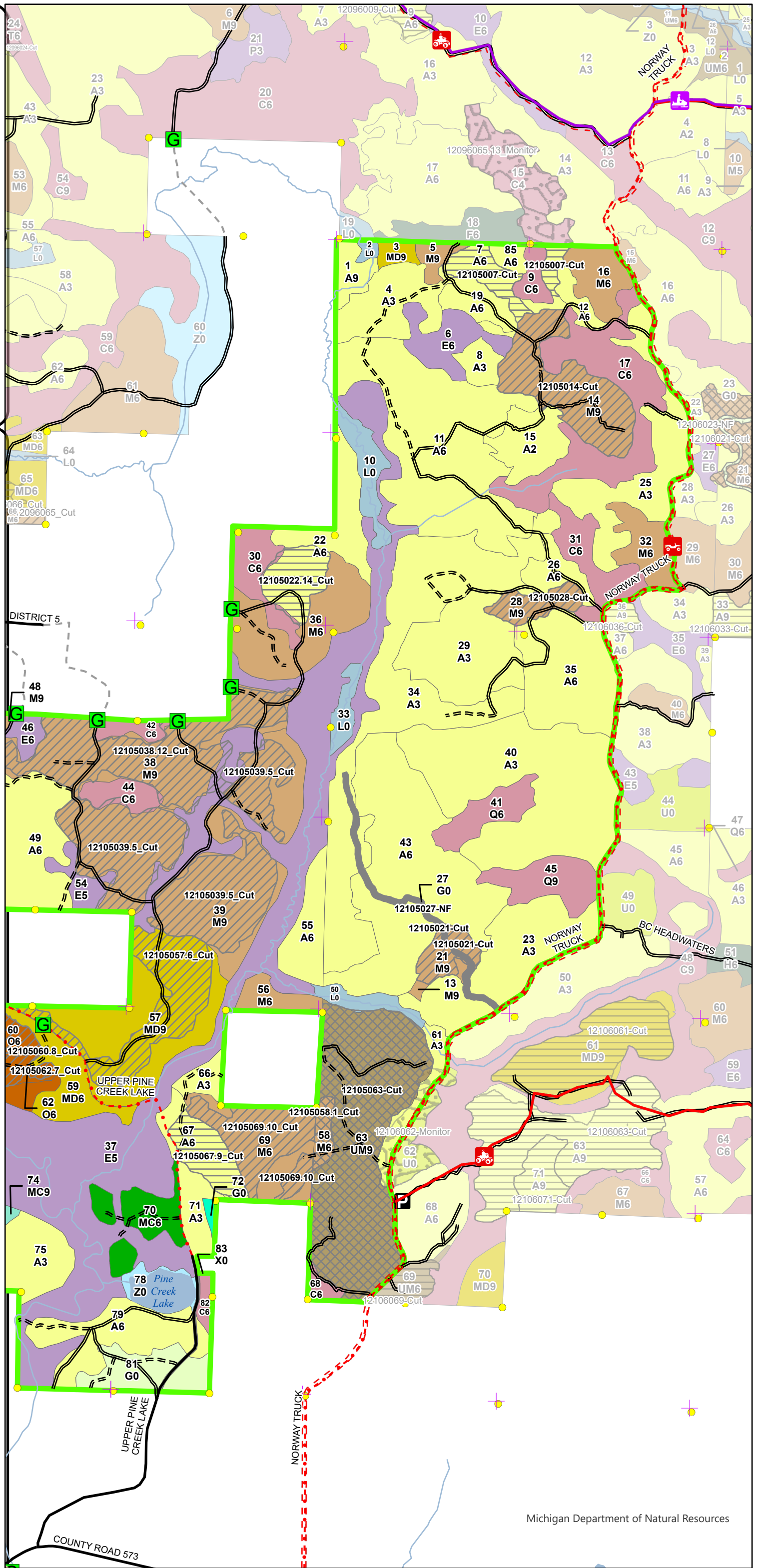


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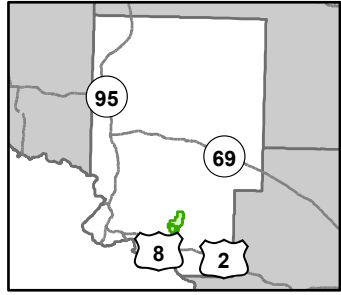


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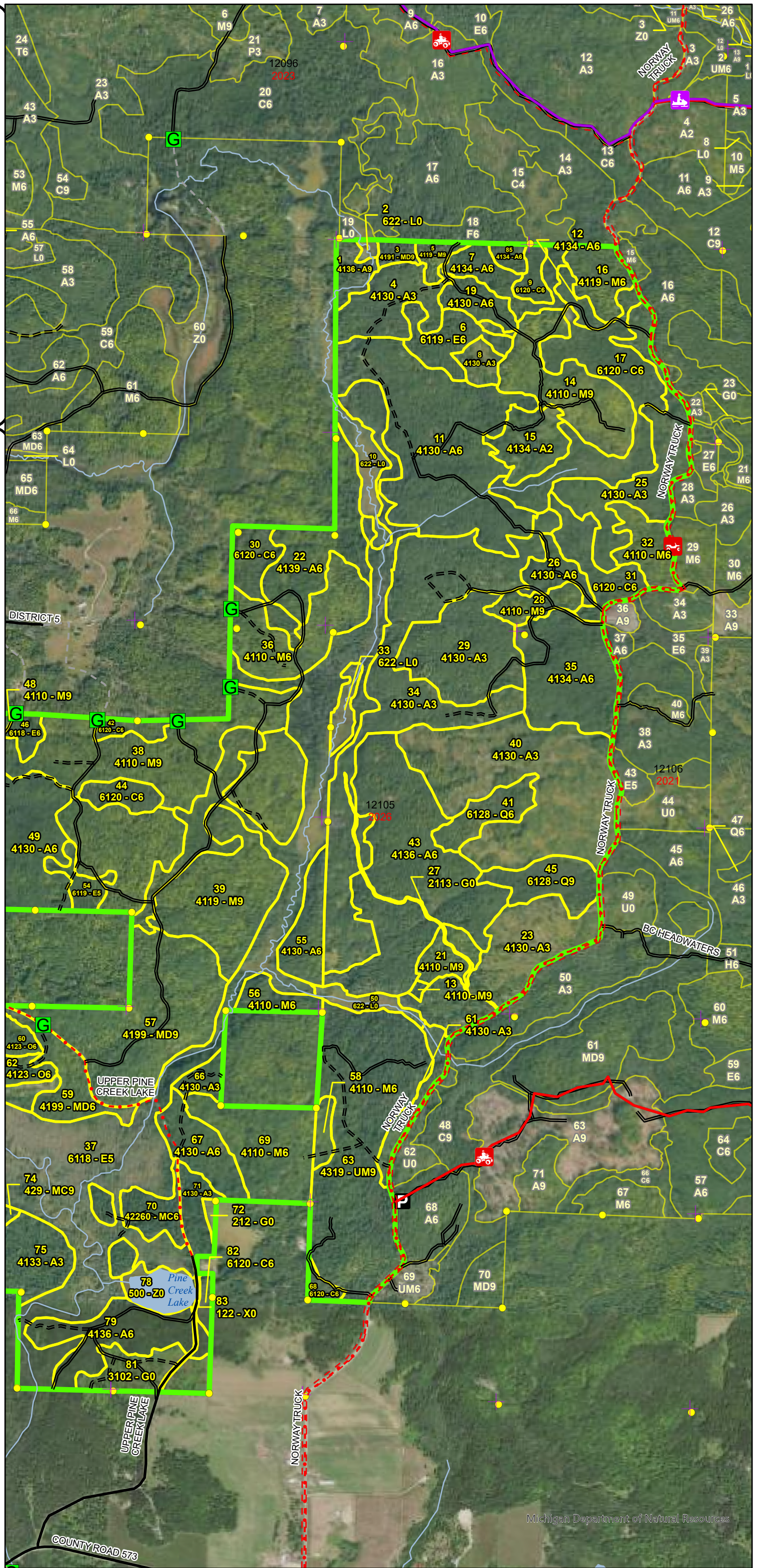


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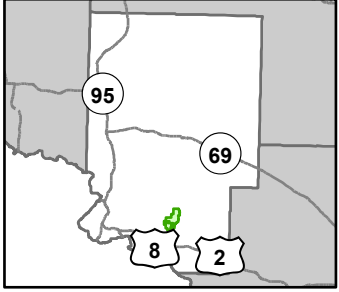


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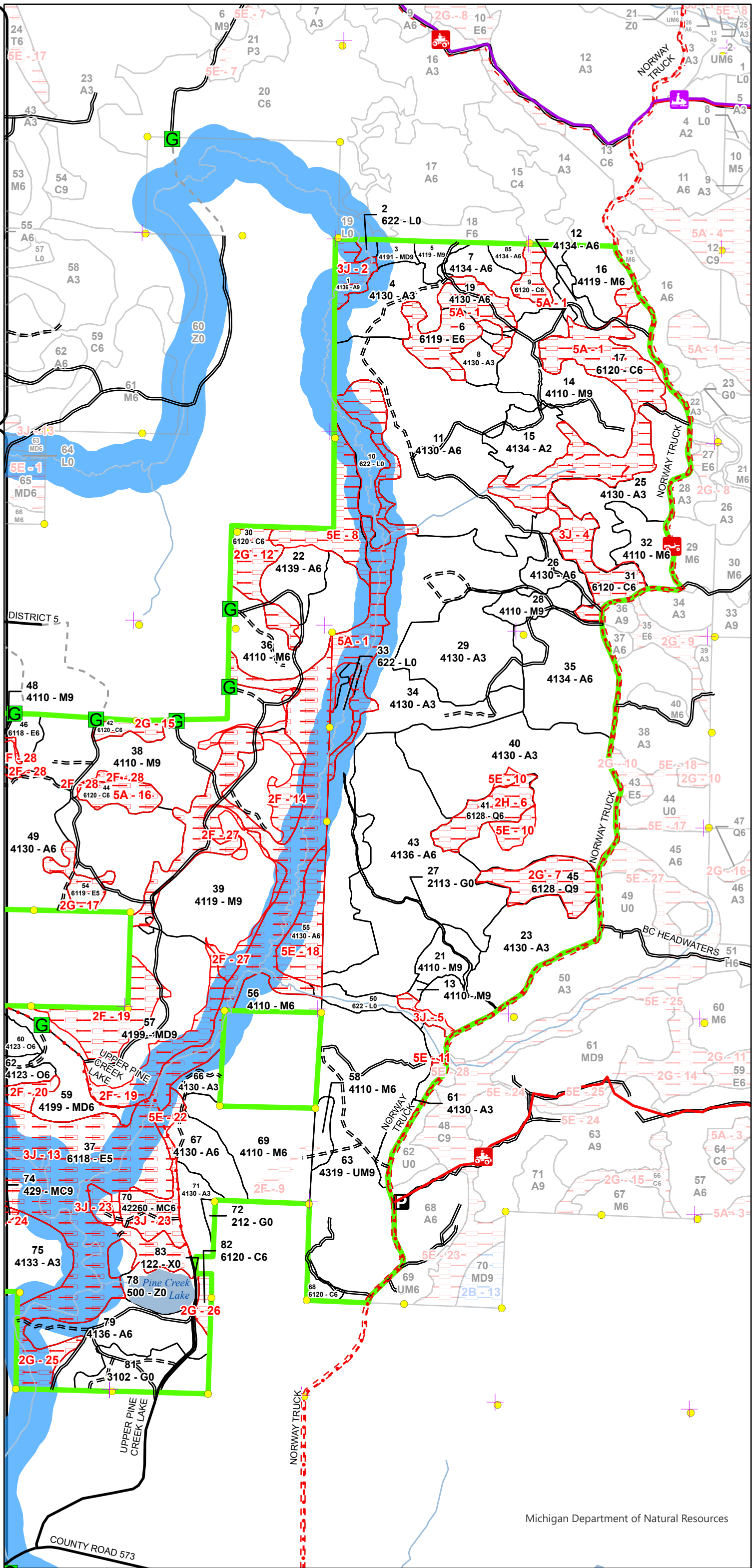


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- Stand Boundaries
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There are old and new ORV trails in this compartment

**Fire Protection:**

Berms will be the biggest issue to get back into some areas here and steep topography could be a problem in some areas of the compartment. There is a pine component here but mostly mixed pine and not as conducive to fire as a plantation would be.

**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**

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	157	238	52	96	265	35	0	19	8	20	0	0	0	0	0	0	0	890
Cedar	0	0	0	0	0	0	0	0	0	0	22	66	38	0	0	0	0	0	126
Cropland	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Herbaceous Openland	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0	0	0	32
Lowland Deciduous	0	0	0	0	0	5	0	0	0	0	17	8	290	0	0	0	0	0	320
Lowland Shrub	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Mixed Upland Deciduous	0	0	0	0	0	20	0	0	0	4	77	0	0	0	0	0	0	0	101
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19
Northern Hardwood	0	0	0	0	9	17	51	0	38	12	287	0	0	0	0	0	0	0	414
Oak	0	0	0	0	0	0	0	0	0	7	0	60	0	0	0	0	0	0	67
Upland Conifers	0	0	0	0	0	0	0	0	0	18	0	0	9	0	0	0	0	0	27
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	101	0	0	0	0	0	0	0	101
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
White Pine	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
<b>Total</b>	<b>66</b>	<b>157</b>	<b>238</b>	<b>57</b>	<b>105</b>	<b>307</b>	<b>86</b>	<b>0</b>	<b>57</b>	<b>49</b>	<b>556</b>	<b>134</b>	<b>337</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>2168</b>



## Report 2 – Treatment Summary

Crystal Falls Mgt. Unit  
Year of Entry: 2026

Acres of Harvest

Compartment 105  
Total Compartment Acres: 2,167

Commercial Harvest - 474  
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	46	0	0	0	0	0	0	0	0	46
Mixed Upland Deciduous	0	0	0	0	38	0	0	0	0	38
Northern Hardwood	0	5	0	0	247	0	0	0	0	252
Oak	0	0	0	0	39	0	0	0	0	39
Upland Mixed Forest	0	100	0	0	0	0	0	0	0	100
<b>Total</b>	<b>46</b>	<b>105</b>	<b>0</b>	<b>0</b>	<b>323</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>474</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	474	0	0	0	0	0	0	2	0	477
Next Step	0	0	0	0	0	151	0	0	0	151
<b>Total</b>	<b>474</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>151</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>627</b>



Stand Name	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>7</b>	<b>12105007-Cut</b>	14.4	4134 - Aspen, Spruce/Fir	Poletimber Well	96	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final Harvest to a 3 inch spec. Leave Pine, Cedar, Hemlock, and Oak if present. Leave 4 pockets of 4 inch spruce/fir where available</p> <p><u>Specs:</u> dispersed across the unit.</p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Aspen, Maple, Birch, Spruce/Fir, Pine</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>											
<b>14</b>	<b>12105014-Cut</b>	39.6	4110 - Sugar Maple Association	Sawtimber Well	96	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No
<p><u>Prescription</u> Thin to 70-90BA following Compleat Marker. Do not mark Pine, Oak, Cedar or Oak. Leave where possible roost trees for Northern Long eared bats.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>											
<b>21</b>	<b>12105021-Cut</b>	9.7	4110 - Sugar Maple Association	Sawtimber Well	87	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No
<p><u>Prescription</u> Thin to 70-90 BA. Remove Ash as EAB is present. Winter cut only due to hunter walking trail. Where possible leave roost trees for Northern Long eared bats.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2025</p>											
<b>27</b>	<b>12105027-NF</b>	2.4	2113 - Forage Crops	Nonstocked	0	Unspecified	NonForestMgt	Herbaceous/Crop /Grass Planting	2113 - Forage Crops		No
<p><u>Prescription</u> WLD Hunter Walking Trail opening maintenance- clear, herbicide, disc, seed, fertilize, mow</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u></p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>											



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
<b>28 12105028-Cut</b>	10.0	4110 - Sugar Maple Association	Sawtimber Well	96	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No
<p><u>Prescription</u> Thin to 70-90 BA.  <u>Specs:</u>  <u>Next Step</u>  <u>Treatments:</u>  <u>Acceptable Regen:</u>  <u>Other Comment:</u> Leave conifers in the west half of the stand.  <u>Site Condition</u>  <u>Proposed Start Date:</u> 10/1 /2025</p>										
<b>63 12105063-Cut</b>	100.3	4319 - Mixed Upland Forest	Sawtimber Well	99	111-140	Harvest	Group Selection	4319 - Mixed Upland Forest	Uneven-Aged	No
<p><u>Prescription</u> Cut all Aspen, Jack Pine, Ash, Birch, Balsam Poplar and Spruce/Fir using a 2 inch spec. Except green marked trees of those species. Mark Pine and Hardwood for removal. Target BA will be 40-50 to reduce Aspen coppice and provide for diversity and a seed source.. BA will be variable depending on stand composition. Leave all Cedar, Hemlock, and Oak. Exclude the cedar pocket and steep areas.  <u>Specs:</u>  <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)  <u>Treatments:</u>  <u>Acceptable Regen:</u> Aspen, Maple, Oak, Pine  <u>Other Comment:</u>  <u>Site Condition</u>  <u>Proposed Start Date:</u> 10/1 /2025</p>										

**Approved Treatments:**

<b>22 12105022.14_Cut</b>	15.9	4139 - Aspen, Mixed Deciduous	Poletimber Well	59	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Harvest to 2" spec. Leave sub merchantable spruce/fir, cedar, hemlock, white pine, and oak.  <u>Specs:</u>  <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)  <u>Treatments:</u>  <u>Acceptable Regen:</u> aspen, mixed hardwood  <u>Other Comment:</u> No pine was observed within this stand. No blue line (just red line) against private will be needed on the north edge due to a steep rock bluff which leads down to a lowland drainage.  <u>Site Condition</u>  <u>Proposed Start Date:</u> 10/1 /2019</p>										



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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<b>38</b>	<b>12105038.12_Cut</b>	63.0	4110 - Sugar Maple Association	Sawtimber Well	97	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	No
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Prescription Mark this stand to be thinned to a 70-90 BA. Release 7' around trees less than 8" in diameter. Remove the two main crown competitors on trees 8" or larger. Leave all hemlock. Leave and open up around any oak that may be present. Mark any live beech unless it appears to be resistant to beech bark disease.

Next Step  
Treatments:

Acceptable mixed northern hardwood  
Regen:

Other Focus on releasing good quality crop trees.  
Comment:

Site Condition

Proposed Start Date: 10/1 /2019

<b>39</b>	<b>12105039.5_Cut</b>	95.7	4119 - Mixed Northern Hardwoods	Sawtimber Well	97	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	No
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Prescription This treatment is to salvage the higher percentage of beech volume within this stand while thinning the remaining hardwoods where needed.  
Specs: Mark this stand to be thinned to a 70-90 BA in areas where this can be achieved. Release 7' around trees less than 8" in diameter. Remove the two main crown competitors on trees 8" or larger. Designate beech for removal while green marking 1-3 beech trees per acre that appear to be healthy or possibly immune to BBD. BA may be lower than target in areas where more beech is present which will encourage more intolerant/mid-tolerant species. Leave cedar, hemlock, white pine, and oak.

Next Step  
Treatments:

Acceptable mixed northern hardwood, oak  
Regen:

Other  
Comment:

Site Condition

Proposed Start Date: 10/1 /2019

<b>57</b>	<b>12105057.6_Cut</b>	37.8	4199 - Other Mixed Upland Deciduous	Sawtimber Well	97	81-110	Harvest	Crown Thinning	4199 - Other Mixed Upland Deciduous	Uneven-Aged	No
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Prescription This prescription is to ensure a proper crown thinning for a mixed oak/northern hardwoods stand. Mark this stand to be thinned to a 70-90 BA in patches dominated by northern hardwood species. Release 7' around trees less than 8" in diameter. Remove the two main crown competitors on trees 8" or larger. Areas dominant to oak should be thinned lighter to a 80-100 BA. Leave scattered large diameter oak. Green mark any beech that appears to be immune to BBD. Mark with caution to avoid damage to residual from felling larger trees. Designate merchantable beech and aspen for removal. (DO NOT cut aspen within 300' of Fern Creek to the east).

Next Step  
Treatments:

Acceptable oak, aspen, mixed hardwoods  
Regen:

Other Steep hills and rock bluffs will have to be excluded from this treatment. This should bring the actual treatment size to approximately 40 acres.  
Comment:

Site Condition

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	Habitat Cut
<b>58</b> 12105058.1_C ut	4.9	4110 - Sugar Maple Association	Poletimber Well	96	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Uneven-Aged	No
<p><u>Prescription</u> Mark to retain 80-90 BA putting in occasional canopy gaps and focusing on best tree in place, leaving crop trees with good spacing and focusing to harvest white ash which has a prescence in the stand.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> n. hwd association.</p> <p><u>Regen:</u></p> <p><u>Other</u> This stand could be cut with the stand in the next compartment of which this is a part of. The stand in the next compartment is a much larger stand and this can be cut with that in 2020. Old next step comments: Regen survey needed after harvest</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2019</p>										
<b>60</b> 12105060.8_C ut	32.9	4123 - Red Oak	Poletimber Well	104	111-140	Harvest	Low Thinning	4123 - Red Oak	Even-Aged	No
<p><u>Prescription</u> This prescription is to ensure a proper crown thinning for a mixed oak/northern hardwoods stand. Mark this stand to be thinned to a 70-90 BA in patches dominated by northern hardwood species. Release 7' around trees less than 8" in diameter. Remove the two main crown competitors on trees 8" or larger. Areas dominant to oak should be thinned lighter to a 80-100 BA. Thin the patch of mixed pine in the east tip to release crowns for future growth. All beech will be designated for removal. Leave cedar, hemlock, and scattered large diameter oak. Treatment lines were estimated from field observations based off of steep terrain.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> oak, mixed northern hardwood</p> <p><u>Regen:</u></p> <p><u>Other</u> Oak management guidelines recommend to NOT remove more than 1/3 BA in any one thinning of an oak dominated stand. This treatment is meant to release crowns for growth and not to create regeneration gaps at this time.</p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2019</p>										
<b>62</b> 12105062.7_C ut	5.9	4123 - Red Oak	Poletimber Well	87	81-110	Harvest	Crown Thinning	4123 - Red Oak	Two-Aged	No
<p><u>Prescription</u> Mark this stand to be thinned to a 70-90 BA. Release 7' around trees less than 8" in diameter. Remove the two main crown competitors on trees 8" or larger. Leave scattered large diameter oak if present.</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u> oak, mixed northern hardwood</p> <p><u>Regen:</u></p> <p><u>Other</u></p> <p><u>Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2019</p>										



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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67	12105067.9_Cut	15.3	4130 - Aspen	Poletimber Well	79	111-140	Harvest	Clearcut with Retention	413 - Aspen	Two-Aged	No
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Prescription Harvest stand to 4" spec. Green mark better quality oak to leave approximately one tree per acre for wildlife/seed. Leave cedar, hemlock, and white pine. The treatment has been updated with a 300' buffer for Fern Creek to the west.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, oak, mixed hardwood

Regen:

Other Determine if northern triangular portion is operable due to steeper slope.

Comment:

Site Condition

Proposed Start Date: 10/1 /2019

69	12105069.10_Cut	28.7	4110 - Sugar Maple Association	Poletimber Well	79	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven-Aged	No
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Prescription Include stand 58 (3.7 acres) from the adjoining compartment 105 to the east. Mark this stand to be thinned to a 70-90 BA. Release 7' around trees less than 8" in diameter. Remove the two main crown competitors on trees 8" or larger. Leave all cedar, hemlock, red pine, white pine, beech, and oak. Mark aspen to thin if needed to benefit hardwood but not to create larger open pockets and encourage aspen regeneration. Designate live paper birch for removal. Exclude small cedar patch along the north border and sub-merchantable balsam in the southeast corner. Mark around rock bluff in the east 1/3 of this stand. Avoid marking in dense hardwood sapling/pole pockets. Avoid damage to hardwood saplings/poles.

Next Step

Treatments:

Acceptable mixed northern hardwood, oak

Regen:

Other Access to this stand may be better to come west off of the Norway Truck Trail due to the steep incline of the road coming into the western tip of this stand.

Comment:

Site Condition

Proposed Start Date: 10/1 /2019

**Total Treatment** 476.5  
**Acreage Proposed:**



## Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Rich Goupell : Examiner

Compartment: 105

Year of Entry: 2026

### Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available
891	821	0	70

### Dominant Site Conditions

	Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Condition	Dominant Site Conditions						
						2A	2F	2G	2H	3J	5A	5E
891	821	0	70		Aspen			1	0	11	11	47
126	5	0	121		Cedar			28		18	75	
4	4	0	0		Cropland							
20	20	0	0		Herbaceous Openland							
32	1	0	31		Lowland Conifers			18	14			0
319	7	0	312		Lowland Deciduous			18		244	50	0
28	26	0	1		Lowland Shrub					0	1	0
101	62	0	39		Mixed Upland Deciduous		39			0		
19	4	0	15		Natural Mixed Pines					15		
413	381	0	32		Northern Hardwood		31			1	0	0
66	42	0	25		Oak		25					
27	0	0	27		Upland Conifers	18	9					
101	101	0	0		Upland Mixed Forest							
2	2	0	0		Urban							
12	12	0	0		Water							
5	5	0	0		White Pine							
2,167	1,494		673		Total Forested Acres	18	104	64	14	289	137	47
	69%		31%		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	5A: Not able to obtain desirable regeneration	118	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	8	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Buffer for Fern Creek and not much acreage where nothing else is being cut.							

## Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Rich Goupell : Examiner

Compartment: 105

Year of Entry: 2026

4	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> There is a stream running through here and it is wet and diverse. Some areas have rock some are low and wer.							
5	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	3	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Long-Term Retention for Rocks and Raptors timber sale.							
6	<b>Unavailable</b>	<b>2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)</b>	14	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> This has cedar, rock outcrops and wet so it isn't worth going after for what you would get out of it							
7	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Some of this has been cut and it is wet							
8	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	20	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
10	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	6	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Rocks and Raptors long-term retention.							
11	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	1	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Rocks and Raptors retention							

## Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Rich Goupell : Examiner

Compartment: 105

Year of Entry: 2026

12	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	15	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> lowland cedar							
13	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	245	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
14	<b>Unavailable</b>	<b>2F: Too steep</b>	13	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
15	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	6	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> lowland cedar/black ash							
16	<b>Unavailable</b>	<b>5A: Not able to obtain desirable regeneration</b>	19	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> lowland cedar							
17	<b>Unavailable</b>	<b>2G: Too wet (sensitive soils, does not include access issues)</b>	8	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> lowland black ash/alder drainage							

## Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Rich Goupell : Examiner

Compartment: 105

Year of Entry: 2026

18	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	17	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
19	<b>Unavailable</b>	<b>2F: Too steep</b>	39	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
20	<b>Unavailable</b>	<b>2F: Too steep</b>	25	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
21	<b>Unavailable</b>	<b>2F: Too steep</b>	9	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Steep slope stocked with hemlock poles drains down to a lowland cedar patch.							
22	<b>Unavailable</b>	<b>5E: Long-Term Retention</b>	4	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
23	<b>Unavailable</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	15	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Abundant aspen regen would be significantly damaged with a harvest at this time.							
24	<b>Unavailable</b>	<b>2A: Adjacent landowner denied access</b>	18	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Rich Goupell : Examiner

Compartment: 105  
Year of Entry: 2026

25	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
27	Unavailable	2F: Too steep	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
28	Unavailable	2F: Too steep	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Mgt. Unit

Compartment: #Type!

Year of Entry:



## Report 5 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments

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

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

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

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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1	4136 - Aspen, Mixed Conifer	Sawtimber Well	8.1	81		N/A	Creek runs through the stand.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	10	Pole/Log	8		Balsam Fir	Low	Variable	Sapling
Balsam Poplar	5	Log/Pole	10					
Balsam Fir	15	Pole/Log	8					
White Pine	10	XLog/Log	18					
Northern White Cedar	10	Log/Pole	10					
Paper Birch	5	Pole/Log	8					
Quaking Aspen	45	Log/Pole	12	81				

2	622 - Lowland Shrub	Nonstocked	1.7			No	
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3	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Well	3.9	81	111-140	N/A	Most of Spruce/Fir is dying out from Spruce budworm.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	15	Pole/Log	8		Balsam Fir	Medium	Variable	Sapling
White Pine	10	Log	16					
Sugar Maple	45	Log/Pole	11	81				
Balsam Fir	15	Pole	6					
Red Maple	10	Log/Pole	10					
Hemlock	5	Log/Pole	12					

4	4130 - Aspen	Sapling Well	25.2	16	Immature	N/A	Cut 2005 part of Snow to Tick Sale. Drainage runs East West through the South part of the stand. It was left last time it was cut.
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Canopy Species	% Cover	Size Class	DBH	Age
White Pine	2	Log	14	
Quaking Aspen	98	Sapling	2	16

5	4119 - Mixed Northern Hardwoods	Sawtimber Well	5.1	96	81-110	N/A	This stand was proposed for cutting last time but does not have the BA, has a large rock outcrop and is only 5 acres.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	10	Log/Pole	10		Balsam Fir	Low	Variable	Sapling
Sugar Maple	60	Log/Pole	10	96	White Spruce	Low	Variable	Sapling
Yellow Birch	10	Log/Pole	10	96	Ironwood	Low	Variable	Sapling
White Ash	5	Log/Pole	10					
Red Maple	15	Log/Pole	10					





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
6	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	16.7	96	81-110	N/A	No evidence of EAB but it is in the area expect most of the Black Ash to be dead next inventory.		
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Red Maple		15	Pole	6		Black Ash	Medium	Variable	Sapling
Balsam Fir		5	Pole/Log	8		Balsam Fir	Low	Variable	Sapling
Northern White Cedar		5	Log/Pole	10	104	Tag Alder	Low	Variable	Tall Shrub
Paper Birch		10	Pole/Log	8					
Quaking Aspen		25	Pole	5					
Black Ash		40	Pole	6	96				
7	4134 - Aspen, Spruce/Fir	Poletimber Well	16.1	96	81-110	N/A			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Red Maple		20	Pole/Log	8		Balsam Fir	Medium	Variable	Sapling
White Spruce		5	Pole/Log	8					
Quaking Aspen		40	Log/Pole	11	96				
Balsam Fir		20	Pole/Log	8	96				
Paper Birch		15	Pole/Log	8					
8	4130 - Aspen	Sapling Well	7.9	18	Immature	N/A			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Quaking Aspen		90	Sapling	1	18	Wild Red Raspberry	High	Variable	Tall Shrub
Balsam Fir		10	Sapling	1	18				
9	6120 - Lowland Cedar	Poletimber Well	6.0	109	111-140	N/A			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Paper Birch		5	Pole/Log	8		Balsam Fir	Low	Variable	Sapling
Black Spruce		5	Pole/Log	8		Black Spruce	Low	Variable	Sapling
Tamarack		5	Pole/Log	8					
Black Ash		5	Pole/Log	8					
Northern White Cedar		80	Pole/Log	8	109				
10	622 - Lowland Shrub	Nonstocked	12.5			No	Lowland around Fern Creek.		
11	4130 - Aspen	Poletimber Well	99.8	40		N/A			
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	<b>Density</b>	<b>Avg. Height</b>	<b>Size</b>
Sugar Maple		3	Pole	5	40	White Spruce	Low	Variable	Sapling
Quaking Aspen		87	Pole	5	40	Balsam Fir	Low	Variable	Sapling
Balsam Fir		5	Pole	5	40				
Red Maple		5	Pole	5	40				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																													
12	4134 - Aspen, Spruce/Fir	Poletimber Well	5.4	40		N/A																																																														
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15	4134 - Aspen, Spruce/Fir	Sapling Medium	18.1	18	Immature	N/A	Uncut area in center of stand is wet.																																																													
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**17**      6120 - Lowland Cedar      Poletimber Well      50.7      104      N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	8	Log/Pole	10		Tag Alder	Medium	5 - 10 feet	Tall Shrub
Quaking Aspen	10	Log/Pole	10		Balsam Fir	Medium	Variable	Sapling
Balsam Fir	10	Pole	7		Black Spruce	Low	Variable	Sapling
Northern White Cedar	50	Log/Pole	10	104				
Black Spruce	10	Pole/Log	8					
Red Maple	2	Pole	6					
Black Ash	10	Pole	6					

**19**      4130 - Aspen      Poletimber Well      10.4      21      81-110      N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	75	Pole	5	21	Balsam Fir	Low	Variable	Sapling
Balsam Fir	10	Pole	6					
Red Maple	15	Pole	6					

**21**      4110 - Sugar Maple Association      Sawtimber Well      10.6      87      111-140      N/A      Needs update.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Basswood	20	Log	15		Ironwood	Medium	Variable	Sapling
Yellow Birch	5	Log/Pole	10					
Sugar Maple	60	Log/Pole	10	87				
Paper Birch	10	Pole	8					
Red Oak	5	Log	16					

**22**      4139 - Aspen, Mixed Deciduous      Poletimber Well      35.4      59      111-140      N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Bigtooth Aspen	40	Log/Pole	12	59	Ironwood	Medium	10 - 20 feet	Sapling
Sugar Maple	25	Pole/Log	8					
Beech	5	Pole	8					
Red Maple	5	Pole	8					
White Ash	5	Pole/Log	8					
Yellow Birch	10	Pole/Log	8					
Quaking Aspen	10	Log	14					

**23**      4130 - Aspen      Sapling Well      48.6      6      Immature      N/A      Cut with Rocks and Raptors timber sale. Finished cutting November 2016.

Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	100	Sapling	1	6



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**25** 4130 - Aspen Sapling Well 42.1 18 Immature N/A Black Ash poket along Norway Truck Trail.

Canopy Species	% Cover	Size Class	DBH	Age
Balsam Fir	10	Pole	6	
Black Ash	5	Pole/Sapling	5	
White Pine	5	Log	12	
Red Oak	5	Pole/Log	8	
Quaking Aspen	75	Sapling	2	18

**26** 4130 - Aspen Poletimber Well 10.1 40 Unspecified N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	15	Pole	6	40	White Spruce	Low	Variable	Sapling
Paper Birch	5	Pole	6	40	Balsam Fir	Low	Variable	Sapling
Bigtooth Aspen	15	Pole	6	40				
White Pine	3	Pole/Log	10					
Balsam Poplar	7	Pole	6	40				
Quaking Aspen	45	Pole	6	40				
Balsam Fir	10	Pole	5	40				

**27** 2113 - Forage Crops Nonstocked 2.4 0 Unspecified No Hunter Walking Trail Opening Maintenance

**28** 4110 - Sugar Maple Association Sawtimber Well 10.0 96 111-140 N/A Poor quality Hardwood stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Basswood	10	Log/Pole	10		Ironwood	Low	Variable	Sapling
Ironwood	2	Pole	5					
Red Maple	5	Pole	8					
Sugar Maple	83	Log/Pole	10	96				

**29** 4130 - Aspen Sapling Well 41.8 24 Immature N/A Cut 1999 part of Ample Bugs Sale.

Canopy Species	% Cover	Size Class	DBH	Age
Ironwood	5	Sapling	1	24
Red Maple	5	Sapling	3	24
Balsam Fir	10	Sapling	2	24
Bigtooth Aspen	20	Sapling	3	24
White Spruce	5	Sapling	2	24
Quaking Aspen	55	Sapling	3	24



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>30</b>	6120 - Lowland Cedar	Poletimber Well	15.4	113	111-140	N/A	Lowland cedar with saturated, organic soil. Other species mixed within stand. Cedar origin varies from the early 1900's. Very soft ground across stand. OPIC - FMD: OI Stand Year Origin was 1911
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Canopy Species	% Cover	Size Class	DBH	Age
Hemlock	5	Log/Pole	10	
Paper Birch	5	Pole	8	
White Spruce	5	Pole	8	
Black Ash	15	Pole	7	
Balsam Fir	5	Pole	6	
Yellow Birch	5	Pole	8	
Northern White Cedar	60	Pole/Log	9	113

<b>31</b>	6120 - Lowland Cedar	Poletimber Well	18.8	96		N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	25	Pole	6	96	Tag Alder	High	5 - 10 feet	Tall Shrub
Northern White Cedar	55	Pole/Log	8	96	Black Ash	Medium	Variable	Sapling
Black Ash	20	Pole	5		Balsam Fir	Low	Variable	Sapling

<b>32</b>	4110 - Sugar Maple Association	Poletimber Well	15.0	96	81-110	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Basswood	40	Log/Pole	10		Balsam Fir	Low	Variable	Sapling
White Ash	5	Pole/Log	8		Ironwood	Low	Variable	Sapling
Balsam Fir	5	Pole/Log	8	96	White Spruce	Low	Variable	Sapling
Sugar Maple	50	Pole/Log	8	96				

<b>33</b>	622 - Lowland Shrub	Nonstocked	6.4			No	
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<b>34</b>	4130 - Aspen	Sapling Well	106.7	16	Immature	N/A	Cut 2008 part of ORV Aspen Sale.
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Canopy Species	% Cover	Size Class	DBH	Age
Bigtooth Aspen	20	Sapling	2	16
Quaking Aspen	80	Sapling	2	16

<b>35</b>	4134 - Aspen, Spruce/Fir	Poletimber Well	44.6	41		N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Bigtooth Aspen	20	Pole	6	41	Balsam Fir	Low	Variable	Pole
Sugar Maple	5	Pole	5		White Spruce	Low	Variable	Pole
Balsam Fir	25	Pole	5	41	Hazelnut (American)	Low	Variable	Tall Shrub
Quaking Aspen	45	Pole	6	41				
Red Maple	5	Pole	5	41				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
36	4110 - Sugar Maple Association	Poletimber Well	38.0	59	81-110	N/A	This is a hardwood pole stand. Average of around 100 BA. Mainly sugar maple poles.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
White Ash		5	Pole/Log	8		Ironwood	
Beech		5	Pole	8		Leatherwood	
Basswood		10	Pole/Log	9		Density	
Sugar Maple		65	Pole/Log	8	59	Avg. Height	
Yellow Birch		15	Pole/Log	8		Size	
						Sapling	
						Tall Shrub	
37	6118 - Lowland Deciduous with Cedar	Poletimber Medium	289.6	116	81-110	N/A	This is a large lowland drainage Fern Creek and Pine Creek, that is connected across a majority of this compartment. It is mainly black ash to the south with more cedar and some aspen mixed in further north. Old stand year origin was 1908. EAB is present in the stand, most of the stand will be dead next inventory.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Black Ash		65	Pole	8	116	Alder	
Northern White Cedar		20	Log/Pole	10		Density	
Black Spruce		5	Pole	8		Avg. Height	
Hemlock		5	Log/Pole	12		Size	
Quaking Aspen		5	Log	12		Tall Shrub	
38	4110 - Sugar Maple Association	Sawtimber Well	66.4	97	111-140	N/A	Good quality hardwood log stand. Black ash pockets and/or drainages are found within stand. Rocky, rolling terrain but not as rough as surrounding hardwood stands. The far west portion of this stand has some areas of smaller diameter patches of poles. A couple of small red oak/beech patches are found within stand.  OPIC - FMD: CUT IN 1997 AS 'DOC'S RETREAT' SALE.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Yellow Birch		5	Log/Pole	10		Leatherwood	
Red Oak		3	XLog/Log	18		Density	
Sugar Maple		50	Log/Pole	10	97	Avg. Height	
Basswood		30	Log	12		Size	
Beech		5	Log	12		Tall Shrub	
White Ash		5	Log/Pole	12			
Red Maple		2	Pole	8			
39	4119 - Mixed Northern Hardwoods	Sawtimber Well	115.8	97	111-140	N/A	Hardwood stand that has a mixed area of pole and log sized trees. Beech in stand is infested with BBD. Crowns are in good shape yet but scale is bad, nearly 100% infected. Beech ranges from scattered to more dense patches across this stand. Scattered red oak found across entire stand. Knobs of younger hemlock found mainly in the southwest. Black ash pockets and drainage are found within. Rocky, rolling terrain. Better quality found on the west side of this stand.  OPIC - FMD: CUT IN 1997 AS 'DOC'S RETREAT' SALE.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>	
Red Oak		3	Log	14		Leatherwood	
Basswood		23	Log	12		Density	
White Ash		5	Log/Pole	12		Avg. Height	
Sugar Maple		35	Log	12	97	Size	
Yellow Birch		10	Log/Pole	10		Tall Shrub	
Hemlock		2	Pole/Log	8			
Beech		20	Log/Pole	10			
Red Maple		2	Pole	8			
40	4130 - Aspen	Sapling Well	97.4	6	Immature	N/A	Cut with the Rocks and Raptors in 2018. Stand needs update.
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>		
Quaking Aspen		100	Sapling	1	6		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**41** 6128 - Lowland Coniferous, Mixed Deciduous Poletimber Well 14.1 99 N/A There are clumps of cedar and then other species on rock outcrops with some other species mixed in.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	10	Log	10		Black Spruce	Low	Variable	Sapling
Balsam Poplar	5	Log	10		Tag Alder	Low	Variable	Tall Shrub
Balsam Fir	10	Pole	6		Balsam Fir	Low	Variable	Sapling
Black Spruce	20	Pole/Log	8					
Northern White Cedar	35	Log	10	99				
Tamarack	5	Pole/Log	8					
Paper Birch	5	Log	10					
Black Ash	10	Pole/Log	8					

**42** 6120 - Lowland Cedar Poletimber Well 5.6 113 111-140 N/A Lowland cedar stand. Ash is dying from EAB

Canopy Species	% Cover	Size Class	DBH	Age
Yellow Birch	5	Log/Pole	10	
Black Ash	10	Pole	8	
Sugar Maple	5	Pole/Log	8	
Northern White Cedar	65	Pole/Log	9	113
Paper Birch	10	Pole	7	
Red Maple	5	Pole	8	

**43** 4136 - Aspen, Mixed Conifer Poletimber Well 96.4 33 Immature N/A Cut in 1989 part of Social Woodchuck Sale.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Oak	5	Log/Pole	10		White Spruce	Low	Variable	Seeding
Bigtooth Aspen	15	Pole	5	33	Black Spruce	Low	Variable	Seeding
Balsam Fir	10	Pole	5	33	Balsam Fir	Low	Variable	Seeding
Black Spruce	5	Sapling/Pole	4	33				
Red Pine	5	Log/Pole	10					
White Pine	5	Log	10					
Quaking Aspen	55	Pole/Sapling	5	33				

**44** 6120 - Lowland Cedar Poletimber Well 8.9 102 141-170 N/A Lowland cedar patch surrounded by hardwoods.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Pole	9		Balsam Fir	Low	>20 feet	Pole
Yellow Birch	5	Pole/Log	9					
Black Ash	5	Pole	8					
Balsam Poplar	5	Log	14					
Northern White Cedar	80	Pole	7	102				



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**45** 6128 - Lowland Coniferous, Mixed Deciduous Sawtimber Well 18.3 99 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Tamarack	5	Log/Pole	10		Balsam Fir	Low	Variable	Sapling
Quaking Aspen	10	Log/Pole	12		Tamarack	Low	Variable	Sapling
Black Spruce	5	Pole/Log	8		Tag Alder	Low	Variable	Tall Shrub
Northern White Cedar	35	Log/Pole	12	99	Black Spruce	Low	Variable	Sapling
Red Maple	5	Pole/Log	8					
Black Ash	5	Pole/Log	8					
Paper Birch	10	Pole/Log	8					
Hemlock	15	Log/Pole	10					
White Pine	5	Log	14					
Balsam Poplar	5	Log/Pole	12					

**46** 6118 - Lowland Deciduous with Cedar Poletimber Well 5.2 42 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Northern White Cedar	25	Pole	8	
Black Ash	10	Pole	8	
Quaking Aspen	35	Pole	6	42
Balsam Poplar	20	Pole	6	
Yellow Birch	3	Log/Pole	10	
Sugar Maple	2	Pole	8	
Red Maple	5	Pole	8	

This is a little lowland patch. It has saturated ground with about 1/3 being a cedar/black ash cover type. It appears that it was clear-cut in the past while staying out of the cedar/black ash, allowing aspen to fill in the openings. Lowland species around 100 years old.

**48** 4110 - Sugar Maple Association Sawtimber Well 15.1 92 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Beech	2	Log/Pole	10	
Sugar Maple	70	Log/Pole	12	92
Yellow Birch	10	Log/Pole	12	
Basswood	15	Log	14	
Red Oak	2	Log/XLog	16	
Quaking Aspen	1	Log/XLog	16	

Nice mixed northern hardwood stand. BA averages under 110. There is still plenty of room for crowns to grow, not quite ready to be thinned yet. A drainage borders most of the southeast side of this stand along with a steeper slope in the south which may be difficult to access. The best access would be from the north through private property. A fairly open skid trail mapped from the west would make excellent access through state with a little bit of road work if denied access through private.

OPIC - FMD: CUT IN 1997. Bitternut Hickory scattered in this stand.

**49** 4130 - Aspen Poletimber Well 49.7 42 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age
Beech	2	Log	14	
Sugar Maple	4	Pole/Sapling	6	
Red Oak	2	Log	16	
Quaking Aspen	92	Pole	7	42

Younger aspen stand. Rocky rolling terrain. Scattered mixed hardwood poles, beech, and oak is found across stand. Abundant ironwood saplings around edges of this stand. 1/2 acre patch of Japanese barberry found in south central part of stand. Patch of cedar lowland in southwest corner.

OPIC - FMD: OI Stand Year Origin was 1982, prescription was to leave hemlock, oak, beech, cedar, cherry, hickory, white pine and a 2" spec for the rest of the spp.





Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**50** 622 - Lowland Shrub Nonstocked 7.0 No

**51** 6120 - Lowland Cedar Poletimber Well 9.8 113 141-170 N/A Lowland cedar with dense balsam under story.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	15	Pole	8		Balsam Fir	Medium	10 - 20 feet	Sapling
Balsam Fir	5	Pole/Sapling	5					
Northern White Cedar	80	Pole/Log	9	113				

**52** 4111 - S.Maple, Hard Mast Association Poletimber Well 13.2 50 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	5	Sapling/Pole	4		Sugar Maple	Low	>20 feet	Sapling
Sugar Maple	50	Pole/Sapling	6	50				
Basswood	15	Pole	7	50				
Bigtooth Aspen	15	Log	14					
Red Oak	15	Log/XLog	16	104				

Average BA around 110. Mainly hardwood poles with scattered remnant oak and aspen. Very limited access. Very difficult terrain. No roads access this stand from state land. Steep drainage cuts across north 1/3 of stand. Recommend revisiting access through state land when adjacent aspen is harvested in the future.

OPIC - FMD: Rough terrain. Do not cut. Leave for wildlife. We tried putting up a sale in this area and terrain and private owner blocked access.

**54** 6119 - Mixed Lowland Deciduous Forest Poletimber Medium 7.8 102 51-80 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Beech	5	Pole/Log	9		Alder	Low	5 - 10 feet	Tall Shrub
Black Ash	25	Pole/Log	8	102				
Red Maple	5	Pole	8					
Yellow Birch	50	Log/Pole	10	102				
Northern White Cedar	15	Pole/Log	9					

Lowland stand. Most of the ash is dying from EAB.

**55** 4130 - Aspen Poletimber Well 16.6 45 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	4	Pole/Sapling	6		Leatherwood	Low	5 - 10 feet	Tall Shrub
Red Oak	1	Log	14		Sugar Maple	Medium	>20 feet	Sapling
Sugar Maple	14	Pole/Sapling	6					
Quaking Aspen	72	Pole/Log	9	45				
Paper Birch	2	Pole	6					
Balsam Fir	4	Pole	7					
White Spruce	1	Pole	9					
Beech	1	Pole/Sapling	6					
White Pine	1	XLog	22					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>56</b>	4110 - Sugar Maple Association	Poletimber Well	8.7	37	51-80	N/A	The west half of this stand can never be accessed. There is a 3.5 acre patch in the east half that could be managed in the future. Inventory is based on the east half. This is a hardwood sapling/pole stand that is cut in half by a steep, wet lowland drainage making the west half inaccessible. Large remnant aspen is scattered within. OPIC - FMD: . INACCESSABLE.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Sugar Maple		71	Pole/Sapling	5	37	Sugar Maple		Low	10 - 20 feet	Sapling	
Quaking Aspen		3	Log/XLog	15							
Yellow Birch		2	Pole/Sapling	5							
Red Maple		10	Pole/Sapling	5							
Bigtooth Aspen		3	Log/XLog	15							
Basswood		10	Pole/Sapling	7							
Red Oak		1	Log/XLog	15							

<b>57</b>	4199 - Other Mixed Upland Deciduous	Sawtimber Well	76.7	97	81-110	N/A	Thinned in Dec 2023 part of Yellow Brick Road Sale. OPIC - FMD: NICE OAK! SOME STEEP SLOPES. Thinned in 1991.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Beech		10	Pole/Log	8		Ironwood		Low	10 - 20 feet	Sapling
Sugar Maple		20	Pole	7						
Red Oak		36	Log/XLog	16	97					
Basswood		10	Pole/Log	8						
Bigtooth Aspen		15	Log/Pole	12						
Yellow Birch		2	Pole/Log	8						
White Ash		2	Pole/Log	9						
Paper Birch		5	Pole	8						

<b>58</b>	4110 - Sugar Maple Association	Poletimber Well	5.1	96	111-140	N/A	There are hills and rocks here.			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size
Basswood		20	Pole/Log	10	96	Leatherwood		Low	Variable	Tall Shrub
Red Oak		10	Pole/Log	10	96					
Beech		5	Pole/Log	10	96					
White Ash		10	Pole/Log	10	96					
Sugar Maple		55	Pole/Log	10	96					

<b>59</b>	4199 - Other Mixed Upland Deciduous	Poletimber Well	20.1	42	81-110	N/A	Oak was left in past. This is a mixed pole stand. Some areas are heavier to aspen, some areas to maple/basswood. Larger oak logs scattered within with some more dense pockets of oak poles in the west 1/3 of stand. Remnant older aspen is scattered across stand. Steep rolling terrain across most of stand. Everything within stand lines should be accessible except possibly areas bordering the fern creek lowland. CAN NOT access beyond stand lines along the west due to rock bluffs and very steep terrain. Small black ash pocket in north. OPIC - FMD: OI Stand Year Origin was 1982, left oak, beech, and black cherry.				
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species		Density	Avg. Height	Size	
Red Oak		29	Log/XLog/Pole	14	92	Leatherwood		Low	5 - 10 feet	Tall Shrub	
Black Cherry		2	Pole	7							
Beech		2	Pole/Log	8							
Basswood		8	Pole	8							
White Ash		5	Log/Pole	10							
Quaking Aspen		32	Pole/Sapling	6	42						
Paper Birch		2	Pole/Log	8							
Sugar Maple		20	Pole/Sapling	6							



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>60</b>	4123 - Red Oak	Poletimber Well	59.5	104	111-140	N/A	OPIC - FMD: Rough terrain. This stand was marked to sell in 1997, but terrain and access limitations prevented operations.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Quaking Aspen		1	Log	12		Sugar Maple		
White Ash		5	Log	12		Density		
Hemlock		2	Pole/Log	8		Avg. Height		
Sugar Maple		15	Pole/Log	8		Size		
Red Pine		1	Log	14				
Red Oak		70	Log/Pole	12	104			
Basswood		5	Log/Pole	12				
Beech		1	Pole	6				

<b>61</b>	4130 - Aspen	Sapling Well	10.8	8	Immature	N/A	Cut in 2016 under Rocks and Raptors timber sale.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
White Pine		5	Log	12	70	Aspen (spp.)		
Red Pine		5	Log	10		Density		
Quaking Aspen		90	Sapling	1	8	Avg. Height		
						Size		

<b>62</b>	4123 - Red Oak	Poletimber Well	6.7	87	81-110	N/A	Small oak stand that was broken out from current inventory. Most of this stand was marked in the past but never cut. Average of 140 BA of oak/mixed hardwood poles, and mixed size oak logs. CAN NOT access beyond stand lines along the south and west due to rock bluffs and very steep terrain.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>			
Sugar Maple		20	Pole/Sapling	7	42			
Basswood		13	Pole	8				
Red Oak		65	Log/Pole	12	87			
Beech		2	Pole/Log	8				

<b>63</b>	4319 - Mixed Upland Forest	Sawtimber Well	101.1	99	111-140	N/A	There is a lot of rock and creeks running through and will hold.	
<b>Canopy Species</b>		<b>% Cover</b>	<b>Size Class</b>	<b>DBH</b>	<b>Age</b>	<b>Sub-Canopy Species</b>		
Red Maple		5	Pole	6	69	White Spruce		
Red Pine		25	Log/Pole	12	99	Density		
Basswood		3	Pole/Log	8	69	Avg. Height		
Hemlock		2	Log/Pole	12	99	Size		
Red Oak		5	Log	14	99			
Black Cherry		5	Pole/Log	8	69			
Paper Birch		5	Log/Pole	10	69			
Bigtooth Aspen		20	Log/Pole	10	69			
Northern White Cedar		5	Log/Pole	12	99			
Quaking Aspen		10	Log/Pole	10	69			
Sugar Maple		5	Pole	6	69			
White Pine		10	Log	14	99			



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																							
64	42390 - Mixed Non-Pine Upland Conifers	Poletimber Well	9.0	113	111-140	N/A	Half lowland cedar, half hemlock poles with mixed hardwood and white pine on transition into uplands. OPIC - FMD: OI Stand Year Origin was 1911																																																							
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65	4111 - S.Maple, Hard Mast Association	Poletimber Well	16.6	47	81-110	N/A	This stand was broke out from past inventory from the adjoining oak stand due to a different species composition and size. This is a northern hardwood pole stand with scattered oak log trees and remnant aspen. The only access to this stand would be through a funnel from the north due to steep terrain. This stand should coincide with adjoining harvests in the future.																																																							
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66	4130 - Aspen	Sapling Well	6.1	41	111-140	N/A	Young aspen stand. Very dense balsam understory. Little cedar bubble drains out to the north. Remnant oak and white pine were left.  OPIC - FMD: OI Stand Year Origin was 1983																																																							
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67	4130 - Aspen	Poletimber Well	19.2	79	111-140	N/A	Older aspen stand. Mixture of quaking and bigtooth in excellent shape. Dominant age is 72 with a component of younger aspen mixed in as well. Hardwood and white pine poles fairly abundant in understory. Scattered oak poles and remnant overstory oak and white pine trees across stand. A fairly steeper slope sweeps across the stand (north/south) becoming steeper to the north. Most of this stand should be operable except possibly in the far northern portion which will be determined during TSE work.																																																							
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**68** 6120 - Lowland Cedar Poletimber Well 3.4 99 Unspecified N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	5	Pole/Log	9		Balsam Fir	Low	Variable	Sapling
Quaking Aspen	5	Log/Pole	10		Tag Alder	Low	Variable	Tall Shrub
Balsam Poplar	5	Log/Pole	12		White Spruce	Low	Variable	Sapling
Balsam Fir	10	Pole	6					
Black Spruce	10	Pole	6					
Paper Birch	5	Log/Pole	10					
Red Pine	5	Log/Pole	12					
Northern White Cedar	55	Pole	8	99				

**69** 4110 - Sugar Maple Association Poletimber Well 37.8 79 111-140 N/A Cut Fall of 2022 part of Yellow Brick Road Sale.

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	3	Log/Pole	12	
White Ash	10	Log/Pole	12	
Red Oak	10	Log/XLog	16	
Basswood	25	Log/Pole	12	
Sugar Maple	45	Pole/Log	9	79
Beech	2	Pole	8	
Quaking Aspen	5	Log	15	

**70** 42260 - Natural Pine, Mixed Deciduous Poletimber Well 18.6 65 111-140 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	2	Pole	7		Aspen (spp.)	Medium	10 - 20 feet	Sapling
Red Maple	5	Pole	7					
Red Pine	10	Log	15					
White Pine	50	Log	12	65				
Paper Birch	4	Log/Pole	12					
White Spruce	4	Log	12	65				
Quaking Aspen	25	Sapling	3	32				

Mixed stand with aspen saplings filling in any gaps. Very diverse age ranging from 26 year old aspen to 90 year old white pine with a majority of pine and a little bit of white spruce species around 60 years old. This stand should be left alone to not damage aspen regen which is thriving any place the canopy has openings and places in the understory.

OPIC - FMD: OI Stand Year Origin was 1934  
Cut 1991 Oine Creek Lake Sale

**71** 4130 - Aspen Sapling Well 10.8 12 Immature N/A

Canopy Species	% Cover	Size Class	DBH	Age
Red Pine	5	XLog/Log	18	
Quaking Aspen	85	Sapling	1	12
White Pine	10	Pole	6	

Fully stocked aspen sapling stand with abundant white pine poles and scattered large red pine.

OPIC - FMD: Needs survey. Request sent. Save pine and cherry.  
HARVESTED WITH PINEAPPLE POPPLE SALE 2012 #12-006-10-01

**72** 212 - Non-tilled Herbaceous Agriculture Nonstocked 1.5 No

Grass opening. Fenced in by private owner. WLD was notified about issue.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																								
74	429 - Mixed Upland Conifers	Sawtimber Well	18.4	85	111-140	N/A	Very open understory with gentle terrain. Clones of younger aspen are present but majority of aspen is very large and ready to decline. Previous site condition on stand from 2005 was to hold off on harvest to not damage 3" diameter, 30' tall natural pine regeneration. Both red and white pine ranges from small pole size to 20"+. Most of the pine has reached the overstory and grew in diameter from the previous site condition. More red pine is found in the east at a much smaller diameter which is topped over by large aspen. Some pine is starting to self thin. Removing hardwood species would open up pine to grow and create an excellent natural pine stand adjacent to Pine Creek. A natural spring pipe is located in the northwest corner and can be found in the reference layer.																																								
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75	4133 - Aspen, Mixed Pine	Sapling Well	27.1	12	Immature	N/A	Aspen sapling stand. Large pine scattered across stand. Fully stocked with aspen except areas where pine is too dense.  OPIC - FMD: The south end has some hardwood that may be excluded from a sale. Survey requested. Use care to protect logging dam site south of this stand. HARVESTED WITH PINEAPPLE POPPLE SALE 2012 #12-006-10-01																																								
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76	42200 - Natural White Pine	Sapling Poor	5.2	21	Immature	N/A	Opening that seeded in dense with 20' white pine saplings/poles. Average 3"-4" diameter. About 1/3 of this stand is fully stocked.																																								
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77	42360 - Upland Cedar	Sawtimber Well	4.3	113	111-140	N/A	Upland cedar patch, drainage area from adjacent private higher ground.  OPIC - FMD: OI Stand Year Origin was 1911																																								
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78	500 - Water	Nonstocked	12.0	84		No	Lake with cattail/lowland shrub perimeter.																																								
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79	4136 - Aspen, Mixed Conifer	Poletimber Well	33.0	42	111-140	N/A	Young aspen stand with paper birch. Red maple saplings 20'+ in under story. Remnant pine scattered. Small patch on the east side of Pine Creek Lake Road was not harvested and has larger older trees.  OPIC - FMD: OI Stand Year Origin was 1982																																								
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>81</b>	3102 - Grass	Nonstocked	20.2			No	Grass opening with scattered black cherry across the entire field.
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<b>82</b>	6120 - Lowland Cedar	Poletimber Well	3.3	113	111-140	N/A	Lowland cedar with some black ash and tamarack mixed in more to the north. Old barbed wire fence meanders across the middle of this stand running north/south.
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Canopy Species	% Cover	Size Class	DBH	Age
Tamarack	5	Pole	7	
Northern White Cedar	73	Pole	9	113
Black Ash	16	Pole/Sapling	6	
Paper Birch	3	Pole/Sapling	5	
White Pine	1	Log/XLog	14	
Black Spruce	2	Pole/Sapling	6	

<b>83</b>	122 - Road/Parking Lot	Nonstocked	1.9			No	OPIC - FMD: Pine Creek Lake road.
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<b>85</b>	4134 - Aspen, Spruce/Fir	Poletimber Well	3.8	96	81-110	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	20	Pole/Log	8		Balsam Fir	Medium	Variable	Sapling
Paper Birch	15	Pole/Log	8					
Balsam Fir	20	Pole/Log	8	96				
White Spruce	5	Pole/Log	8					
Quaking Aspen	40	Log/Pole	11	96				