



# Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12031

Entry Year 2025

Acreage: 2,235

County Dickinson

Management Area: Ralph Moraine

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**Stand Examiner:** Andrew Church

**Legal Description:**

T43N R27W Sections 5-8,17,18 T43N R28W Sections 1,12

**Identified Planning Goals:**

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Protect riparian areas during management activities.

**Soil and topography:**

Soils range from well drained Emmet fine sandy loams to very poorly drained Waucedah - Cathro mucks. The topography is rolling hills with few steep areas.

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

Small pieces of private ownership are scattered around this compartment. Active forest management has occurred and will continue within and surrounding this area. Hunting, fishing, and dispersed camping are the main recreational use patterns.

**Unique Natural Features:**

North Branch of Ford River

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

No Archeological, Historical, or Cultural Features known.

**Special Management Designations or Considerations:**

**Watershed and Fisheries Considerations:**

The northern region of this compartment borders the North Branch of the Ford River. The southcentral region of this compartment contains headwater reaches of Hayes Creek. The North Branch of the Ford River is designated a Type 1 trout stream less than 50-foot width and has a predicted mean July temperature of 66.9°F (cool stream). Hayes Creek is designated a Type 1 trout stream less than 50-foot width and has a predicted mean July temperature of 63.3 °F (cold stream). 300-foot buffers are recommended for the North Branch Ford River and Hayes Creek in riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, 100 foot plus 5 feet per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices.

**Wildlife Habitat Considerations:**

This compartment has been extensively treated in past entry years and is basically a mix of younger aspen, swamp conifer, upland hardwoods and large grass openings. Budworm is affecting portions of this compartment so conifer species that are not affected by it, primarily hemlock, cedar and pine will be very important for their ability to provide cover and forage for wildlife. Transition zones between upland and lowland are an important habitat feature, providing cover during travel, and providing access to forage from winter cover. Lowland conifers and lowland hardwoods are especially important for bear. Large maintained openings are uncommon in the area and provide a wide variety of habitat components for openland species. Openings will be retained by prescribed burn.

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

Surface sediments consist of medium-textured glacial till. The glacial drift thickness varies between 50 and 100 feet. The Cambrian Munising Formation and Precambrian Archean granite/gneiss subcrop below the glacial drift. There is not an economic use for these rocks, although they have building stone potential. Abandoned iron mines are located approximately ten miles to the south. A gravel pit is located 2.5 miles to the south and there appears to be good gravel potential. Part of Sections 5 and 6 are leased, and there was previous leasing for metallic exploration in the general area. There is no economic oil and gas production in the UP.

**Vehicle Access:**

Access is good throughout the landscape with County Road 581 and the Buckler Road serving as the main access points.

**Survey Needs:**

None.

**Recreational Facilities and Opportunities:**

Hunting, fishing, and dispersed camping are the main recreational use patterns.

**Fire Protection:**

Felch fire protection area.

**Additional Compartment Information:**

The following reports from the Inventory are attached:

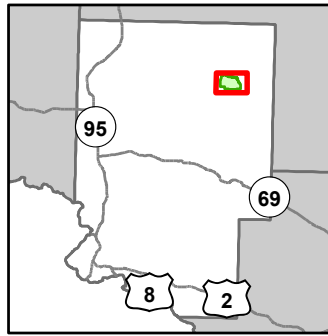
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

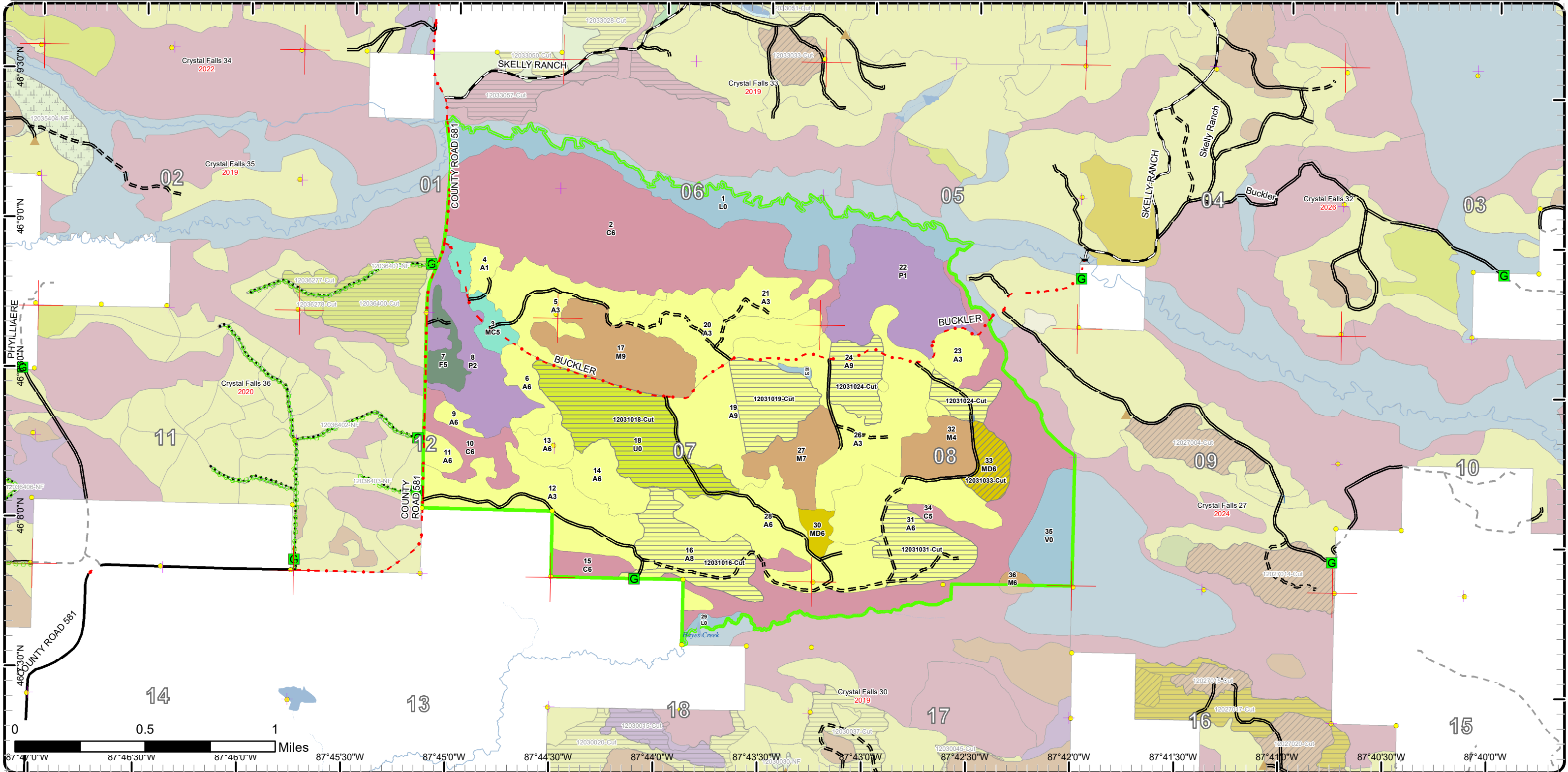
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

# Cover Type & Treatments Map

Compartment: 31  
 T43N, R27W, Sec. 05-08, 17-18  
 T43N, R28W, Sec. 1, 12  
 County: Dickinson  
 Unit: Crystal Falls  
 Mgmt Area: Ralph Moraine  
 YOE: 2025  
 Acres: 2234.6 GIS Calculated  
 Examiner: Andrew Church  
 Map Revised: 8/1/2023  
 Map Phase: Review

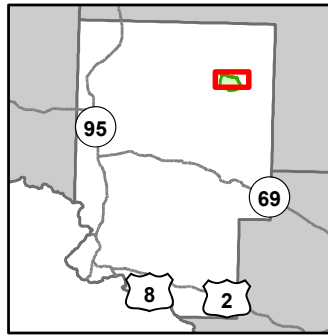


- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
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- Compartment Boundary
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 330 - Low Density Trees
- 622 - Lowland Shrub

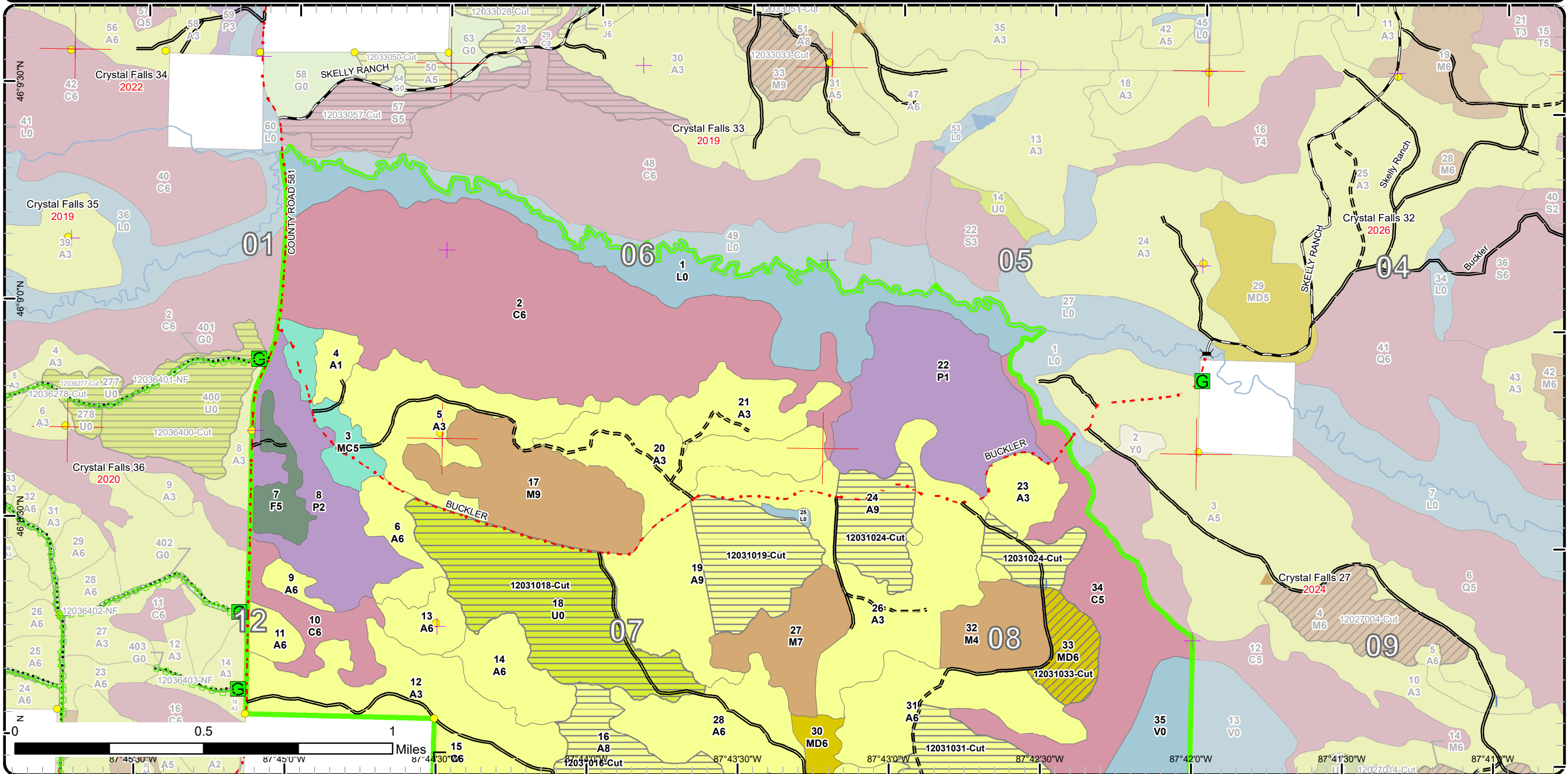


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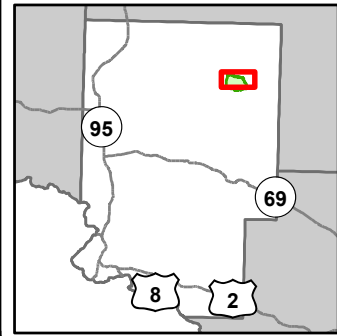


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# Stand Boundary Map

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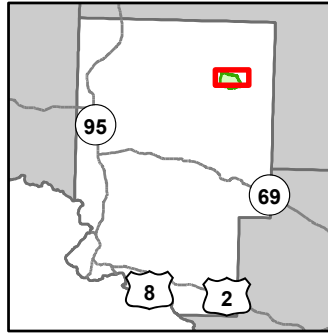


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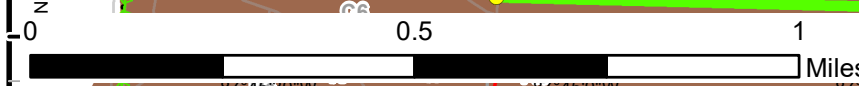
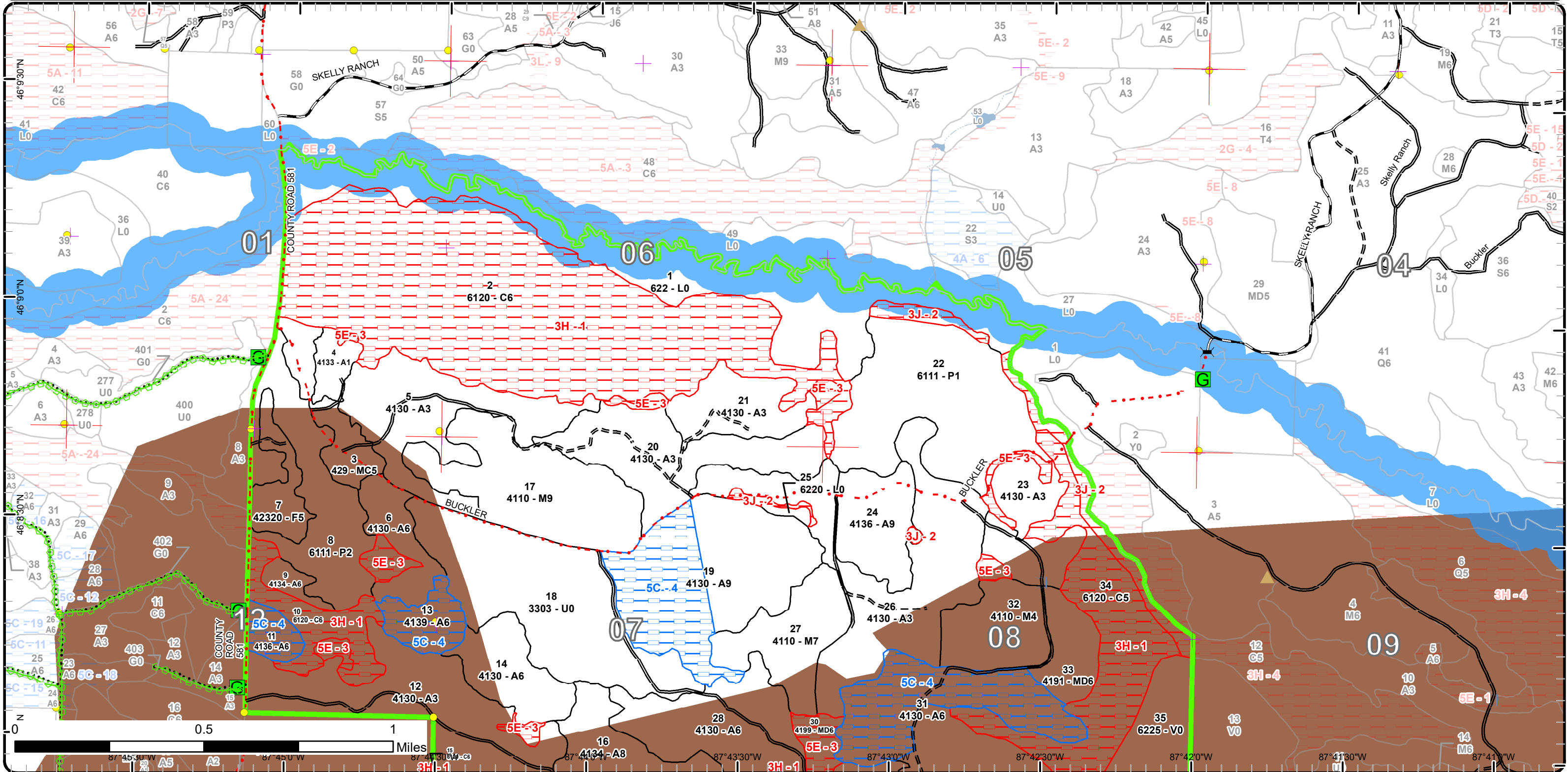


# Special Conservation Areas

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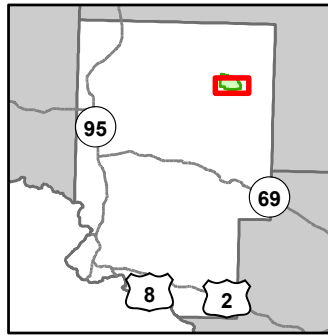
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- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- High Priority Trout Stream Buffer
- Deer Winter Range



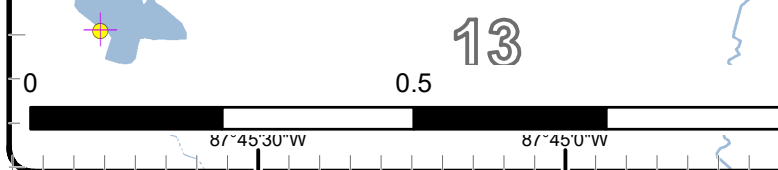
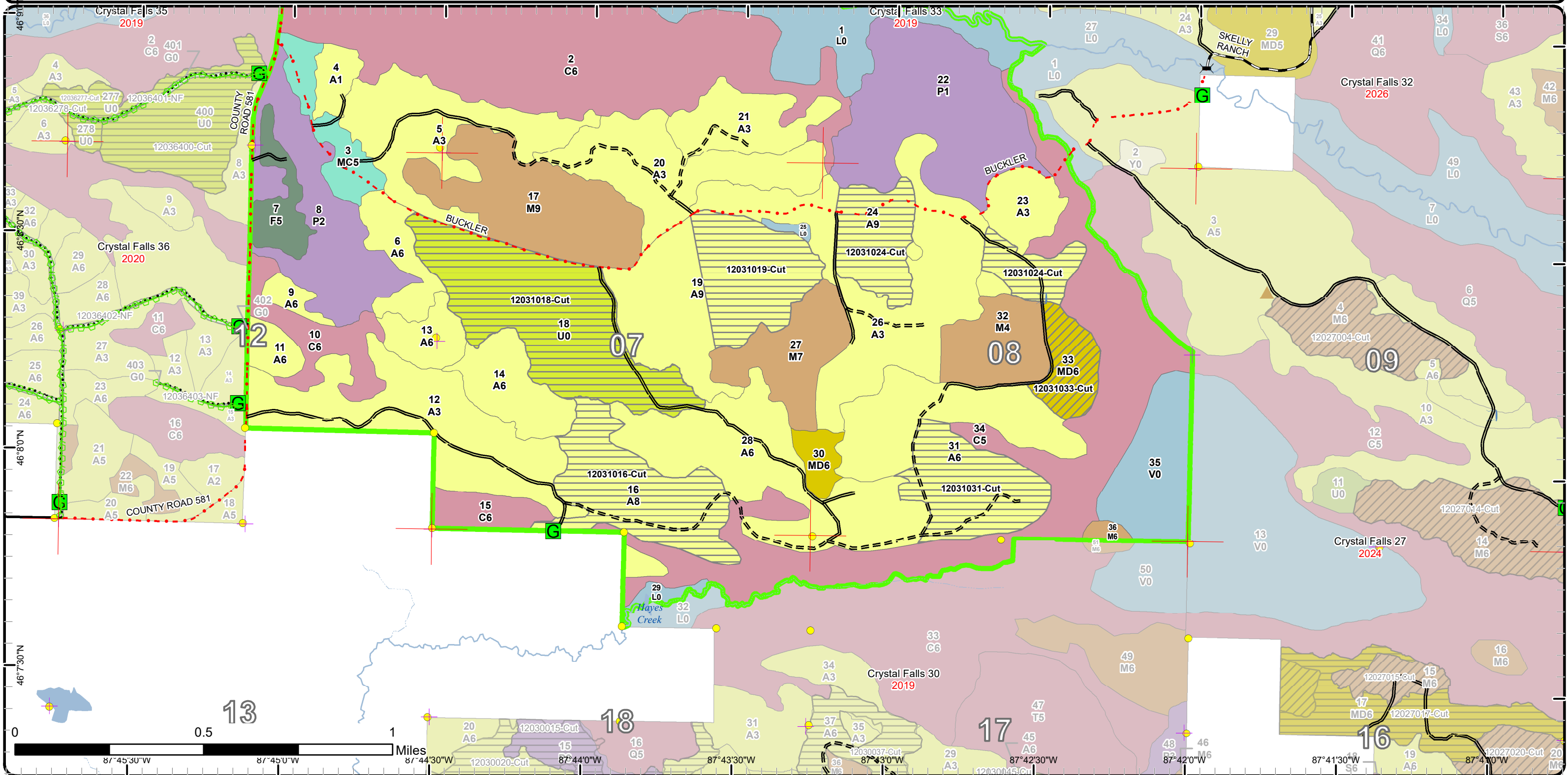
87°45'30"W
87°45'00"W
87°43'30"W
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87°42'30"W
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# Cover Type & Treatments Map

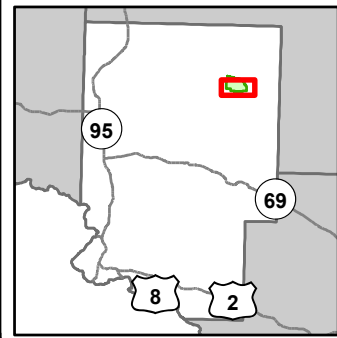
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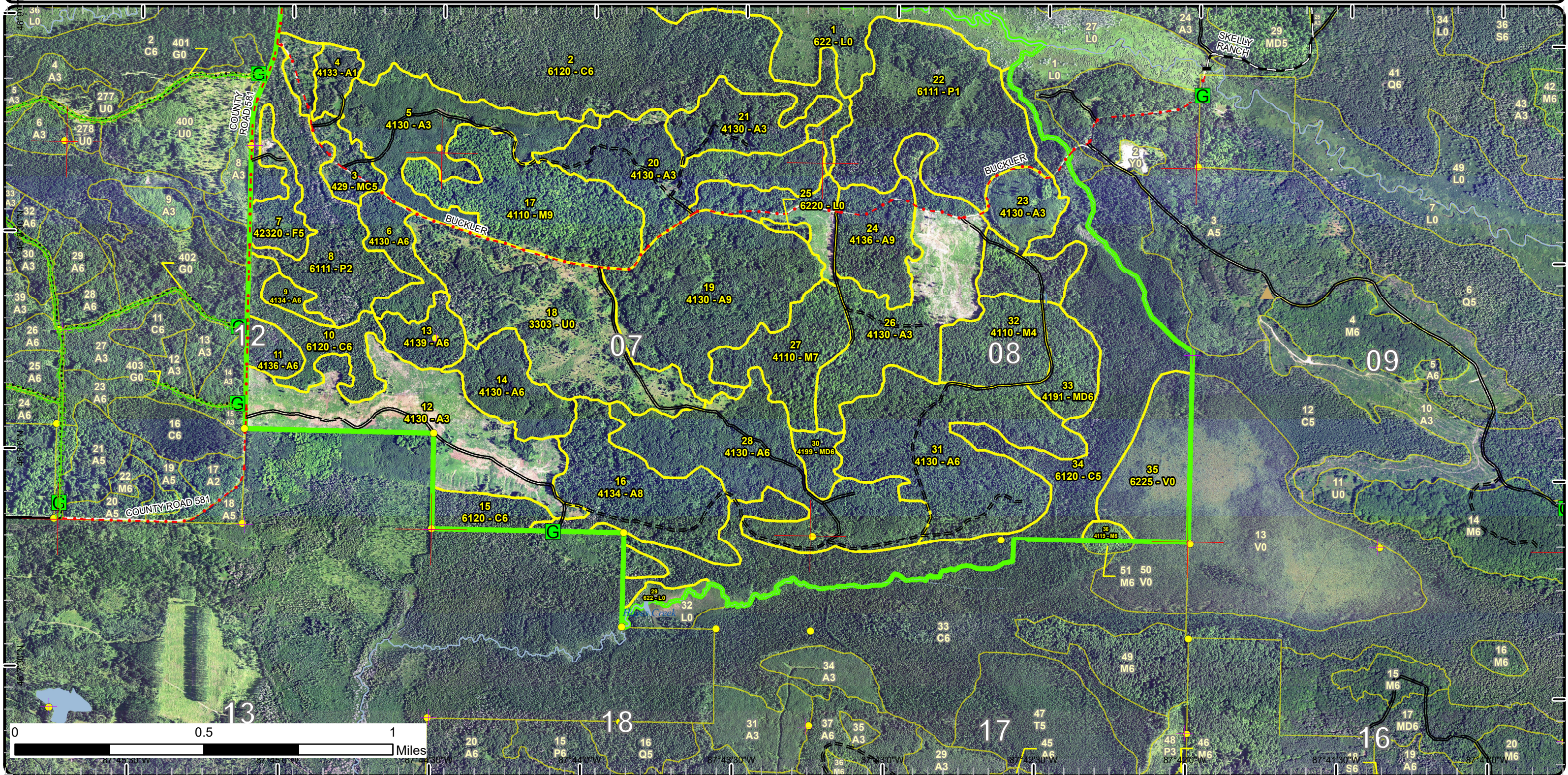


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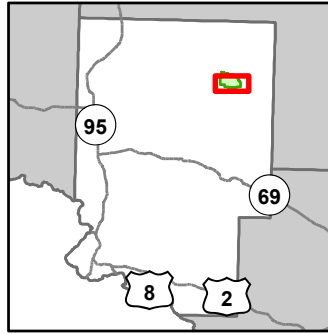
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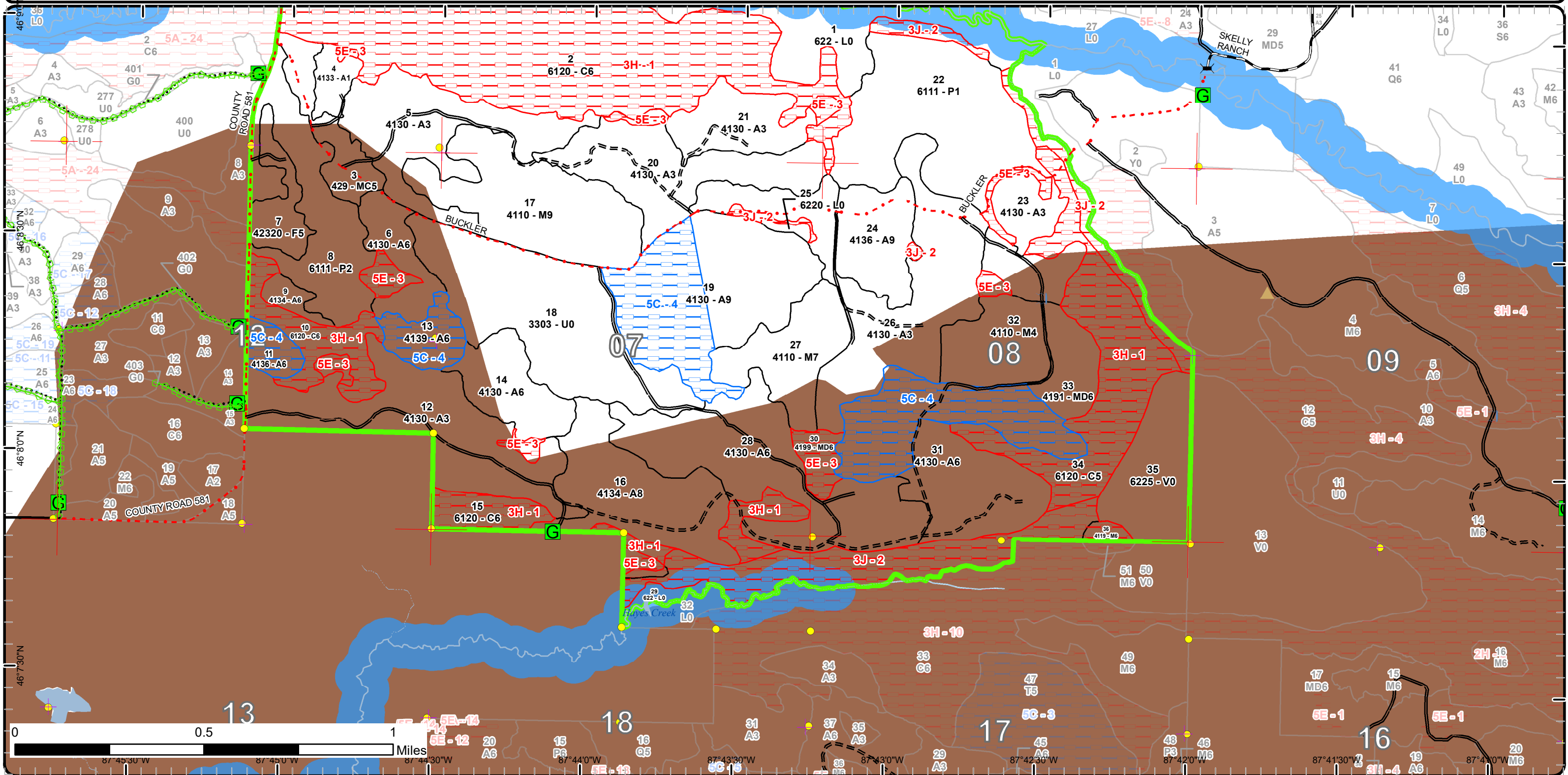


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Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	330	22	70	161	7	313	74	0	0	0	0	0	0	0	0	0	0	977
Bog	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
Cedar	0	0	0	0	0	0	0	0	0	0	544	0	0	0	0	0	0	0	544
Low-Density Trees	111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111
Lowland Aspen/Balsam Poplar	0	183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183
Lowland Shrub	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
Mixed Upland Deciduous	0	0	0	0	0	0	23	0	0	0	11	0	0	0	0	0	0	0	34
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	165	0	0	0	0	0	0	0	164
Upland Conifers	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Upland Spruce/Fir	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20
<b>Total</b>	<b>289</b>	<b>513</b>	<b>22</b>	<b>70</b>	<b>206</b>	<b>7</b>	<b>336</b>	<b>74</b>	<b>0</b>	<b>0</b>	<b>720</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2236</b>



## Report 2 – Treatment Summary

Crystal Falls Mgt. Unit  
Year of Entry: 2025

Acres of Harvest

Compartment 31  
Total Compartment Acres: 2,235

Commercial Harvest - 364  
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	Overshoot Removal	Salvage	Other	Total Acres
Aspen	231	0	0	0	0	0	0	0	0	231
Low-Density Trees	111	0	0	0	0	0	0	0	0	111
Mixed Upland Deciduous	0	0	0	0	0	23	0	0	0	23
<b>Total</b>	<b>341</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>364</b>

### Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	364	0	0	0	0	0	0	0	0	364
Next Step	0	0	0	0	111	0	231	0	0	341
<b>Total</b>	<b>364</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>0</b>	<b>231</b>	<b>0</b>	<b>0</b>	<b>706</b>



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat
											Cut

**Proposed Treatments:**

<b>16</b>	<b>12031016-Cut</b>	69.4	4134 - Aspen, Spruce/Fir	Sawtimber Medium	62	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest using 4" spec. Leave Cherry, Pine, Cedar, Hemlock if found. Buffer vernal ponds 100 feet. In addition, leave conifers South of road.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Aspen, Mixed Hardwood, Mixed Conifers</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>											
<b>19</b>	<b>12031019-Cut</b>	53.7	4130 - Aspen	Sawtimber Well	58	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest using 4" spec. Leave Cherry and conifers. Buffer vernal ponds 100 feet.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Aspen, Mixed Conifers, Mixed Hardwoods</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>											
<b>24</b>	<b>12031024-Cut</b>	55.0	4136 - Aspen, Mixed Conifer	Sawtimber Well	58	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest using 4" spec. Leave Cherry, Pine, Cedar, Hemlock if found. Buffer vernal ponds 100 feet.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Aspen, Mixed Hardwood, Mixed Conifers</p> <p><u>Other Comment:</u></p> <p><u>Site Condition</u></p> <p><u>Proposed Start Date:</u> 10/1 /2024</p>											
<b>31</b>	<b>12031031-Cut</b>	52.5	4130 - Aspen	Poletimber Well	53	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest using 4" spec. Leave Cherry and conifers.</p> <p><u>Specs:</u></p> <p><u>Next Step</u> Monitoring, Natural Regen (Re-Inventory)</p> <p><u>Treatments:</u></p> <p><u>Acceptable Regen:</u> Aspen, Mixed Conifers, Mixed Hardwoods</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
33 12031033-Cut	23.0	4191 - Mixed Upland Deciduous with Conifer	Poetimber Well	53	141-170	Harvest	Crown Thinning	4199 - Other Mixed Upland Deciduous	Uneven-Aged	No
<p><u>Prescription</u> Mark stand to release Maple. Target 80 residual BA. Leave Pine, Cedar, Hemlock if found.  <u>Specs:</u>  <u>Next Step</u>  <u>Treatments:</u>  <u>Acceptable</u>  <u>Regen:</u>  <u>Other</u>  <u>Comment:</u>  <u>Site Condition</u>  <u>Proposed Start Date:</u> 10/1 /2024</p>										

**Approved Treatments:**

18 12031018-Cut	110.8	3303 - Mixed Low Density Trees	Nonstocked		Unspecified	Harvest	Clearcut	310 - Herbaceous Openland		No
<p><u>Prescription</u> Final Harvest using 2" spec. Leave Pine.  <u>Specs:</u>  <u>Next Step</u> Burn, Opening  <u>Treatments:</u>  <u>Acceptable</u> herbaceous openland  <u>Regen:</u>  <u>Other</u>  <u>Comment:</u>  <u>Site Condition</u>  <u>Proposed Start Date:</u> 7 /15/2021</p>										

**Total Treatment Acreage Proposed: 364.4**

## Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2025

### Availability for Management

Total Acres	Acres Available	Acres Avail		Acres Not Available	Dominant Site Conditions				
		With Condition			5C	3H	3J	5E	
977	802	<b>148</b>		27	Aspen	<b>148</b>	0	5	22
48	48	<b>0</b>		0	Bog				
544	0	<b>0</b>		544	Cedar		462	81	0
111	111	<b>0</b>		0	Low-Density Trees				
182	169	<b>0</b>		13	Lowland Aspen/Balsam Poplar			7	6
130	130	<b>0</b>		0	Lowland Shrub				
34	23	<b>0</b>		11	Mixed Upland Deciduous				11
164	161	<b>0</b>		3	Northern Hardwood			3	
25	25	<b>0</b>		0	Upland Conifers				
20	20	<b>0</b>		0	Upland Spruce/Fir				
2,235	1,488	<b>148</b>		599	Total Forested Acres	<b>148</b>	462	97	40
	67%	<b>7%</b>		27%	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	<b>3H: Deer Wintering Area - habitat is incompatible with harvest at this time</b>	462	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b> Obligate deer winter range.							
2	Unavailable	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	97	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							
3	Unavailable	<b>5E: Long-Term Retention</b>	40	Unspecified	Unspecified	Unspecified	Unspecified
<b>Comments:</b>							

# Report 4 – Site Conditions

Crystal Falls Mgt. Unit  
Andrew Church : Examiner

Compartment: 31  
Year of Entry: 2025

4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	148	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 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.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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1	622 - Lowland Shrub	Nonstocked	122.1		Unspecified	No	
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2	6120 - Lowland Cedar	Poletimber Well	310.8	93	Unspecified	N/A	Fir in open areas and under the Tamarack. Stand is a mix of swamp conifer with veins of pure Cedar throughout.																												
<table border="1"> <thead> <tr> <th>Canopy Species</th> <th>% Cover</th> <th>Size Class</th> <th>DBH</th> <th>Age</th> </tr> </thead> <tbody> <tr> <td>Black Spruce</td> <td>20</td> <td>Pole</td> <td>6</td> <td></td> </tr> <tr> <td>Tamarack</td> <td>20</td> <td>Pole</td> <td>6</td> <td></td> </tr> <tr> <td>Northern White Cedar</td> <td>60</td> <td>Pole</td> <td>6</td> <td>93</td> </tr> </tbody> </table>		Canopy Species	% Cover	Size Class	DBH	Age	Black Spruce	20	Pole	6		Tamarack	20	Pole	6		Northern White Cedar	60	Pole	6	93	<table border="1"> <thead> <tr> <th>Sub-Canopy Species</th> <th>Density</th> <th>Avg. Height</th> <th>Size</th> </tr> </thead> <tbody> <tr> <td>Balsam Fir</td> <td>High</td> <td>Variable</td> <td>Sapling</td> </tr> <tr> <td>Tag Alder</td> <td>High</td> <td>5 - 10 feet</td> <td>Tall Shrub</td> </tr> </tbody> </table>		Sub-Canopy Species	Density	Avg. Height	Size	Balsam Fir	High	Variable	Sapling	Tag Alder	High	5 - 10 feet	Tall Shrub
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3	429 - Mixed Upland Conifers	Poletimber Medium	25.0	39	51-80	N/A	Once a large opening, now reclaiming to trees. In a few years, will be fully stocked with trees of all ages.																																																					
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4	4133 - Aspen, Mixed Pine	Sapling Poor	11.5	4	Immature	N/A	Seed tree harvested in 2019.																																							
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5	4130 - Aspen	Sapling Well	70.1	25	Unspecified	N/A	Tamarack regen in wetter areas. Cut 1998.																																
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6	4130 - Aspen	Poletimber Well	23.3	35	Unspecified	N/A	Some stems starting to reach merchantability size.																												
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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>7</b>	42320 - Upland Spruce	Poletimber Medium	19.7	39	Unspecified	N/A	Once an opening, now is reclaiming to trees.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	5	Pole/Sapling	6		White Spruce	High	Variable	Sapling
Balsam Fir	20	Pole/Sapling	6		Balsam Fir	High	Variable	Sapling
White Spruce	60	Pole/Sapling	6	39				
Balsam Poplar	5	Pole/Sapling	6					
Tamarack	10	Pole/Sapling	7					

<b>8</b>	6111 - Lowland Balsam Poplar	Sapling Medium	71.5	4	Immature	N/A	Harvested 2019. Small upland inclusion in far south.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Cherry	5	Sapling	1		Bracken Fern	Medium	Unspecified	Non-Wood
White Spruce	10	Sapling	1		Tag Alder	Medium	5 - 10 feet	Tall Shrub
Tamarack	10	Sapling	1					
Northern White Cedar	10	Pole	8					
Red Maple	10	Sapling	1					
Quaking Aspen	15	Sapling	1					
Balsam Poplar	40	Sapling	1	4				

<b>9</b>	4134 - Aspen, Spruce/Fir	Poletimber Well	6.9	46	Unspecified	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
White Spruce	10	Pole/Sapling	6		Blackberry/Raspberry	Medium	< 5 feet	Tall Shrub
Quaking Aspen	80	Pole/Sapling	7	46				
Balsam Fir	10	Pole/Sapling	7					

<b>10</b>	6120 - Lowland Cedar	Poletimber Well	30.5	93	Unspecified	N/A	More Cedar to East.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Spruce	5	Pole	6		Tag Alder	High	5 - 10 feet	Tall Shrub
Black Ash	10	Pole/Sapling	6		Balsam Fir	Medium	Variable	Sapling
Balsam Poplar	5	Pole	8		White Spruce	Medium	Variable	Sapling
Tamarack	10	Log/Pole	10					
Northern White Cedar	70	Pole	8	93				

<b>11</b>	4136 - Aspen, Mixed Conifer	Poletimber Well	11.2	53	Unspecified	N/A	Smaller diameters due to lower site indexes. Eastern edge very wet. Much Spruce/Fir in understory.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	50	Pole/Sapling	7	53	White Spruce	Medium	Variable	Sapling
Balsam Poplar	30	Pole/Sapling	7		Balsam Fir	High	Variable	Sapling
White Pine	5	Log	14					
Red Pine	5	Log	14					
Balsam Fir	10	Sapling/Pole	5					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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<b>12</b>	4130 - Aspen	Sapling Well	99.4	7	Immature	N/A	Harvested 2016		
<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		100	Sapling	1	7	Balsam Fir	Medium	Variable	Sapling
						Blackberry/Raspberry	Low	< 5 feet	Tall Shrub
						Hazelnut (Beaked)	Low	5 - 10 feet	Tall Shrub
						Ironwood	Low	Variable	Sapling

<b>13</b>	4139 - Aspen, Mixed Deciduous	Poletimber Well	18.5	50	Unspecified	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		55	Pole	8	50	Ironwood	Low	Variable	Sapling
Balsam Poplar		30	Pole	8		Hazelnut (Beaked)	Low	5 - 10 feet	Tall Shrub
Balsam Fir		10	Pole/Sapling	6		Balsam Fir	Medium	Variable	Sapling
White Spruce		5	Pole/Sapling	6					

<b>14</b>	4130 - Aspen	Poletimber Well	33.7	33	Unspecified	N/A	Harvested 1990.		
<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		100	Pole/Sapling	5	33	Balsam Fir	Low	Variable	Sapling

<b>15</b>	6120 - Lowland Cedar	Poletimber Well	17.3	97	Unspecified	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>
Tamarack		15	Pole	8		Balsam Fir	Medium	Variable	Sapling
White Spruce		5	Pole/Log	10		Tag Alder	Medium	10 - 20 feet	Tall Shrub
Quaking Aspen		5	Log	12					
Balsam Fir		5	Sapling/Pole	4					
Northern White Cedar		50	Pole	7	97				
Black Spruce		15	Pole	6					
Paper Birch		5	Pole	6					

<b>16</b>	4134 - Aspen, Spruce/Fir	Sawtimber Medium	73.9	62	81-110	N/A	Grassy openings found throughout stand. Aspen and Birch are in declining health.		
<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		10	Pole	6		Black Cherry	Low	Variable	Sapling
Quaking Aspen		50	Log/Pole	14	62	Quaking Aspen	Low	Variable	Sapling
Balsam Poplar		20	Log/Pole	12		Balsam Fir	Low	Variable	Sapling
White Spruce		15	Pole/Sapling	6					
Balsam Fir		5	Pole/Sapling	6					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																																								
17	4110 - Sugar Maple Association	Sawtimber Well	80.3	97	81-110	N/A	Thinned 2008.																																																								
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18	3303 - Mixed Low Density Trees	Nonstocked	110.8		Unspecified	No																																																									
19	4130 - Aspen	Sawtimber Well	108.4	58	Unspecified	N/A	Small scattered grassy openings throughout. Supercanopy Pines within stand.																																																								
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24	4136 - Aspen, Mixed Conifer	Sawtimber Well	58.8	58	111-140	N/A	Many different ages of Aspen. Scattered large Pines found throughout most of stand. Aspen and Birch are in declining health.																																																											
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25	6220 - Alder/willow	Nonstocked	2.2		Unspecified	No																																																												
26	4130 - Aspen	Sapling Well	114.2	5	Immature	N/A	Harvested 2018																																																											
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27	4110 - Sugar Maple Association	Sawtimber Poor	43.7	98	1-50	N/A	Treated 2018. Retained 20-40 BA of Maple, removed Aspen, Ironwood, Birch.																																																											
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28	4130 - Aspen	Poletimber Well	104.4	36	Unspecified	N/A	Pockets of Spruce/Fir throughout. Cut 1987.																																																											
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29	622 - Lowland Shrub	Nonstocked	5.3		Unspecified	No																																																												



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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**30** 4199 - Other Mixed Upland Deciduous Poletimber Well 10.8 98 81-110 N/A Excellent Hard Maple regen. Scattered Aspen clones mixed throughout stand. Stand retained for retention purposes.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Poplar	5	Log	14		Sugar Maple	High	Variable	Sapling
Basswood	10	Log	12		Ironwood	Medium	Variable	Sapling
Yellow Birch	5	Pole	8		Leatherwood	Medium	< 5 feet	Tall Shrub
Quaking Aspen	10	Log	14					
Northern White Cedar	2	Log	14					
Paper Birch	5	Pole	8					
American Elm	3	Pole	8					
Ironwood	15	Sapling/Pole	4					
Sugar Maple	40	Pole/Sap/Log	8	98				
Black Ash	5	Pole	6					

**31** 4130 - Aspen Poletimber Well 116.0 53 Unspecified N/A Scattered pockets of Spruce/Fir.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	70	Pole	9	53	Sugar Maple	Low	Variable	Sapling
Bigtooth Aspen	15	Pole/Log	9		Balsam Fir	Low	Variable	Sapling
Sugar Maple	5	Pole	7		White Spruce	Low	Variable	Sapling
White Spruce	5	Pole/Sapling	6		Ironwood	Low	Variable	Sapling
Balsam Fir	5	Pole/Sapling	4					

**32** 4110 - Sugar Maple Association Poletimber Poor 36.8 98 1-50 N/A Stand treated 2018. Aspen and Ironwood removed. Also, Maple greater than 8" DBH removed.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Northern White Cedar	2	Log	14		Sugar Maple	High	Variable	Sapling
Sugar Maple	98	Pole/Sap/Log	8	98	Leatherwood	Medium	< 5 feet	Tall Shrub
					Ironwood	Medium	Variable	Sapling
					Quaking Aspen	High	Variable	Sapling

**33** 4191 - Mixed Upland Deciduous with Conifer Poletimber Well 23.0 53 141-170 N/A

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
Quaking Aspen	35	Pole/Log	9	53	Ironwood	Low	Variable	Sapling
White Spruce	10	Pole/Sapling	6		White Spruce	Low	Variable	Sapling
Balsam Fir	10	Sapling/Pole	4		Sugar Maple	Low	Variable	Sapling
White Ash	5	Log/Pole	10					
Sugar Maple	30	Pole	7					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
<b>34</b>	6120 - Lowland Cedar	Poletimber Medium	185.0	95	Unspecified	N/A	Pockets of pure Cedar and pockets of young Tamarack present.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Black Spruce	20	Pole/Sapling	6		Tag Alder	Medium	5 - 10 feet	Tall Shrub
Tamarack	20	Pole/Sapling	6		Tamarack	Medium	Variable	Sapling
Northern White Cedar	60	Pole/Log	10	95	Black Spruce	Medium	Variable	Sapling

<b>35</b>	6225 - Bog	Nonstocked	48.3		Unspecified	No	
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<b>36</b>	4119 - Mixed Northern Hardwoods	Poletimber Well	3.5	95	111-140	N/A	Upland island in the swamp. Upland Cedar mixed throughout. BAM/Fir strip along edge. Stream to NW of stand.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	10	Pole/Sapling	6		Sugar Maple	Low	>20 feet	Sapling
Northern White Cedar	5	Log	14					
Red Maple	5	Pole/Log	10					
Basswood	15	Log	12					
Balsam Poplar	10	Log	10					
American Elm	2	Pole	6					
Sugar Maple	45	Pole/Sapling	7	95				
Ironwood	5	Pole	6					
Paper Birch	3	Pole	6					