



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12057

Entry Year 2023

Acreage: 1,743

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2021-08-16

Stand Examiner:

Legal Description:

T42N R29W Sec 10, 11, 13-15, 22-24

Identified Planning Goals:

Conserve, protect, manage, use and enjoy the State's natural and cultural resources for current and future generations.

Soil and topography:

The uplands are dominated by Pemene-Rock outcrop complex which has well-drained Pemene soil intermingled with areas of rock outcrop. Other upland soils include Emmet fine sandy loam located on rolling, well-drained soils. Lowland soils are Carbondale and Cathro mucks and Ensley fine sandy loam.

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

This compartment is a large contiguous block of State-owned land primarily used by a variety of outdoor enthusiasts. State land surrounds much of the compartment boundary.

Unique Natural Features:

Sixmile creek, East Branch Sturgeon River.

Archeological, Historical, and Cultural Features:

none

Special Management Designations or Considerations:

Small portion in Obligate Deer Wintering Range.

Watershed and Fisheries Considerations:

The southern boundary of the compartment runs along Sixmile Creek. I have received angler reports of a good trout fishery there even though it isn't an official trout designated stream. A 300 ft buffer is recommended, but not required. The western border runs along an unnamed stream that drains into Sixmile Lake. The upper reaches appear to be impacted by beaver with multiple impoundments along the stream. A 100 foot buffer is recommended. An unnamed stream that flows into SixMile Creek runs through the eastern portion of the compartment and should also receive a 100 foot buffer.

Wildlife Habitat Considerations:

All species of wildlife need to be considered and a full range of habitat conditions should be provided. Conditions from early-successional to old growth must be provided to meet these needs. Riparian and transition zones were set aside in prior years of entry to provide some of these habitat requirements. Rich conifer swamps and associated lowland hardwood drainages make this compartment unique. Upland and lowland conifer components should be maintained and enhanced when possible. Opening maintenance will be completed as logistics allow.

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 active sand/gravel pit is approximately three miles to the southeast. There appears to be some good potential for sand & gravel within the compartment. Past iron ore exploration has occurred in the area of the compartment, but the closest historical mining is greater than two miles to the southwest and southeast. There does not appear to be any potential for iron ore beneath the compartment. Potential for other metallic minerals beneath the compartment is unknown but is considered low at this time. There is some history of leasing of State-owned mineral rights in the area, but there is no current metallic mineral lease activity within three miles. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Access from Wells Grade and Six Mile Lake roads.

Survey Needs:

Survey will be needed.

Recreational Facilities and Opportunities:

Hunting, camping, fishing, trapping, hiking, canoeing.

Fire Protection:

Felch protection area.

Additional Compartment Information:

The following reports from the Inventory are attached:

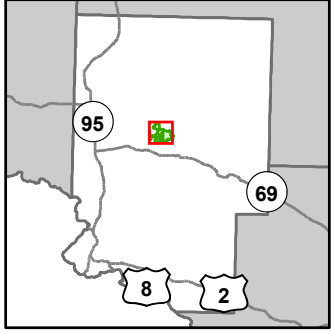
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

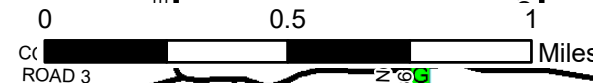
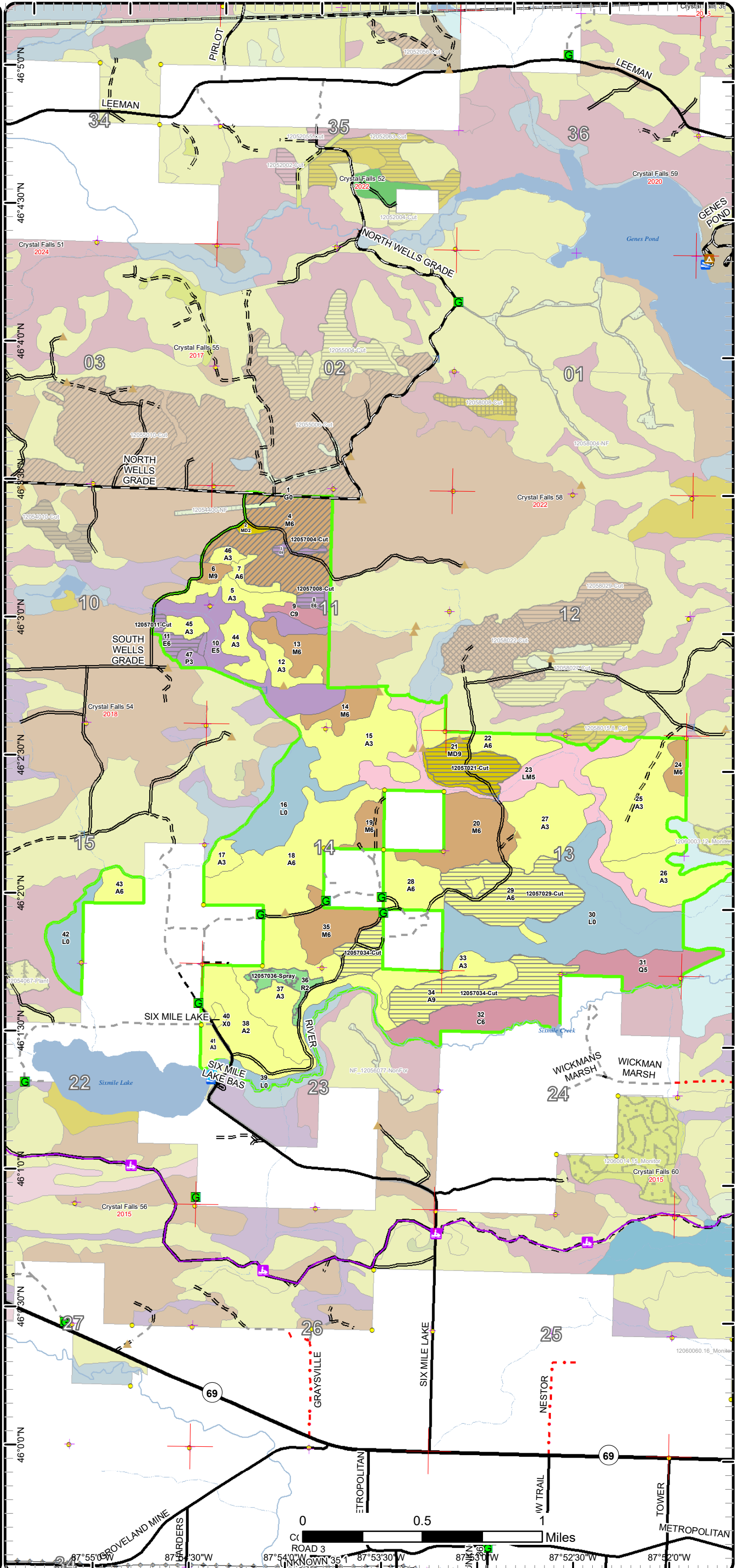
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 57
 T42N, R29W, Sec. 10, 11, 13-15, 22-24
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Ralph Ground Moraine
 YOE: 2023
 Acres: 1743.1 GIS Calculated
 Examiner: Andrew Church
 Map Revised: 12/28/2021
 Map Phase: Post-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
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
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- Lake/Pond
- Perennial River
- Lakes and Rivers
- ▲ Berms
- Gate
- Boating Access Site
- Culvert
- Fishing Access Site
- Compartment Boundary
- Pesticide
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 622 - Lowland Shrub

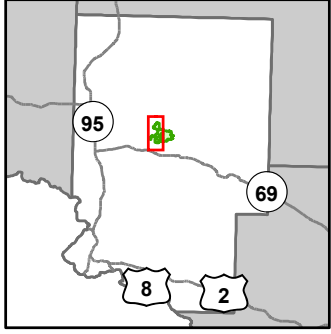


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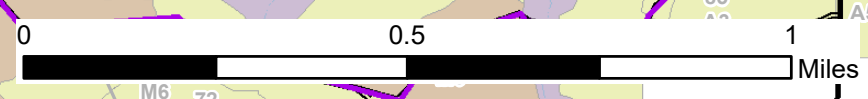
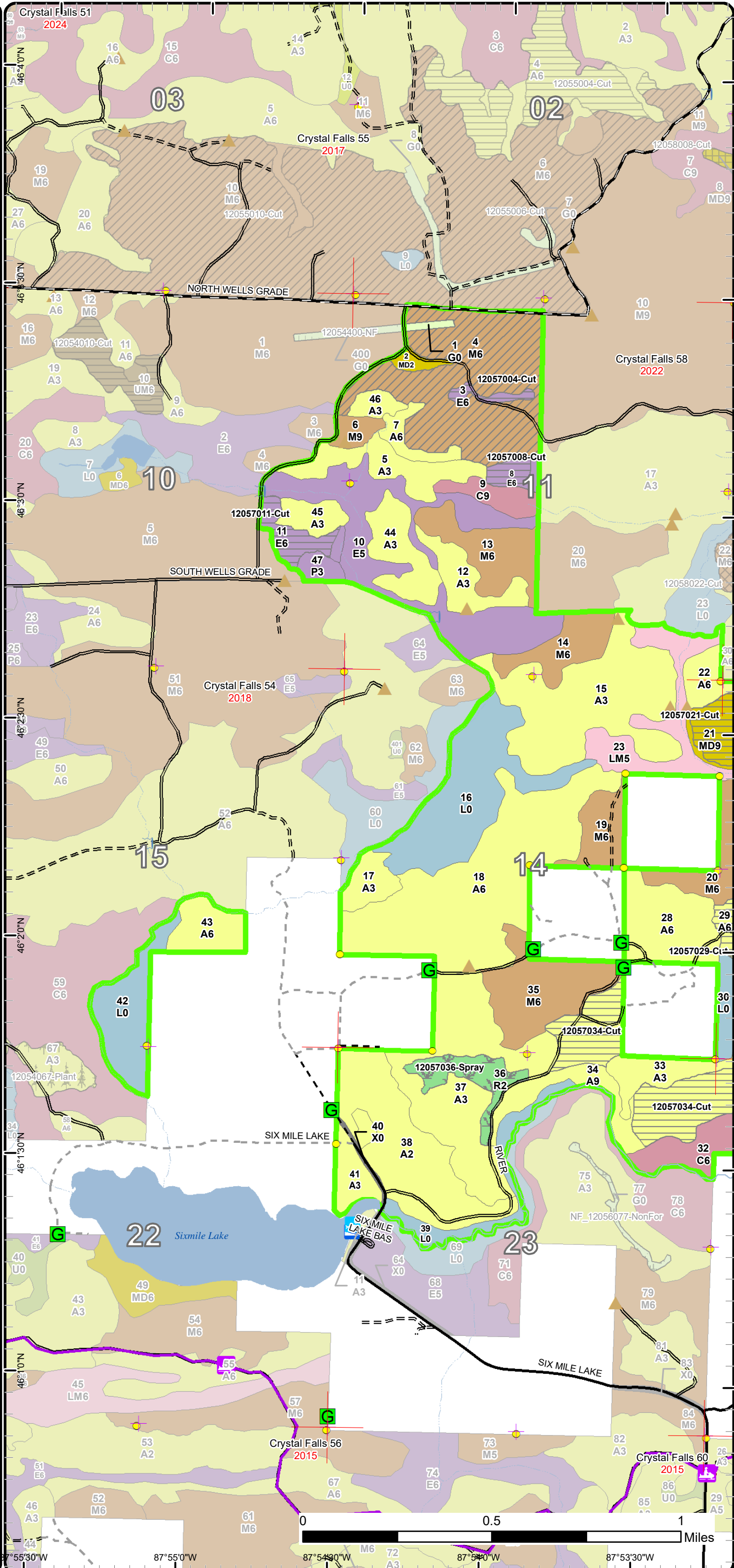
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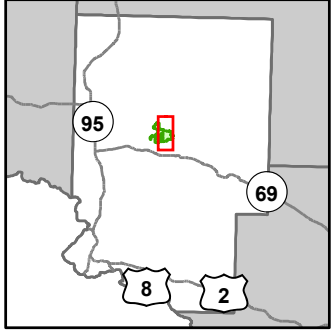
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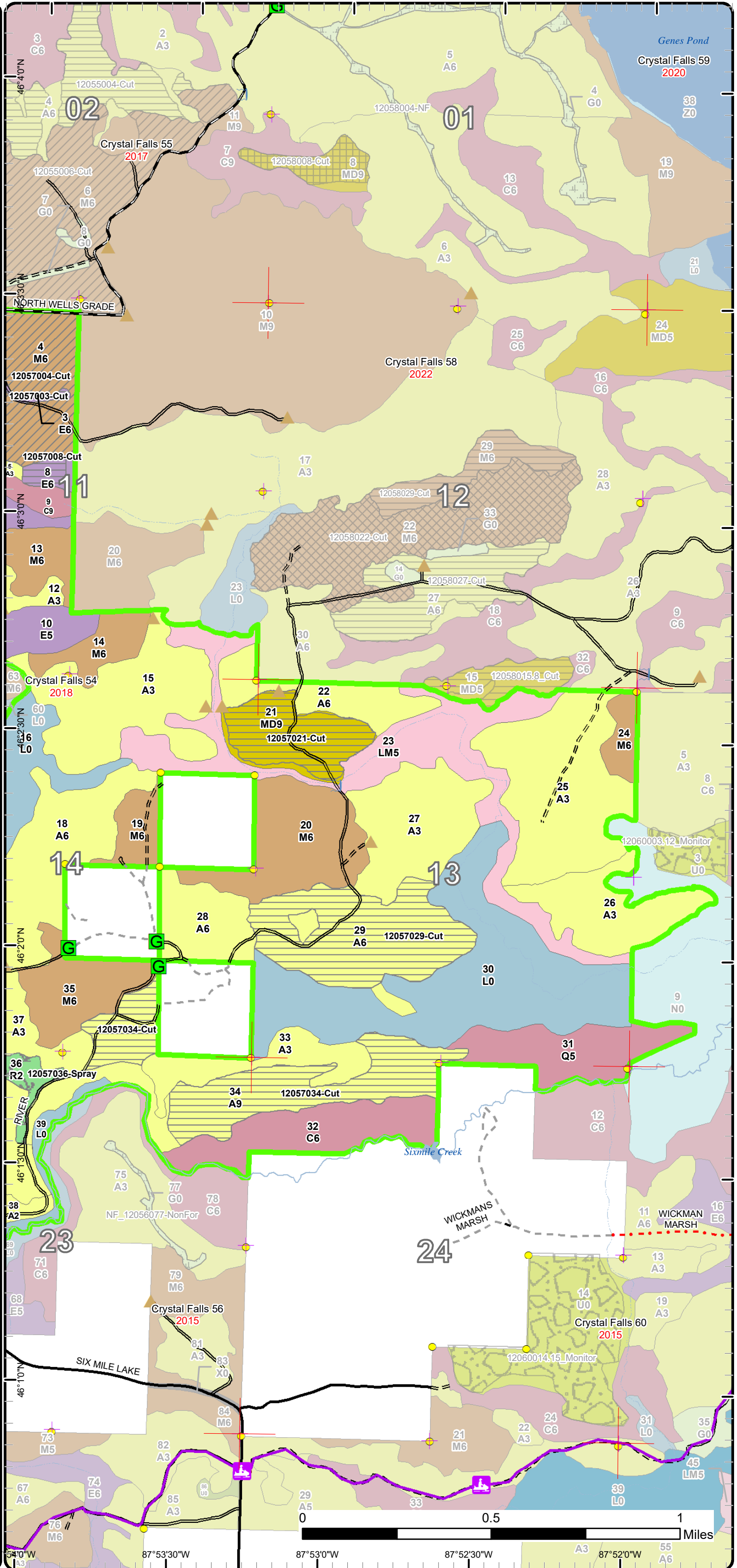
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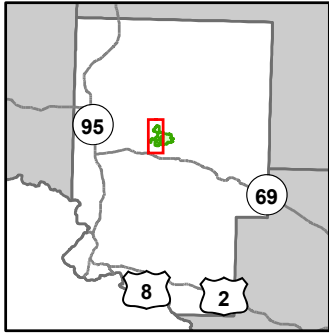


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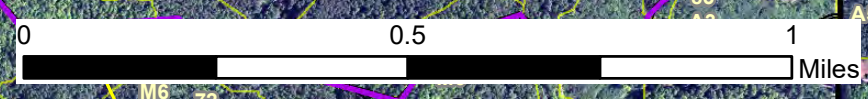
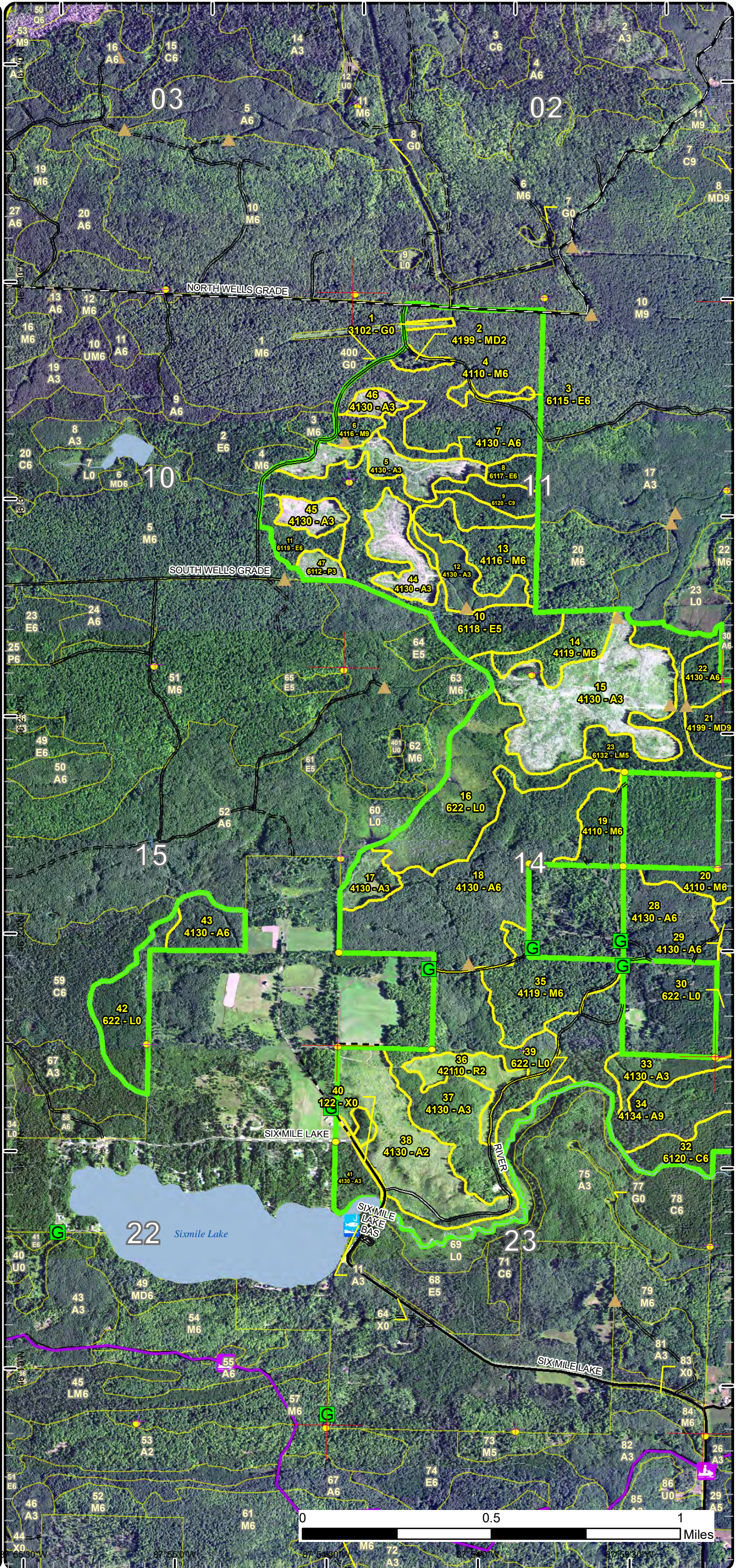


Stand Boundary Map

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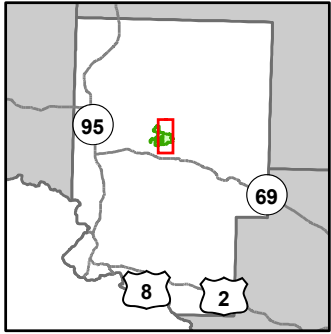


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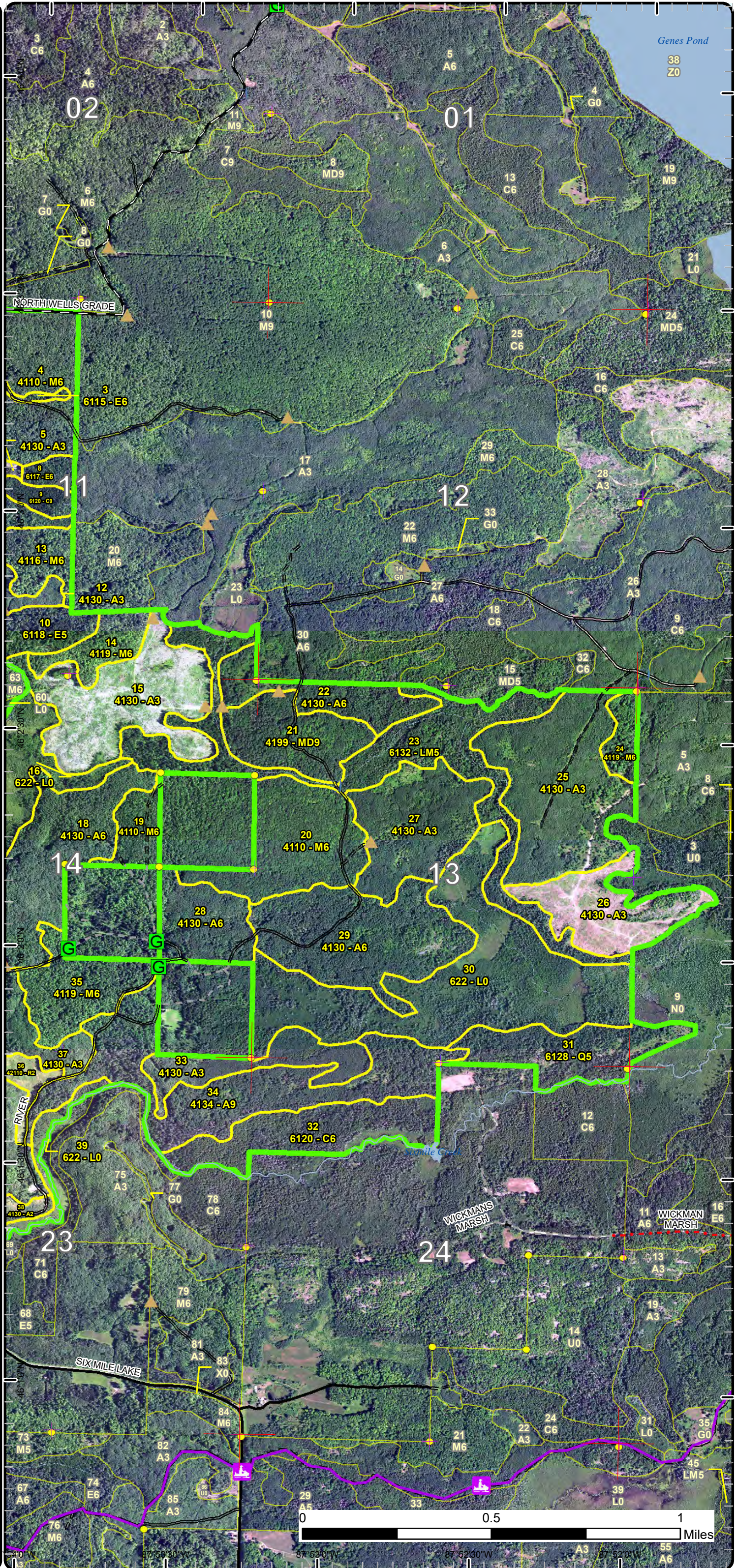


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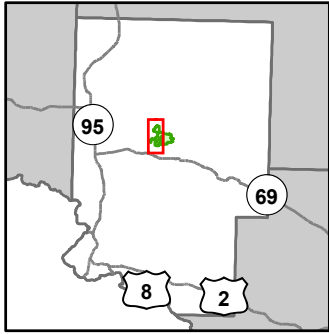


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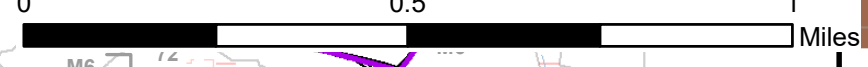
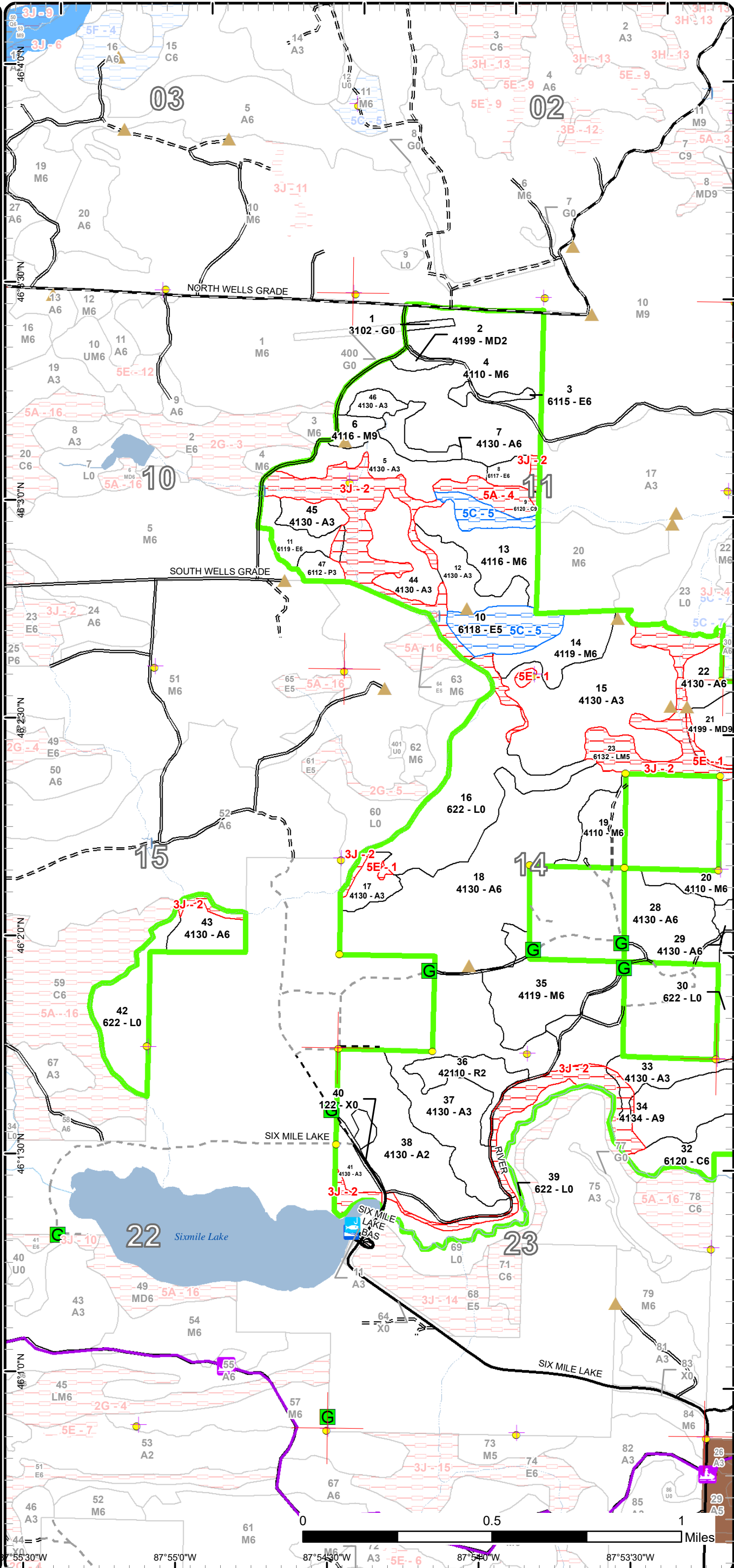


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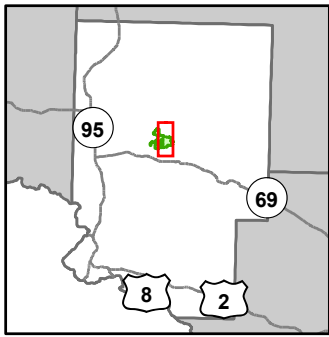
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- Compartment Boundary
- Available w/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable
- 3J: Water quality / BMPs (stream, river, or lake)
- 5A: Not able to obtain desirable regeneration
- 5E: Long-Term Retention
- Stand Boundaries
- SCA
- Cold Water Streams
- High Priority Trout Stream Buffer
- Wildlife Management Areas



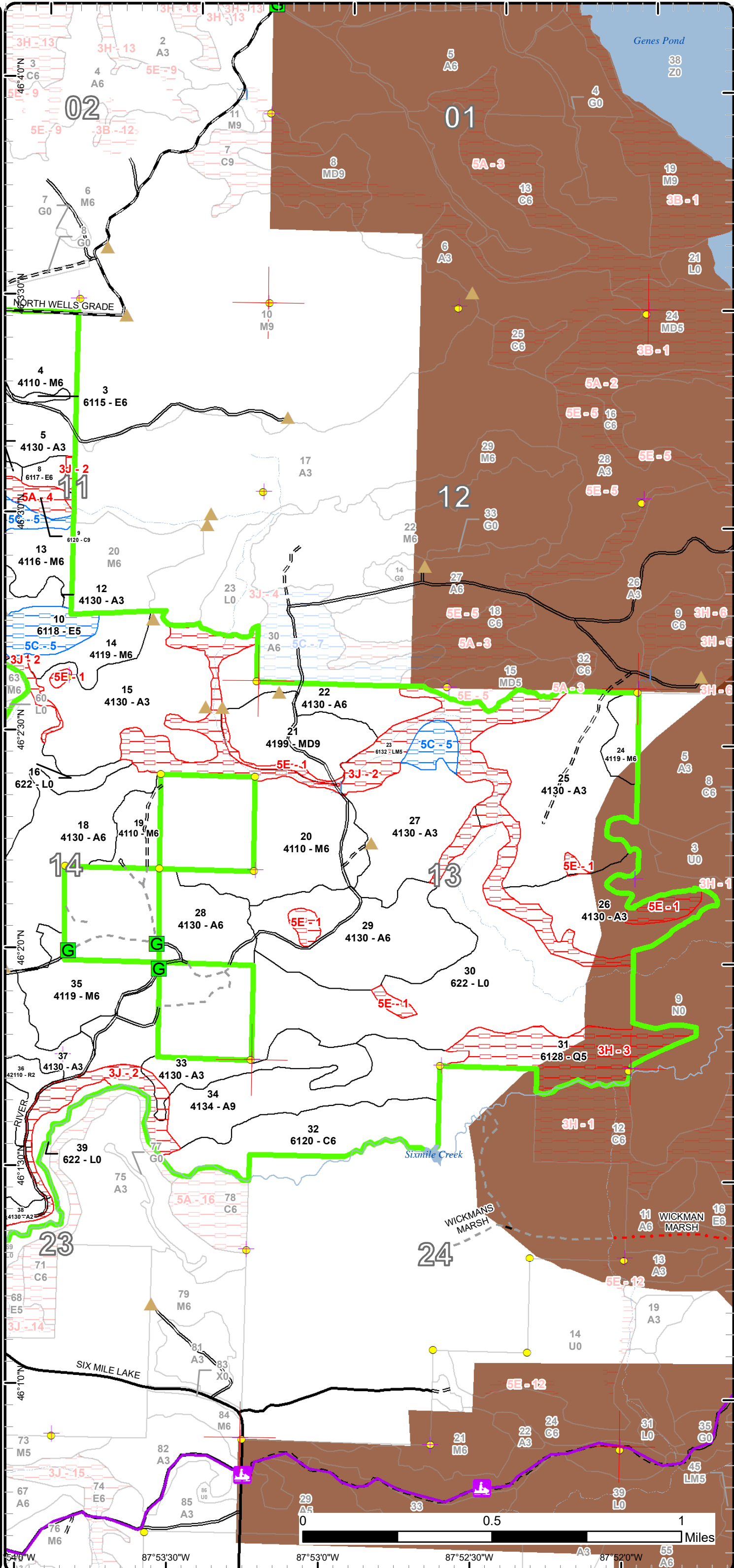
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- 5A: Not able to obtain desirable regeneration
- 5E: Long-Term Retention
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- Deer Winter Range
- Wildlife Management Areas



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	243	15	256	161	31	0	176	0	0	0	0	0	0	0	0	0	0	882
Cedar	0	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	60
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Aspen/Balsam Poplar	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	43
Lowland Deciduous	0	0	0	0	0	0	0	0	0	12	74	0	0	0	0	0	0	4	89
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	97	0	0	0	0	0	0	0	97
Lowland Shrub	246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
Mixed Upland Deciduous	0	0	0	4	0	0	0	0	40	0	0	0	0	0	0	0	0	0	44
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	172	0	0	0	0	0	0	89	261
Red Pine	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	250	263	15	260	161	31	0	176	40	12	446	0	0	0	0	0	0	93	1746



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2023

Acres of Harvest

Compartment 57
Total Compartment Acres: 1,743

Commercial Harvest - 297
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	153	0	0	0	0	0	0	0	0	153
Lowland Deciduous	19	0	0	0	0	0	0	0	0	19
Mixed Upland Deciduous	37	0	0	0	0	0	0	0	0	37
Northern Hardwood	0	0	0	0	0	89	0	0	0	89
Total	209	0	0	0	0	89	0	0	0	297

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	297	0	0	0	0	15	0	0	0	312
Next Step	0	0	0	0	0	0	223	0	0	223
Total	297	0	0	0	0	15	223	0	0	535



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
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Approved Treatments:

3	12057003-Cut	3.7	6115 - Lowland Ash	Poletimber Well	97	81-110	Harvest	Clearcut with Retention	611 - Lowland Deciduous Forest	Even-Aged	No
<p><u>Prescription</u> Final Harvest using 2" DBH spec. Leave Cedar, Hemlock, Pine, and Oak (if found). Also, leave conifers measuring 6" and less at stump height.</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> Black Ash, Maple, Mixed Hardwood, Mixed Conifers</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> 12/15/2021</p>											
4	12057004-Cut	88.7	4110 - Sugar Maple Association	Poletimber Well	94	111- 140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	No
<p><u>Prescription</u> Thin targeting 80 residual BA. Leave Cedar, Hemlock, Pine, and Oak (if found).</p> <p><u>Specs:</u></p> <p><u>Next Step</u></p> <p><u>Treatments:</u></p> <p><u>Acceptable</u></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> 12/15/2021</p>											
8	12057008-Cut	5.1	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	91	Unspec ified	Harvest	Clearcut with Retention	611 - Lowland Deciduous Forest	Even-Aged	No
<p><u>Prescription</u> Final Harvest using 2" DBH spec. Leave Cedar, Hemlock, Pine, and Oak (if found). Also, leave conifers measuring 6" and less at stump height. Buffer stream 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</u> Aspen, Mixed Hardwood, Mixed Conifers</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> 12/15/2021</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
11 12057011-Cut	10.0	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	89	81-110	Harvest	Clearcut with Retention	611 - Lowland Deciduous Forest	Even-Aged	No
<u>Prescription Specs:</u> Final Harvest using 2" DBH spec. Leave Cedar, Hemlock, Pine, and Oak (if found). Also, leave conifers measuring 6" and less at stump height. Buffer stream 100 feet.										
<u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)										
<u>Acceptable Regen:</u> Aspen, Mixed Hardwoods, Mixed Conifers										
<u>Other Comment:</u>										
<u>Site Condition</u>										
Proposed Start Date: 12/15/2021										
21 12057021-Cut	36.5	4199 - Other Mixed Upland Deciduous	Sawtimber Well	76	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<u>Prescription Specs:</u> Final Harvest using 4" DBH spec. Leave Cedar, Hemlock, Pine, and Oak (if found). Also, leave conifers measuring 6" and less at stump height. Also leave some Maple for additional diversity. Buffer stream 100 feet.										
<u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)										
<u>Acceptable Regen:</u> Aspen, Mixed Hardwood, Mixed Conifer										
<u>Other Comment:</u>										
<u>Site Condition</u>										
Proposed Start Date: 10/1 /2021										
29 12057029-Cut	75.0	4130 - Aspen	Poletimber Well	63	Unspecified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<u>Prescription Specs:</u> Final Harvest using 2" DBH spec. Leave Cedar, Hemlock, Pine, and Oak (if found). Also, leave conifers measuring 6" and less at stump height.										
<u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)										
<u>Acceptable Regen:</u> Aspen, Mixed Hardwood, Mixed Conifer										
<u>Other Comment:</u>										
<u>Site Condition</u>										
Proposed Start Date: 10/1 /2021										
34 12057034-Cut	78.4	4134 - Aspen, Spruce/Fir	Sawtimber Well	68	111-140	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
<u>Prescription Specs:</u> Final Harvest using 4" DBH spec. Leave Cedar, Hemlock, Pine, and Oak (if found). Also, leave conifers measuring 6" and less at stump height. Buffer stream 100 feet.										
<u>Next Step Treatments:</u> Monitoring, Natural Regen (Re-Inventory)										
<u>Acceptable Regen:</u> Aspen, Mixed Hardwood, Mixed Conifers										
<u>Other Comment:</u>										
<u>Site Condition</u>										
Proposed Start Date: 10/1 /2022										



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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
36 12057036-Spray	14.6	42110 - Planted Red Pine	Sapling Medium	4	Immature	Pesticide	ERROR	4211 - Planted Red Pine	Even-Aged	No
<p><u>Prescription</u> Herbicide to release planted Pine. <u>Specs:</u> <u>Next Step</u> Monitoring, Artificial Regen(3yr) <u>Treatments:</u> <u>Acceptable Regen:</u> <u>Other Comment:</u> <u>Site Condition</u> Proposed Start Date: 10/8 /2021</p>										

Total Treatment Acreage Proposed: 312

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
Andrew Church : Examiner

Compartment: 57
Year of Entry: 2023

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	Dominant Site Conditions				
		With Condition	Not Available		5C	3H	3J	5A	5E
882	823	0	58	Aspen			41		17
60	50	0	10	Cedar			1	9	
2	2	0	0	Herbaceous Openland					
5	5	0	0	Lowland Aspen/Balsam Poplar					
43	0	0	43	Lowland Conifers		43			
89	19	28	42	Lowland Deciduous	28		42	0	
97	0	9	88	Lowland Mixed Forest	9		88		0
245	245	0	0	Lowland Shrub			0		
44	40	0	3	Mixed Upland Deciduous			0		3
260	260	0	0	Northern Hardwood			0		
15	15	0	0	Red Pine					
2	2	0	0	Urban					
1,743	1,462	37	245	Total Forested Acres	37	43	172	9	21
	84%	2%	14%	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	5E: Long-Term Retention	21	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	172	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments: Stream within stand.							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit
Andrew Church : Examiner

Compartment: 57
Year of Entry: 2023

3	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	43	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Obligate winter deer range.							
4	Unavailable	5A: Not able to obtain desirable regeneration	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Cedar stand.							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	37	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Look at harvesting when entering adjacent stand.							

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



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	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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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1 3102 - Grass Nonstocked 1.6 0 Unspecified No

2 4199 - Other Mixed Upland Deciduous Sapling Medium 3.7 24 Immature N/A Trees reclaiming small opening.

Canopy Species	% Cover	Size Class	DBH	Age
Ironwood	15	Sapling	2	
Quaking Aspen	25	Sapling/Pole	3	24
Sugar Maple	5	Pole/Sapling	6	
Balsam Poplar	40	Sapling/Pole	4	24
White Spruce	5	Sapling/Pole	3	
Basswood	5	Sapling/Pole	4	
Black Cherry	5	Sapling/Pole	4	

3 6115 - Lowland Ash Poletimber Well 3.7 97 81-110 N/A

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	20	Pole/Log	9		Ironwood	Medium	Variable	Sapling
Basswood	10	Log/Pole	10					
Black Ash	70	Pole	7	97				

4 4110 - Sugar Maple Association Poletimber Well 88.7 94 111-140 N/A Thinned 2005.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	40	Log/Pole	10		Ironwood	Medium	Variable	Sapling
Yellow Birch	5	Log/Pole	10		Leatherwood	Low	< 5 feet	Tall Shrub
Basswood	50	Log/Pole	14	94				
Quaking Aspen	5	Log/Pole	12					

5 4130 - Aspen Sapling Well 22.6 5 Immature N/A Harvested 2016

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	70	Sapling	1	5	Quaking Aspen	Low	Variable	Sapling
Balsam Poplar	30	Sapling	1					

6 4116 - Mixed N. Hardwood - Aspen Sawtimber Well 5.8 93 81-110 N/A Thinned 2013.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	35	Log/Pole	12	93	Balsam Fir	Low	5 - 10 feet	Sapling
Red Maple	5	Pole	9					
Yellow Birch	5	Pole	9					
Basswood	30	Log/Pole	13					
Bigtooth Aspen	25	Log/Pole	14					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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7	4130 - Aspen	Poletimber Well	7.5	39	Unspecified	N/A	Harvested 1982.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	5	Pole/Sapling	5	
Paper Birch	5	Pole/Sapling	5	
Quaking Aspen	90	Pole/Sapling	5	39

Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	Medium	10 - 20 feet	Sapling

8	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Well	6.5	91	Unspecified	N/A	More Birch to West.
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Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	20	Pole/Sap/Log	9	
Balsam Fir	10	Pole/Sapling	6	
Northern White Cedar	10	Pole	7	
Black Ash	10	Pole/Sapling	5	
Quaking Aspen	25	Log/XLog	16	91
Black Spruce	5	Pole/Sapling	6	
Balsam Poplar	10	Pole/Log	8	
White Spruce	10	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Medium	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling
Black Spruce	Low	Variable	Sapling

9	6120 - Lowland Cedar	Sawtimber Well	9.8	95	Unspecified	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	15	Pole	7	
Balsam Fir	5	Pole/Sapling	4	
Northern White Cedar	70	Log/Pole	11	95
Black Ash	10	Pole	7	

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	Medium	5 - 10 feet	Tall Shrub

10	6118 - Lowland Deciduous with Cedar	Poletimber Medium	67.2	91	Unspecified	N/A	Stream through majority of stand. Very wet ground.
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Canopy Species	% Cover	Size Class	DBH	Age
Yellow Birch	5	Pole/Log	9	
Balsam Poplar	15	Log/Pole	12	
Northern White Cedar	20	Log/Pole	10	
Black Ash	50	Pole/Log	8	91
Quaking Aspen	5	Log	14	
Balsam Fir	5	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	High	5 - 10 feet	Sapling
Black Ash	High	5 - 10 feet	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
11	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	11.5	89	81-110	N/A	Trace amounts of Hemlock. Stream on East side of stand.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Sugar Maple		15	Pole/Log	8		Black Ash	
Red Maple		20	Pole/Log	8		Medium	
Basswood		10	Log/Pole	10		Variable	
Yellow Birch		10	Pole/Log	8		Sapling	
Black Ash		30	Pole/Sap/Log	8	89	5 - 10 feet	
Northern White Cedar		5	Log	14		Tall Shrub	
Balsam Fir		5	Pole/Sapling	6			
Balsam Poplar		5	Log	14			
12	4130 - Aspen	Sapling Well	15.4	15	Unspecified	N/A	Harvested 2005.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		95	Sapling	3	15	Bracken Fern	
Balsam Fir		5	Sapling	3		Medium	
						Unspecified	
						Non-Wood	
13	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	25.3	93	81-110	N/A	Thinned 2005.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Sugar Maple		35	Pole	8	93	White Spruce	
Red Maple		25	Pole	8		Low	
Paper Birch		20	Pole/Log	10		< 5 feet	
Quaking Aspen		20	Log	12		Sapling	
						Blackberry/Raspberry	
						Medium	
						< 5 feet	
						Tall Shrub	
14	4119 - Mixed Northern Hardwoods	Poletimber Well	18.5	94	81-110	N/A	Thinned 2015.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Sugar Maple		20	Pole	8		White Spruce	
Red Maple		40	Pole	9	94	Low	
Basswood		30	Log/Pole	10		< 5 feet	
Paper Birch		10	Pole	9		Sapling	
						Leatherwood	
						Medium	
						< 5 feet	
						Tall Shrub	
15	4130 - Aspen	Sapling Well	74.6	7	Immature	N/A	Wells Bermed TS cut 2014
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Red Maple		20	Sapling	2		Bracken Fern	
Quaking Aspen		80	Sapling	2	7	Medium	
						Unspecified	
						Non-Wood	
16	622 - Lowland Shrub	Nonstocked	57.9		Unspecified	No	
17	4130 - Aspen	Sapling Well	10.6	7	Immature	N/A	Harvested 2014.
Canopy Species		% Cover	Size Class	DBH	Age		
Quaking Aspen		100	Sapling	1	7		



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
18	4130 - Aspen	Poletimber Well	105.3	39	Unspecified	N/A	Harvested 1982.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		95	Pole/Sapling	6	39	Balsam Fir	
Balsam Fir		5	Pole/Sapling	5		Hazelnut (American)	
						Density	Avg. Height
						Low	Variable
						Medium	< 5 feet
							Size
							Sapling
							Tall Shrub
19	4110 - Sugar Maple Association	Poletimber Well	15.7	94	81-110	N/A	Thinned 2016.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Sugar Maple		40	Pole	8		Sugar Maple	
Yellow Birch		2	Pole	8		Leatherwood	
Basswood		45	Log/Pole	9	94		
Quaking Aspen		13	Log	14			
						Density	Avg. Height
						Low	10 - 20 feet
						Low	< 5 feet
							Size
							Sapling
							Tall Shrub
20	4110 - Sugar Maple Association	Poletimber Well	58.3	94	81-110	N/A	Thinned 2016.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Sugar Maple		40	Pole	9	94	Ironwood	
Basswood		45	Pole/Log	10	94	Leatherwood	
Quaking Aspen		10	Log	12			
Bigtooth Aspen		5	Log	14			
						Density	Avg. Height
						Low	10 - 20 feet
						Low	< 5 feet
							Size
							Sapling
							Tall Shrub
21	4199 - Other Mixed Upland Deciduous	Sawtimber Well	40.1	76	111-140	N/A	More Maple to East. Much of Spruce/Fir is dead. Aspen is in decline.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Red Maple		10	Pole/Log	9		Balsam Fir	
Paper Birch		5	Pole/Log	9		White Spruce	
Quaking Aspen		35	Log	14	76	Hazelnut (American)	
Balsam Fir		5	Pole	7			
White Spruce		5	Pole/Log	9			
Sugar Maple		20	Log/Pole	9			
Basswood		15	Log/Pole	10			
Ironwood		5	Pole/Sapling	5			
						Density	Avg. Height
						Low	Variable
						Low	Variable
						Low	< 5 feet
							Size
							Sapling
							Sapling
							Tall Shrub
22	4130 - Aspen	Poletimber Well	30.8	43	Unspecified	N/A	Less stocking to West.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		70	Pole	7	43	Red Maple	
Balsam Fir		15	Pole/Sapling	6		Balsam Fir	
Balsam Poplar		10	Pole	8		Hazelnut (American)	
Red Maple		5	Pole/Sapling	6			
						Density	Avg. Height
						Low	5 - 10 feet
						Medium	5 - 10 feet
						Medium	< 5 feet
							Size
							Sapling
							Sapling
							Tall Shrub



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments																																														
23	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	96.8	97	Unspecified	N/A	Black ash is fairly wide spread in this stand. Cedar is concentrated in west portion. Stream within stand.																																														
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24	4119 - Mixed Northern Hardwoods	Poletimber Well	10.9	94	81-110	N/A																																															
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27	4130 - Aspen	Sapling Well	56.6	22	Unspecified	N/A	Harvested 1999. Some trees starting to reach pole size.																																														
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Balsam Fir	2	Sapling/Pole	3																																																		
Sub-Canopy Species	Density	Avg. Height	Size																																																		
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Hazelnut (Spp.)	Medium	5 - 10 feet	Tall Shrub																																																		
28	4130 - Aspen	Poletimber Well	32.1	39	Unspecified	N/A																																															
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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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29 4130 - Aspen Poletimber Well 80.3 63 Unspecified N/A Much of Spruce/Fir is dead. Aspen is in decline.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	80	Pole	9	63	Red Maple	Low	5 - 10 feet	Sapling
Balsam Poplar	2	Pole	8		Balsam Fir	Medium	Variable	Sapling
Balsam Fir	3	Pole	7		White Spruce	Low	Variable	Sapling
White Spruce	5	Log/Pole	9		Hazelnut (American)	Medium	< 5 feet	Tall Shrub
Red Maple	10	Pole/Sapling	7					

30 622 - Lowland Shrub Nonstocked 142.9 Unspecified No

31 6128 - Lowland Coniferous, Mixed Deciduous Poletimber Medium 43.3 97 Unspecified N/A There is a rock knob in far east. 2 streams within stand.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	5	Pole/Log	9		Black Ash	Medium	Variable	Sapling
Balsam Poplar	10	Log	14		Tag Alder	Medium	< 5 feet	Tall Shrub
White Spruce	5	Pole	9					
Black Spruce	5	Pole	8					
Northern White Cedar	45	Pole/Log	9	97				
Tamarack	15	Pole	9					
Black Ash	10	Pole	8					
Balsam Fir	5	Pole/Sapling	5					

32 6120 - Lowland Cedar Poletimber Well 49.8 95 Unspecified N/A

Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	3	Pole	8	
Black Spruce	15	Pole	9	
Northern White Cedar	80	Pole/Log	10	95
Tamarack	2	Pole	8	

33 4130 - Aspen Sapling Well 30.4 24 Immature N/A Harvested 1997.

Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen	80	Sapling/Pole	4	24	Blackberry/Raspberry	Low	< 5 feet	Tall Shrub
Balsam Poplar	5	Sapling	3		Hazelnut (American)	Low	< 5 feet	Tall Shrub
Balsam Fir	8	Sapling/Pole	4					
White Spruce	5	Sapling	2					
Tamarack	2	Sapling	2					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
34	4134 - Aspen, Spruce/Fir	Sawtimber Well	95.5	68	111-140	N/A	Much of Spruce/Fir is dead. Aspen and Birch is in decline.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		55	Log/Pole	12	68	Balsam Fir	
Balsam Fir		10	Pole/Sapling	6		Medium	
White Spruce		10	Pole/Sap/Log	8		White Spruce	
White Pine		2	Log	18		Low	
Balsam Poplar		5	Log/Pole	10		Variable	
Red Maple		5	Pole/Log	8		Sapling	
Paper Birch		5	Pole	6		Sapling	
Sugar Maple		5	Pole/Log	8		Tall Shrub	
Hemlock		3	Log	12			
35	4119 - Mixed Northern Hardwoods	Poletimber Well	37.2	94	81-110	N/A	Thinned 2005.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Sugar Maple		40	Pole	8	94	Leatherwood	
Basswood		20	Pole/Log	9		Low	
Quaking Aspen		13	Log	12		< 5 feet	
White Pine		5	XLog	20		Tall Shrub	
Hemlock		2	Log/Pole	12			
Red Maple		20	Pole/Log	8			
36	42110 - Planted Red Pine	Sapling Medium	14.6	4	Immature	N/A	Planted 2017 with Red and White Pine.
Canopy Species		% Cover	Size Class	DBH	Age		
Red Pine		75	Sapling	1	4		
White Pine		25	Sapling	1			
37	4130 - Aspen	Sapling Well	66.0	24	Immature	N/A	Harvested 1997. Small Maple inclusion areas present.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		75	Sapling/Pole	4	24	Bracken Fern	
Balsam Fir		5	Sapling	3		Medium	
Sugar Maple		20	Pole/Sapling	6		Unspecified	
						Non-Wood	
						Sapling	
38	4130 - Aspen	Sapling Medium	57.0	5	Immature	N/A	Harvested 2016.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		90	Sapling	1	5	Bracken Fern	
White Spruce		10	Sapling	1		High	
						Unspecified	
						Non-Wood	
39	622 - Lowland Shrub	Nonstocked	16.2		Unspecified	No	
40	122 - Road/Parking Lot	Nonstocked	2.1		Unspecified	No	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments		
41	4130 - Aspen	Sapling Well	13.4	23	Unspecified	N/A	Harvested 1997.		
Canopy Species		% Cover	Size Class	DBH	Age				
Quaking Aspen		85	Sapling/Pole	4	23				
Balsam Fir		5	Sapling	4					
White Spruce		10	Pole	5					
42	622 - Lowland Shrub	Nonstocked	28.5		Unspecified	No	low density young tamarack		
43	4130 - Aspen	Poletimber Well	15.7	39	Unspecified	N/A			
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
American Elm		2	Pole/Sapling	5		Balsam Fir	Low	5 - 10 feet	Sapling
Quaking Aspen		93	Pole	6	39				
Balsam Fir		5	Pole/Sapling	6					
44	4130 - Aspen	Sapling Well	19.9	5	Immature	N/A	Harvested 2016		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen		70	Sapling	1	5	Quaking Aspen	Low	Variable	Sapling
Balsam Poplar		30	Sapling	1					
45	4130 - Aspen	Sapling Well	8.8	5	Immature	N/A	Harvested 2016		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen		70	Sapling	1	5	Quaking Aspen	Low	Variable	Sapling
Balsam Poplar		30	Sapling	1					
46	4130 - Aspen	Sapling Well	5.2	5	Immature	N/A	Harvested 2016		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen		70	Sapling	1	5	Quaking Aspen	Low	Variable	Sapling
Balsam Poplar		30	Sapling	1					
47	6112 - Lowland Aspen	Sapling Well	5.0	5	Immature	N/A	Harvested 2016		
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Quaking Aspen		70	Sapling	1	5	Quaking Aspen	Low	Variable	Sapling
Balsam Poplar		30	Sapling	1					