



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12039

Entry Year 2025

Acreage: 1,325

County Dickinson

Management Area: Ralph Moraine

Stand Examiner: Deb Goupell

Legal Description:

T43N R28W Sec 18-20, 30

Identified Planning Goals:

Over half of this compartment is upland; all of the aspen is under 50 years old. Management of all stands is to balance age class distribution and allow best suited species to grow on best suited sites while promoting sustainable timber production and enhancing and protecting wildlife habitat. Hardwood management goals are to put growth on the best trees in place by removing crown competition. Protect all bodies of water, especially the Ford River.

Soil and topography:

The uplands are gently rolling to flat with fine sands and fine sandy loam soils. The lowlands are flat, poorly drained and characterized by Carbondale & Cathro mucks.

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

Great Lakes Gas Transmission Pipeline crosses the south third of this compartment.

Unique Natural Features:

Ford River.

Archeological, Historical, and Cultural Features:

None in the compartment.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

The northern region of this compartment borders the Main Branch Ford River. The Main Branch Ford River is designated a Type 1 trout stream less than 50-foot width and has a predicted mean July temperature of 67.3°F (cool stream). A 300-foot buffer is recommended for the Main Branch Ford River in riparian areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, a 100 foot plus 5 feet per 1% increase in slope; buffer is recommended to protect these areas in accordance with Best Management Practices. Wood Turtle (State Threatened) have been documented to occur two sections downstream of the eastern region of this compartment.

Wildlife Habitat Considerations:

This compartment follows the south side of the Ford River and provide riparian habitat and movement corridor features for deer, bear, wolves, furbearers and waterfowl. This compartment winters deer and has both lowland conifer and cedar stands as well as hemlock, cedar, spruce, fir, jack pine, mixed pine mesic conifers to provide dense winter cover and transition zone cover to aid in dispersal through upland types to access forage. There is ample soft mast which contributes to this compartment's value as bear habitat. Overall this compartment is highly diverse, which in turn provides habitat for a wide spectrum of animals.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. Precambrian Archean granite/gneiss subcrops below the glacial drift. There is not a current economic use for these rocks, although they have building stone potential. A rock quarry (? type) lies three miles to the north. Iron mines are located approximately twelve miles to the south. Gravel pits are not indicated in this area, but there appears to be good gravel potential. Most of this area was previously leased for metallic exploration and State land to the northwest is currently leased. There is no economic oil and gas production in the UP.

Vehicle Access:

Two-track roads access most of this compartment, but is a roundabout access. Stands on the north are limited by private gate.

Survey Needs:

Needed in Sections 20 and 30.

Recreational Facilities and Opportunities:

The area is heavily used by loggers, hunters, fisherpeople, local camp owners, trappers, general recreationists. Gene's Pond State Forest Campground is located about a mile south of the compartment's south boundary.

Fire Protection:

Felch protection area. Access to any fire would be circuitous. Great Lakes Gas Transmission underground pipeline present.

Additional Compartment Information:

The following reports from the Inventory are attached:

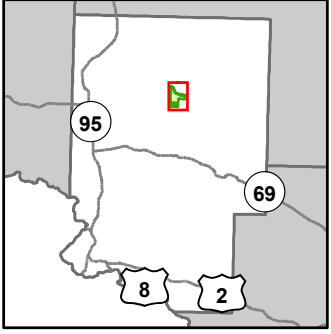
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

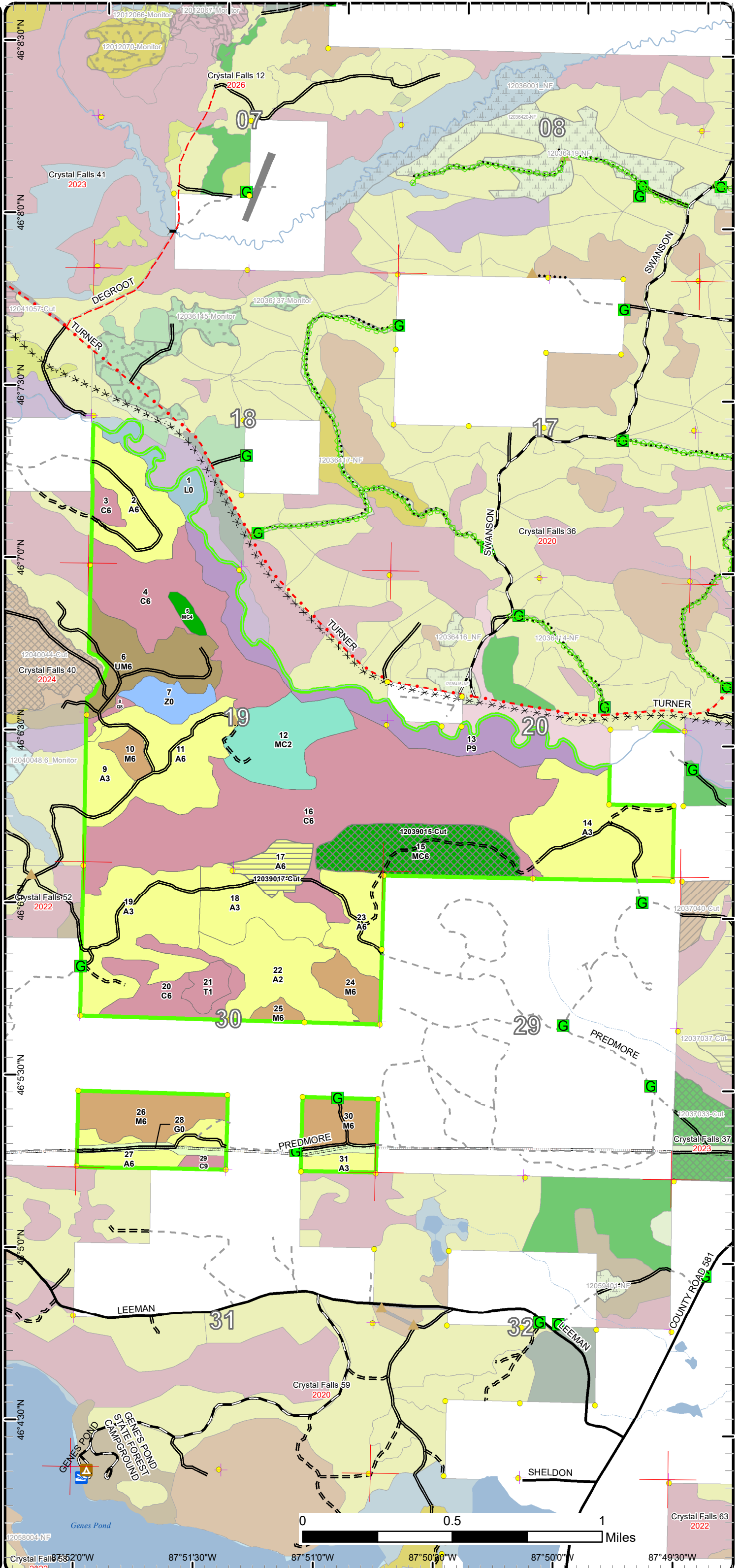
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 39
 T42N, R28W, Sec. 18-20, 30
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Ralph Moraine
 YOE: 2025
 Acres: 1324.5 GIS Calculated
 Examiner: Deb Goupell
 Map Revised: 8/1/2023
 Map Phase: Review

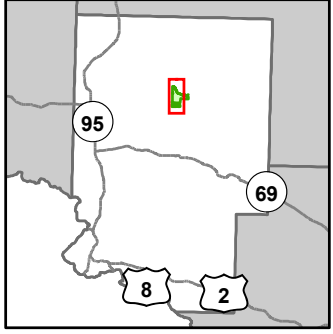


- Miris Corners
- Remonumented Section Corners
- Survey Grade Corners
- Counties
- DNR - Primary Forest Road
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State / County - Paved Road
- County - Gravel Road
- County - Dirt Road (Seasonal)
- Private - Dirt / Gravel Road
- DNR - Management Access
- Abandoned Railroads
- Designated Hunter Walking Trails
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers
- Berms
- Gate
- Pipeline
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 310 - Herbaceous Openland
- 621 - Floating Aquatic
- 622 - Lowland Shrub

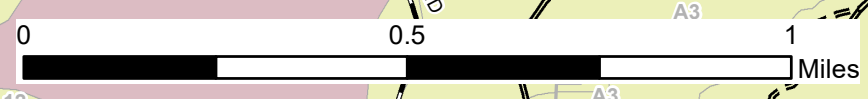
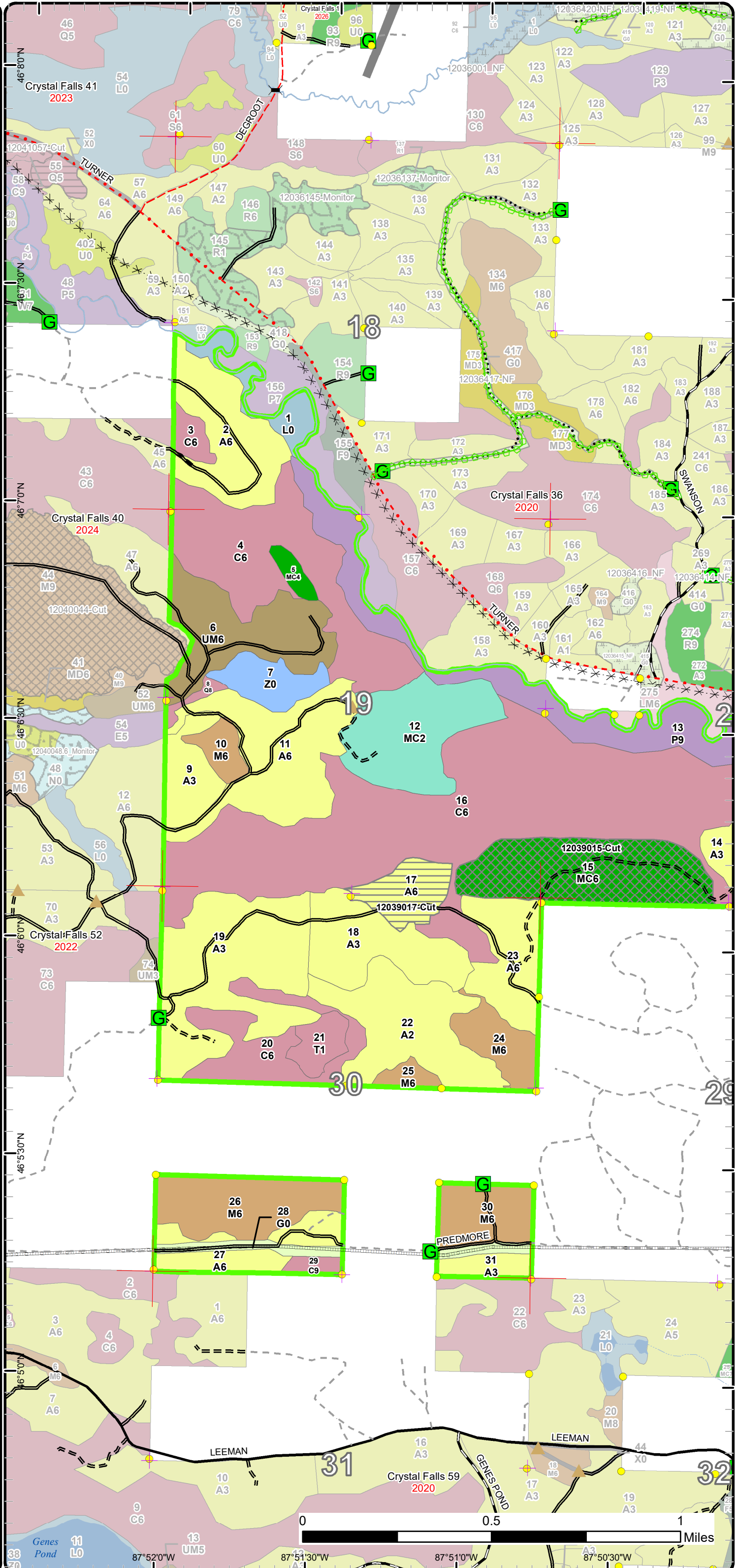


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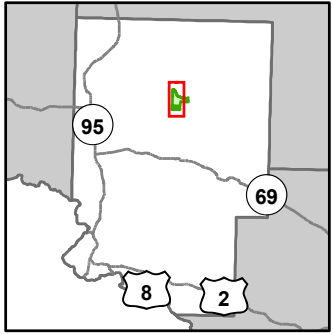
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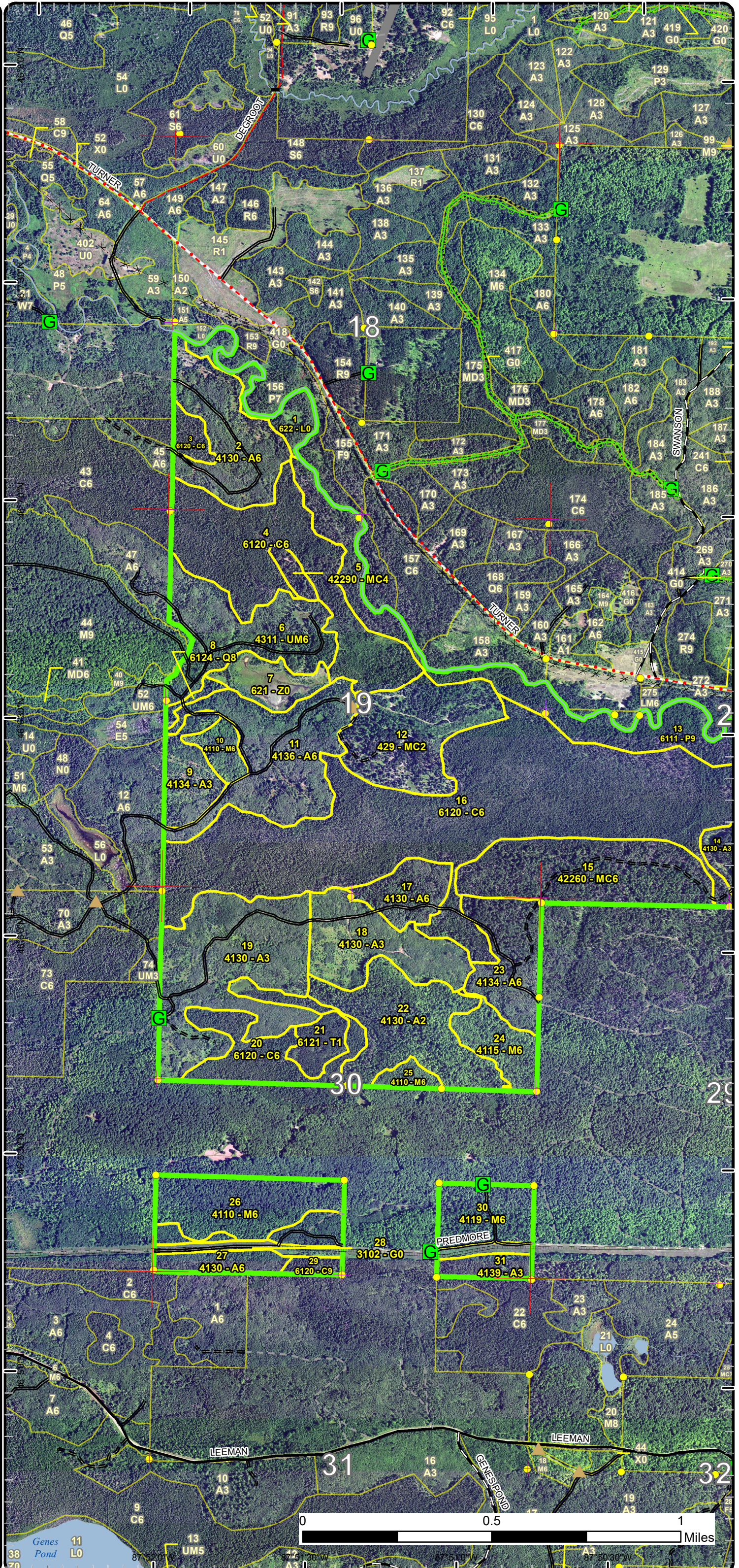
87°52'0"W 87°51'30"W 87°51'0"W 87°50'30"W

Stand Boundary Map

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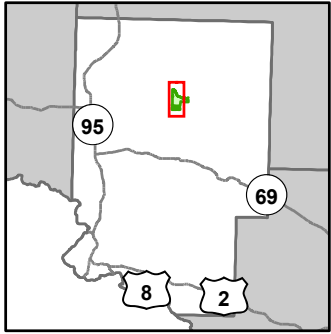


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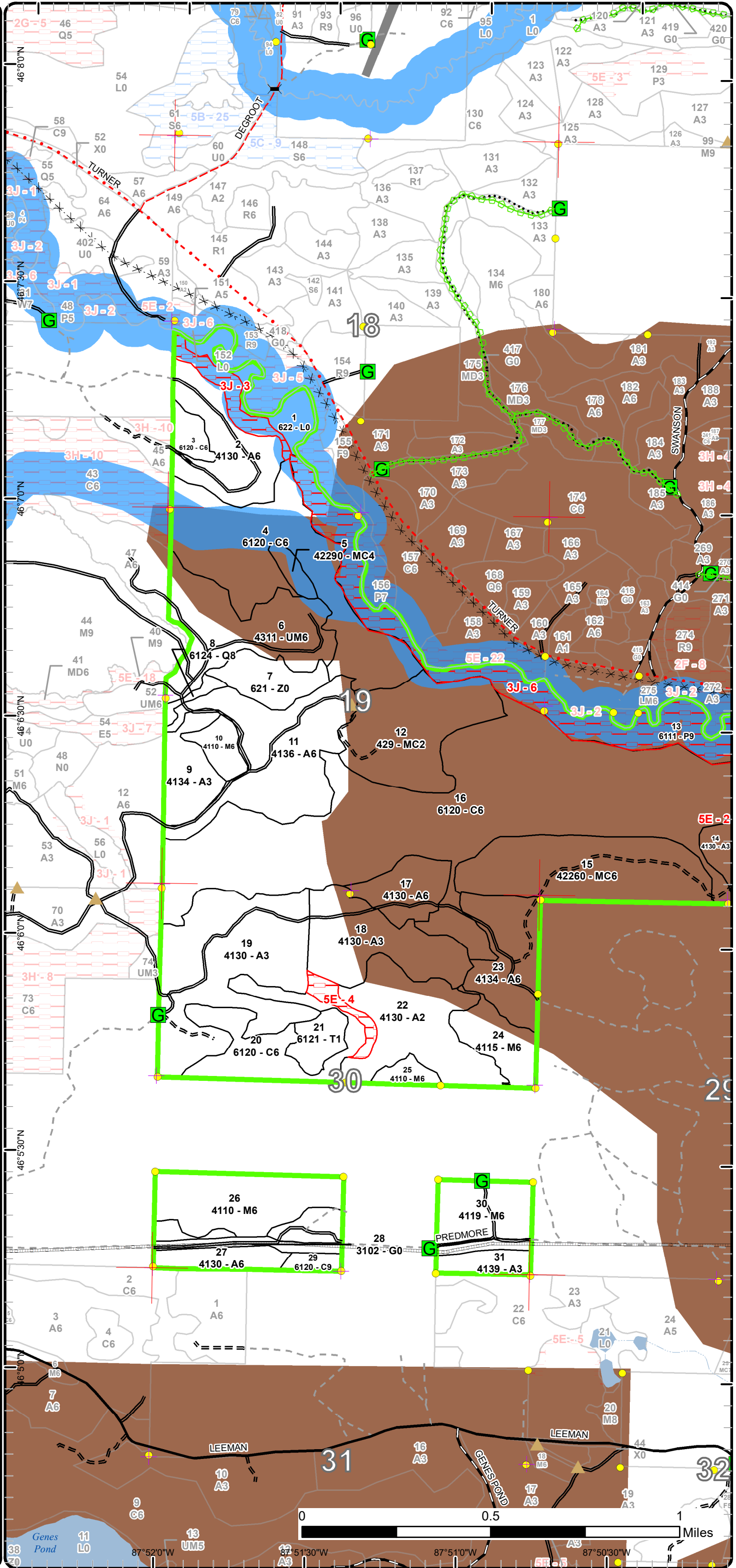


Special Conservation Areas

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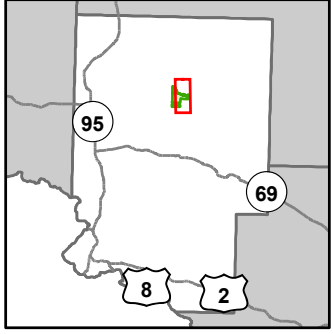


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- Cold Water Lakes
- High Priority Trout Stream Buffer
- Deer Winter Range
- Wildlife Management Areas

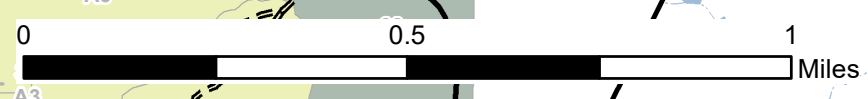
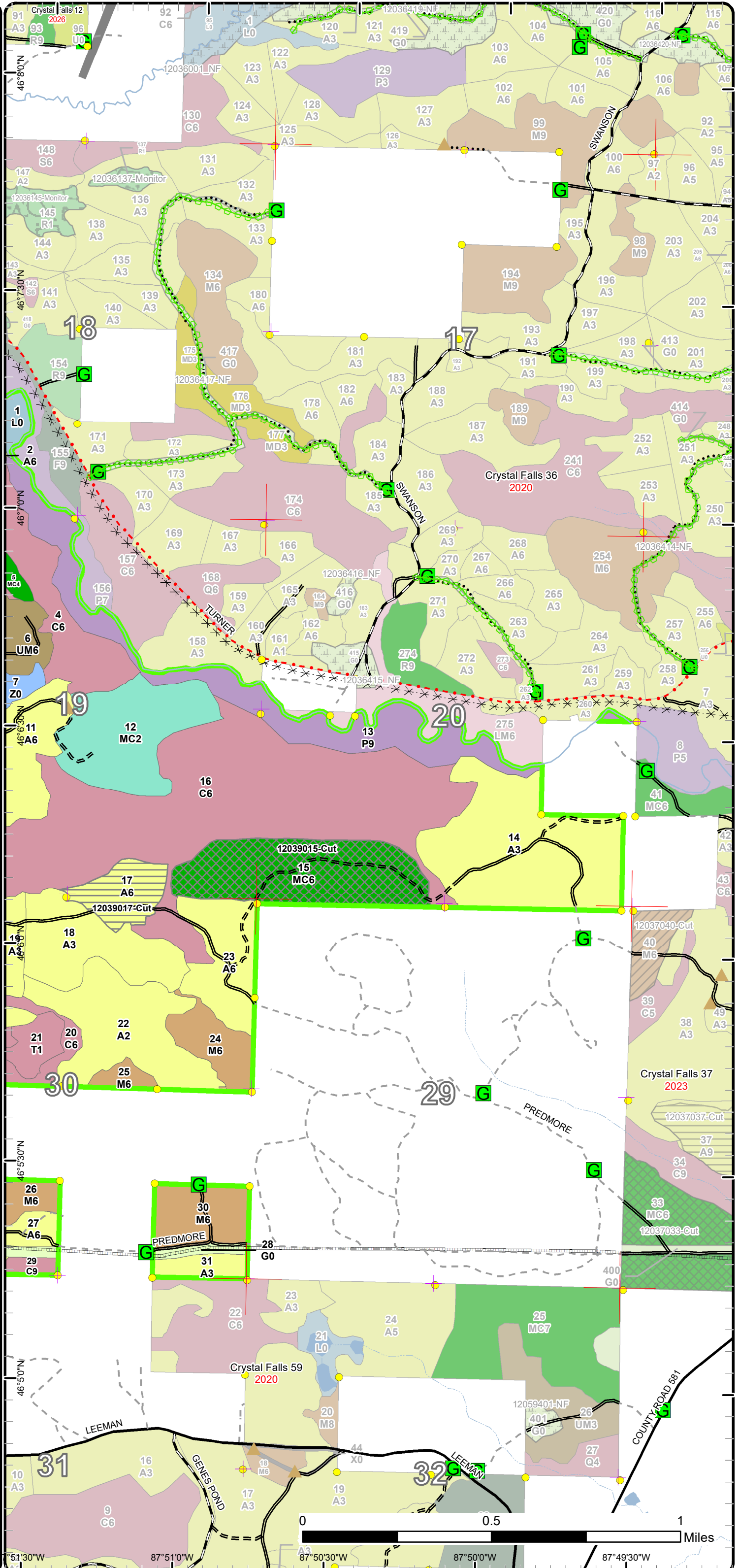


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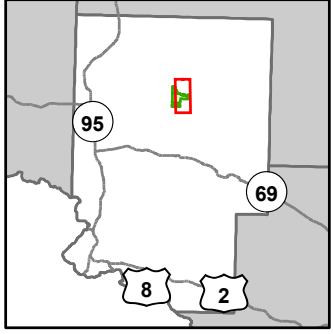
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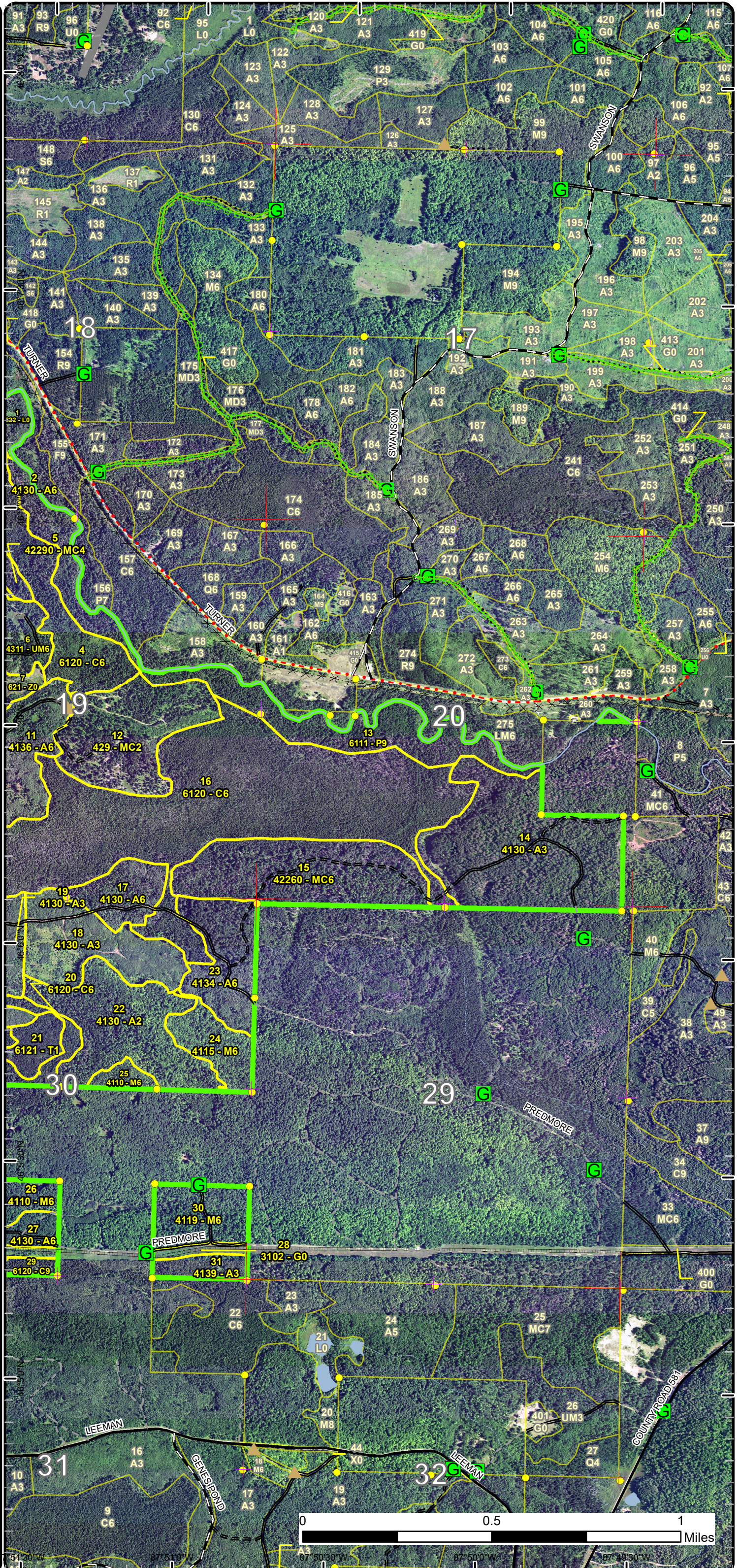
51°30'W 87°51'0"W 87°50'30"W 87°50'0"W 87°49'30"W

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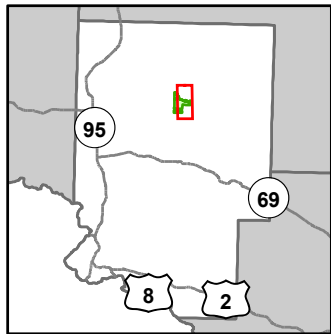


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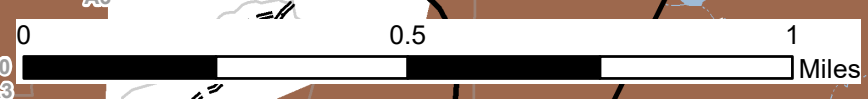
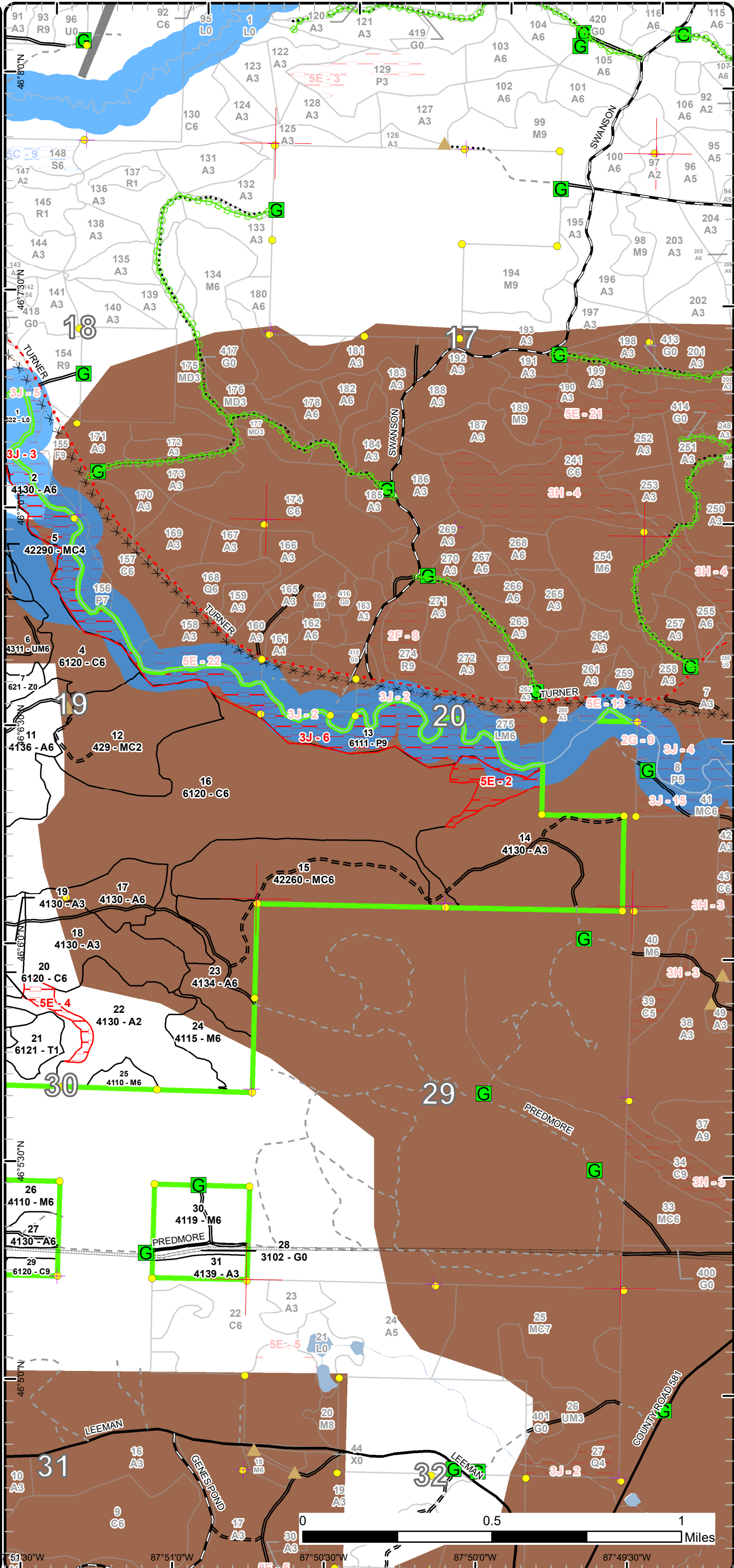


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- Deer Winter Range
- Wildlife Management Areas



46°53'0"N 87°51'0"W 87°50'30"W 87°50'0"W 87°49'30"W
 46°51'30"N 46°50'0"N 46°48'30"N

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+	Unseen-Aged	Total
Aspen	0	155	45	158	135	0	20	0	0	0	0	0	0	0	0	0	0	0	512
Cedar	0	0	0	0	0	0	0	0	0	0	7	381	5	0	0	0	0	0	392
Herbaceous Openland	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	0	0	0	74	0	0	0	0	0	0	0	74
Lowland Conifers	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
Lowland Shrub	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Natural Mixed Pines	0	0	0	0	0	0	0	0	5	0	67	0	0	0	0	0	0	0	72
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	26	78	0	0	0	0	0	0	104
Tamarack	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Upland Conifers	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
Upland Mixed Forest	0	0	0	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	53
Water	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	47	167	101	158	188	0	20	0	8	0	174	459	5	0	0	0	0	0	1325



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2025

Acres of Harvest

Compartment 39
Total Compartment Acres: 1,325

Commercial Harvest - 87
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	Overshory Removal	Salvage	Other	Total Acres
Aspen	20	0	0	0	0	0	0	0	0	20
Natural Mixed Pines	0	67	0	0	0	0	0	0	0	67
Total	20	67	0	0	0	0	0	0	0	87

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	87	0	0	0	0	0	0	0	0	87
Next Step	0	67	0	0	0	0	87	0	0	154
Total	87	67	0	0	0	0	87	0	0	241



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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Proposed Treatments:

15	12039015-Cut	67.0	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	95	1-50	Harvest	Group Selection	429 - Mixed Upland Conifers	Two-Aged	No
<p><u>Prescription</u> Removing all species except pine, summer harvest. Try to scarify post harvest for best results. <u>Specs:</u> <u>Next Step</u> SitePrep, Scarification; Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> mixed pine, mixed conifer, mixed hardwood, aspen <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2024</p>											
17	12039017-Cut	20.2	4130 - Aspen	Poletimber Well	52	Unspecified	Harvest	Clearcut	413 - Aspen	Even-Aged	No
<p><u>Prescription</u> Final harvest all stems, no retention other than red or white pine, cedar if found. <u>Specs:</u> <u>Next Step</u> Monitoring, Natural Regen (Re-Inventory) <u>Treatments:</u> <u>Acceptable</u> mixed hardwood, mixed conifer or pine <u>Regen:</u> <u>Other</u> <u>Comment:</u> <u>Site Condition</u> <u>Proposed Start Date:</u> 10/1 /2024</p>											

Total Treatment 87.2
Acreage Proposed:

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 39

Year of Entry: 2025

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	3J	5E
		With Condition	Not Available			
512	482	0	30	Aspen	11	18
393	392	0	1	Cedar	1	
13	13	0	0	Herbaceous Openland		
74	2	0	72	Lowland Aspen/Balsam Poplar	72	
3	3	0	0	Lowland Conifers		
16	16	0	0	Lowland Shrub		
72	72	0	0	Natural Mixed Pines		
104	104	0	0	Northern Hardwood		
11	11	0	0	Tamarack		
56	56	0	0	Upland Conifers	0	
53	53	0	0	Upland Mixed Forest		
18	18	0	0	Water		
1,325	1,222		102	Total Forested Acres	84	18
	92%		8%	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
2	Unavailable	5E: Long-Term Retention	12	3J: Water quality / BMPs (stream, river, or lake)	2F: Too steep	Unspecified	Unspecified
Comments:							
3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 39

Year of Entry: 2025

6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	73	Unspecified	Unspecified	Unspecified	Unspecified
Comments: along Ford River							

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.
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																																																											
1	622 - Lowland Shrub	Nonstocked	15.7		Unspecified	No																																																												
2	4130 - Aspen	Poletimber Well	48.5	22	Unspecified	N/A	Wooden Fence TS, cut 1990. Along Q types has less regeneration but tamarack, WS, BF are filling in. The north sliver of this stand is filling in with balsam, white spruce 1-7" dbh with some red pine and cherry saplings.																																																											
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3	6120 - Lowland Cedar	Poletimber Well	7.3	94	Unspecified	N/A	thinning pocket of cedar/spruce in northeast.																																																											
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4	6120 - Lowland Cedar	Poletimber Well	88.8	105	Unspecified	N/A	Thinning crowns in center of stand																																																											
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5	42290 - Natural Mixed Pine	Poletimber Poor	5.2	71	51-80	N/A	Balsam fir understory is 1-4" dbh and black spruce is 1-3" dbh. This is a rock upwelling in swamp. Most of the aspen is gone (fallen out) however the stand has some black spruce/fir regeneration; few white spruce. SBW has decimated the understory here.																																																											
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6	4311 - Pine, Aspen Mix	Poletimber Well	53.4	33	Unspecified	N/A	Tucker TS, 1989. Far east is loaded with jack pine seedlings and red pine, especially along road and old opening, 2-5" dbh. Some 3" jack pine have cones. Far west sliver along hardwood was cut in 1999, but too small to map separately and same cover type.																																																											
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7	621 - Floating Aquatic	Nonstocked	18.1		Unspecified	No																																																												



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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8	6124 - Lowland Spruce-Fir	Sawtimber Medium	3.3	78	Unspecified	N/A	This stand has a bed and bank and was obviously left as a buffer to the drainage in the adjacent timber sales.
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	25	Pole/Log	10		Paper Birch	Low	< 5 feet	Sapling
White Spruce	25	Log	12	78	Tag Alder	Low	< 5 feet	Tall Shrub
Northern White Cedar	5	Log	10					
Tamarack	10	Pole	8					
Red Maple	10	Pole	9					
Balsam Poplar	10	Log	14					
Quaking Aspen	15	Log	12					

9	4134 - Aspen, Spruce/Fir	Sapling Well	20.9	23	Immature	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	5	Sapling	1	
Quaking Aspen	50	Sapling	4	23
Balsam Fir	10	Sapling	4	
White Spruce	25	Pole/Sapling	5	23
Red Maple	10	Sapling	2	

10	4110 - Sugar Maple Association	Poletimber Well	9.7	100	81-110	N/A	Thinned with adjacent compartment in 2017 Darter Mix TS (12-067-14)
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Paper Birch	10	Pole	10		Sugar Maple	Low	5 - 10 feet	Sapling
Red Maple	5	Pole	9		White Spruce	Low	5 - 10 feet	Sapling
Yellow Birch	5	Log/Pole	12		Ironwood	Low	Variable	Sapling
Sugar Maple	60	Pole	10	100				
Basswood	20	Pole	10					

11	4136 - Aspen, Mixed Conifer	Poletimber Well	65.6	34	Immature	N/A	
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Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size
Red Maple	12	Sapling	3		Balsam Fir	Medium	Variable	Seeding
Quaking Aspen	62	Pole/Sapling	5	34	White Spruce	Low	Variable	Seeding
Balsam Fir	3	Pole	5		White Pine	Low	Variable	Seeding
White Spruce	5	Sapling	3		Red Pine	Low	Variable	Sapling
Black Cherry	3	Sapling	4		Jack Pine	Low	Variable	Seeding
Red Pine	5	Log/Pole	12					
Jack Pine	10	Sapling	4					



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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12	429 - Mixed Upland Conifers	Sapling Medium	55.9	15	Unspecified	N/A	Lycopodium Aspen TS cut 2007. Great mortality from SBW and yet there is still some live canopy and submerchantable WS/BF. Stocking is still not full. Mixed deciduous? Mixed conifer?
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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	25	Sapling	2	
Balsam Fir	15	Pole/Sapling	5	
White Pine	15	XLog/Log	18	
Red Pine	10	Log	16	
Red Maple	10	Sapling	2	
White Spruce	25	Pole	8	15

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	Variable	Sapling
White Pine	Low	Variable	Sapling
White Spruce	High	Variable	Sapling

13	6111 - Lowland Balsam Poplar	Sawtimber Well	73.5	96	Unspecified	N/A	within 300 ft Ford River. Stand is breaking up
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Canopy Species	% Cover	Size Class	DBH	Age
Balsam Poplar	60	Log	14	96
White Spruce	10	Pole	10	
Northern White Cedar	5	Pole	10	
Tamarack	10	Pole	10	
White Pine	5	Log/Pole	11	
Black Ash	5	Pole	6	
Red Maple	5	Log/Pole	12	

Sub-Canopy Species	Density	Avg. Height	Size
Black Ash	Low	10 - 20 feet	Sapling
Tag Alder	High	< 5 feet	Tall Shrub
Balsam Poplar	Low	10 - 20 feet	Sapling

14	4130 - Aspen	Sapling Well	95.7	6	Immature	N/A	Sale harvested 2018 Yellowstone Zoo. Residual pine experienced windthrow damage post harvest, East half of stand was more mixed deciduous and is coming in as such: good red maple stump sprouting, some sugar maple saplings, pockets of aspen. West half of stand regenerating more fully aspen.
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Canopy Species	% Cover	Size Class	DBH	Age
Red Maple	25	Sapling	1	
Quaking Aspen	70	Sapling	1	6
Red Pine	5	Log	12	

15	42260 - Natural Pine, Mixed Deciduous	Poletimber Well	67.0	95	1-50	N/A	Most of this stand has scattered large pine overstory and heavy understory (not much volume, doghair thick). Nice pine country but little to no pine recruitment (saplings or poles) except along road. Good mesic conifer stand. Some upland black spruce north of trail. Drainage with bed/bank runs north-south but fans out as it goes north to swamp (no bed/bank), Located just east of SW section corner of 20. 12/2022: 95% of conifer in here is dead. While aspen and birch is still small, it is merchantable; this stand should be cleaned up. Stand should also be scaled as volume will be very minimal.
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Canopy Species	% Cover	Size Class	DBH	Age
Paper Birch	10	Pole	9	
Quaking Aspen	10	Pole	8	
White Pine	50	XLog	20	95
Red Maple	10	Pole	9	
Red Pine	20	Log	14	

Sub-Canopy Species	Density	Avg. Height	Size
Hazelnut (American)	Low	< 5 feet	Tall Shrub
Balsam Fir	Low	Variable	Sapling
White Spruce	Low	Variable	Sapling
Red Pine	Low	Variable	Sapling

16	6120 - Lowland Cedar	Poletimber Well	255.6	105	Unspecified	N/A	Thinning in the center of this stand
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Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	10	Pole	8	
Balsam Fir	5	Pole	7	
Tamarack	15	Pole	9	
Northern White Cedar	70	Pole	8	105

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	5 - 10 feet	Sapling
Tag Alder	Medium	5 - 10 feet	Tall Shrub
Black Spruce	Low	Variable	Sapling
Paper Birch	Medium	Variable	Sapling



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
17	4130 - Aspen	Poletimber Well	20.2	52	Unspecified	N/A	Very little conifer alive due to SBW
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Quaking Aspen		90	Pole	9	52	Red Maple	
Balsam Fir		2	Pole	7		High	
White Spruce		8	Pole	9		Variable	
						Sapling	
18	4130 - Aspen	Sapling Well	44.5	15	Unspecified	N/A	Lycopodium Aspen TS, closed 2007
Canopy Species		% Cover	Size Class	DBH	Age		
Red Maple		10	Sapling	1			
Quaking Aspen		90	Sapling	2	15		
19	4130 - Aspen	Sapling Well	88.7	23	Unspecified	N/A	Blomquist Junction TS, 1999. Traces of red and white pine super canopy trees.
Canopy Species		% Cover	Size Class	DBH	Age		
Quaking Aspen		70	Sapling	4	23		
Balsam Poplar		10	Sapling	4			
Red Maple		20	Sapling	3			
20	6120 - Lowland Cedar	Poletimber Well	36.5	100	Unspecified	N/A	
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Northern White Cedar		90	Pole	10	100	Balsam Fir	
Black Spruce		5	Pole	7		High	
Tamarack		5	Pole	7		Variable	
						Sapling	
						Tag Alder	
						High	
						< 5 feet	
						Tall Shrub	
21	6121 - Tamarack	Sapling Poor	11.5	5	Immature	N/A	Stand cut spring 2018, Yellowstone Zoo TS.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Tamarack		75	Sapling	1	5	Tag Alder	
Balsam Poplar		25	Sapling	1		High	
						5 - 10 feet	
						Tall Shrub	
22	4130 - Aspen	Sapling Medium	58.8	6	Immature	N/A	Cut summer 2017 Yellowstone Zoo TS. Still some porrer regenerating pockets, mostly in southeast.
Canopy Species		% Cover	Size Class	DBH	Age		
Red Maple		30	Sapling	1			
Quaking Aspen		60	Sapling	1	6		
White Pine		10	Log	16			
23	4134 - Aspen, Spruce/Fir	Poletimber Well	34.4	34	Unspecified	N/A	Knotty Pine TS, closed 1987. Aspen heavier on south half . Much mortality of conifer saplings and poles but there is some flushing of new trees.
Canopy Species		% Cover	Size Class	DBH	Age	Sub-Canopy Species	
Red Pine		10	Log/XLog	16		Red Pine	
Red Maple		20	Sapling	2		High	
Quaking Aspen		50	Pole/Sapling	5	34	Variable	
Balsam Fir		20	Sapling	4	34	Sapling	
						White Spruce	
						Medium	
						Variable	
						Sapling	
						Hazelnut (American)	
						High	
						< 5 feet	
						Tall Shrub	



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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24	4115 - Y.Birch, Hemlock NH	Poletimber Well	19.9	99	81-110	N/A	Thinned in 2017 with Yellowstone Zoo.
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Canopy Species	% Cover	Size Class	DBH	Age
Hemlock	15	Log/Pole	14	
Basswood	25	Log/Pole	11	
Red Maple	10	Pole	9	
Yellow Birch	5	Log/Pole	11	
Sugar Maple	45	Pole	9	99

Sub-Canopy Species	Density	Avg. Height	Size
Sugar Maple	Low	>20 feet	Sapling
White Spruce	Medium	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling

25	4110 - Sugar Maple Association	Poletimber Well	5.8	99	81-110	N/A	Stand thinned in 2017 Yellowstone Zoo TS. Current BA is 80
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Canopy Species	% Cover	Size Class	DBH	Age
Sugar Maple	85	Pole	8	99
Hemlock	2	Pole	10	
Basswood	13	Pole	10	

26	4110 - Sugar Maple Association	Poletimber Well	42.7	100	81-110	N/A	Petroleum Hwd cut 2009. Rocky ledge on north runs east/west. Most of white birch is dead. A lot of grass on the ground, not sedge. 9 points = 105.5 BA
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Canopy Species	% Cover	Size Class	DBH	Age
Yellow Birch	5	Log/Pole	11	
Basswood	35	Pole	10	
Sugar Maple	55	Pole	10	100
Northern White Cedar	5	Pole	10	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	Low	Variable	Sapling
White Spruce	Low	Variable	Sapling
Balsam Fir	Low	Variable	Sapling

27	4130 - Aspen	Poletimber Well	25.3	36	Unspecified	N/A	Pipeline Bluebird closed 1987. Most of balm of gilead is south of pipeline.
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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	85	Pole	7	36
Red Maple	5	Pole	9	
Balsam Poplar	10	Pole/Sapling	5	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	Medium	Variable	Sapling
Red Maple	Medium	Variable	Sapling
Hazelnut (Spp.)	High	5 - 10 feet	Tall Shrub

28	3102 - Grass	Nonstocked	12.7		Unspecified		
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29	6120 - Lowland Cedar	Sawtimber Well	4.5	112	Unspecified	N/A	Most of species other than cedar is on edge of stand.
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Canopy Species	% Cover	Size Class	DBH	Age
Black Spruce	2	Pole	10	
Northern White Cedar	93	Log/Pole	12	112
Tamarack	3	Pole	10	
Balsam Poplar	2	Log	12	

Sub-Canopy Species	Density	Avg. Height	Size
Balsam Fir	High	Variable	Sapling
Tag Alder	High	< 5 feet	Tall Shrub



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Site	General Comments
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30	4119 - Mixed Northern Hardwoods	Poletimber Well	25.5	100	81-110	N/A	Petroleum Hwd closed 2009. Not high quality hardwood; this may be a stand to try what Keweenaw Land did just east of this stand: leave oak, pine, and decent sugar maple (shelterwood). Watch how KLAs 40 regenerates.
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Canopy Species	% Cover	Size Class	DBH	Age
Quaking Aspen	5	Log/Pole	12	
Sugar Maple	35	Pole	9	100
Red Maple	10	Pole	9	
Paper Birch	5	Log/Pole	12	
Yellow Birch	5	Log/Pole	10	
Basswood	20	Log	13	
White Pine	5	XLog	18	
Red Oak	15	XLog	18	

Sub-Canopy Species	Density	Avg. Height	Size
Ironwood	High	10 - 20 feet	Sapling
White Pine	Medium	< 5 feet	Seeding
White Spruce	Low	Variable	Sapling
Balsam Fir	Medium	Variable	Sapling

31	4139 - Aspen, Mixed Deciduous	Sapling Well	9.6	36	Unspecified	N/A	Pipeline Bluebird closed 1987. Wetter than other units of this sale.(stand 27)
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Canopy Species	% Cover	Size Class	DBH	Age
White Spruce	5	Pole/Sapling	5	
Balsam Fir	10	Pole/Sapling	5	
Balsam Poplar	30	Sapling	4	
Quaking Aspen	45	Pole/Sapling	6	36
Red Maple	10	Pole/Sapling	6	

Sub-Canopy Species	Density	Avg. Height	Size
Tag Alder	High	< 5 feet	Tall Shrub