



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12167

Entry Year 2020

Acreage: 563

County Iron

Management Area: Panola Plains

Revision Date: 2018-08-17

Stand Examiner: Scott Sebero

Legal Description:

T 42N-R31W Sections 10 and 15

Identified Planning Goals:

Develop age class distribution in aspen type. Develop the quality while maintaining diversity in hardwood types. Maintain health of conifer types and increase acreage where possible. Develop buffers on streams. Maintain and improve road system.

Soil and topography:

Karlin soils with inclusions of Petticoat and Sagola. Karlin soils are very deep, excessively drained to moderately well drained soils on outwash plains, stream terraces, ground moraines, and end moraines. These soils formed in loamy and sandy glacial till and outwash deposits. Slopes range from 0 to 35 percent.

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

State lands mixed with blocks company lands and small private parcels. Lands used mainly for hunting and fishing.

Unique Natural Features:

Erickson Lake, Michigamme River, Camp 5 Creek and Camp 6 Creek.

Archeological, Historical, and Cultural Features:

None

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

Camp Six Creek, Camp Five Creek and Erickson Lake are located within this compartment. Camp Six Creek and Camp Five Creek are both Type 1 Trout Streams and should have a 300' buffer for those areas susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, a 100' plus 5' per 1% increase in slope is recommended. Erickson Lake should have a 100' buffer plus 5' per 1% increase in slope.

Wildlife Habitat Considerations:

This compartment contains part of a DWC (deer wintering complex) that provides shelter and forage for deer in south Iron County. Featured species in this Management Area (Panola Plains MA) include; eastern bluebird, bear, grouse, woodcock and Kirtland warbler. Moose, eagles, turkeys, sandhill cranes and wolves all have been documented in this compartment. Management for deer, including transition zones, movement corridors, lowland conifer stands for winter thermal cover and conifer component throughout the forage stands is critical in this compartment. Aspen age and stand size diversity are important management goals for deer, bear, grouse, woodcock.. The mature mixed pine component provides both winter cover for deer, and provides ideal habitat for black bears especially as refuge trees for cub rearing. In addition the white pine component also makes this area particularly important for eagles. Mature forest condition in the riparian habitat is important for nesting wood ducks. This compartment also includes a series of intensely managed aspen stands of various age classes to provide grouse habitat.

Mineral Resource and Development Concerns and/or Restrictions

An active sand/gravel pit is located roughly two miles to the northeast (operated by Payne & Dolan), and there may be sand & gravel potential within the compartment in places where bedrock is not at or near the surface. There is relatively little information on the surficial geology within the compartment. Abandoned iron mines are located five miles to the northwest. Crystal Exploration did some leasing and minor mineral exploration around the compartment in the early 1990s. To my knowledge, there were no significant discoveries. Part of the compartment was more recently leased by Prime Meridian Resources. It is unknown whether they completed any mineral exploration. There is no known potential for economic oil and gas production in the UP.

Vehicle Access:

Access is through company land and private land. State has no management easement.

Survey Needs:

4 corners in section 10.

Recreational Facilities and Opportunities:**Fire Protection:****Additional Compartment Information:****The following reports from the Inventory are attached:**

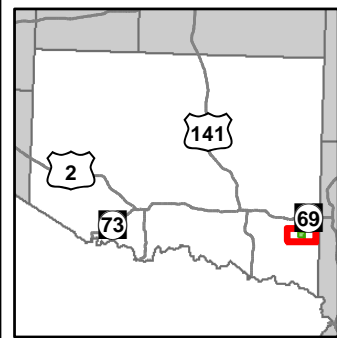
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

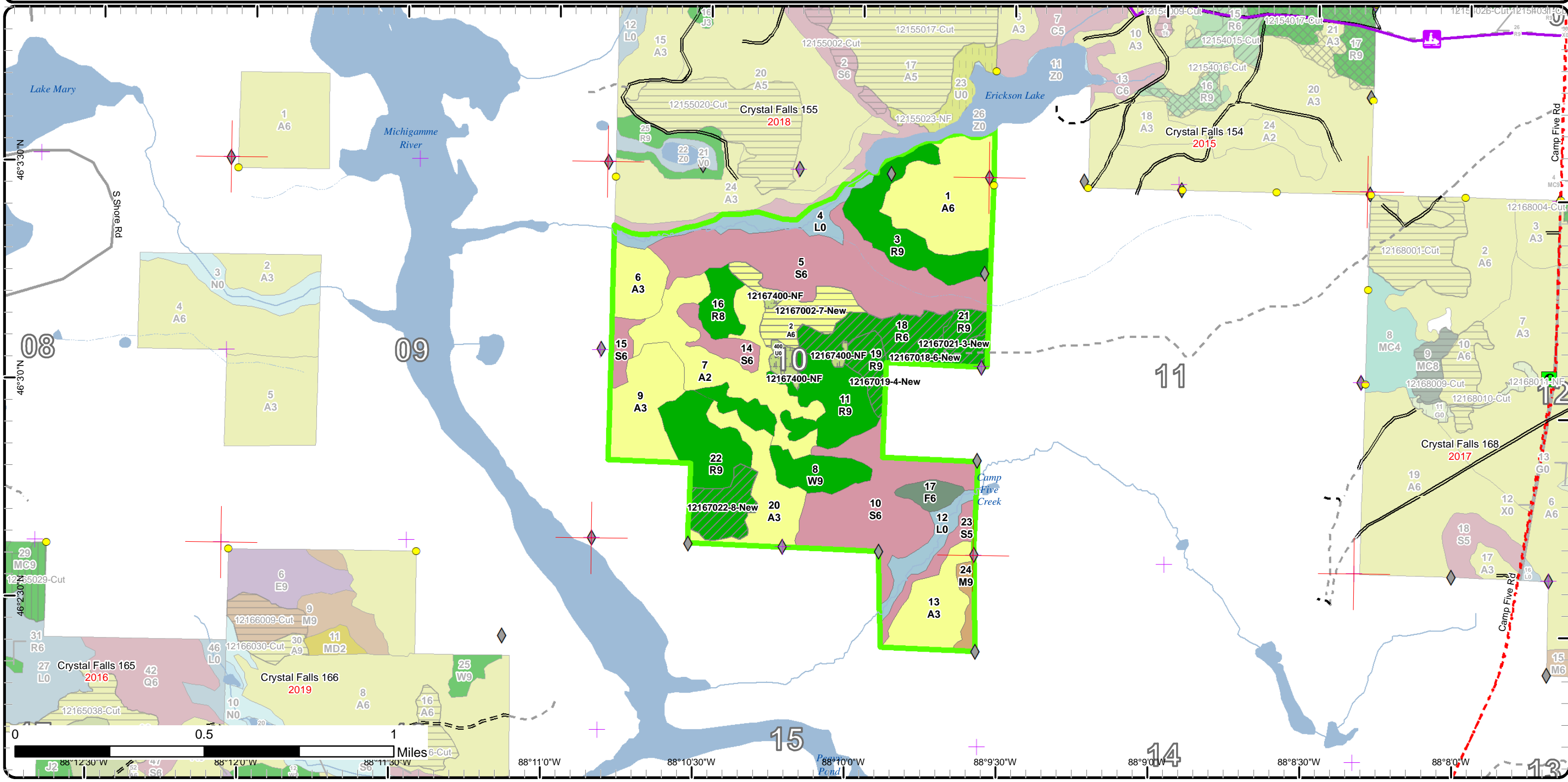
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 167
 T42N, R30W, Sec. 10, 15
 County: Iron
 Unit: Crystal Falls
 Mgmt Area: Panola Plains
 YOE: 2020
 Acres: 563 GIS Calculated
 Examiner: Scott Sebero
 Map Revised: 12/17/2018
 Map Phase: Post-Review

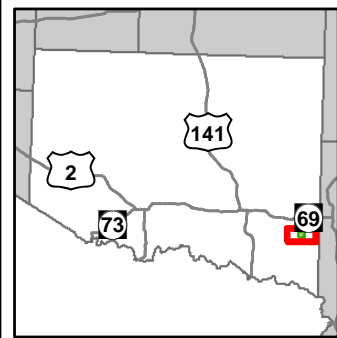


- Miris Corners
- + Remonumented Section Corners
- Survey Grade Corners
- ◆ Field Grade Corners
- Counties
- DNR - Secondary Forest Road
- DNR - Forest Access Route
- Federal / State - Dirt / Gravel Road
- County - Gravel Road
- Private - Paved Road
- Private - Dirt / Gravel Road
- Snowmobile Trails
- - - Designated Bicycle Trails
- Designated Snowmobile Trails
- Gate
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Compartment Boundary
- Other Treatment - See Comments
- Clearcut (w/Reserves)
- Thinning (Crown, Low, Systematic)
- 411 - Northern Hardwood
- 413 - Aspen
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 612 - Lowland Coniferous Forest
- 320 - Upland Shrub
- 622 - Lowland Shrub
- Lakes

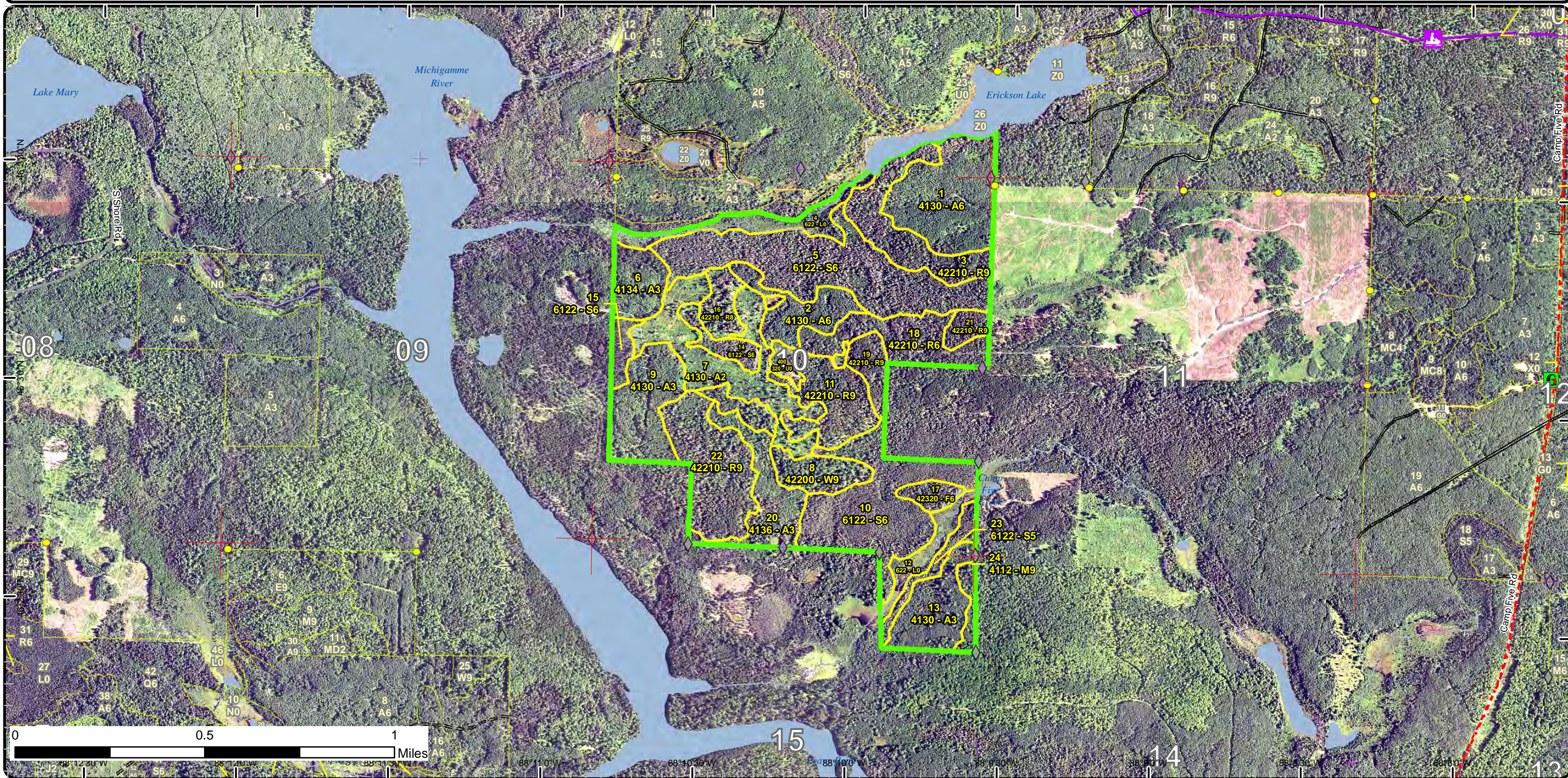


Stand Boundary Map

Compartment: 167
 T42N, R30W, Sec. 10, 15
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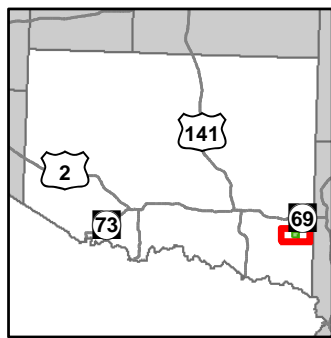


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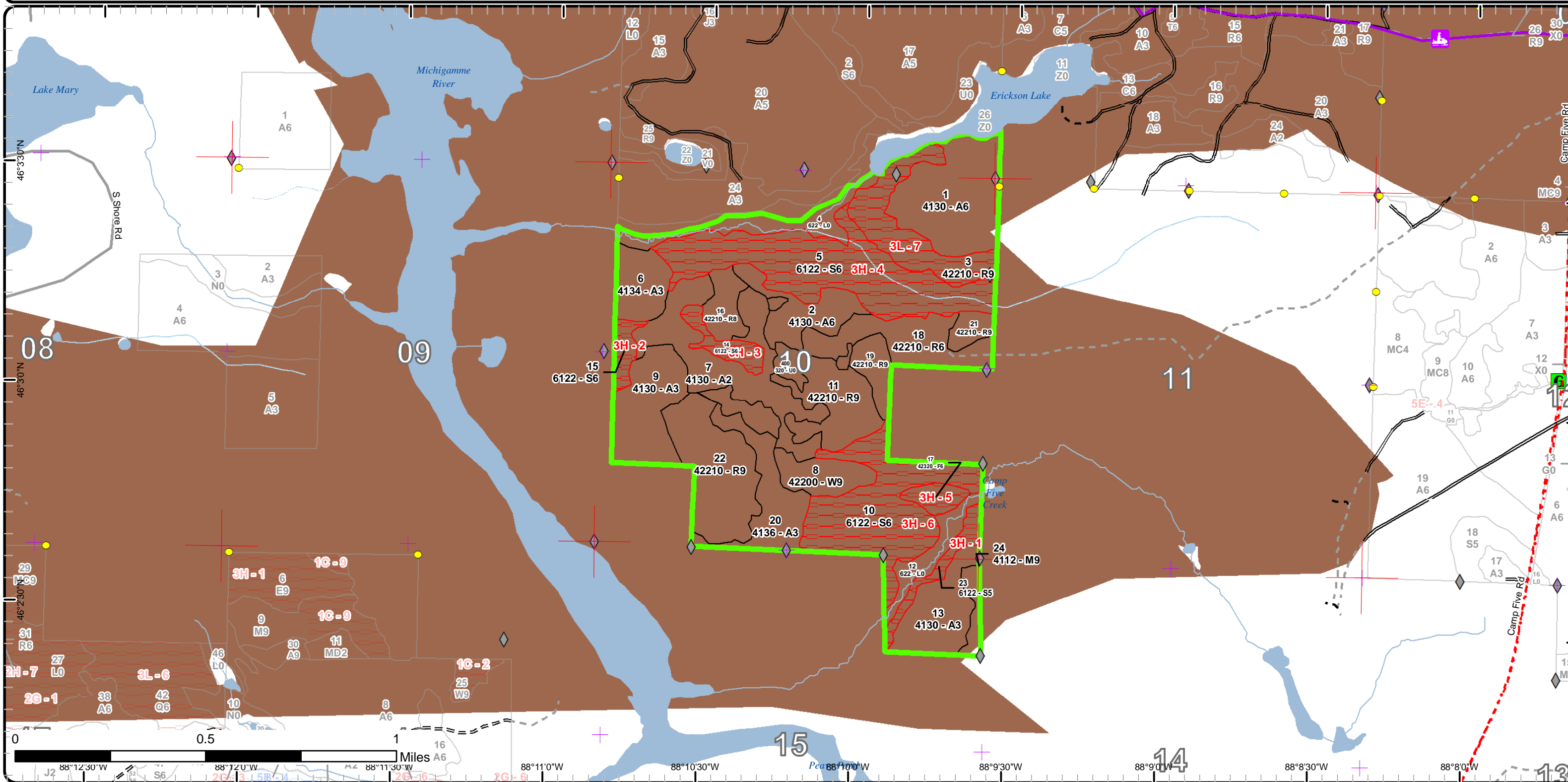


Special Conservation Areas & Site Conditions Map

Compartment: 167
 T42N, R30W, Sec. 10, 15
 County: Iron
 Unit: Crystal Falls
 Mgmt Area: Panola Plains
 YOE: 2020
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- - - Designated Bicycle Trails
- - - Designated Snowmobile Trails
- G Gate
- Intermittent Stream
- Lake/Pond
- Perennial River
- Lakes and Rivers All
- Compartment Boundary
- Unavailable
- 3L: Other wildlife concerns
- Stand Boundaries
- Cold Water Streams
- Cold Water Lakes
- Deer Winter Range



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	44	24	69	44	19	0	0	0	0	0	0	0	0	0	0	0	0	200
Lowland Shrub	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	149	0	0	0	0	0	0	0	148
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
Red Pine	0	0	0	0	0	0	0	110	0	0	45	0	0	0	0	0	0	0	155
Upland Shrub	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
White Pine	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	14
Total	34	44	24	69	44	19	0	110	0	0	219	0	0	0	0	0	0	0	562



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2020

Compartment 167
Total Compartment Acres: 563

Acres of Harvest

Commercial Harvest -
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 77

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	19	0	0	0	0	0	0	0	0	19
Red Pine	0	0	0	0	0	58	0	0	0	58
Total	19	0	0	0	0	58	0	0	0	77

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	77	0	0	0	0	0	0	0	6	83
Next Step	0	0	0	0	0	0	19	0	0	19
Total	77	0	0	0	0	0	19	0	6	102



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
2	12167002-7- New	19.0	4130 - Aspen	Poletimber Well	46	51-80	Harvest	Clearcut with Retention	4136 - Aspen, Mixed Conifer	Even-Aged	Draft Field Boundary

Habitat Cut: Yes**Site Condition:**

Prescription Cut all aspen and maple 2" DBH or larger. Cut all spruce, balsam, jack pine and birch with one or more pulpwood stick, 4" DBH. No red or white pine or oak will be cut.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of aspen, fir and pine.

Regen:

Other Red line any old openings with young sub merchantable trees.

Comment:

Proposed Start Date: 10/1 /2019

18	12167018-6- New	27.6	42210 - Natural Red Pine	Poletimber Well	60	141- 170	Harvest	Crown Thinning	42210 - Natural Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: Yes**Site Condition:**

Prescription Mark to 120 BA. Mark trees in 16 to 22 inch size. Mark skid trails to access larger trees. Cut aspen, maple, spruce and balsam 6" DBH or greater .

Next Step

Treatments:

Acceptable

Regen:

Other Protect sub merchantable trees.

Comment:

Proposed Start Date: 10/1 /2019

19	12167019-4- New	9.4	42210 - Natural Red Pine	Sawtimber Well	96	141- 170	Harvest	Crown Thinning	42210 - Natural Red Pine	Uneven- Aged	Draft Field Boundary
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Habitat Cut: Yes**Site Condition:**

Prescription Mark to 120 BA.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Target 16-22 inch size to cut.

Comment:

Proposed Start Date: 10/1 /2019

21	12167021-3- New	5.8	42210 - Natural Red Pine	Sawtimber Well	96	141- 170	Harvest	Crown Thinning	42210 - Natural Red Pine	Uneven- Aged	Draft Field Boundary
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Habitat Cut: Yes**Site Condition:**

Prescription Mark to 120 BA.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Target 16-22 inch size to cut. Protect small diameter trees of all species. Only mark those trees to access red pine.

Comment:

Proposed Start Date: 10/1 /2019



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
22	12167022-8-New	15.6	42210 - Natural Red Pine	Sawtimber Well	60	141-170	Harvest	Crown Thinning	42210 - Natural Red Pine	Even-Aged	Draft Field Boundary

Habitat Cut: Yes

Site Condition:

Prescription Mark to 120 BA. Favor white pine. No oak will be cut.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

400	12167400-NF	5.8	320 - Upland Shrub	Nonstocked		Unspecified	NonForestMgt	Other - Specify	3102 - Grass		Draft Field Boundary
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Habitat Cut: No

Site Condition:

Prescription Mechanical/Burn Opening Maintenance
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/1 /2019

Total Treatment Acreage Proposed: 83.2

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Scott Sebero : Examiner

Compartment: 167

Year of Entry: 2020

Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Conditions		
Acres	Available	With Condition	Not Available	3H	3L	
200	200	0	0			Aspen
28	28	0	0			Lowland Shrub
149	0	0	149	149		Lowland Spruce/Fir
5	5	0	0			Northern Hardwood
155	125	0	29		29	Red Pine
6	6	0	0			Upland Shrub
6	0	0	6	6		Upland Spruce/Fir
14	14	0	0			White Pine
563	378		184	155	29	Total Forested Acres
	67%		33%			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	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Compartment: 167

Scott Sebero : Examiner

Year of Entry: 2020

4	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	71	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	56	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
7	Unavailable	3L: Other wildlife concerns	29	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

**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.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Poletimber Well	44.0	38	51-80	Spruce and balsam mainly at north end near lake,
2	4130 - Aspen	Poletimber Well	19.0	46	51-80	
3	42210 - Natural Red Pine	Sawtimber Well	29.4	96	111-140	
5	6122 - Black Spruce	Poletimber Well	70.9	96	51-80	
6	4134 - Aspen, Spruce/Fir	Sapling Well	15.8	26	Immature	
7	4130 - Aspen	Sapling Medium	43.9	7	Immature	
8	42200 - Natural White Pine	Sawtimber Well	13.7	96	111-140	
9	4130 - Aspen	Sapling Well	29.7	26	Immature	
10	6122 - Black Spruce	Poletimber Well	55.5	96	51-80	
11	42210 - Natural Red Pine	Sawtimber Well	33.1	60	111-140	
13	4130 - Aspen	Sapling Well	23.8	23	Immature	
14	6122 - Black Spruce	Poletimber Well	8.1	96	81-110	
15	6122 - Black Spruce	Poletimber Well	6.0	96	51-80	
16	42210 - Natural Red Pine	Sawtimber Medium	10.3	60	51-80	
17	42320 - Upland Spruce	Poletimber Well	6.3	96	51-80	Scattered large red pine and a few aspen.
18	42210 - Natural Red Pine	Poletimber Well	27.6	60	141-170	Scattered large diameter red pine. Some paper birch. Lots of sub merchantable red pine.
19	42210 - Natural Red Pine	Sawtimber Well	9.4	96	141-170	
20	4136 - Aspen, Mixed Conifer	Sapling Well	23.9	16	Immature	
21	42210 - Natural Red Pine	Sawtimber Well	5.8	96	141-170	

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Crystal Falls Mgt. Unit

Report 7 – Forested Stands

Compartment: 167
Year of Entry: 2020



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	42210 - Natural Red Pine	Sawtimber Well	39.2	60	141-170	
23	6122 - Black Spruce	Poletimber Medium	8.3	96	51-80	Buffers Camp 5 Creek.
24	4112 - Maple, Beech, Cherry Association	Sawtimber Well	5.2	96	81-110	OPIC - FMD: OI Stand Year Origin was 1922



Stand	Cover Type	Acres	Managed Site	General Comments:
4	622 - Lowland Shrub	16.7	No	STAND CONTAINS CAMP 6 CREEK.
12	622 - Lowland Shrub	11.2	No	STAND CONTAINS CAMP 5 CREEK.
400	320 - Upland Shrub	5.8	No	GRASS OPENING SEEDING IN WITH SPRUCE, PINE AND CHERRY.