



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12093

Entry Year 2019

Acreage: 1,060

County Dickinson

Management Area: Cassidy Creek

Revision Date: 2017-08-18

Stand Examiner: Matt Modlin

Legal Description:

T40N, R29W, Sections 2, 3

Identified Planning Goals:

Manage hardwoods and aspen for high quality timber production and wildlife needs. Maintain value of the Breen creek and the flooding by following best management practices.

Soil and topography:

Compartment is hilly with good hardwood soils on most uplands and good lowland conifer soils in the lowlands.

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

Bordered by private and other state land

Unique Natural Features:

Breen creek and associated flooding

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

This area has some conifer plantings under the hardwoods in the past

Watershed and Fisheries Considerations:

Breen creek has potential to be erosive if care is not taken in work around the banks. Careful attention to best management practices is required to maintain the value of this waterway. 100 foot buffer is recommended for Breen Creek. For all other riparian areas, including vernal pools and intermittent streams, BMPs should be followed to maintain canopy cover and prevent erosion into waterbodies.

Wildlife Habitat Considerations:

This compartment has excellent bear habitat. The steep terrain creates a diversity of stands within this compartment, and provides a great opportunity to leave some rocky outcrop stands in a natural state. Featured species include American woodcock, Blackburnian warbler, northern goshawk, white-tailed deer, and woodcock. The compartment is made up of mostly state game funds.

Mineral Resource and Development Concerns and/or Restrictions

Gravel pits are not located in the area and potential appears to be limited by shallow bedrock. The bedrock consists of granite and gneiss and may have value as dimension stone. The abandoned Calumet iron mine is located five miles to the north. There is no known iron ore potential within the compartment, and metallic mineral potential, in general, is considered low. There is no economic oil and gas production in the UP. The state does not own the mineral rights beneath parts of this compartment.

Vehicle Access:

Good by pickup and 4x4 from the north. Private access from other points surrounding the compartment.

Survey Needs:

None right now

Recreational Facilities and Opportunities:

Hunting, hiking, bird watching

Fire Protection:

Minor concern, easy access

Additional Compartment Information:

The following reports from the Inventory are attached:

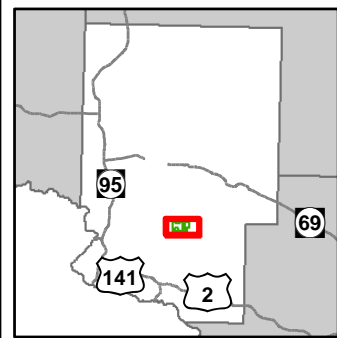
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

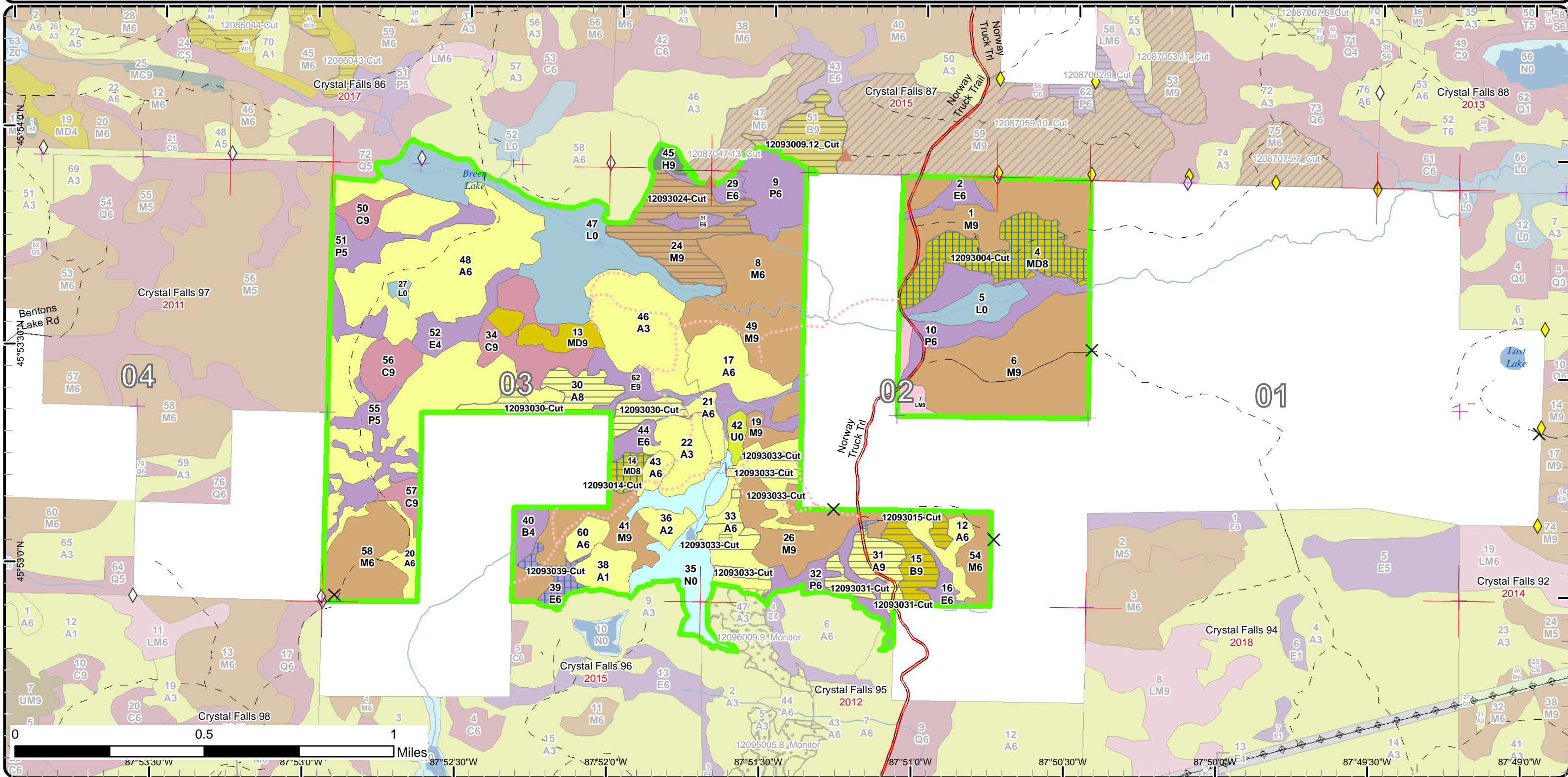
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 93
 T40N, R29W, Sec. 2, 3
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Cassidy Creek
 YOE: 2019
 Acres: 1060.4 GIS Calculated
 Examiner: Matt Modlin
 Map Revised: 11/30/2017
 Map Phase: Post-Review

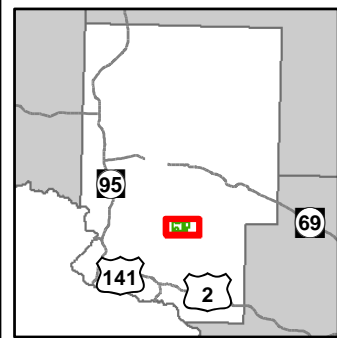


- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Counties
- X Gate
- Culvert
- County Gravel Roads
- - - Poor Dirt Roads
- ⋯ Closed
- Streams
- Lakes and Rivers All
- ⊕ Powerline
- Compartment Boundary
- Clearcut (w/Reserves)
- Patch/Strip Cut (Femelschlag)
- Seed Tree (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest
- 330 - Low Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- Lakes

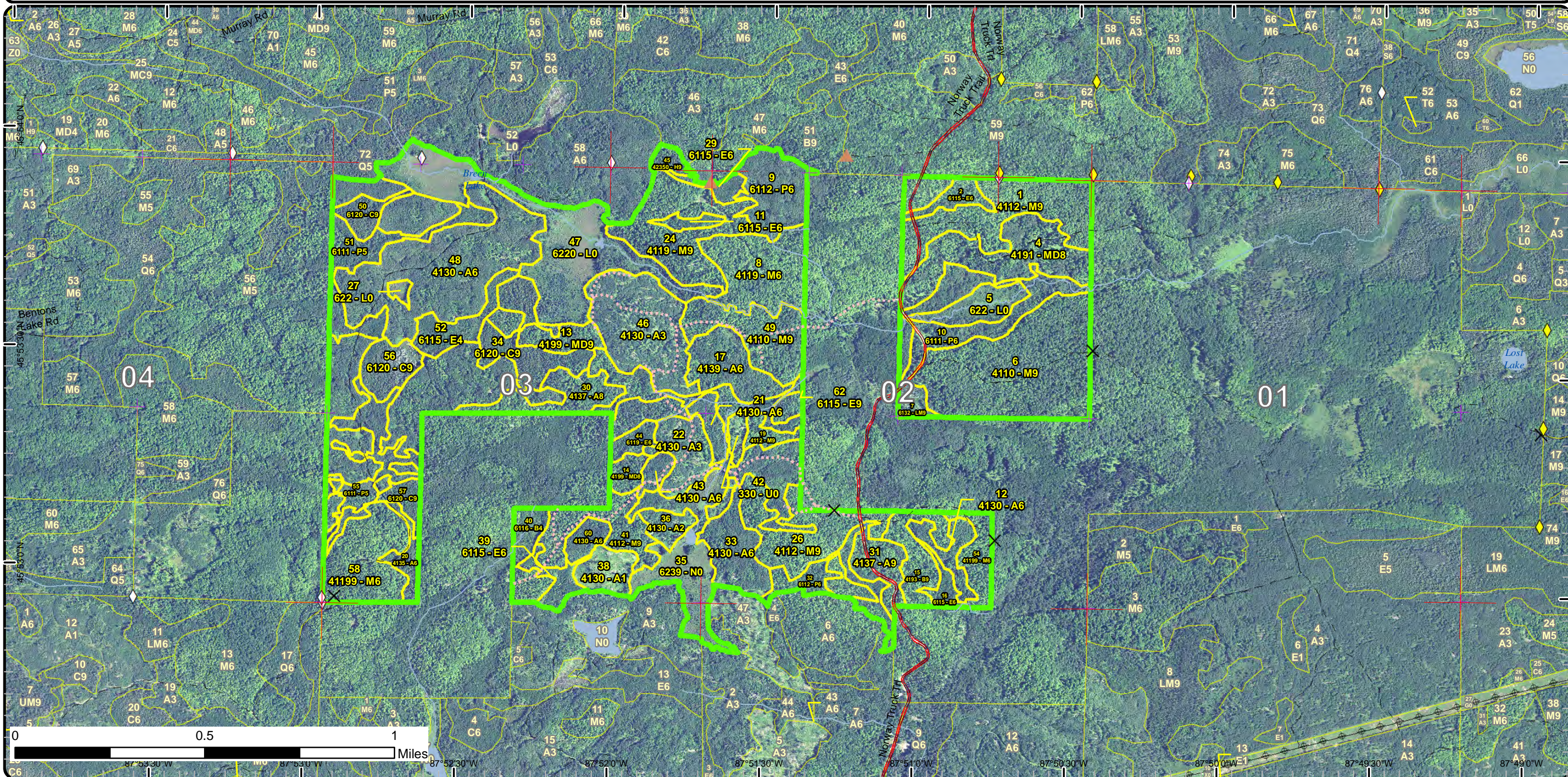


Stand Boundary Map

Compartment: 93
 T40N, R29W, Sec. 2, 3
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Cassidy Creek
 YOE: 2019
 Acres: 1060.4 GIS Calculated
 Examiner: Matt Modlin
 Map Revised: 11/30/2017
 Map Phase: Post-Review

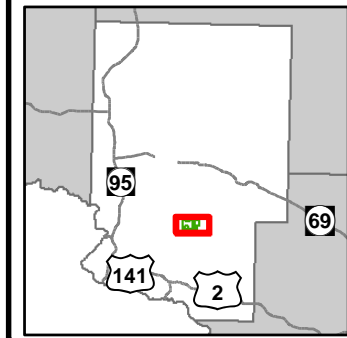


- Miris Corners
- + Remonumented Section Corners
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- ◇ Field Grade GPS Corners
- Counties
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- ▲ Berms
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- Streams
- Lakes and Rivers All
- ⊕ Powerline
- Compartment Boundary
- Stand Boundaries
- 411 - Northern Hardwood
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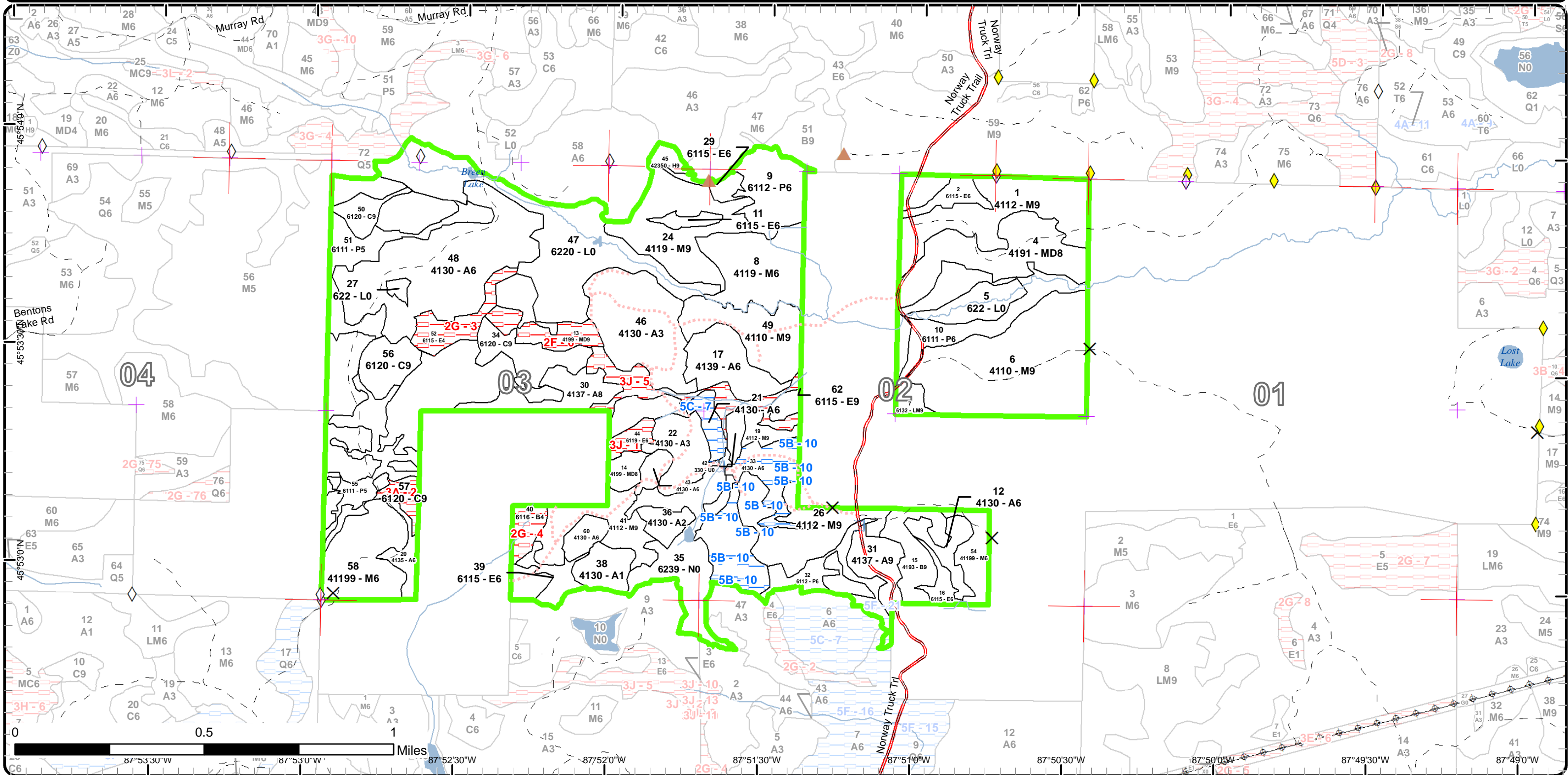


Special Conservation Areas & Site Conditions Map

Compartment: 93
 T40N, R29W, Sec. 2, 3
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Cassidy Creek
 YOE: 2019
 Acres: 1060.4 GIS Calculated
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- Miris Corners
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- ◆ Survey Grade GPS Corners
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- Counties
- Gate
- Berms
- Culvert
- County Gravel Roads
- Poor Dirt Roads
- Closed
- Streams
- Lakes and Rivers All
- ⊕ Powerline
- Compartment Boundary
- Available w/ Constraints
- Unavailable
- 5B: Maintain for regeneration purposes
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2F: Too steep
- 2G: Too wet (sensitive soils, does not include access issues)
- 3A: Conservation Values incompatible with harvest at this time
- 3J: Water quality / BMPs (stream, river, or lake)
- Stand Boundaries



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	10	63	20	156	19	6	34	0	0	0	24	17	0	0	0	0	0	349
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	34	0	7	0	5	0	46
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Low-Density Trees	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Aspen/Balsam Poplar	0	0	0	0	88	0	0	0	0	0	14	0	0	0	0	0	0	0	101
Lowland Deciduous	0	0	0	0	0	0	0	7	0	0	38	9	7	0	0	0	0	0	60
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	7
Lowland Shrub	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
Marsh	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	35	5	11	0	0	0	0	0	51
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	30	153	35	50	0	0	0	40	308
Paper Birch	0	0	0	0	0	0	7	0	0	0	0	0	0	15	0	0	0	0	21
Total	112	10	63	20	244	19	13	41	0	7	117	191	104	65	7	0	8	40	1058



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2019

Acres of Harvest

Compartment 93
Total Compartment Acres: 1,060

Commercial Harvest - 190
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	41	0	14	0	0	0	0	0	0	55
Lowland Aspen/Balsam Poplar	18	0	0	0	0	0	0	0	0	18
Lowland Deciduous	0	0	0	7	0	0	0	0	0	7
Mixed Upland Deciduous	0	0	0	40	0	0	0	0	0	40
Northern Hardwood	35	0	0	0	21	0	0	0	0	56
Paper Birch	15	0	0	0	0	0	0	0	0	15
Total	109	0	14	47	21	0	0	0	0	190

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	190	0	0	0	0	0	0	0	0	190
Next Step	0	90	0	0	0	0	190	50	0	331
Total	190	90	0	0	0	0	190	50	0	521



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
4	12093004-Cut	34.7	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	95	51-80	Harvest	Seed Tree	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut everything 10" or less. Cut all aspen and balsam poplar. Leave spruce and fir 1 stick and less. Scarify for bare mineral soil. No Aspen
Specs: cutting within 300 ft of creek.

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Northern hardwoods and conifers
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

9	12093009.12_Cut	17.7	6112 - Lowland Aspen	Poletimber Well	38	Unspecified	Harvest	Clearcut with Retention	4193 - Birch, Aspen	Even-Aged	Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Cut all trees two inches or more in diameter leaving red and white pine, hemlock, cedar, elm, cherry, oak and all spruce and balsam that is 6 inches or less in diameter at a 4 inch stump. Leave all yellow birch also and while cruising choose a few white birch here and there for seed trees to remain in stand after harvest.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable aspen, birch sprouts
Regen:

Other Stay out of wet areas. Old next step comments: Regen check
Comment:

Proposed Start Date: 10/01/2014

14	12093014-Cut	5.2	4199 - Other Mixed Upland Deciduous	Sawtimber Medium	103	51-80	Harvest	Seed Tree	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Select 10-20 BA of red maple to retain for seed. Cut everything else with a 2" spec.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Birch, maple, conifers
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018

15	12093015-Cut	15.2	4193 - Birch, Aspen	Sawtimber Well	127	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave all oak, hemlock, cedar, and elm where present. Leave all spruce and fir 1 stick and less. Protect areas of higher fir
Specs: regen
 Winter only cut.

Next Step ; Other, Other; Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Birch, maple, aspen, ash, conifers
Regen:

Other
Comment:

Proposed Start Date: 10/01/2018



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
24	12093024-Cut	34.9	4119 - Mixed Northern Hardwoods	Sawtimber Well	114	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Clearcut 4" spec. Leave all spruce, fir, pine, oak, cherry, cedar, and hemlock. Buffer creek/flooding 100 ft.

Specs:

Next Step SitePrep, Scarification; Other, Other; Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Birch, maple, ash, conifer

Regen:

Other Do not harvest in drain that cuts through the entire middle of the stand east to west

Comment:

Proposed Start Date: 10/01/2018

30	12093030-Cut	24.3	4137 - Aspen, Birch	Sawtimber Medium	107	51-80	Harvest	Clearcut	4139 - Aspen, Mixed Deciduous	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clear cut. Leave pine and cedar.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, birch, aspen, conifers

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

31	12093031-Cut	16.6	4137 - Aspen, Birch	Sawtimber Well	110	51-80	Harvest	Clearcut	4319 - Mixed Upland Forest	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Clearcut 2" spec. Leave spruce and fir 1 stick and less as well as all oak, cedar, hemlock, and elm.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Northern hardwoods and conifers

Regen:

Other Winter only cut.

Comment:

Proposed Start Date: 10/01/2018

33	12093033-Cut	14.0	4130 - Aspen	Poletimber Well	60	81-110	Harvest	Strip/Patch/Gap Cut (Femelschlag)	4199 - Other Mixed Upland Deciduous	Even-Aged	Approved Proposal
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Habitat Cut: No**Site Condition:**

Prescription Alternate cutting and leaving 1 chain wide strips oriented east and west to promote hardwood regeneration. Leave all oak and cherry.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, hardwoods, conifers

Regen:

Other Trying to figure out how to harvest the value of the aspen while converting the stand to a higher hardwood component.

Comment:

Proposed Start Date: 10/01/2018



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
39	12093039-Cut	7.0	6115 - Lowland Ash	Poletimber Well	110	Unspec ified	Harvest	Seed Tree with Retention	611 - Lowland Deciduous Forest	Even-Aged	Approved Proposal

Habitat Cut: No**Site Condition:**

Prescription Green tree 10-20 BA of red maple and black ash for shade. Leave all cedar. Winter only cut.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Ash, maple, conifers

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

49	12093049-Cut	20.6	4110 - Sugar Maple Association	Sawtimber Well	129	81-110	Harvest	Shelterwood	411 - Northern Hardwood	Even-Aged	Proposal - Approval Pending Edits
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Habitat Cut: No**Site Condition:**

Prescription Thin stand to 10-20BA. Leave all hemlock, and cedar. Buffer creek to BMP standards regarding slope. Mark out any drains to E type.

Specs: Scarify to help regen.

Next Step ; SitePrep, Scarification; Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Northern hardwoods

Regen:

Other

Comment:

Proposed Start Date: 10/01/2018

**Total Treatment
Acreage Proposed: 190.2**

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Matt Modlin : Examiner

Compartment: 93

Year of Entry: 2019

Availability for Management

Total Acres	Acres Available	Acres Available With Condition	Acres Not Available
348	324	25	0
46	40	0	5
3	3	0	0
3	3	0	0
102	99	2	0
60	25	0	35
7	7	0	0
77	14	0	63
32	32	0	0
52	41	0	11
308	308	0	0
22	15	0	6
1,060	912	27	121
	86%	3%	11%

Dominant Site Conditions

	Total Acres	Acres Available	Acres Available With Condition	Acres Not Available	Dominant Site Conditions								
					5B	5C	5F	2F	2G	3A	3G	3J	
348	324	324	25	0	Aspen	18	6	0		0			
46	40	40	0	5	Cedar						5		
3	3	3	0	0	Hemlock								
3	3	3	0	0	Low-Density Trees								
102	99	99	2	0	Lowland Aspen/Balsam Poplar		1	2		0			
60	25	25	0	35	Lowland Deciduous					12			23
7	7	7	0	0	Lowland Mixed Forest								
77	14	14	0	63	Lowland Shrub							63	
32	32	32	0	0	Marsh								
52	41	41	0	11	Mixed Upland Deciduous				11				
308	308	308	0	0	Northern Hardwood								
22	15	15	0	6	Paper Birch					6			
1,060	912	912	27	121	Total Forested Acres	18	7	2	11	18	5	63	23
		86%	3%	11%	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	3J: Water quality / BMPs (stream, river, or lake)	5	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3A: Conservation Values incompatible with harvest at this time	5	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Some 190+ year old cedar scattered throughout the stand							

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Matt Modlin : Examiner

Compartment: 93

Year of Entry: 2019

3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	18	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2F: Too steep	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Very rocky stand surrounded by wetland							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
10	Available	5B: Maintain for regeneration purposes	18	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
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
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Stand	Crystal Falls Mgt. Unit		Report 7 – Forested Stands			Compartment: 93 Year of Entry: 2019
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4112 - Maple, Beech, Cherry Association	Sawtimber Well	44.0	105	81-110	Smaller diameters on west half of stand BREEN HDWD SALE COMPLETED 10-2-11
2	6115 - Lowland Ash	Poletimber Well	6.5	68	Unspecified	
4	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Medium	35.4	95	51-80	Very park like in places with sedge and ferns. Thicker areas of aspen and fir. Drainage through middle of stand from E type in north flowing to creek.
6	4110 - Sugar Maple Association	Sawtimber Well	70.6	100	81-110	Scattered yellow birch and hemlock A few low/wet areas and seeps throughout C93 BREEN HDWD SALE COMPLETED 10-2-11
7	6132 - Mixed Lowland Forest with Cedar	Sawtimber Well	7.2	86	81-110	Area immediately east of road is dead due to flooding
8	4119 - Mixed Northern Hardwoods	Poletimber Well	30.7	103	81-110	
9	6112 - Lowland Aspen	Poletimber Well	21.4	38	Unspecified	lots of low areas throughout branching into neighboring stands Drainage turning into stream in SE part of stand
10	6111 - Lowland Balsam Poplar	Poletimber Well	27.1	30	Unspecified	Many seeps along the slopes leading to creek
11	6115 - Lowland Ash	Poletimber Well	3.3	90	Unspecified	Part of the network of drainages in this area
12	4130 - Aspen	Poletimber Well	9.0	42	Unspecified	In self thinning stage Some scattered maple and a few XL aspen in the middle
13	4199 - Other Mixed Upland Deciduous	Sawtimber Well	11.3	117	51-80	Paper birch and aspen are on their way out. Some wetter areas throughout. Rock outcrops throughout to navigate around.
14	4199 - Other Mixed Upland Deciduous	Sawtimber Medium	5.2	103	51-80	 C93 BREEN HDWD SALE COMPLETED 10-2-11: If they are present in the stand, retain pines, oak, cedar, cherry and good den trees.
15	4193 - Birch, Aspen	Sawtimber Well	15.2	127	51-80	Wetter ground throughout Scattered oak around rocky higher ground Steep rock outcrops around the north half.
16	6115 - Lowland Ash	Poletimber Well	4.4	100	Unspecified	Stream cuts through very southern part of stand Water drains south through this stand



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	4139 - Aspen, Mixed Deciduous	Poletimber Well	19.6	29	Immature	Numerous wet/drainage areas around the rock outcrops. Should be harvestable in the winter.
19	4112 - Maple, Beech, Cherry Association	Sawtimber Well	7.9	105	81-110	Fair quality aspen. Scattered yellow birch and aspen. Low area/seeps runs through stand. Some steep, unharvestable rocky parts throughout.
20	4135 - Aspen, Cedar	Poletimber Well	6.2	34	Immature	Old cedar and hemlock left from previous aspen cut Scattered yellow birch on the nurse logs in the understory
21	4130 - Aspen	Poletimber Well	6.2	57	Unspecified	5-7 stick aspen just finishing self thinning stage
22	4130 - Aspen	Sapling Well	15.5	14	Immature	
24	4119 - Mixed Northern Hardwoods	Sawtimber Well	35.2	114	51-80	This is a rolling, rocky stand. The lower area in the north has the most yellow birch. There is a patch of fallen spruce and fir in the southwest.
26	4112 - Maple, Beech, Cherry Association	Sawtimber Well	29.6	97	81-110	Scattered yellow birch, oak, cedar, and hemlock. A few scattered vernal ponds Stand thinned in 2010
29	6115 - Lowland Ash	Poletimber Well	4.3	90	Unspecified	Part of the network of drainages in this area
30	4137 - Aspen, Birch	Sawtimber Medium	24.1	107	51-80	Fair quality red maple. Paper birch and aspen are dying out. Paper birch is good quality. Scattered cedar and super canopy white pine. Heavier to paper birch and aspen in SE portion
31	4137 - Aspen, Birch	Sawtimber Well	16.6	110	51-80	Scattered cedar, elm, and hemlock Rocky and hilly with wet areas in between
32	6112 - Lowland Aspen	Poletimber Well	14.3	98	Unspecified	very wet in some areas with pure black ash Scattered cedar, hemlock, and elm
33	4130 - Aspen	Poletimber Well	33.5	60	81-110	Understory is responding very well in overstory canopy gaps Scattered oak, cedar, and yellow birch very wet throughout Wetland along the south side of the road in the north
34	6120 - Lowland Cedar	Sawtimber Well	21.8	112	171-200	Very wet
36	4130 - Aspen	Sapling Medium	8.4	16	Immature	Little to no aspen closer to the low area, it is much wetter in that area



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4130 - Aspen	Sapling Poor	10.0	6	Immature	Water drains in all directions to the low areas surrounding the high rock outcrop. Very very thick with raspberries Most of the regen is on the SW side C93 BREEN HDWD SALE COMPLETED 10-2-11: If they are present in the stand, retain pines, oak, cedar, cherry and good den trees. Retain patches of wet timber types. C93 BREEN HDWD SALE COMPLETED 10-2-11
39	6115 - Lowland Ash	Poletimber Well	7.0	110	Unspecified	Very wet. May be harvestable in a cold winter. Water flowing to the west.
40	6116 - Lowland Birch	Poletimber Poor	6.5	50	Unspecified	Extremely wet
41	4112 - Maple, Beech, Cherry Association	Sawtimber Well	24.7	120	81-110	C93 BREEN HDWD SALE COMPLETED 10-2-11: If they are present in the stand, retain pines, oak, cedar, cherry and good den trees.
43	4130 - Aspen	Poletimber Well	4.2	40	Unspecified	some wet spots throughout this stand
44	6119 - Mixed Lowland Deciduous Forest	Poletimber Well	4.9	100	51-80	Scattered white spruce and cedar
45	42350 - Upland Hemlock	Sawtimber Well	3.4	173	141-170	Hemlock is trying to regenerate on its own, but the deer are heavily browsing it
46	4130 - Aspen	Sapling Well	39.9	14	Immature	Scattered super canopy white ash. Numerous wet spots in between the rolling rock outcrops, and especially around the low perimeter.
48	4130 - Aspen	Poletimber Well	149.3	34	Unspecified	Many low areas and vernal ponds throughout this stand. Rutting is still present from previous logging and has formed water drains in places. Density varies throughout the stand. Aspen is thinner where super canopy white pine shade it and hardwood competes with it. It is also thinner in certain spots where the site is poorer. Some places have finished the self thinning phase while others are still in it. Black ash is regenerating well in the understory in the lower areas.
49	4110 - Sugar Maple Association	Sawtimber Well	25.1	129	81-110	Breen Creek runs along north border with scattered black ash, hemlock, cedar and aspen in the flood plain. Thinned in 2003
50	6120 - Lowland Cedar	Sawtimber Well	6.6	130	Unspecified	Balsam poplar drain flows to flooding
51	6111 - Lowland Balsam Poplar	Poletimber Medium	20.3	34	Unspecified	Wetter black ash areas were not cut through



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
52	6115 - Lowland Ash	Poletimber Poor	11.8	94	Unspecified	very wet
54	41199 - Northern Hardwood (OI)	Poletimber Well	10.9	180	51-80	OPIC - FMD: If they are present in the stand, retain pines, oak, cedar, cherry and good den trees. C93 BREEN HDWD SALE COMPLETED 10-2-11
55	6111 - Lowland Balsam Poplar	Poletimber Medium	18.8	34	Unspecified	Some places wetter than others. Wetland plants in these areas. Some pure pockets of tag, black ash, and balsam poplar respectively
56	6120 - Lowland Cedar	Sawtimber Well	11.8	111	Unspecified	Northeast side of stand is completely dead from too much water stress
57	6120 - Lowland Cedar	Sawtimber Well	5.3	190	Unspecified	Some 190+ year old cedar within this stand Potentially qualifies as Type 1 old growth
58	41199 - Northern Hardwood (OI)	Poletimber Well	29.3	180	51-80	OPIC - FMD: If they are present in the stand, retain pines, oak, cedar, cherry and good den trees. C93 BREEN HDWD SALE COMPLETED 10-2-11
60	4130 - Aspen	Poletimber Well	5.8	47	Unspecified	6-7 stick aspen, just past the self thinning stage Water flows through this stand from NE to SW, connecting the 2 low areas. Ruts from previous harvest still present. Winter harvest only.
62	6115 - Lowland Ash	Sawtimber Well	18.2	90	Unspecified	Low drainages flowing east with streams starting in the middle and running through east portion of stand



Stand	Cover Type	Acres	Managed Site	General Comments:
5	622 - Lowland Shrub	12.0	No	
27	622 - Lowland Shrub	1.8	No	
35	6239 - Mixed Emergent Wetland	31.8	No	Scattered spruce, fir, and tamarack
42	330 - Low-Density Trees	3.4		small amount of ironwood coming back. otherwise there are some scattered maples and aspens left along the west side. Steep rocky area
47	6220 - Alder/willow	63.2	No	