

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12153
Entry Year 2017
Acreage: 764
County Iron

Management Area: Panola Plains

Revision Date: 2015-07-27

Stand Examiner: Scott Sebero

Legal Description:

T43N-R31W section 31. T43N-R32W section 36.

Identified Planning Goals:

Develop age class distribution in aspen type. Maintain health in conifer types and increase acres where possible. Maintain and improve road system.

Soil and topography:

Karlin sands on flat to rolling hills with some lowland swamps and drainages.

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

State lands mixed with a few small private parcels. Two year round homes on US- 2 Lake Mary Road intersection. Lands used mainly for hunting and fishing and managed for timber products.

Unique Natural Features:

Glidden Lake is on the south side of the compartment and the Michigamme River is just east of the compartment.

Archeological, Historical, and Cultural Features:

None.

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

Glidden Lake is on the south side of the compartment. The fish community consists of bluegill, largemouth bass, yellow perch, and walleye. 100 foot buffer around any waterbody. There is also an unnamed tributary running through the compartment. Streams, regardless of their size or frequency of flow, are connected to downstream waters and strongly influence their function. Additionally, wetlands and open waters in riparian areas and floodplains are physically, chemically, and biologically integrated with rivers via functions that improve downstream water quality. These systems act as effective buffers to protect downstream waters from pollution and are essential components of river food webs. BMP's should be implemented to control sediment sources from adjacent uplands. Fine sediments such as silt and sand negatively affect natural reproduction of fish, decrease the diversity of aquatic invertebrate and fish taxa, and result in lower overall fish populations.

Wildlife Habitat Considerations:

This compartment falls within the Panola Plains Management area. Featured species selected for this management area include American woodcock, black bear, eastern bluebird, Kirtland's warbler, ruffed grouse and white-tailed deer. This compartment is part of the Old Mansfield Deeryard. Lowland cedar and spruce stands provide a travel corridor from the northwest corner of the compartment through to its east central side. This travel corridor is heavily used by black bear and also used as winter cover by deer. Soft mast such as blueberries and cherry, as well as, hard mast producing oak trees, are essential habitat components for bear, deer and grouse. Aspen stands with adequate conifer cover and maximum age class diversity provide excellent habitat for deer, grouse, woodcock and bear.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of thin to discontinuous glacial outwash sand and gravel and post-glacial alluvium. The glacial drift thickness varies between 10 and 50 feet. The Precambrian Hemlock Formation subcrops below the glacial drift. There is not a current economic use for the Hemlock. The Amasa iron formation is known to occur just to the west and the Hemlock volcanics iron formation has been mapped just to the east of the compartment. Abandoned iron mines are located one mile to the northwest. Part of this compartment was previously leased for metallic exploration. The nearest gravel pit is located several miles away and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access:

M-69, Lake Mary Road and associated woods roads.

Survey Needs:

None.

Recreational Facilities and Opportunities:

Lake Mary Ski Trail is in the SE portion of the compartment. Glidden Lake Campground is located just south of the compartment.

Fire Protection:

Additional Compartment Information:

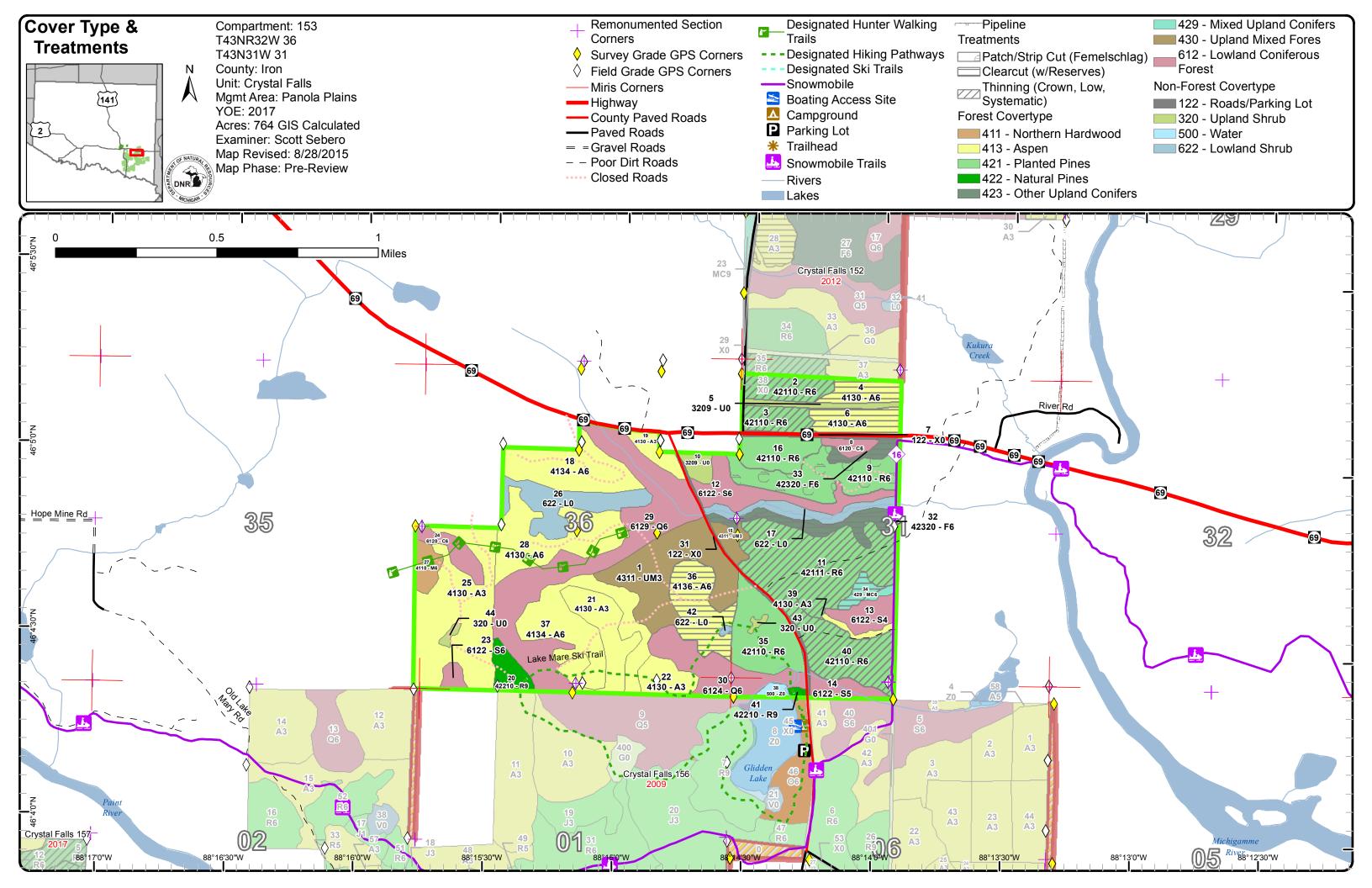
None.

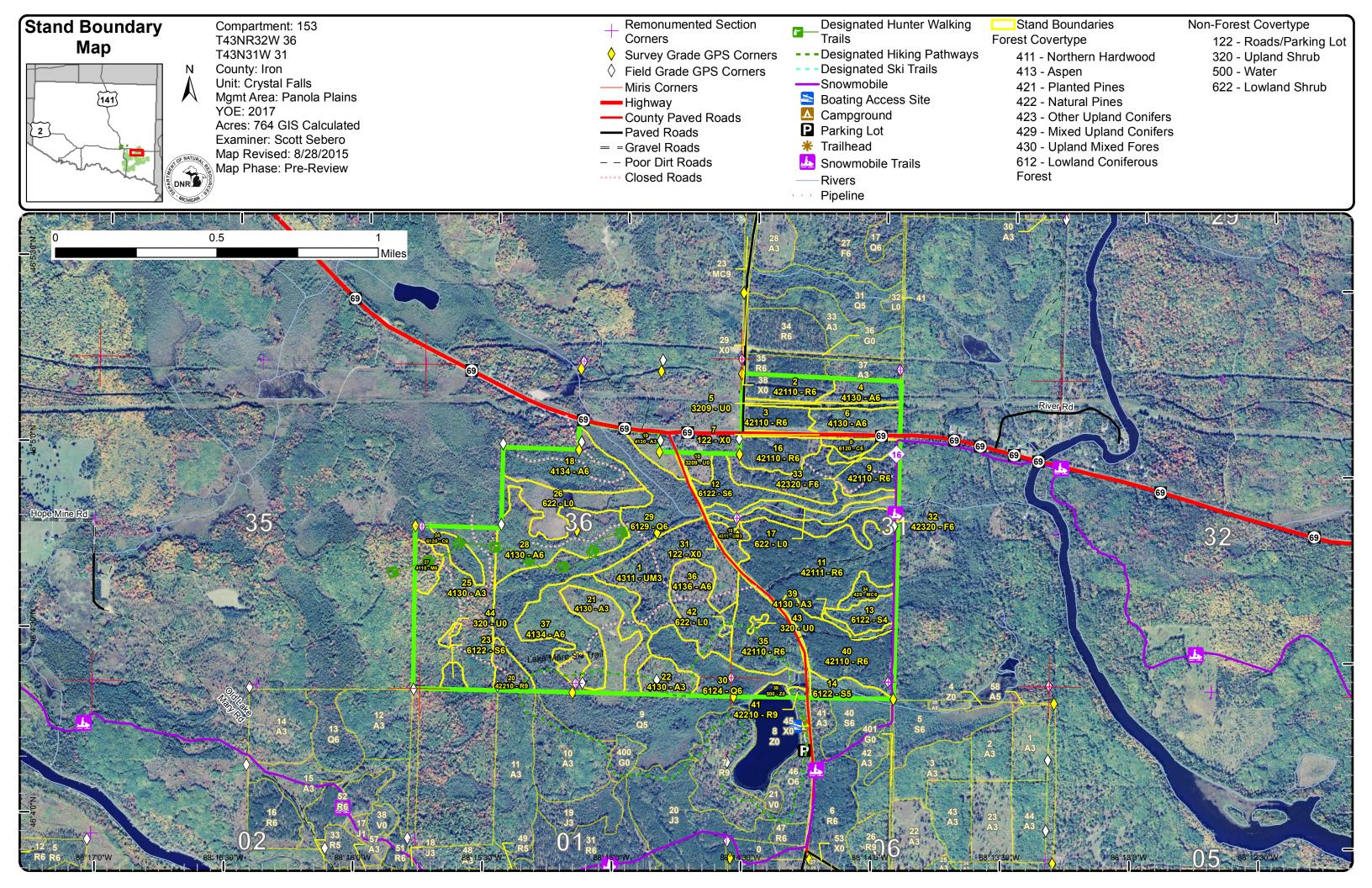
The following reports from the Inventory are attached:

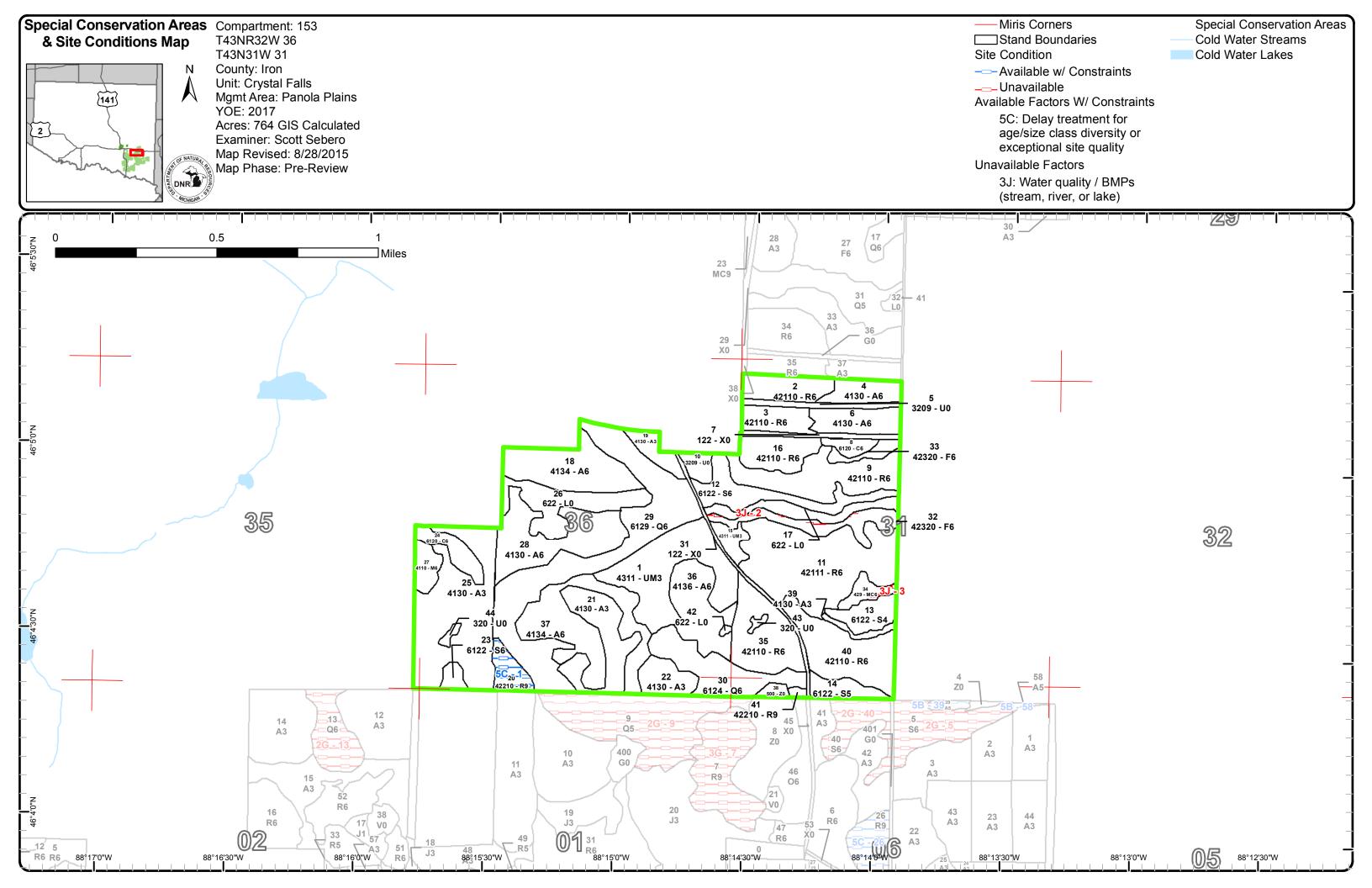
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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







Compartment 153 Year of Entry 2017

Crystal Falls Mgt. Unit Scott Sebero : Examiner



Age Class

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Aspen	0	43	3	59	72	36	24	0	25	0	0	0	0	0	0	0	0	0	262
Cedar	0	0	0	0	0	0	0	0	9	0	4	0	0	0	0	0	0	0	13
Lowland Conifers	0	0	0	0	0	0	0	0	101	0	0	0	0	0	0	0	0	0	101
Lowland Shrub	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	39	0	3	0	0	0	0	0	0	0	42
Northern Hardwood	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7
Red Pine	0	0	0	0	0	0	195	0	0	9	0	0	0	0	0	0	0	0	204
Upland Conifers	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	6
Upland Mixed Forest	0	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
Upland Shrub	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Upland Spruce/Fir	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	19
Urban	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	61	43	52	59	72	36	219	0	206	9	7	0	0	0	0	0	0	0	764



Report 2 – Treatment Summary

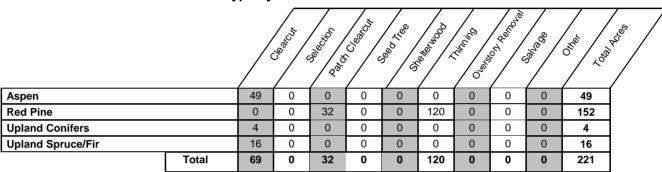
Crystal Falls Mgt. Unit Year of Entry: 2017

Acres of Harvest

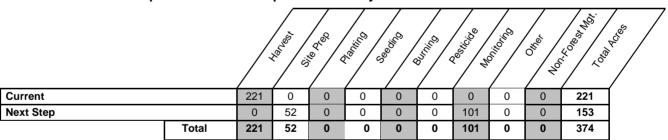
Compartment 153
Total Compartment Acres: 764

Commercial Harvest - 221 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Crystal Falls Mgt. Unit Report 4 -- Treatments Compartment: 153 s Year of Entry: 2017 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age **Approval** n Objective Name CoverType Density Age Range Type Method Structure **Status** d 2 12153002-Cut 13.2 42110 - Planted Poletimber 141-Crown Thinning 4211 - Planted Even-Aged Harvest Proposal Red Pine Well 170 Red Pine **Habitat Cut: No Site Condition:** Prescription Mark red pine to a BA of 120. Specs: Next Step Treatments: Acceptable Regen: Other Old next step comments: Comment: **Proposed Start Date:** 10/1 /2016 12153003-Cut 10.8 42110 - Planted Poletimber 59 141-Harvest Crown Thinning 4211 - Planted Even-Aged Proposal Red Pine Well 170 Red Pine **Habitat Cut: No Site Condition:** Prescription Mark red pine to BA of 120. Specs: Next Step **Treatments:** Acceptable Regen: Other Old next step comments: Comment: **Proposed Start Date:** 10/1 /2016 12153004-Cut Poletimber 53 10.1 4130 - Aspen 51-80 Clearcut with 4133 - Aspen, Even-Aged Proposal Harvest Well Retention Mixed Pine **Habitat Cut: No Site Condition:** Prescription Cut all aspen and mix hardwood, except oak, 2" DBH or greater. Cut all spruce, balsam and jack pine with one or more pulpwood sticks. Leave all red and white pine, cedar, hemlock, cherry and oak. Specs: Next Step **Treatments:** Acceptable Mix of aspen, mixed hardwood, mixed softwood and pine.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

12153006-Cut 13.8 53 4130 - Aspen Poletimber 51-80 Clearcut with 4133 - Aspen, Even-Aged Proposal Harvest

Well

Retention Mixed Pine

Habitat Cut: No Site Condition:

Prescription Cut all aspen and mixed hardwood, except oak, 2" or greater DBH. Cut all spruce, balsam and jack pine with one or more pulpwood sticks.

Specs: Leave all red and white pine, cedar, hemlock, cherry and oak.

Next Step Treatments:

Acceptable Mix of aspen, mixed hardwood, mixed softwood and pine.

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

Compartment: 153 Year of Entry: 2017

Red Pine

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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
9	12153009-Cut	32.4	42110 - Planted Red Pine	Poletimber Well	59	111- 140	Harvest	Strip/Patch/Gap Cut (Femelschlag)	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription Cut all aspen, spruce, balsam, jack pine, paper birch and maple with one or more pulpwood sticks. Mark red pine to a BA of 120. Leave all oak

Specs: and white pine.

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

Treatments:

Acceptable A mix of aspen, mixed softwood and mixed hardwood.

Regen:

Scarify areas of spruce and jack pine and around open grown red and white pine. Old next step comments: Other

Comment:

Proposed Start Date: 10/1 /2016

63.6 42111 - Planted Poletimber 59 141-4211 - Planted Proposal 12153011-Cut Harvest Crown Thinning Even-Aged

Red Pine, Mixed Well 170

Deciduous

Habitat Cut: No Site Condition:

Prescription Cut all aspen, balsam, spruce, jack pine, paper birch and maple with one or more pulpwood sticks. Mark red pine to a BA of 120. Leave oak

Specs: and cherry.

Next Step **Treatments:**

Acceptable

Regen:

Other If stand is cut in the winter, snowmobile trail will have 4" snow cover and wood will not be decked or equipment parked within 50' of the trail. No

Comment: hauling on weekends. Old next step comments:

Proposed Start Date: 10/1 /2016

32 12153032-Cut 11.3 42320 - Upland Poletimber 51-80 Harvest Clearcut with 429 - Mixed Even-Aged Proposal Well Retention **Upland Conifers**

Spruce

Habitat Cut: No Site Condition:

Prescription Cut all aspen, paper birch and maple greater than 2" DBH. Cut all spruce, balsam, jack pine and tamarack with one or more pulpwood sticks.

No red or white pine, cedar, hemlock or oak will be cut. Specs:

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

Treatments:

Acceptable Mix of softwood and aspen.

Regen:

Other Scarify to promote softwood regeneration. 100 foot buffer for unnamed creek reflected in treatment boundary. Buffer will serve as retention and

Comment: black spruce seed source. Old next step comments:

Proposed Start Date: 10/1 /2016

12153033-Cut 42320 - Upland Poletimber 51-80 429 - Mixed 4.5 70 Harvest Clearcut with Even-Aged Approved Retention **Upland Conifers** Proposal

Well Spruce

Habitat Cut: No Site Condition: Prescription Cut all aspen, paper birch and maple greater than 2" DBH and all spruce, balsam, jack pine and tamarack with one or more pulpwood sticks. No

Specs: red or white pine, cedar, hemlock or oak will be cut.

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

Treatments:

Acceptable Mix of softwood and aspen.

Regen:

Other Scarify to promote softwood regeneration. Retention will be left in clumps of black spruce along C-type. Wildlife will hand plant white spruce

after stand has been scarified. Old next step comments: Comment:

Proposed Start Date: 10/1 /2016 Crystal Falls Mgt. Unit

Report 4 -- Treatments

Compartment: 153

Year of Entry: 2017

Upland Conifers

Red Pine

s t а

Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age **Approval** n Objective Name CoverType Density Age Range Type Method Structure **Status** d 12153034-Cut 4.1 429 - Mixed Upland Poletimber 70 81-110 Clearcut with 429 - Mixed 34 Harvest Even-Aged Proposal

Retention

Site Condition: Habitat Cut: No

Prescription Cut all aspen, paper birch and maple greater than 2" DBH. Cut all spruce, balsam, jack pine and tamarack with one or more pulpwood sticks. Specs:

No red or white pine, cedar, hemlock or oak will be cut.

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

Conifers

Treatments:

Acceptable Mix of softwood and aspen.

Regen:

Other Scarify to promote softwood regeneration. 100 foot buffer on unnamed creek is reflected in treatment boundary. Buffer will serve as retention

Comment: and seed source for spruce regeneration. Old next step comments:

Proposed Start Date: 10/1 /2016

36 12153036-Cut 24.8 4136 - Aspen, Poletimber 70 51-80 Harvest Clearcut with 4133 - Aspen. Even-Aged Proposal Retention Mixed Pine

Mixed Conifer Well

Habitat Cut: No Site Condition:

Prescription Cut all aspen, paper birch and maple greater than 2" DBH. Cut all spruce, balsam, tamarack and jack pine with one or more pulpwood sticks.

Mark red pine to a BA of 100. No white pine, cedar, hemlock or oak will be cut. Buffer stand 42. Specs:

Well

Next Step **Treatments:**

Acceptable Mix of aspen and mixed softwood.

Regen:

Winter cut per wildlife request. Protect ski trail. Only cross at right angle to trail. Trail specs to keep clean and rut free daily. Old next step Other

Comment:

Proposed Start Date: 10/1 /2016

12153040-Cut 42110 - Planted 4211 - Planted 32.2 Poletimber 59 141-Crown Thinning Even-Aged Proposal Harvest

Red Pine Well 170

Habitat Cut: No Site Condition:

Prescription Mark red pine to a BA of 120.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

Total Treatment Acreage Proposed:

221.0

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Scott Sebero : Examiner

Compartment: 153 Year of Entry: 2017

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres		Dominant Site Condition				
Acres	Available	With Condition	Not Available		5C	2G	3J		
261	261	0	0	Aspen		0			
13	13	0	0	Cedar					
101	100	0	0	Lowland Conifers		0			
35	35	0	0	Lowland Shrub					
43	43	0	0	Lowland Spruce/Fir		0			
7	7	0	0	Northern Hardwood					
204	196	8	0	Red Pine	8				
6	4	0	1	Upland Conifers			1		
49	49	0	0	Upland Mixed Forest					
13	13	0	0	Upland Shrub					
19	16	0	3	Upland Spruce/Fir			3		
11	11	0	0	Urban					
2	2	0	0	Water		0			
764	750	8	5	Total Forested Acres	8	1	5		
	98%	1%	1%	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	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	8	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	Unspecified	Unspecified	Unspecified	Unspecified
Comments: 100 foot buffer for unnamed stream.							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Scott Sebero : Examiner

Compartment: 153
Year of Entry: 2017

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	1	Unspecified	Unspecified	Unspecified	Unspecified
	omments: 00 foot buffer for u	unnamed stream.					

Mgt. Unit

Compartment: #Type! Year of Entry:



Report 6 - 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				

Mgt. Unit Compartment:
Year of Entry

Report 7 – 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.

Conservation Type Description
Area

ERA = Ecological Reference Area

HCVA = High Conservation Value Area

SCA = Special Conservation Area

S t	Crystal Falls Mgt. Unit			Report 8	- Forested	Stands Compartment: 153 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4311 - Pine, Aspen Mix	Sapling Well	43.6	16	1-50	Mix of aspen, jack pine and red pine saps with pockets of red pine log sized trees.
2	42110 - Planted Red Pine	Poletimber Well	13.2	59	141-170	A few white pine, jack pine and oak present in stand.
3	42110 - Planted Red Pine	Poletimber Well	10.8	59	141-170	A few white pine, jack pine and oak present in stand.
4	4130 - Aspen	Poletimber Well	10.1	53	51-80	Poor quality aspen. Pine site.
6	4130 - Aspen	Poletimber Well	13.8	53	51-80	Poor quality aspen. Pine site.
8	6120 - Lowland Cedar	Poletimber Well	4.4	95	51-80	
9	42110 - Planted Red Pine	Poletimber Well	32.4	59	111-140	
11	42111 - Planted Red Pine, Mixed Deciduous	Poletimber Well	63.6	59	141-170	
12	6122 - Black Spruce	Poletimber Well	20.7	70	Unspecified	
13	6122 - Black Spruce	Poletimber Poor	10.3	70	1-50	
14	6122 - Black Spruce	Poletimber Medium	8.2	70	51-80	
15	4311 - Pine, Aspen Mix	Sapling Well	5.6	16	1-50	
16	42110 - Planted Red Pine	Poletimber Well	14.6	59	81-110	
18	4134 - Aspen, Spruce/Fir	Poletimber Well	30.7	38	51-80	
19	4130 - Aspen	Sapling Well	7.1	7	Immature	
20	42210 - Natural Red Pine	Sawtimber Well	8.3	85	81-110	Red pine log stand with full stand of aspen and red maple stump sprouts from 2008 shelter wood cut.
21	4130 - Aspen	Sapling Well	24.6	7	Immature	
22	4130 - Aspen	Sapling Well	11.0	7	Immature	

S t	Crystal Falls	s Mgt. Unit		Report 8	 Forested Stand 	S Compartment: 153 Year of Entry: 2017
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	6122 - Black Spruce	Poletimber Well	3.5	90	51-80	
24	6120 - Lowland Cedar	Poletimber Well	8.6	70	81-110	
25	4130 - Aspen	Sapling Well	59.3	20	1-50	
27	4110 - Sugar Maple Association	Poletimber Well	6.8	70	81-110	
28	4130 - Aspen	Poletimber Well	36.1	42	81-110	
29	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	73.8	70	51-80	
30	6124 - Lowland Spruce- Fir	Poletimber Well	26.8	70	51-80	
32	42320 - Upland Spruce	Poletimber Well	14.5	70	51-80	
33	42320 - Upland Spruce	Poletimber Well	4.5	70	51-80	
34	429 - Mixed Upland Conifers	Poletimber Well	5.5	70	81-110	
35	42110 - Planted Red Pine	Poletimber Well	28.0	59	111-140	
36	4136 - Aspen, Mixed Conifer	Poletimber Well	24.8	70	51-80	
37	4134 - Aspen, Spruce/Fir	Poletimber Well	41.0	38	1-50	
39	4130 - Aspen	Sapling Well	2.9	17	1-50	
40	42110 - Planted Red Pine	Poletimber Well	32.2	59	141-170	
41	42210 - Natural Red Pine	Sawtimber Well	1.1	85	81-110	

Compartment: 153 Year of Entry: 2017



Stand	Cover Type	Acres	Managed Site	General Comments:
5	3209 - Upland Shrub (OI)	5.8	No	Pipeline
7	122 - Road/Parking Lot	5.0	No	M69
10	3209 - Upland Shrub (OI)	4.7	No	Natural opening with trees starting to move in from the edges.
17	622 - Lowland Shrub	11.9	No	Wet lowland area bordering small stream.
26	622 - Lowland Shrub	22.9	No	
31	122 - Road/Parking Lot	5.7	No	Lake Mary Road.
38	500 - Water	2.4	No	Glidden Lake
42	622 - Lowland Shrub	0.6	No	
43	320 - Upland Shrub	1.0	No	
44	320 - Upland Shrub	1.4	No	