



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 32

Entry Year 2016

Acreage: 3,975

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 07/25/2014

Stand Examiner: Deb Goupell

Legal Description:

T44N R27W Sec 27, 28, 33, 34 T43N R27W Sec 3-5, 9, 10

Identified Planning Goals:

This compartment is about two-thirds lowland. Aspen makes up most of the upland cover type with a mix of upland combinations comprising the rest of the uplands, including just over 200 acres of hardwood. 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 and selectively harvest on an alternating 20 year rotation.

Soil and topography:

The majority of the lowland is dominated by Carbondale and Cathro mucks and some peats. Rousseau and Zimmerman fine sands and Escanaba loamy fine sand, which are well drained soils found on level to rolling hills, dominate the uplands.

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

The compartment is contiguous State land with one private landowner within. State land adjoins the compartment on all sides except the far north/northeast. The area is heavily used by loggers, hunters, fishermen, campers, trappers, general recreationists.

Unique Natural Features:

West Branch of the Escanaba and North Branch of the Ford Rivers

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Protect water quality for all bodies of water, particularly the West Branch of the Escanaba River and the Ford River. Promote long lived conifer species along these waterbodies and use adequate buffer protection.

Wildlife Habitat Considerations:

Aspen harvest should provide age class diversity that is favorable for grouse, woodcock, deer, bear and numerous songbirds. Den and snag trees should be retained for both game and non-game species. Mesic conifers and lowland conifers should be retained and promoted whenever possible to provide diversity, and cover.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of peat and muck and medium-textured glacial till (drumlins). There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Formation and Precambrian Archean granite/gneiss subcrop below the glacial drift. There is not an economic use for these rocks, although the granite/gneiss has building stone potential. Abandoned iron mines are located approximately twelve miles to the northeast. A gravel pit is located in Section 5 and there is potential on the uplands. This Compartment was previously leased for metallic exploration and part of Sections 3 – 5 are currently leased. There is no economic oil and gas production in the UP.

Vehicle Access:

Buckler Road & Skelly Ranch Road are the primary access along the south third; additional access is via unimproved two-track roads. The north portion of the State land in this compartment is accessed via private property over a private bridge.

Survey Needs:

A couple interior corners for Section 3.

Recreational Facilities and Opportunities:

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

Fire Protection:

Felch protection area. Access to most upland stands is fair, access to some swamp types would be difficult.

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**

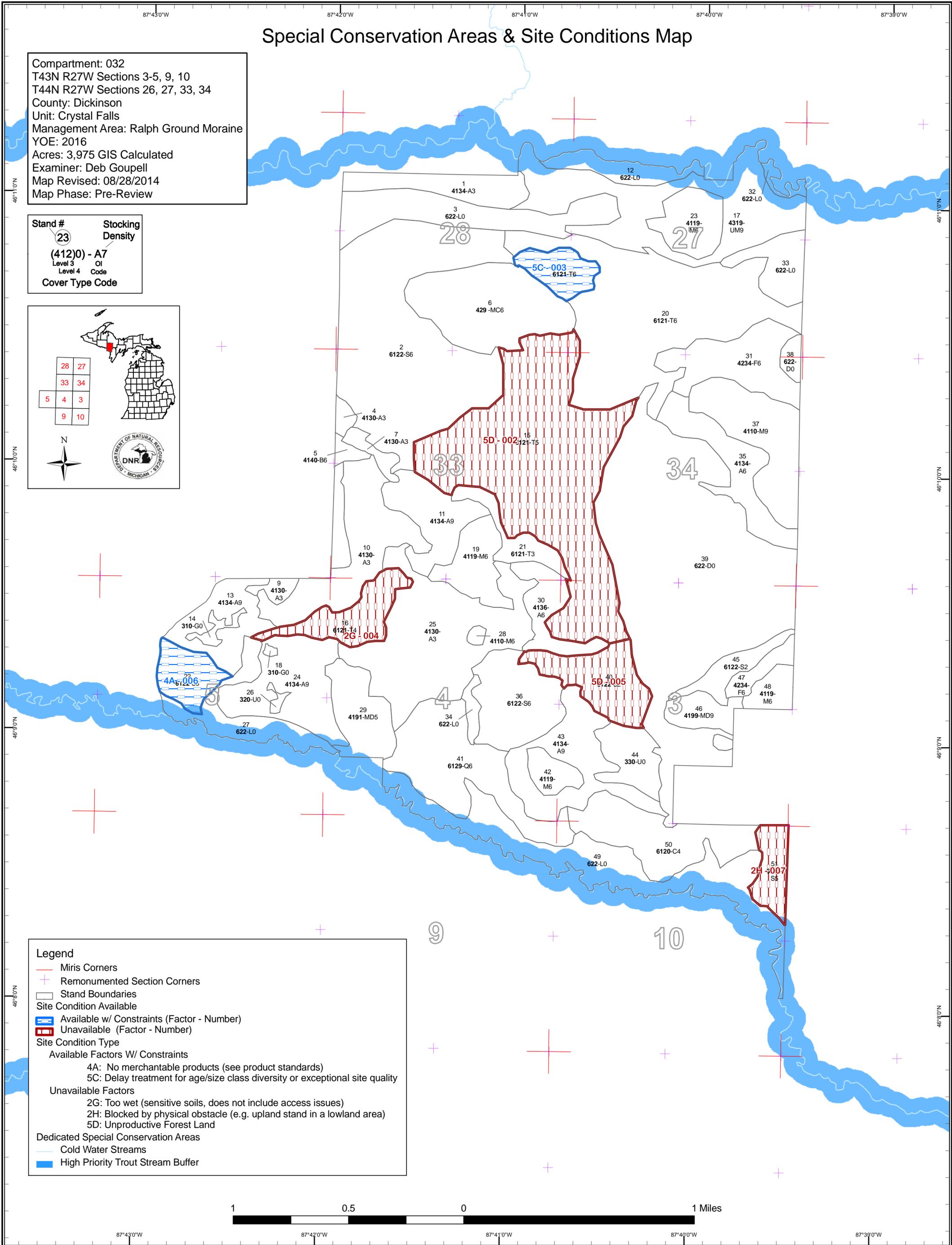
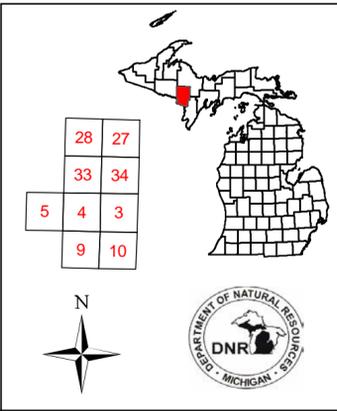
The following information is displayed, where pertinent, on the attached compartment maps:

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

Special Conservation Areas & Site Conditions Map

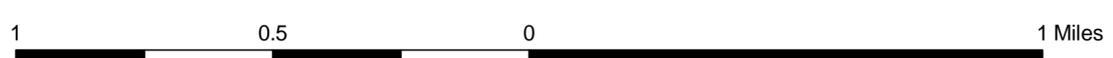
Compartment: 032
 T43N R27W Sections 3-5, 9, 10
 T44N R27W Sections 26, 27, 33, 34
 County: Dickinson
 Unit: Crystal Falls
 Management Area: Ralph Ground Moraine
 YOE: 2016
 Acres: 3,975 GIS Calculated
 Examiner: Deb Goupell
 Map Revised: 08/28/2014
 Map Phase: Pre-Review

Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



Legend

- Miris Corners
- ⊕ Remonumented Section Corners
- Stand Boundaries
- Site Condition Available
- ▨ Available w/ Constraints (Factor - Number)
- ▨ Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
 - 4A: No merchantable products (see product standards)
 - 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
 - 2G: Too wet (sensitive soils, does not include access issues)
 - 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
 - 5D: Unproductive Forest Land
- Dedicated Special Conservation Areas
 - Cold Water Streams
 - ▨ High Priority Trout Stream Buffer



87°43'0"W 87°42'0"W 87°41'0"W 87°40'0"W 87°39'0"W

Report 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	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 +		Uneven Age
Aspen	62	295	31	67	0	131	211	0	0	0	0	0	0	0	797
Cedar	0	0	0	0	0	0	0	0	0	0	94	0	0	0	94
Herbaceous Openland	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Low-Density Trees	40	0	0	0	0	0	0	0	0	0	0	0	0	0	40
Lowland Conifers	0	0	0	0	0	0	126	0	0	0	0	0	0	0	126
Lowland Shrub	390	0	0	0	0	0	0	0	0	0	0	0	0	0	390
Lowland Spruce/Fir	0	0	0	0	0	319	0	139	105	0	0	0	0	0	562
Mixed Upland Deciduous	0	0	0	0	55	0	29	0	0	0	0	0	0	0	84
Northern Hardwood	0	0	0	0	0	0	0	0	91	137	0	0	0	0	228
Paper Birch	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7
Tamarack	0	0	0	0	307	0	0	33	364	52	0	0	0	0	756
Treed Bog	488	0	0	0	0	0	0	0	0	0	0	0	0	0	488
Upland Conifers	0	0	0	0	126	0	0	0	0	0	0	0	0	0	126
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	0	167	0	0	0	167
Upland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Upland Spruce/Fir	0	0	0	79	17	0	0	0	0	0	0	0	0	0	96
Total	992	295	31	146	505	450	366	172	566	190	262	0	0	0	3975



Report 2 – Proposed Treatment Summaries

Crystal Falls Mgt. Unit
Year of Entry 2016

Compartment 032
Total Compartment Acres: 3,975

Acres by Treatment Type

Commercial Harvest - 476 Tree Planting - 0 Other - 0
 Habitat Cut - 0 Opening Maintenance - 12

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	342	0	0	0	0	0	342
Lowland Coniferous Forest	8	0	0	0	0	0	8
Mixed Upland Deciduous	0	29	0	0	0	0	29
Northern Hardwood	0	90	0	0	0	0	90
Other Upland Deciduous	7	0	0	0	0	0	7
Total	356	119	0	0	0	0	476



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	12032005-Cut	6.7	4140 - Other Upland Deciduous	High Density Pole	89	51-80	Harvest	Clearcut	4199 - Other Mixed Upland Deciduous	Cmpt. Review Proposal

Prescription Cut all species over 2" retaining any cedar or pine. No other retention due to small acreage and poor quality. Acceptable alternatives include
Specs: aspen, maple, spruce/fir, pine.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2015

11	12032011-Cut	61.3	4134 - Aspen, Spruce/Fir	High Density Log	67		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription Cut all species 2" dbh and greater except cedar (if found) and pine.
Specs:

Other White birch heavier in southwest corner and northwest edge.
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2015

13	12032013-Cut	57.3	4134 - Aspen, Spruce/Fir	High Density Log	63		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription Cut all stems 2" and greater except cedar, red and white pine. Retention will be on far west nearest beaver pond where conifer is thickest and
Specs: aspen is mixed in.

Other This stand has been filling in and therefore ages vary from 40 years on up.
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2015

19	12032019-Cut	46.3	4119 - Mixed Northern Hardwoods	High Density Pole	89	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
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Prescription Thin to 70 BA removing poorer formed trees and releasing crowns of crop trees. Leave some aspen for diversity. If opportunity presents, open up
Specs: around any sugar maple saplings (except the flat topped ones) above the deer.

Other Stand BA ranges from 80-120
Comments:

Next May want to consider some experimental work to control the ironwood in this stand.
Steps:

Proposed
Start Date: 10/01/2015

24	12032024-Cut	92.1	4134 - Aspen, Spruce/Fir	High Density Log	64		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription Cut all stems 2" and greater except cedar, red and white pine. 300 foot buffer to North Br. Ford R. except in far southeast, where Fisheries
Specs: approved 200 ft buffer.

Other There is a black spruce/white spruce pocket on west line center of stand between grass openings which will be cut. Dbh of aspen ranges from 9-
Comments: 14"

Next
Steps:

Proposed
Start Date: 10/01/2015



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28	12032028-Cut	3.4	4110 - Sugar Maple Association	High Density Pole	91	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal

Prescription Thin to BA 80. Heavy hazel understory; consider some sort of treatment for this if necessary.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2015

30	12032030-Cut	42.1	4136 - Aspen, Mixed Conifer	High Density Pole	58		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription Cut all stems 2" and greater except pine and cedar. Includes approximately 1 chain of black spruce on east edge where operable.

Specs:

Other

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2015

42	12032042-Cut	20.4	4119 - Mixed Northern Hardwoods	High Density Pole	90	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
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Prescription Thin to BA 70, opening up around sugar maple saplings where possible but focusing on releasing crowns of crop trees first. White birch should be removed as it is not holding well.

Specs:

Other Consider some experimental treatment to control ironwood.

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2015

43	12032043-Cut	89.1	4134 - Aspen, Spruce/Fir	High Density Log	59		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription Cut all stems 2"dbh and greater except red pine, white pine, cedar (no hemlock noted). Do not leave unmerchantable conifer as understory is too thick with it. In far north is a black spruce knob which is to be cut. Also in north is heavier to white birch: in this area west of the north/south road, leave a good representation of birch (green tree) particularly where sugar maple saplings are present.

Specs:

Other Far south of this stand is wetter and includes tamarack, black spruce, white spruce, balsam, etc.

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2015



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
46	12032046-Cut	29.3	4199 - Other Mixed Upland Deciduous	High Density Log	66		Harvest	Group Selection	4116 - Mixed N. Hardwood - Aspen	Cmpt. Review Proposal
<u>Prescription</u> Cut all aspen, birch, spruce and fir that is 2" and up. Red maple over 10" dbh will be cut. Center of this stand is more of a hardwood type but this removal should bring BA to 70-80. If additional light thinning is needed, mark additional trees. Sugar maple seed/saplings are present. Smaller portion of stand 46 (south piece) should be final harvested cutting all species 2" dbh and over except pine and cedar. No retention in south piece. Retention will be part of hardwood stand in center and a few leave tree aspen/birch for main stand 46. <u>Specs:</u> <u>Other</u> Smaller portion of stand 46 will need to be crossed by lowland unless private landowner agrees to cross his land. <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
48	12032048-Cut	19.9	4119 - Mixed Northern Hardwoods	High Density Pole	91	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal
<u>Prescription</u> Thin to BA 80 removing poorer formed trees and releasing crop tree crowns. Do not mark any pine, cedar or hemlock. Birch is not holding up well and should be marked heavily. <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2015										
14	NF_12032014- NonFor	7.4	310 - Herbaceous Openland				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
<u>Prescription</u> Opening Maintenance <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2016										
18	NF_12032018- NonFor	1.5	310 - Herbaceous Openland				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal
<u>Prescription</u> Opening Maintenance <u>Specs:</u> <u>Other</u> <u>Comments:</u> <u>Next</u> <u>Steps:</u> <u>Proposed</u> <u>Start Date:</u> 10/01/2016										



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
26 NF_12032026-NonFor	3.1	320 - Upland Shrub				Non-Forest Management	Other - Specify	310 - Herbaceous Openland	Cmpt. Review Proposal

Prescription Opening Maintenance
Specs:

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2016

**Total Treatment
Acreage Proposed: 479.8**

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22 12032022-Cut	7.7	6122 - Black Spruce	High Density Sapling	85		Harvest	Clearcut	6122 - Black Spruce	Cmpt. Review Proposal

Prescription Specs: Only northeast portion will be cut with stand 13 where spruce is merchantable. No cedar will be cut. No retention as only a minor acreage will be treated.

Other Comment:

Next Steps:

Proposed Start Date: 10/01/2015

Limiting Factor 4A: No merchantable products (see product standards)

Total Treatment Acreage Proposed: 7.7

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment 032

Year of Entry 2016

Availability for Management

Total Acres	Acres		Dominant Site Conditions	No	5D	5C	4A	2H	2G
	Available	Not Available							
797	797		Aspen	797					
94	94		Cedar	94					
126	126		Lowland Conifers	126					
562	464	98	Lowland Spruce/Fir	426	67		38	31	
84	84		Mixed Upland Deciduous	84					
228	228		Northern Hardwood	228					
7	7		Paper Birch	7					
756	340	416	Tamarack	307	364	33			52
126	126		Upland Conifers	126					
167	167		Upland Mixed Forest	167					
96	96		Upland Spruce/Fir	96					
3,044	2,530	514	Total Forested Acres	2,460	430	33	38	31	52
	83%	17%	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
002	Not Available	5D: Unproductive Forest Land	364	5C: Delay treatment for age/size class diversity or exceptional site quality			
Comments: Very poor growth, small diameters.							
003	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	33	2D: Portable Bridge Needed (Dept. bridge will be adequate)			
Comments: stand will be harvested with additional stands next entry							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment 032

Year of Entry 2016

004	Not Available	2G: Too wet (sensitive soils, does not include access issues)	52	5D: Unproductive Forest Land	4A: No merchantable products (see product standards)
Comments: This is a slowly filling in bog, trees are primarily unmerchantable					
005	Not Available	5D: Unproductive Forest Land	67	4A: No merchantable products (see product standards)	
Comments: Stand has been growing very slowly, has small diameter					
006	Available	4A: No merchantable products (see product standards)	38		
Comments: Average dbh of spruce is 4"					
007	Not Available	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	31		
Comments:					



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
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Comments



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.

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	General Comments:
1	4134 - Aspen, Spruce/Fir	High Density Sapling	49.8	5		Two Rivers TS; due to poor map, the narrow west finger was not cut.
2	6122 - Black Spruce	High Density Pole	318.7	55		1953 photos show the north half of this stand was cut; 1964 photos show the south half of stand cut. First 3 chains of stand edges are largest dbh
4	4130 - Aspen	High Density Sapling	6.8	20		Hilsinki TS cut in Comp 33
5	4140 - Other Upland Deciduous	High Density Pole	6.7	89	51-80	This is primarily birch/aspen, heavy ironwood component. Some sugar maple saplings along road. Manage as even age hardwood.
6	429 - Mixed Upland Conifers	High Density Pole	126.1	45	51-80	Pine and hemlock are primarily on the outer edges of this unique stand. Hardwood is very poor stem quality and should not be managed as a hardwood type. Cut all softwood except pine, cedar, hemlock and cut all hardwood stems greater than 10" on stump.
7	4130 - Aspen	High Density Sapling	11.8	5		Two Rivers Aspen TS 2008
8	6121 - Tamarack	High Density Pole	32.8	78		Stand is very variable volume-wise. Looks healthy
9	4130 - Aspen	High Density Sapling	24.5	20		Part of Bear in the Bush TS Comp 33
10	4130 - Aspen	High Density Sapling	108.0	14		Skelly Ranch Rd TS 1999
11	4134 - Aspen, Spruce/Fir	High Density Log	61.3	67		White birch heavy in the southwest corner and northwest edge
13	4134 - Aspen, Spruce/Fir	High Density Log	57.3	63		This stand has been filling in since 1929. Edges of opening, particularly on west, has aspen around 40 years old. Cut entire stand leaving retention on far west nearest beaver pond/creek where conifer is thickest. Will dip into spruce stand where spruce is merchantable.
15	6121 - Tamarack	Medium Density Pole	363.6	87		Low site index, slow growing. Black spruce dbh ranges from 1-4"
16	6121 - Tamarack	Low Density Pole	52.3	90		Very low site quality, slowly filling in
17	4319 - Mixed Upland Forest	High Density Log	167.5	103	81-110	300 foot buffer from W. Br. Escanaba River has birch 10-12" dbh, BF/WS 8" dbh with a heavy fir/spruce understory. Far east portion of this stand was cut in 2008 (Two Rivers TS), leaving all pine. Understory is red maple, aspen 1-2" dbh in this portion with little to no pine regeneration. Unmerchantable conifers were left in this far east portion.



Stand	Crystal Falls Mgt. Unit		Report 8 – Forested Stands			Compartment: 032 Year of Entry: 2016
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4119 - Mixed Northern Hardwoods	High Density Pole	46.3	89	111-140	Sugar maple 3-12" seedlings present. Some sugar maple saplings are flat topped. White birch not holding up well. Very thick ironwood/hazel on stand edges. Odd ground cover spp: lycopodium, hazel, leatherwood, SM seedlings, princess pine, twisted stalk. Average BA is 109 on 7 points
20	6121 - Tamarack	High Density Pole	277.2	49		1964 photos show the west half of this stand cut
21	6121 - Tamarack	High Density Sapling	29.9	49		Some cedar along south edge. Black spruce also more prominent along stand edges.
22	6122 - Black Spruce	High Density Sapling	37.8	85		Large cedar along north edge of stand with larger black spruce scattered in. Trees are SLOW growing. Will cut only small pocket of 6-7" dbh spruce in far northeast corner.
23	4119 - Mixed Northern Hardwoods	High Density Pole	44.7	85	81-110	Far south 2-3 chains of stand has nice advanced white pine/balsam regeneration 6-10 feet tall where much of aspen and birch have fallen out. Nice conifer component throughout stand 3-20 feet tall, mostly balsam and white pine. Rolling hills. Stand has potential.
24	4134 - Aspen, Spruce/Fir	High Density Log	92.1	64		aspen dbh ranges from 9-14". There is a black spruce/white spruce pocket on west line between grass openings.
25	4130 - Aspen	High Density Sapling	187.2	12		White pine and birch regen is heaviest along roads. Aspen dbh ranges from 1-5", 20-30' tall. Trace black spruce. Horned Owl TS cut 1991
28	4110 - Sugar Maple Association	High Density Pole	3.4	91	111-140	Heavy hazel understory; conifer component heavier on edges. Stand has potential but there is some top dieback. There is a trace of white birch and aspen.
29	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	55.1	45		This is a stand where what little "old" aspen is here will be left as it converts to red maple/white pine/balsam/sugar maple. Managing for understory. There are some overmature aspen/spruce along road, particularly south side. White pine is heaviest on edges and on the north.
30	4136 - Aspen, Mixed Conifer	High Density Pole	42.1	58		Ridge that runs east/west on far south of stand will be left for retention as it has the greatest mix of species. There will be a 1/2 chain to 3 chain of lowland black spruce that is merchantable just north of ridge on south.
31	42340 - Upland Spruce/Fir	High Density Pole	78.7	35		Dead Squirrel TS; cut all species over 5" dbh plus some marked pine. Aspen scattered in clones. Black spruce is heavier on far northwest. Trace of jack pine present.
35	4134 - Aspen, Spruce/Fir	High Density Pole	67.3	35		Dead Squirrel TS cut 1978. A couple eskil ridges on south are heavier to red pine or white pine overstory with a very heavy spruce/fir understory. Evidence that some pines were cut.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	6122 - Black Spruce	High Density Pole	81.4	77		Tamarack and spruce nearest road average 8" dbh as it is more upland. Red pine and white pine are along the road primarily as well.
37	4110 - Sugar Maple Association	High Density Log	93.7	91	81-110	Island Hardwood TS closed 2010. some sugar maple saplings and seedlings 1-3 feet tall. white pine is browsed. Trace amounts of white and yellow birch.
40	6122 - Black Spruce	Medium Density	66.8	87		1939 photos show cut; West finger tag alder swale
41	6129 - Mixed Coniferous Lowland Forest	High Density Pole	126.1	69		Almost 2 different stands: black spruce heavier on north, tamarack on south. Spruce and tamarack healthy, good shape. Stand is wetter as you go south. First 4 chains from road are almost upland spruce.
42	4119 - Mixed Northern Hardwoods	High Density Pole	20.4	90	111-140	Some sugar maple saplings, some SM seedlings 6"-12" tall. Lots of ironwood saplings.
43	4134 - Aspen, Spruce/Fir	High Density Log	89.1	59		Far east finger crossed by a tag/balm of gilead swale; white cedar more prominent on this finger. Some black spruce on stand edges and far north that is merchantable and included in this stand. Larger balsam fir is falling out. Also on north is heavier to white birch west side of north/south road. Consider removing aspen and some birch in this area to encourage sugar maple recruitment and to keep some northern hardwood component in this compartment. Far south piece of this stand includes some wetter black spruce/balm/tamarack
45	6122 - Black Spruce	Medium Density	26.5	76		
46	4199 - Other Mixed Upland Deciduous	High Density Log	29.3	66		Small south piece of this stand will need to be accessed across a wet swale unless private permits access through his land.
47	42340 - Upland Spruce/Fir	High Density Pole	17.1	47		
48	4119 - Mixed Northern Hardwoods	High Density Pole	19.9	91	111-140	This stand has a lot of potential. White birch heaviest in far north. Trace of balm of gilead and hemlock, which will be protected as well as pine. Very light sugar maple seedlings 6" tall.
50	6120 - Lowland Cedar	Low Density Pole	94.3	100		
51	6122 - Black Spruce	Medium Density Pole	31.2	79		



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	622 - Lowland Shrub	95.9	Unspecified	Unspecified	
12	622 - Lowland Shrub	31.8	Unspecified	Unspecified	
14	310 - Herbaceous Openland	7.4	Unspecified	Unspecified	
18	310 - Herbaceous Openland	1.5	Unspecified	Unspecified	
26	320 - Upland Shrub	3.1	Unspecified	Unspecified	
27	622 - Lowland Shrub	54.6	Unspecified	Unspecified	
32	622 - Lowland Shrub	6.8	Unspecified	Unspecified	
33	622 - Lowland Shrub	38.6	Unspecified	Unspecified	
34	622 - Lowland Shrub	8.7	Unspecified	Unspecified	
38	6224 - Treed Bog	9.0	Unspecified	Unspecified	
39	6224 - Treed Bog	479.1	Unspecified	Unspecified	
44	330 - Low-Density Trees	40.1	Unspecified	Unspecified	
49	622 - Lowland Shrub	153.5	Unspecified	Unspecified	