



Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12019

Entry Year 2017

Acreage: 2,517

County Dickinson

Management Area: Ralph Ground Moraine

Revision Date: 2015-08-06

Stand Examiner: Deb Goupell

Legal Description:

T44N R27W Sec 5-7

T44N R28W Sec1-3, 11, 12

Identified Planning Goals:

Manage all forested cover types on a sustainable yield. Develop an age class distribution within aspen cover type as directed by WUP management plan, prescribing for harvest by age 50. Encourage diversity and conifers where possible.

Soil and topography:

The majority of the soils are fine sandy loams with 6-18% slope. There is relatively little lowland areas in this compartment.

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

Entirely State owned land; some private ownership on the west side.

Unique Natural Features:

Archeological, Historical, and Cultural Features:

None noted

Special Management Designations or Considerations:

Cold water streams on far west end.

Watershed and Fisheries Considerations:

Wild West and Flat Rock Creeks are high quality trout streams and require 300 foot buffer. 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 is made up of relatively rich soils for the Ralph Ground Moraine Management Area. Much of the hardwood stands have a heavy oak component which is highly desirable by deer, bear, wild turkeys, and grouse. Thus, much of this area should be managed with acorn production in mind. Upland and lowland conifers that provide year round cover for many wildlife species is lacking in this compartment. Maintaining and enhancing the conifer component will provide cover and travel corridors from compartments to the south and north.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness (~10-100 feet). Archean granite/gneiss and the Cambrian Munising Formation subcrop below the glacial drift. There is not a current economic use for the granite/gneiss, although they have building/dimension stone potential. Abandoned iron mines of the Marquette Iron District are located more than ten miles to the northeast. There is an active gravel pit in Section 26 (T44N R28W, NM Lease 297) approximately three miles to the southwest, and there appears to be some gravel potential. Much of the compartment was previously leased (as recently as 2003) for metallic mineral exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Simpson Road (poor dirt road) and Tower Road (county gravel road) are the primary arteries of this compartment. Various two-track roads and trails cut through the interior.

Survey Needs:

A few in Section 3

Recreational Facilities and Opportunities:

No facilities within the compartment; snowmobile trail is located a half mile southeast of the compartment boundary. This area heavily used by hunters, trappers, ATV riders, fishermen.

Fire Protection:**Additional Compartment Information:**

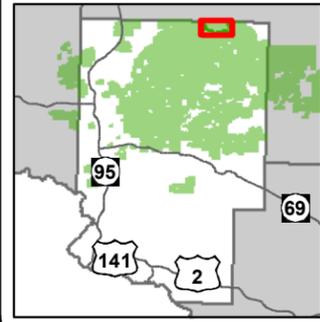
The following reports from the Inventory are attached:

- 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:

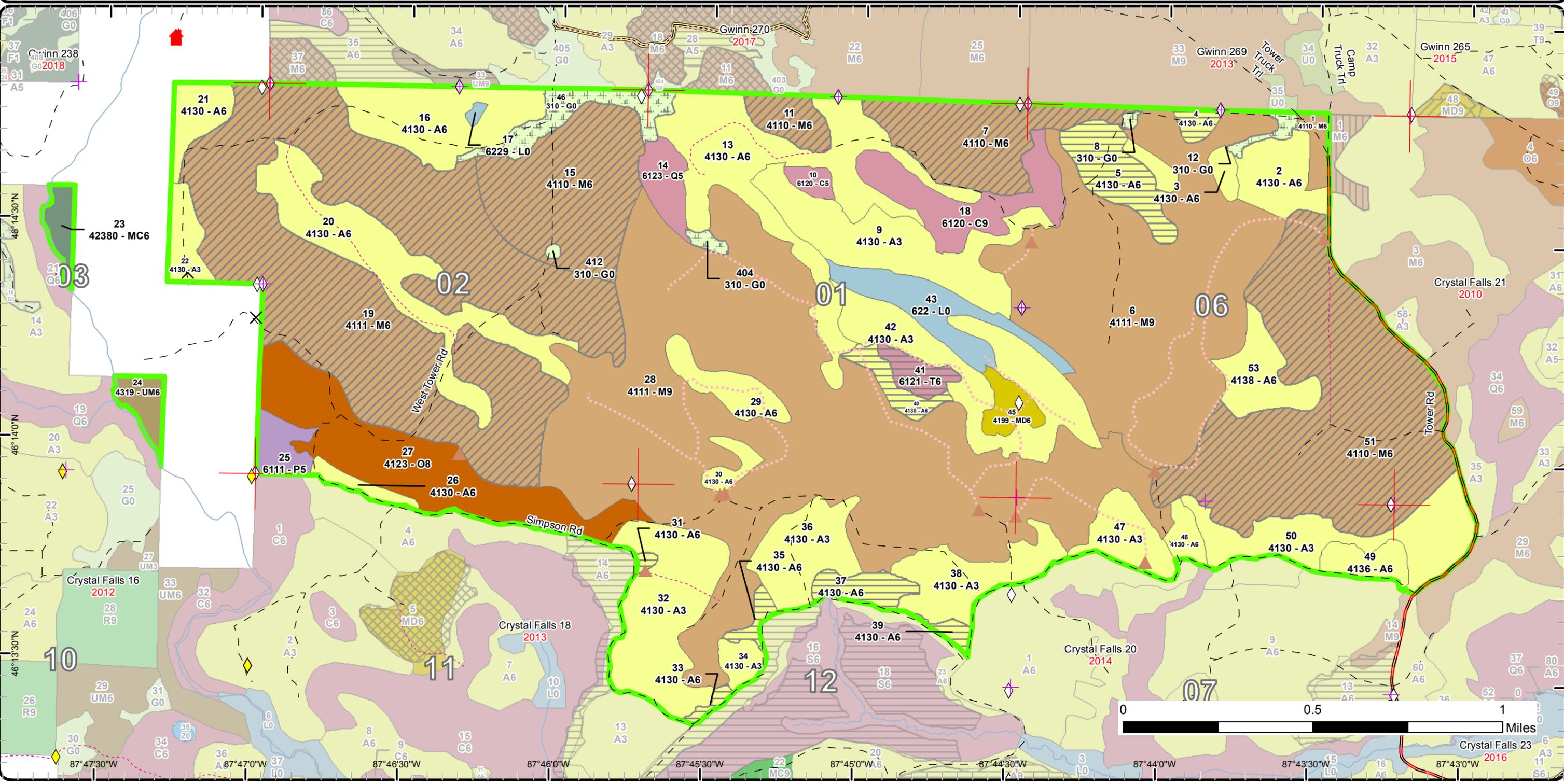
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments



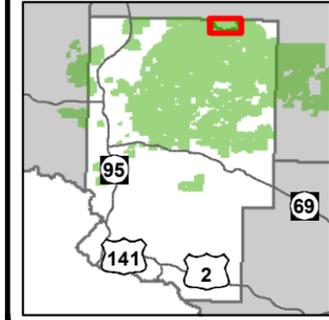
Compartment: 19
 T44N R28W 01-03,11,12
 T44N R27W 05-08
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Ralph Ground Moraine
 YOE: 2017
 Acres: 2517 GIS Calculated
 Examiner: Deb Goupell
 Map Revised: 8/27/2015
 Map Phase: Pre-Review

- ✚ Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- Miris Corners
- County Gravel Roads
- - Poor Dirt Roads
- Trail (Non-Recreation)
- ⋯ Closed Roads
- ✕ Gate
- ▲ Berms
- Rivers
- Lakes
- ▭ Clearcut (w/Reserves)
- ▭ Other Treatment - See Comments
- ▨ Thinning (Crown, Low, Systematic)
- ▭ Forest Covertype
 - 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen
 - 419 - Mixed Upland Deciduous
 - 423 - Other Upland Conifers
- ▭ Non-Forest Covertype
 - 310 - Herbaceous Openland
 - 622 - Lowland Shrub
- ▭ 430 - Upland Mixed Forests
- ▭ 611 - Lowland Deciduous Forest
- ▭ 612 - Lowland Coniferous Forest

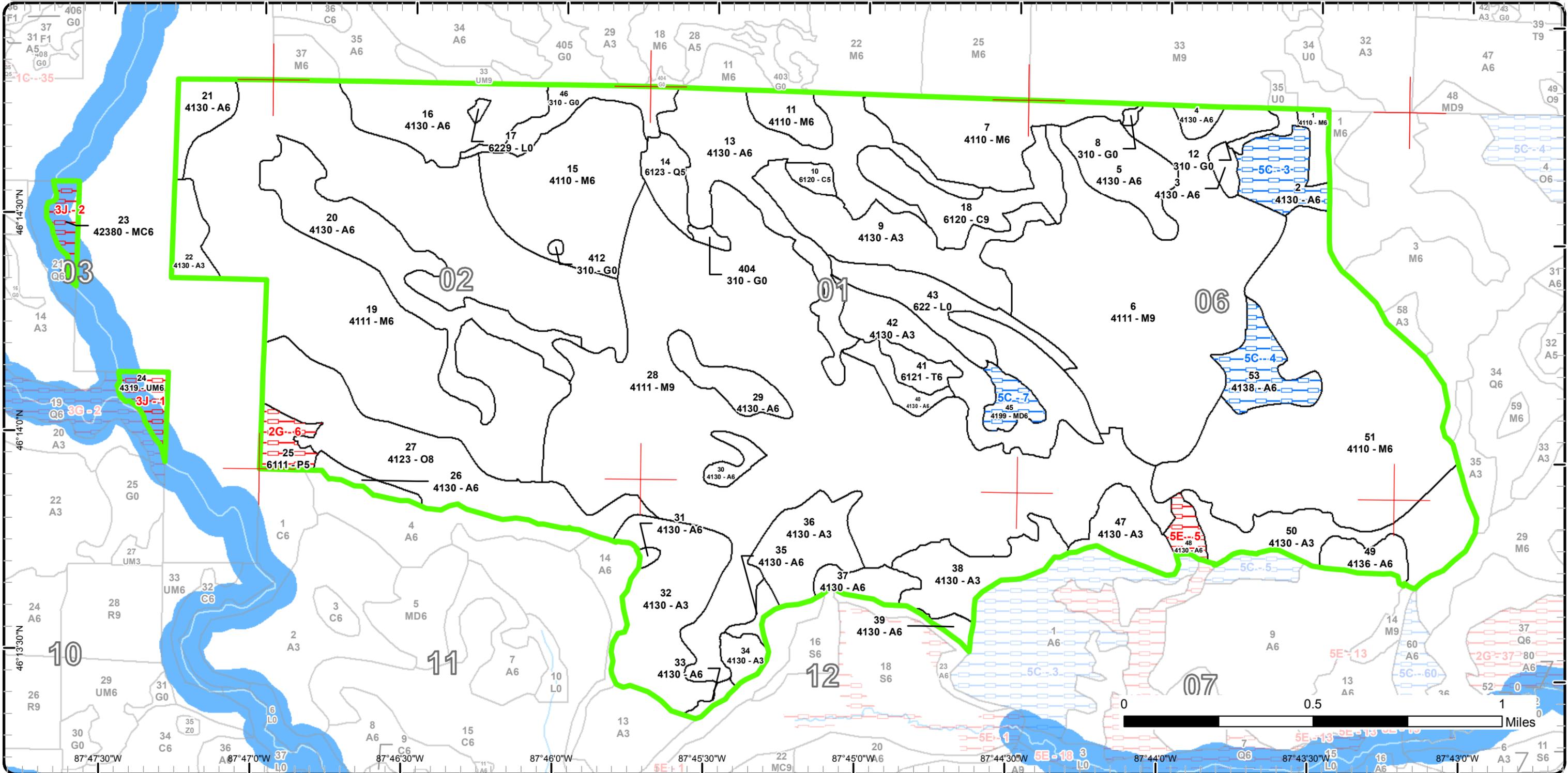


Special Conservation Areas & Site Conditions Map

Compartment: 19
 T44N R28W 01-03,11,12
 T44N R27W 05-08
 County: Dickinson
 Unit: Crystal Falls
 Mgmt Area: Ralph Ground Moraine
 YOE: 2017
 Acres: 2517 GIS Calculated
 Examiner: Deb Goupell
 Map Revised: 8/26/2015
 Map Phase: Pre-Review



- Miris Corners
- Stand Boundaries
- Site Condition
- Available w/ Constraints
- Unavailable
- Available Factors W/ Constraints
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
- 2G: Too wet (sensitive soils, does not include access issues)
- 3J: Water quality / BMPs (stream, river, or lake)
- 5E: Long-Term Retention Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



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	54	22	285	103	232	73	0	8	0	0	0	0	0	0	0	0	0	777
Cedar	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	0	45
Herbaceous Openland	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	12
Lowland Conifers	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Lowland Shrub	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	11
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	1462	0	0	0	0	0	0	8	1470
Oak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93	93
Tamarack	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10
Upland Conifers	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	9
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10
Total	63	54	22	285	118	232	73	0	8	41	1518	0	0	0	0	0	0	101	2515



Report 2 – Treatment Summary

Crystal Falls Mgt. Unit
Year of Entry: 2017

Acres of Harvest

Compartment 19
Total Compartment Acres: 2,517

Commercial Harvest - 813
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	69	0	0	0	0	0	0	0	0	69
Northern Hardwood	0	0	0	0	0	734	0	0	0	734
Tamarack	10	0	0	0	0	0	0	0	0	10
Total	79	0	0	0	0	734	0	0	0	813

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	813	0	0	0	0	0	0	29	0	842
Next Step	0	0	0	0	0	0	79	0	0	79
Total	813	0	0	0	0	0	79	0	29	921



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	12019004-Cut	5.1	4130 - Aspen	Poletimber Well	50	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" & greater. Retention will be around water ponded on north side of road.

Specs:

Next Step

Treatments:

Acceptable balm of gilead, balsam, spruce, ash, maple.

Regen:

Other Road needs a larger culvert or unplugging. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

5	12019005-Cut	27.9	4130 - Aspen	Poletimber Well	50	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Draft Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" and up except oak and cedar. Retention on east side of stand south of road (ash swale) & vernal pond on west boundary.

Specs:

Next Step

Treatments:

Acceptable balsam, spruce, aspen, maple.

Regen:

Other Road needs a larger culvert. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

7	12019007-Cut	59.5	4110 - Sugar Maple Association	Poletimber Well	95	111- 140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin to BA 80 favoring crowns of crop trees and minor species. Try to open up around oak for regenerating.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

8	12019008-NF	1.2	310 - Herbaceous Openland	Nonstocked	0	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Approved Proposal
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Habitat Cut: Yes**Site Condition:**

Prescription Open condition maintained by burning or mechanical treatment.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



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
11	12019011-Cut	15.0	4110 - Sugar Maple Association	Poletimber Well	95	111- 140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Thin to BA 80 focusing on basswood clump removal. Some sugar maple saplings on far east of stand should be released. Open around oaks &
Specs: encourage scarification.

Next Step
Treatments:

Acceptable
Regen:

Other Very heavy ironwood understory. Basswood clumps are not holding up well. Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

12	12019012-NF	4.0	310 - Herbaceous Openland	Nonstocked	0	Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Approved Proposal
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Habitat Cut: Yes**Site Condition:**

Prescription Open condition maintained by burning or mechanical treatment.
Specs:

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

15	12019015-Cut	88.1	4110 - Sugar Maple Association	Poletimber Well	92	111- 140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin to BA 80 favoring the crown release of crop trees. Minor species should be favored for retention. Do not mark oak in this stand as there isn't
Specs: much of it. Clearcut aspen portion on far north.

Next Step
Treatments:

Acceptable
Regen:

Other Many large rocks on surface. South 2/3 of stand is best quality on hill. Stand has an old DNR fire tower site that should be protected. Old next
Comment: step comments:

Proposed Start Date: 10/1 /2016

19	12019019-Cut	351.7	4111 - S.Maple, Hard Mast Association	Poletimber Well	92	111- 140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Even-Aged	Draft Proposal
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Habitat Cut: No**Site Condition:**

Prescription Thin to BA 80, favoring minor species for retention. Release crowns of crop tree potential and remove poorly formed, low quality stems. Leave all
Specs: pockets of conifer particularly on the north edge of stand.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016



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
31	12019031-Cut	1.4	4130 - Aspen	Poletimber Well	49	Unspec ified	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except oak, red & white pine. No other retention due to stand size.

Specs:

Next Step

Treatments:

Acceptable aspen, mixed hardwood, spruce, fir

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

33	12019033-Cut	2.9	4130 - Aspen	Poletimber Well	49	Unspec ified	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except oak, red pine, white pine. No retention due to stand size.

Specs:

Next Step

Treatments:

Acceptable aspen, mixed hardwood, spruce, fir, pine

Regen:

Other Green up adjacency issues will need monitoring. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

35	12019035-Cut	5.0	4130 - Aspen	Poletimber Well	49	Unspec ified	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except red oak, red pine, white pine (if found). No other retention due to stand size.

Specs:

Next Step

Treatments:

Acceptable aspen, mixed hardwood, spruce, fir

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

37	12019037-Cut	12.7	4130 - Aspen	Poletimber Well	49	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and up except oak, red pine, white pine. Retention will be on far west near seep/cedar.

Specs:

Next Step

Treatments:

Acceptable aspen, mixed hardwood, spruce, fir, pine

Regen:

Other white spruce is falling out due to SBW. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



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	12019039-Cut	3.8	4130 - Aspen	Poletimber Well	49	Unspec ified	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except oak, red pine, white pine. No retention due to stand size.

Specs:

Next Step

Treatments:

Acceptable aspen, mixed hardwood, oak, pine, spruce, fir

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

40	12019040-Cut	10.2	4130 - Aspen	Poletimber Well	55	Unspec ified	Harvest	Clearcut	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh & greater except red oak. Will leave good quality sugar maple 12" dbh and up as well. There is some good sugar maple

Specs: seedling/sapling counts.

Next Step

Treatments:

Acceptable aspen, mixed hardwood, spruce, fir

Regen:

Other South & east has younger aspen 4-7" dbh, west is older. Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

41	12019041-Cut	10.1	6121 - Tamarack	Poletimber Well	85	Unspec ified	Harvest	Clearcut	6121 - Tamarack	Even-Aged	Proposal
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Habitat Cut: No**Site Condition:**

Prescription Cut all stems 2" dbh and greater except cedar. No retention. Cut on frozen or dry summer ground.

Specs:

Next Step

Treatments:

Acceptable spruce, fir, birch, maple, aspen

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016

46	12019046-NF	21.1	310 - Herbaceous Openland	Nonstocked		Unspec ified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Approved Proposal
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Habitat Cut: Yes**Site Condition:**

Prescription Open condition maintained by burning or mechanical treatment.

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other Old next step comments:

Comment:

Proposed Start Date: 10/1 /2016



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
51	12019051-Cut	219.4	4110 - Sugar Maple Association	Poletimber Well	95	111-140	Harvest	Crown Thinning	4110 - Sugar Maple Association	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Thin to BA 80 favoring crown release of crop trees, minor species and avoid wet areas. Focus on removing/thinning basswood clumps as opportunity avails.

Next Step
Treatments:

Acceptable
Regen:

Other Small wet conifer/swale in south central lobe should be avoided. Lower BAs and heavier ironwood saps nearer Tower Rd. Old next step comments:

Proposed Start Date: 10/1 /2016

404	12019404-NF	2.6	310 - Herbaceous Openland	Nonstocked		Unspecified	NonForestMgt	Other - Specify	310 - Herbaceous Openland		Approved Proposal
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Habitat Cut: Yes **Site Condition:**

Prescription Open condition maintained by burning or mechanical treatment.

Next Step
Treatments:

Acceptable
Regen:

Other Old next step comments:
Comment:

Proposed Start Date: 10/1 /2016

Total Treatment Acreage Proposed: 841.9

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 19

Year of Entry: 2017

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5C	2G	3J	5E
		With Condition	Not Available					
778	719	51	8	Aspen	51			8
45	45	0	0	Cedar				
30	30	0	0	Herbaceous Openland				
12	0	0	12	Lowland Aspen/Balsam Poplar		12		
15	15	0	0	Lowland Conifers				
33	33	0	0	Lowland Shrub				
11	0	11	0	Mixed Upland Deciduous	11			
1470	1470	0	0	Northern Hardwood				
93	93	0	0	Oak				
10	10	0	0	Tamarack				
9	0	0	9	Upland Conifers			9	
10	0	0	10	Upland Mixed Forest			10	
2,517	2,415	61	40	Total Forested Acres	61	12	20	8
	96%	2%	2%	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)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	9	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							

Report 5 – Site Conditions

Crystal Falls Mgt. Unit

Deb Goupell : Examiner

Compartment: 19

Year of Entry: 2017

3	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments: will be cut next entry with adjacent stand on west							
4	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	25	5B: Maintain for regeneration purposes	Unspecified	Unspecified	Unspecified
Comments: Heavy sugar maple understory and aspen is not overly stocked.							
5	Unavailable	5E: Long-Term Retention	8	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments: there is a bed and bank that cuts this stand in half							
7	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments: This stand should be classified as a northern hardwood stand vs mixed deciduous; it was thinned last entry with Split Sale. It is a dominant oak/sugar maple stand.							

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				



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	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	4110 - Sugar Maple Association	Poletimber Well	7.6	95	81-110	THE OAKS TS CUT 2010
2	4130 - Aspen	Poletimber Well	24.9	48	Unspecified	Not best stocked aspen site. Will hold til next entry and can cut with adjacent stand on west.
3	4130 - Aspen	Poletimber Well	5.0	40	Unspecified	
4	4130 - Aspen	Poletimber Well	5.1	50	Unspecified	Swale of black ash/water ponded on north side of road. Either needs a culvert or culvert needs unplugging. Oak will be retained.
5	4130 - Aspen	Poletimber Well	32.8	50	Unspecified	Some wet swales/vernal ponds in here to protect. Road needs larger culvert. Cut all 2" and up; retention will be ash swale on east side of stand south of main road (there's more sapling recruitment) plus vernal pond on west boundary. Leave all oak.
6	4111 - S.Maple, Hard Mast Association	Sawtimber Well	249.3	95	81-110	THE OAKS TSALE CUT 2010
7	4110 - Sugar Maple Association	Poletimber Well	59.5	95	111-140	Tower Basswood cut 2000. Some sugar maple and white ash saplings >5'. Fewer oak.
9	4130 - Aspen	Sapling Well	61.6	24	Immature	Tower Rd Walking Trail cut 1991
10	6120 - Lowland Cedar	Poletimber Medium	5.3	95	Unspecified	
11	4110 - Sugar Maple Association	Poletimber Well	15.0	95	111-140	Tower Basswood cut 2000. Many basswood clumps, most of which are not holding up well (bumps, swells). Some sugar maple saplings >10' along east edge.
13	4130 - Aspen	Poletimber Well	96.3	39	Unspecified	County Line TS cut 1976
14	6123 - Lowland Fir	Poletimber Medium	14.7	36	Unspecified	Conifer is thick, dbhs range from 1-7" with a couple 12" white spruce. Water table very near to the surface. Little merchantable wood at this time.
15	4110 - Sugar Maple Association	Poletimber Well	88.1	92	111-140	many large rocks scattered in stand, on topsoil. South 2/3 of stand is best quality and potential (on hillside). North edge is heavier to aspen.
16	4130 - Aspen	Poletimber Well	50.8	45	Unspecified	Aspen ranges from 7-14" dbh
18	6120 - Lowland Cedar	Sawtimber Well	40.0	98	Unspecified	Heavy to tag alder especially on south edge of stand. Most tamarack in far southwest. Not prescribing because I feel pecking through this stand will compromise its cover integrity in an area where decent conifer cover is scarce. Heavier to black ash where stand crosses road.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4111 - S.Maple, Hard Mast Association	Poletimber Well	351.7	92	111-140	Thinned in 2004. BAs range from 100-150. Quite a variable stand.
20	4130 - Aspen	Poletimber Well	72.0	40	Unspecified	OPIC - FMD: OI Stand Year Origin was 1975
21	4130 - Aspen	Poletimber Well	15.6	40	Unspecified	BF & WS show new (as of this year) SBW on leaders in understory.
22	4130 - Aspen	Sapling Well	13.8	27	Immature	West Tower TS cut 1987
23	42380 - Non Pine Upland Conifer, Mixed Deciduous	Poletimber Well	9.4	84	81-110	Most of this stand is within 300' of prime trout waters.
24	4319 - Mixed Upland Forest	Poletimber Well	10.4	85	81-110	Stand is within 300' of prime trout water.
25	6111 - Lowland Balsam Poplar	Poletimber Medium	12.5	86	Unspecified	Much of interior of stand is dead; drainage south central of stand. Larger spruce and balm are standing dead. Buffering this bed/bank preclude much of the stand.
26	4130 - Aspen	Poletimber Well	7.0	31	Immature	understory/submerchantable fir/spruce hit harder by SBW
27	4123 - Red Oak	Sawtimber Medium	93.2	95	81-110	Sugar maple seedlings are browsed, stump sprouting as well. Almost no red oak seed recruitment where red oak BA is higher.
28	4111 - S.Maple, Hard Mast Association	Sawtimber Well	478.8	95	81-110	Split Sale cut 2008-2010
29	4130 - Aspen	Poletimber Well	18.0	40	Unspecified	
30	4130 - Aspen	Poletimber Well	6.9	40	Unspecified	
31	4130 - Aspen	Poletimber Well	1.4	49	Unspecified	
32	4130 - Aspen	Sapling Well	66.0	24	Immature	Tower Rd Walking Trail TS cut 1991. Most of the conifer is along road; SBW has been here 1-2 years but no mortality on younger trees.
33	4130 - Aspen	Poletimber Well	2.9	49	Unspecified	
34	4130 - Aspen	Sapling Well	8.0	24	Immature	Tower Road Walking Trail TS cut 1991; Oak regenerating along with the Aspen.
35	4130 - Aspen	Poletimber Well	5.0	49	Unspecified	



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	4130 - Aspen	Sapling Well	34.8	24	Immature	Oak regenerating along with the Aspen. Tower Rd Walking Trail cut 1991. Some oak and white pine regeneration; not much conifer in this stand.
37	4130 - Aspen	Poletimber Well	12.7	49	Unspecified	Larger WS is falling out due to SBW. Cedar on far west near seep will be retention for this stand.
38	4130 - Aspen	Sapling Well	36.0	24	Immature	Tower Rd Walking Trail TS cut 1991
39	4130 - Aspen	Poletimber Well	3.8	49	Unspecified	Spruce is getting hit by SBW
40	4130 - Aspen	Poletimber Well	10.2	55	Unspecified	South & east of stand has younger aspen 4-7" dbh. West is older. Good sugar maple seedling/sapling count. Propose to cut everything 4" and up except red oak plus leave all sugar maple 12" dbh and up.
41	6121 - Tamarack	Poletimber Well	10.1	85	Unspecified	Tamarack dbh ranges from 7-11". Edges of stand is where most of red maple/aspen/cedar are. Will leave all cedar, no other retention due to stand size.
42	4130 - Aspen	Sapling Well	64.8	24	Immature	Tower Rd Walking Trail cut 1991
45	4199 - Other Mixed Upland Deciduous	Poletimber Well	10.7	95	81-110	Split Sale cut 2008-2010
47	4130 - Aspen	Sapling Well	21.8	16	Immature	Walking Trail TS cut 1999
48	4130 - Aspen	Poletimber Well	7.7	75	Unspecified	Intermittent drainage with bed/bank through this stand. Most of this stand is retention/buffers from previous harvests.
49	4136 - Aspen, Mixed Conifer	Poletimber Well	12.9	43	Unspecified	Larger WS affected harder by SBW, no mortality yet
50	4130 - Aspen	Sapling Well	54.1	6	Immature	Febrile Aspen TS cut 2009
51	4110 - Sugar Maple Association	Poletimber Well	219.4	95	111-140	ONeill TS cut 1991-92. Lower BAs, heavier ironwood saplings along Tower Rd. Lots of basswood clumps. There is a wet conifer/ash swale in southwest lobe of this stand to protect.
53	4138 - Aspen (OI)	Poletimber Well	25.3	50	81-110	OPIC - FMD: OI Stand Year Origin was 1965



Stand	Cover Type	Acres	Managed Site	General Comments:
8	310 - Herbaceous Openland	1.2	No	OPIC - FMD: Leave the Oak, Hemlock, Cedar, Red Pine and White Pine. Mark out drainages and wet areas/vernal ponds. THE OAKS TSALE CUT 2010ISH CLOSED 2011
12	310 - Herbaceous Openland	4.0	No	OPIC - FMD: Leave the Oak, Hemlock, Cedar, Red Pine and White Pine. Mark out drainages and wet areas/vernal ponds. THE OAKS TSALE CUT 2010ISH CLOSED 2011
17	6229 - Mixed lowland shrub	1.3	No	
43	622 - Lowland Shrub	32.1	No	OPIC - FMD: OI Stand Year Origin was
46	310 - Herbaceous Openland	21.1	No	
404	310 - Herbaceous Openland	2.6	No	OPIC - FMD: Site Index is from previous OI data.
412	310 - Herbaceous Openland	0.8	No	Old fire tower site