

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12155
Entry Year 2018
Acreage: 838
County Iron

Management Area: Ralph Ground Moraine

Revision Date: 2016-08-20

Stand Examiner: Andrew Church

Legal Description:

T42N-R31W SECTION 3 & 4.

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Protect riparian areas during management activity implementing Best Management Practices guidelines. Respond to Forest Health risks accordingly.

Soil and topography:

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

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

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

Unique Natural Features:

Erickson lake, and the Michigamme River.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

Iron - Foodwood Deer Wintering Complex.

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

This compartment is in the Ralph Ground Moraine Management Area which has the following featured species: American woodcock, black bear, northern goshawk, ruffed grouse, and white-tailed deer. This compartment is now part of the Iron-Floodwood Deer Wintering Complex. Deer use lowland conifer and natural pine stands for winter cover. Management of uplands for winter and summer deer use is important. Balancing the age classes of aspen to provide early successional habitat through mature aspen forest is a goal in this compartment. Lowland conifers and lowland hardwood types provide winter and summer cover and are essential for travel corridors for a many species of wildlife, particularly bears, and provide essential habitat for riparian species. Mesic conifer in the uplands is promoted to provide structural diversity within stands which increases habitat value, as cover for wildlife. Mast production, such as oak, cherry and raspberry are encouraged to provide valuable forage for bear, deer, grouse and turkey. This compartment has a couple large maintained openings that provide herbaceous spring and summer forage particularly important for deer and other wildlife, and provide recreational opportunities for consumptive and non-consumptive wildlife users.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial 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. Abandoned iron mines are located four miles to the northwest. This Compartment was previously leased for metallic exploration and potential may still exist. The nearest gravel pit is several miles away, but there may be some potential. There is no economic oil and gas production in the UP.

Vehicle Access:

From Camp 5 Road by woods roads. Access to entire compartment is excellent.

Survey Needs:

None

Recreational Facilities and Opportunities:

Snowmobiling, hunting, fishing, camping.

Fire Protection:

Fire response will be from the Crystal Falls DNR station.

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

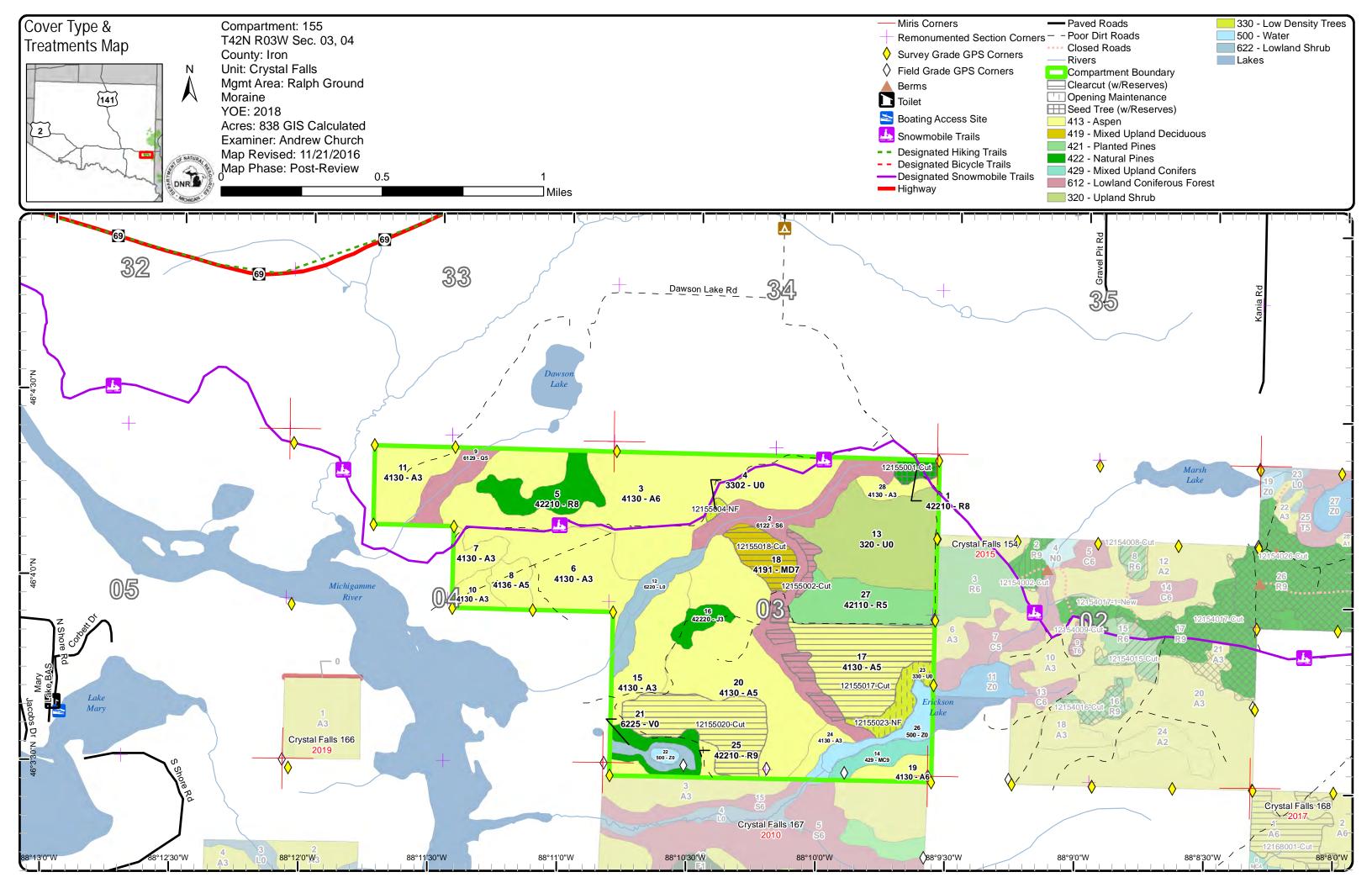
The following information is displayed, where pertinent, on the attached compartment maps:

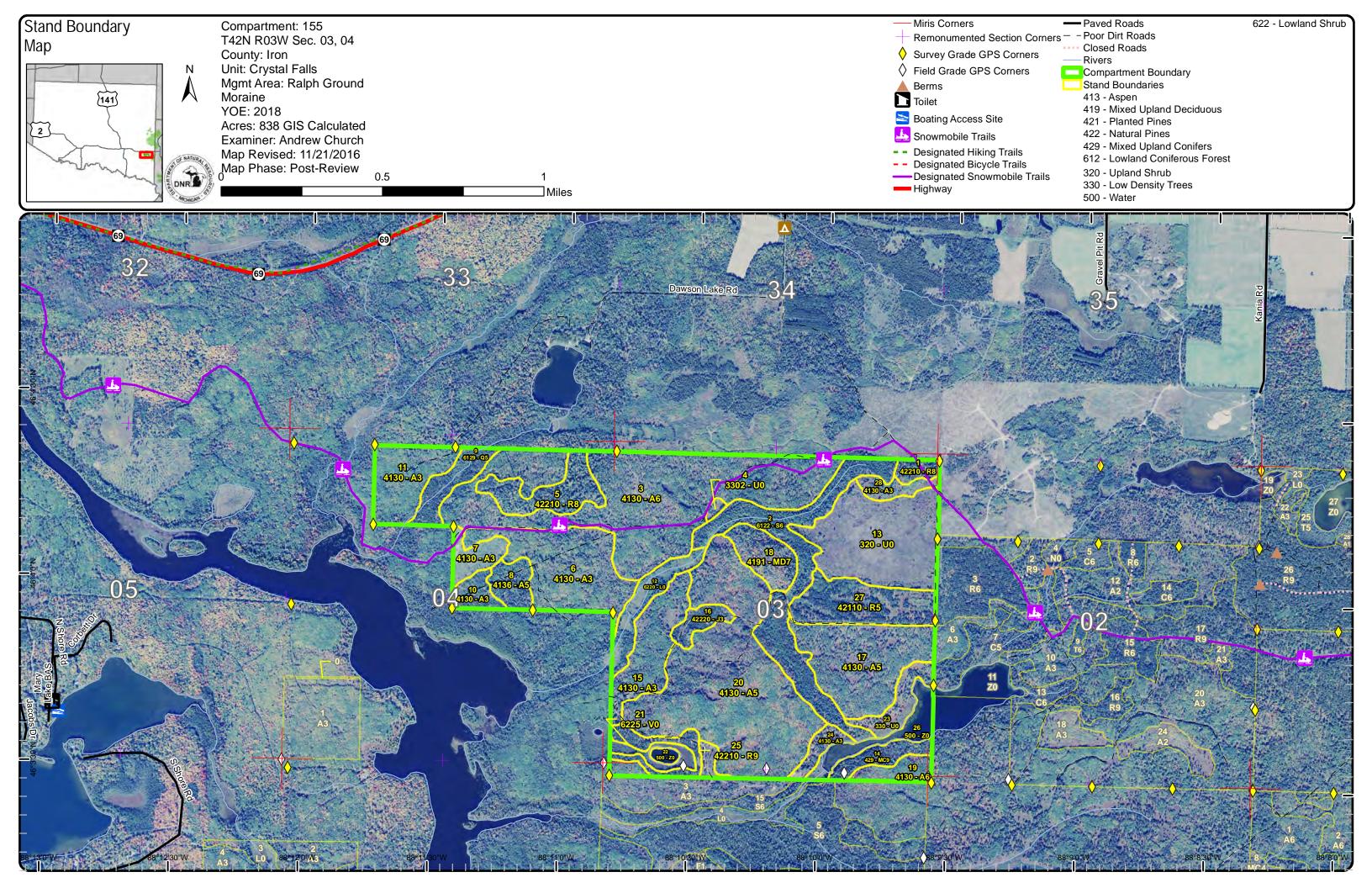
Base feature information, stand boundaries, cover types, and numbers

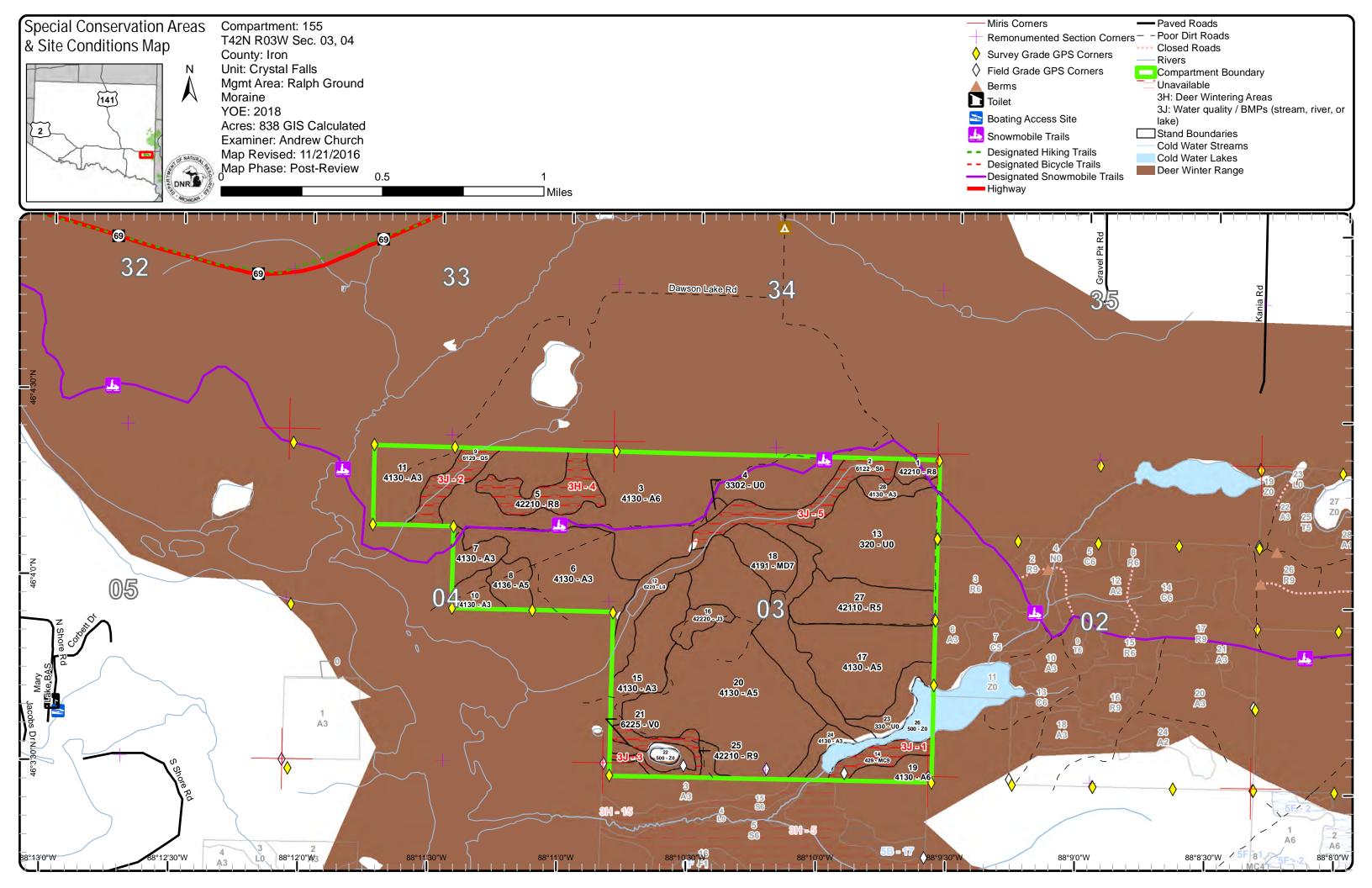
Proposed treatments

Site condition boundaries

Details on the road access system







Compartment 155 Year of Entry 2018

Crystal Falls Mgt. Unit
Andrew Church : Examiner



Age Class

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Aspen	0	33	0	123	356	11	0	0	0	0	0	0	0	0	0	0	0	0	523
Bog	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Jack Pine	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Low-Density Trees	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Lowland Conifers	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	15
Lowland Shrub	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	62	0	0	0	0	0	0	0	62
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17
Red Pine	0	0	0	0	0	0	35	0	0	0	41	0	0	0	0	0	0	0	76
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11
Upland Shrub	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Water	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Total	126	33	8	123	356	11	35	0	15	0	103	0	0	0	0	0	0	28	837



Report 2 – Treatment Summary

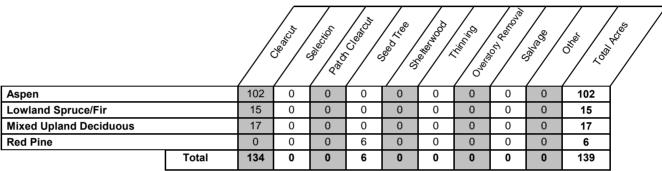
Crystal Falls Mgt. Unit Year of Entry: 2018

Acres of Harvest

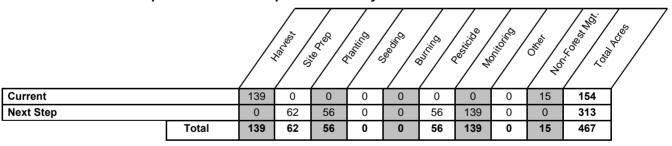
Compartment 155
Total Compartment Acres: 838

Commercial Harvest - 139 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Compartment: 155

Year of Entry: 2018

Openland

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Treatment Size Stand BA **Treatment Treatment Cover Type** Acres Stand Age **Approval** n Name CoverType Density Age Range Type Method Objective Structure Status d 12155001-Cut 42210 - Natural Sawtimber Seed Tree with 42290 - Natural Draft Field 1 5.5 92 51-80 Harvest Even-Aged Red Pine Medium Retention Mixed Pine Boundary

Habitat Cut: No Site Condition:

Prescription Leave 20 BA of seed trees cut other species using 2" spec. Seed trees will be a mix of White Pine and Red Pine. Leave all Cedar, Hemlock,

and Oak if found. Specs:

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

Treatments:

Acceptable Pine, Aspen, Mixed conifers, Mixed hardwoods

Regen:

WLD: Featured species; deer, bear, marten, other species; bobcat, Cover in DWC. Canopy closure minimum. Part of corridor running east-west Other

Comment: in compartment. Important for bear-Refuge trees and habitat.

Proposed Start Date: 10/01/2017

15.0 6122 - Black Spruce Poletimber 95 12155002-Cut Unspec Harvest Clearcut with 612 - Lowland Draft Field Even-Aged Coniferous Well ified Retention Boundary Forest

Habitat Cut: No Site Condition:

Prescription Final harvest using 2" spec. Leave Red Pine, White Pine and Cedar. Buffer stream to North and Erickson Lake to South 100 feet. If bed and

Specs: bank found during sale prep, buffer 100 feet each side.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Spruce, Fir, Pine, Maple, Tamarack, Aspen

Regen:

Other WLD: This stand is cover in DWC and movement corridor for featured species and other wildlife. Canopy closure is too low to allow for much

harvest. Retain with high diversity in species and structure for bear, deer, bobcat, goshawk, marten, fisher, and blackburnian warbler. Comment:

Proposed Start Date: 10/01/2017

12155004-NF 1.7 3302 - Low Density Nonstocked Unspec NonForestMgt Herbaceous/Crop 310 -Draft Field /Grass Planting Herbaceous Boundary

Conifer Trees ified

Site Condition: **Habitat Cut: No**

Prescription WLD- Treat opening. Herbaceous/opening maintenance

Specs:

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

12155017-Cut 56.1 4130 - Aspen Poletimber 37 Unspec 42140 - Planted Draft Field Even-Aged Medium ified Mixed Pine Boundary

Harvest

Clearcut

Site Condition:

Prescription Final Harvest using 2" spec. Leave Cedar, Hemlock, and Oak if found. Winter operations only to provide feed for yarding deer.

Specs:

Pesticide, Skidder/Mechanical; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr) Next Step

Treatments:

Habitat Cut: No

Acceptable Pine, Aspen, Mixed conifers, Mixed hardwoods

Regen:

WLD-Featured species: Deer, bear, grouse & woodcock. Forage stand in DWC for deer. Mesic conifer in the uplands is promoted to provide **Other**

structural diversity within stands which increases habitat value, as cover for wildlife. Comment:

10/01/2017 **Proposed Start Date:**

Crystal Falls Mgt. Unit

Report 3 -- Treatments

Compartment: 155 Year of Entry: 2018 DNR DNR DROUGH

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
18	12155018-Cut	16.9	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Poor	93	1-50	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition:

Prescription Final harvest using 2" spec. Leave Hemlock, Cedar, and Pine. Buffer stream to North 100 feet. Exclude inoperable portions of stand.

Specs:

S

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Maple, Fir, Spruce, Birch

Regen:

Other Much of stand not able to be harvested due to terrain.

Comment: WLD: Recommend no harvest. Stand is remote, access difficult providing refuge for deer and bear, as well mature forest characteristics for

goshawk, fisher and pileated woodpeckers.

Proposed Start Date: 10/01/2017

20 12155020-Cut 45.7 4130 - Aspen Poletimber 37 Unspec Harvest Clearcut with 413 - Aspen Even-Aged Draft Field Retention Boundary

Habitat Cut: No Site Condition:

Prescription Final Harvest using 2" spec. Leave Cedar, Hemlock, White Pine, and Red Pine. Also leave submerchantable conifers. Winter operations only

Specs: to provide feed for yarding deer.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, Pine, Mixed Hardwoods, Mixed Conifers

Regen:

Other Comment:

Proposed Start Date: 10/01/2017

23 12155023-NF 13.3 330 - Low-Density Nonstocked 0 Unspec NonForestMgt Herbaceous/Crop Grass Planting Herbaceous Openland

Draft Field Herbaceous Openland

Habitat Cut: No Site Condition:

Prescription WLD- Treat opening. Herbaceous/opening maintenance

Specs:

Next Step

Treatments:

Acceptable

Regen:

<u>Other</u>

Comment:

Proposed Start Date: 10/01/2017

Total Treatment Acreage Proposed:

154.2

Crystal Falls Mgt. Unit

Andrew Church : Examiner

Compartment: 155
Year of Entry: 2018

Availa	ability for	Managemer	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Cond	litions
Acres	Available	With Condition	Not Available		5F	ЗН	3J	
523	373	150	0	Aspen	150			
7	7	0	0	Bog				
8	8	0	0	Jack Pine				
15	15	0	0	Low-Density Trees				
15	0	0	15	Lowland Conifers			15	
18	18	0	0	Lowland Shrub				
62	35	0	27	Lowland Spruce/Fir			27	
17	17	0	0	Mixed Upland Deciduous				
77	41	0	36	Red Pine		24	12	
11	0	0	11	Upland Conifers			11	
67	67	0	0	Upland Shrub				
19	19	0	0	Water				
838	600	150	89	Total Forested Acres	150	24	65	
	72%	18%	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.

	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)	11	Unspecified	Unspecified	Unspecified	Unspecified
	omments: rickson Lake buffe	ır					
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	15	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Andrew Church : Examiner

Compartment: 155 Year of Entry: 2018

3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	24	3L: Other wildlife concerns	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	27	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Available	5F: Evaluated for Forest Health Considerations	150	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				

Crystal Falls Mgt. Unit Compartment: 155
Year of Entry 2018



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.

Conservati Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area					
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable by are relatively deep, have substantial the state. Such lakes are established by					
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally- stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to year to year. Coldwater streams in Michigan typically provide these conditions due to subs- contributions of groundwater to their stream flows. Such streams are established by Direct designated as trout resources by Fisheries Order 210.						
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildle and Waterfowl Production Areas, deer wintering complexes in loo openings and savannas. Habitat areas are distinct from critical hendangered or threatened species (such as Kirtland's warbler or general in nature, are not primarily associated with threatened or covered by species recovery plans that are developed in cooperation.	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more endangered species, and are not					

S t	Crystal Falls Mgt. Unit			Report 7	- Forested	Stands Compartment: 155 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	Sawtimber Medium	5.5	92	51-80	Large diameter Pine stand.
2	6122 - Black Spruce	Poletimber Well	62.1	95	Unspecified	Upland around edges of stand holding Pine/Fir. No stream or bed and bank found in Southern finger of stand during inventory.
3	4130 - Aspen	Poletimber Well	149.5	37	Unspecified	Eastern 40 acres of stand is 5 years older. Some small lowland areas within stand. Poor quality Aspen. Scattered supercanopy Conifers found throughout.
5	42210 - Natural Red Pine	Sawtimber Medium	23.7	94	51-80	Great Red Pine regeneration where ground was scratched up and canopy was open. Large diameter natural Red Pine stand. Scattered Cedar in subcanopy. Stocking level is variable.
6	4130 - Aspen	Sapling Well	54.6	27	Immature	Scattered supercanopy Conifers throughout. Several small upland openings filling in with Pine/Spruce/Fir. Aspen is offsite and of poor quality.
7	4130 - Aspen	Sapling Well	10.8	4	Immature	Harvested with "Rendevous" sale 2013
8	4136 - Aspen, Mixed Conifer	Poletimber Medium	11.2	42	Unspecified	Wet area in middle of stand. Conifer understory well represented. Scattered supercanopy Pines throughout.
9	6129 - Mixed Coniferous Lowland Forest	Poletimber Medium	14.9	79	Unspecified	
10	4130 - Aspen	Sapling Well	8.4	27	Immature	Scattered large red and white pine.
11	4130 - Aspen	Sapling Well	28.4	27	Immature	Scattered supercanpy Pines and Oaks retained from last harvest in 1990
14	429 - Mixed Upland Conifers	Sawtimber Well	11.3	94	81-110	Uncut buffer to Erickson Lake from neighboring harvest. Stand is mostly upland with a lowland pocket in middle.
15	4130 - Aspen	Sapling Well	31.7	26	Immature	Harvested 1991. Scattered Pines in supercanopy. Openings found throughout.
16	42220 - Natural Jack Pine	Sapling Well	8.3	17	Immature	Harvested 2000
17	4130 - Aspen	Poletimber Medium	56.1	37	Unspecified	Poor quality Aspen. Losing volume as trees are dying most likely due to soil characteristics. Likely PArV[w] Kotar habitat type.
18	4191 - Mixed Upland Deciduous with Conifer	Sawtimber Poor	17.2	93	1-50	Much of Aspen has fallen out of stand due to old age. Stand is naturally converting to Maple/Fir. Very rugged terrain as this is situated on top of large rock outcropping.

S t	Crystal Fall	s Mgt. Unit		Report 7	– Forested	Stands Compartment: 155 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4130 - Aspen	Poletimber Well	9.7	35	Immature	Should be managed with compartment 167 to south. Harvested 1983.
20	4130 - Aspen	Poletimber Medium	140.5	37	Unspecified	Poor quality Aspen site. Pine slowly filling in the many openings within stand. Scattered pockets of pine throughout. Southern half of stand was harvested 1974, while northern half harvested 1980. Higher stocking in Southern part of stand.
24	4130 - Aspen	Sapling Well	14.2	4	Immature	Western portion of stand is 17 years old and should be treated with neighboring compartment to South. Center and West parts of stand were harvested 2013 with much Pine in supercanopy.
25	42210 - Natural Red Pine	Sawtimber Well	12.1	90	81-110	Aspen removed in NW part of stand with harvest in 2000. Majority of stand is within lake buffer.
27	42110 - Planted Red Pine	Poletimber Medium	35.3	51	51-80	Aspen removed from stand in 1999. Openings within stand was herbicided and planted to red pine. The overstory Pine is very short and the stocking levels vary greatly due to openings. Any harvesting at this time will damage the understory.

4130 - Aspen

28

Sapling Well

7.8

4

Immature

Eastern portion harvested in 2000, while Western parts harvested 2013

Compartment: 155 Year of Entry: 2018



Stand	Cover Type	Acres	Managed Site	General Comments:
4	3302 - Low Density Conifer Trees	1.7	No	OPIC - FMD: Red pine and spruce filling in old opening. Snowmobile trail skirts edge of stand.
12	6220 - Alder/willow	17.5	No	OPIC - FMD: OI Stand Year Origin was 1920
13	320 - Upland Shrub	67.2	No	Old Elf study control plot. Edges growing in with jackpine, aspen and cherry. WLD: Breakout area in DWC, some of the largest concentrations of deer in the unit. Limited herbaceous openings in this unit and MA. Featured species bear, deer, woodcock all key in on openings providing forbes and soft mast. Critical habitat for open land WLD, blue birds, sandhills, sandpipers, and turkeys. Opening would be coded to opening maintenance and mast tree plantings, but was already coded to conversion to red pine.
21	6225 - Bog	6.9	No	OPIC - FMD: OI Stand Year Origin was 555
22	500 - Water	2.3	No	
23	330 - Low-Density Trees	13.3	No	OPIC - FMD: OI Stand Year Origin was 1980
26	500 - Water	16.2	No	Erickson Lake.