

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12125 Entry Year 2021 Acreage: 1,210 County Iron

Management Area: Amasa Plains

Revision Date: 2019-08-03 Stand Examiner: Ed Rice

Legal Description:

T44N R32W sections 5, 6, 7

Identified Planning Goals:

Optimize sustainable timber production while enhancing and protecting wildlife habitat. Continue to sustainably balance the aspen age class acres. Get the hardwood stands on a 20 year alternating cutting cycle towards regulation. Protect the riparian areas and transition zones during management activity.

Soil and topography:

Soils are generally fine sandy loams areas of muck and peat soils in the low ground areas. The topography ranges from fairly steep, sharp narrow ridges, to rolling and flat and low swamp land.

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

The compartment is contiguous in state ownership. Large blocks of state lands border the compartment with small private blocks adjacent. Active forest management has occurred and will continue within and surrounding the compartment.

Unique Natural Features:

None identified

Archeological, Historical, and Cultural Features:

Potential archeological feature/s have been identified in the compartment's area.

Special Management Designations or Considerations:

None identified

Watershed and Fisheries Considerations:

This compartment contains Deer River (eastern edge), Premo Creek (southern portion) and unnamed tributaries to Deer River. Both Deer River and Premo Creek are Type 1 trout streams less than 50' in width. 300' buffers are recommended for these waterbodies susceptible to Aspen regeneration. For areas not susceptible to Aspen regeneration, 100' plus 5' per 1% increase in slope; buffers are recommended to protect these areas in accordance with Best Management Practices.

Wildlife Habitat Considerations:

This compartment falls within the Amasa Plains MA, with woodcock, black bear, pileated woodpecker, grouse and deer. It contains State Game Purchased Parcels. The entire compartment lies within the Deerfoot Lodge Deer Wintering Area complex. It has been recorded during this inventory cycle, deer are actively using the lowlands, notably the cedar stand and stands having a cedar component. They also are using the adjacent uplands. Hunter Walking trails are located within the compartment.

Mineral Resource and Development Concerns and/or Restrictions

The state does not own all mineral rights within the compartment.

Vehicle Access:

Access is generally good with the Deer Lake Road running through the center of the compartment.

Survey Needs:

Several survey corners will need to be set.

Recreational Facilities and Opportunities:

None present.

Fire Protection:

Much of the compartment is composed of aspen fuel types with hazel understory. Northern hardwoods and mixed lowland conifers also are present. Access for fire suppression is good overall. There are multiple private camps immediately

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Additional Compartment Information:

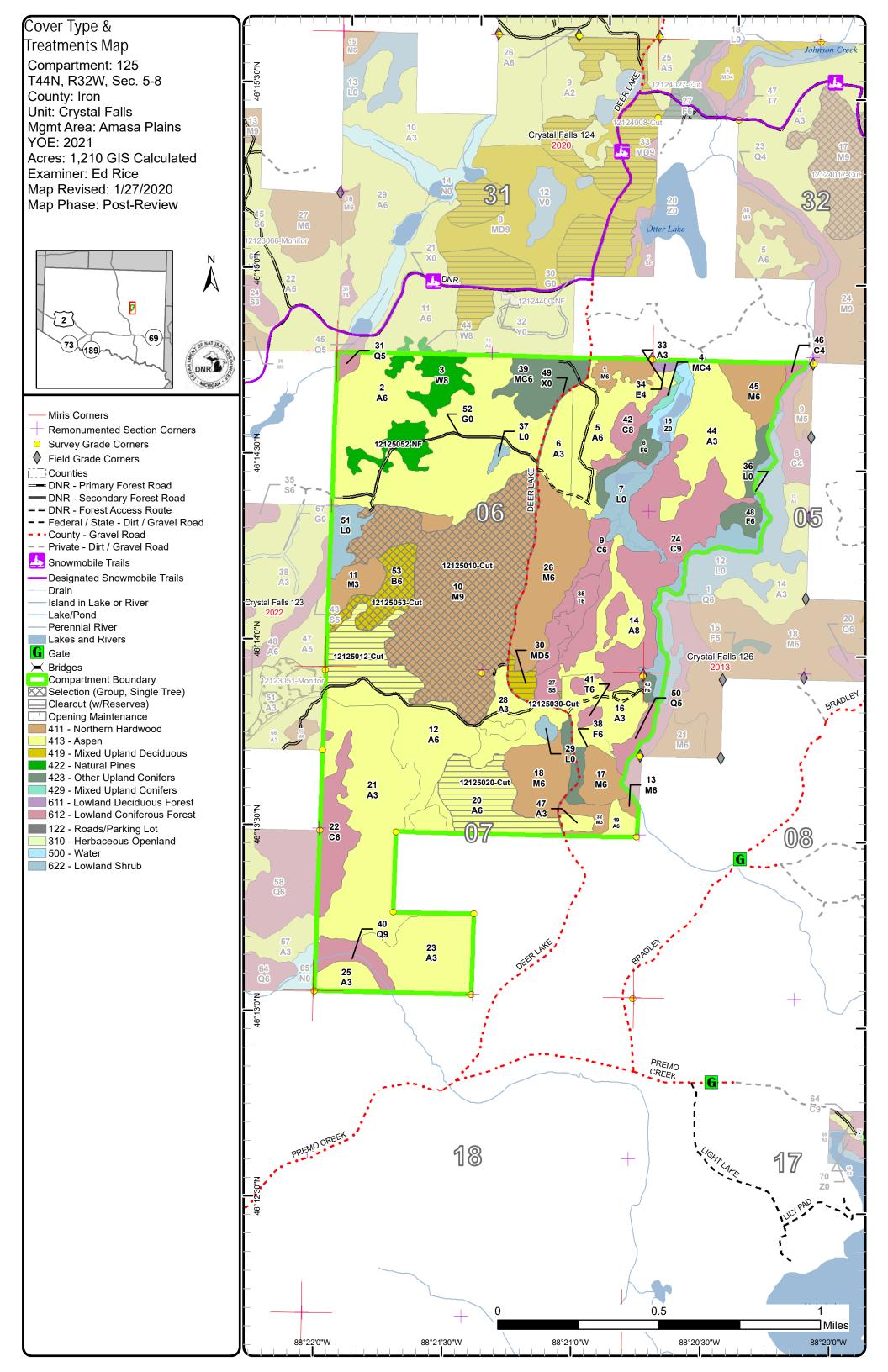
The following reports from the Inventory are attached:

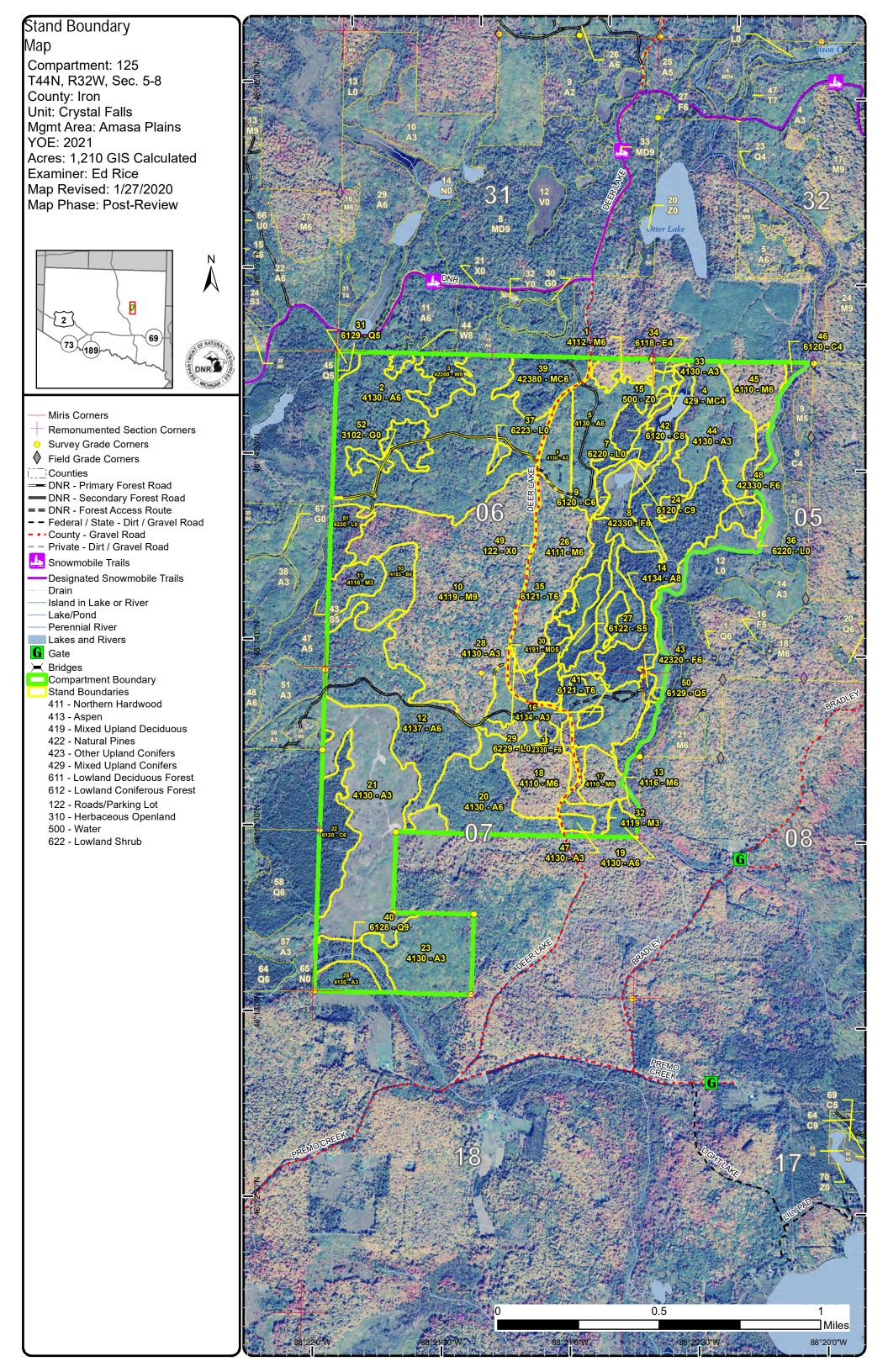
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

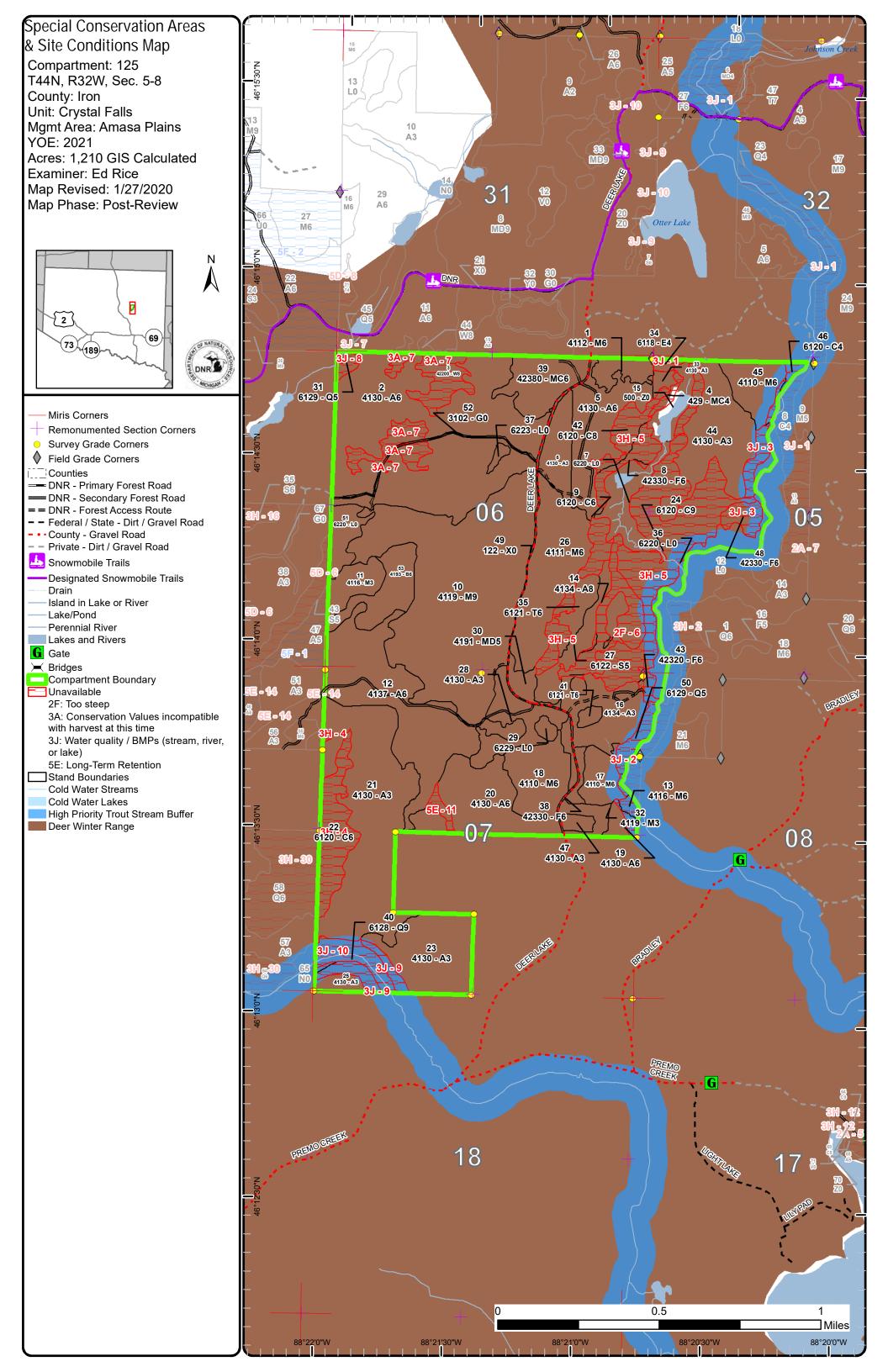
The following information is displayed, where pertinent, on the attached compartment maps:

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

Proposed treatments
Site condition boundaries
Details on the road access system







Report 1 - Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 125 Year of Entry 2021



Age Class

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Aspen	0	96	23	115	168	154	0	19	0	0	0	0	0	0	0	0	0	0	575
Cedar	0	0	0	0	0	0	0	0	0	0	28	93	0	0	0	0	0	0	120
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	3	0	19	0	0	0	0	0	22
Lowland Deciduous	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Shrub	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
Lowland Spruce/Fir	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	18
Mixed Upland Deciduous	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6
Northern Hardwood	0	0	12	0	0	6	2	18	0	0	0	0	0	0	0	0	0	250	288
Paper Birch	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	20
Tamarack	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	12
Upland Conifers	0	0	0	2	23	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Upland Spruce/Fir	0	0	0	0	0	14	14	0	0	0	0	0	0	0	0	0	0	0	28
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
White Pine	0	0	0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	28
Total	68	96	35	117	191	176	52	57	0	0	60	93	19	0	0	0	0	250	1211



Report 2 – Treatment Summary

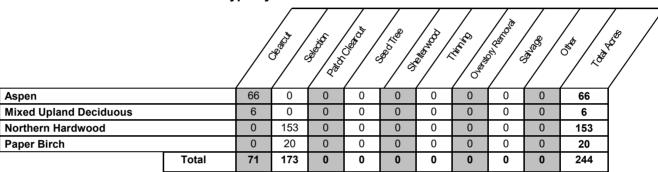
Crystal Falls Mgt. Unit Year of Entry: 2021

Acres of Harvest

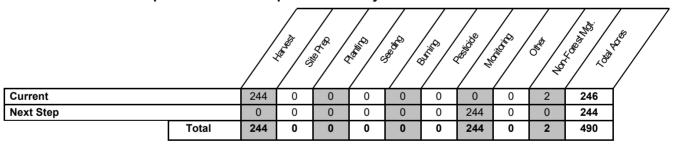
Compartment 125
Total Compartment Acres: 1,210

Commercial Harvest - 244 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 3 -- Treatments

Compartment: 125 Year of Entry: 2021

Habitat

Cut

No

n Name d

Treatment

Stand Acres CoverType

Size Stand Density Age

BA Range **Treatment** Type

Harvest

Treatment Method

Cover Type Objective

Age Structure

Proposed Treatments:

10 12125010-Cut 153.0 4119 - Mixed Northern Hardwoods

Sawtimber Well

111-140

Single Tree Selection

411 - Northern Hardwood

Uneven-Aged

Specs:

s

t а

Prescription Thin stand to 70 BA/acre. Manage for best tree in place. remove in order of priority: trees that likely would not survive or decrease in value within the next cutting cycle (20 years) and if needed to reach BA target, thin from below. keep all current species represented in residual stand. Open canopy up around oak to encourage oak regeneration. Do not cut w pine, oak or hemlock, buffer vernal areas and small

swamp inclusion located in N of stand

Next Step

Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable northern hardwoods

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2020

12 12125012-Cut

30.0 4137 - Aspen, Birch Poletimber

81-110 Harvest Clearcut with Retention

4319 - Mixed **Upland Forest** Even-Aged No

Prescription cut merchantable aspen, r maple, w birch, spruce, fir, and cherry. do not cut h maple, basswood, or oak. where available leave 1 w birch and/or cherry approximately every 200 feet. areas with well established maple saplings 8 - 10 feet tall. avoid operating through these pockets Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, maple, birch

Regen:

Other Comment:

Site Condition

Proposed Start Date: 6 /25/2019

12125020-Cut

4130 - Aspen 35.5

Poletimber

Unspec ified

Harvest

Clearcut with Retention

4134 - Aspen, Spruce/Fir

Even-Aged

No

Prescription cut merchantable aspen and r maple. cut spruce/fir 8 inch stump diameter (2 sticks tall) and larger. do not cut w pine, r pine, hemlock or oak Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, spruce/fir

Regen:

Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2020

s t	Ci	ystai Falls	Mgt. Unit		керо	π3	Treatments		Compartmen Year of Entry	li li	DNR
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
30	12125030-Cut		4191 - Mixed Jpland Deciduous with Conifer	Poletimbe Medium	r 54	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	No
Pres Spec		rchantable	aspen, r maple, sp	oruce, balsa	m fir, a	nd w birch	n. where availabl	e leave one w birch	per cruise point.	do not cut oa	k or pine
	Step Monito	ring, Natura	al Regen (Re-Inver	ntory)							
Acce Rege	e <u>ptable</u> maple, <u>en:</u>	aspen, oak	k, spruce/fir								
Othe Com	<u>er</u> iment:										
	Condition	1011 1001									
	osed Start Date										
52	12125052-NF	1.5	3102 - Grass	Nonstocke	d 0	Unspec ified	NonForestMgt	Herbaceous/Crop /Grass Planting	3102 - Grass		No
Pres Spec		walking tra	il opening mainten	nance- disc,	seed, f	fertilize, m	now				
	Step tments:										
Acce Rege	eptable en:										
Othe Com	<u>er</u> iment:										
Site	<u>Condition</u>										
Prop	osed Start Date	<u>:</u> 6 /10/201	19								
53	12125053-Cut	20.3 4	193 - Birch, Aspen	Poletimbe	r 66	81-110	Harvest	Single Tree	4319 - Mixed	Even-Aged	No

possible. promote stand towards natural mix of species as it currently is. thin along with stand 10

Acceptable n hardwoods, aspen, w birch Regen:

Next Step Monitoring, Natural Regen (Re-Inventory)

Specs:

<u>Other</u> Comment:

Treatments:

Site Condition

Proposed Start Date: 10/1 /2020

Total Treatment Acreage Proposed: 245.9

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice: Examiner

Compartment: 125 Year of Entry: 2021



Availability for Management

	ability for	Managemen	ιτ						
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cond	dition	S
Acres	Available	With Condition	Not Available		2F	3A	3H	3J	5E
575	539	0	36	Aspen	19			15	2
120	0	0	120	Cedar			118	2	
2	2	0	0	Herbaceous Openland					
22	0	0	21	Lowland Conifers				21	
2	0	0	2	Lowland Deciduous				2	
51	51	0	0	Lowland Shrub			0	0	
18	5	0	13	Lowland Spruce/Fir	13				
6	6	0	0	Mixed Upland Deciduous					
287	284	0	4	Northern Hardwood				4	
20	20	0	0	Paper Birch					
12	12	0	0	Tamarack			0		
25	22	0	2	Upland Conifers				2	
28	6	0	22	Upland Spruce/Fir			10	11	
5	5	0	0	Urban					
10	0	0	10	Water	10				
29	0	0	29	White Pine		29			
1,210	952		259	Total Forested Acres	42	29	128	57	2
	79%		21%	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)	8	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
(Comments:						
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Compartment: 125 Year of Entry: 2021 Ed Rice : Examiner



Unavailable	3J: Water quality / BMPs (stream, river, or lake)	15	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
Comments:						
Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	25	Unspecified	Unspecified	Unspecified	Unspecified
Comments:						
Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	104	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
Comments:						
Unavailable	2F: Too steep	20	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Comments: narrow, razor back	ridges mainly surrounded by ce	dar an	d spruce swamp			
Unavailable	3A: Conservation Values incompatible with harvest at this time	29	4A: No Markets Available for these Forest Products	Unspecified	Unspecified	Unspecified
Comments: large diameter w pi	ine, majority of trees are legacy					
	Comments: Unavailable Comments: Unavailable Comments: narrow, razor back Unavailable Comments:	Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 2F: Too steep Comments: narrow, razor back ridges mainly surrounded by ceeping incompatible with harvest at this time	Comments: Unavailable 3H: Deer Wintering Area - 25 habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area - 104 habitat is incompatible with harvest at this time Comments: Unavailable 2F: Too steep 20 Comments: narrow, razor back ridges mainly surrounded by cedar and Unavailable 3A: Conservation Values incompatible with harvest at this time Comments:	Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 2F: Too steep 20 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area) Comments: narrow, razor back ridges mainly surrounded by cedar and spruce swamp Unavailable 3A: Conservation Values incompatible with harvest at this time Comments:	Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area - habitat is incompatible with harvest at this time Comments: Unavailable 2F: Too steep 20 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area) Comments: narrow, razor back ridges mainly surrounded by cedar and spruce swamp Unavailable 3A: Conservation Values incompatible with harvest at this time 29 4A: No Markets Available for these Forest Products Comments:	Comments: Unavailable 3H: Deer Wintering Area habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area habitat is incompatible with harvest at this time Comments: Unavailable 3H: Deer Wintering Area habitat is incompatible with harvest at this time Comments: Unavailable 2F: Too steep 20 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area) Comments: Unavailable 3A: Conservation Values incompatible with harvest at this time 29 4A: No Markets Available for these Forest Products Comments:

Report 4 – Site Conditions

Crystal Falls Mgt. Unit Ed Rice : Examiner



8	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	3	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
•	Comments:						
9	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	9	Unspecified	Unspecified	Unspecified	Unspecified
•	Comments:						
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	Unspecified	Unspecified	Unspecified
(Comments:						
11	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
	Johnnents.						

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: 125
Year of Entry 2021



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 cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildle and Waterfowl Production Areas, deer wintering complexes in low 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 cooperations.	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more endangered species, and are not
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high documentities are ecologically and socially significant in their effects as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well



Stand	d Level 4 Co	over Type	;	Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
1	4112 - Maple, Asso	Beech, Ch ciation	nerry P	oletimb	er Well	8.7	74	81-110	N/A		high prevalence of defect - seams, eutypella. H maple/s maple larger diameter component 14 - 20" dbh, low quality - wolf/cull trees. small
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	vernal areas in NW of stand. slight components of basswood and poletimber fir.
	Sugar Maple	70	Pole/Log	9	74	Iro	nwood	Medium	10 - 20 feet	Sapling	politimber III.
2	4130	- Aspen	Р	oletimb	er Well	141.9	38	Unspecified	N/A		areas of F3
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	85	Pole/Sapling	7	38	Whit	e Spruce	Medium	5 - 10 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	6		Ва	lsam Fir	Medium	5 - 10 feet	Sapling	
						Haze	Inut (Spp.)	High	5 - 10 feet	Tall Shrub	
3	42200 - Natu	ıral White F	Pine Sa	wtimber	Medium	n 28.5	99	81-110	N/A		large diameter w pine stand with very heavy hazel understory
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	White Pine	95	XLog	24	99	Hazeln	ut (Beaked)	Full	5 - 10 feet	Tall Shrub	
						Ва	lsam Fir	Medium	10 - 20 feet	Sapling	
						Whit	e Spruce	Medium	10 - 20 feet	Sapling	
4	429 - Mixed L	Jpland Con	ifers P	oletimb		2.1	27	1-50	N/A		planted r pine on narrow ridge. dense fir understory. N end of stand is a
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	in thorot, very little i pino
	Balsam Fir	50	Sapling	2	23		Isam Fir	Full	10 - 20 feet	Sapling	
	Red Pine	50	Pole	8	27	Wh	ite Pine	Low	10 - 20 feet	Sapling	
5	4130	- Aspen		oletimb	er Well	34.7	41	Unspecified	N/A		small pockets of windthrow from 2017
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	95	Pole	8	41	Ва	lsam Fir	Medium	>20 feet	Sapling	
						Re	d Maple	Medium	>20 feet	Sapling	
6	4130	- Aspen		Sapling		14.8	27	Immature	N/A		scattered aspen just moving into poletimber size class 5 - 6" dbh. large vernal area in south end
	Canopy Species		Size Class		Age		nopy Species		Avg. Height	Size	Tomas as on its odditional
	Quaking Aspen	85	Sapling/Pole	4	27		e Spruce	Low	5 - 10 feet	Sapling	
	Red Maple	10	Sapling	2		Hazeln	ut (Beaked)	Medium	< 5 feet	Tall Shrub	
7	6220 - A	lder/willow		Nonsto	cked	18.5	I	Unspecified	No		series of old beaver meadows with creek and multiple drains. dead standing snags
8	42330 -	Upland Fir	Р	oletimb	er Well	8.1	42	Unspecified	N/A		much of stand lies on narrow, razor back ridge which flattens out in the NE portion of stand. N end has slight component of aspen.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	THE PORTION OF STAIRG. IN GIRL HAS SINGHE CONTIDUNETE OF ASPEN.
	White Spruce	15	Pole	7		Ва	lsam Fir	Medium	10 - 20 feet	Sapling	
	Balsam Fir	75	Pole/Sapling	6	42						

Report 7 - Stands



Stan	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age B	A Range	Managed Site		General Comments
9	6120 - Lo	wland Ceda	r I	Poletimb		14.8	96 U	nspecified	N/A		widely scattered y birch 12 - 14" dbh. very N end has less stocking - 1 tends toward more open canopy with heavier tag alder/r maple saplings.
	Canopy Species	% Cover	Size Class	DBH		Sub-Can	opy Species	Density	Avg. Height	Size	drainage flows in NE end of stand.
No	orthern White Cedar	60	Log/Pole	12	96	Тао	g Alder	High	5 - 10 feet	Tall Shrub	
	White Spruce	20	Log/Pole	10		Bals	sam Fir	Medium	10 - 20 feet	Sapling	
	Balsam Fir	15	Pole/Sapling	g 6		Red	Maple	High	10 - 20 feet	Sapling	
10	4119 - Mixed No	orthern Hard	lwoods	Sawtimb	er Well	155.9	68	111-140	N/A		scattered vernal ponds notably in E end of stand. W side is transitional
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	H maple, r maple, w birch, hazel.
	Sugar Maple	45	Pole/Log	9	68	Suga	ar Maple	Medium	10 - 20 feet	Sapling	
	Red Oak	15	Log	16		Leath	nerwood	Low	< 5 feet	Tall Shrub	
	Red Maple	15	Pole/Log	9							-
	Basswood	10	Log	12							
	Paper Birch	10	Log/Pole	10							
11	4116 - Mixed N.	Hardwood -	Aspen	Sapling	Well	12.1	11	81-110	N/A		heavy hazel throughout. dense h maple saplings established under
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	declining aspen. aspen acting as natural overstory as it has fallen out of the canopy, given the successful h maple sapling establishment,
	Quaking Aspen	20	Log/Pole	10	65	Suga	ar Maple	High	10 - 20 feet	Sapling	recommend letting stand continue converting to n hardwoods through
	Sugar Maple	65	Sapling	1	11	Hazelnu	ıt (Beaked)	High	5 - 10 feet	Tall Shrub	natural succession
	Paper Birch	10	Pole	8				'			•
12	4137 - A	spen, Birch	I	Poletimb	er Well	76.0	48	81-110	N/A		scattered 10-11" dbh aspen. slight component of b cherry .poletimber.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	NE edge has higher component of w birch. scattered pockets of spruce/fir. S of road stand has higher component of aspen - not as much
	Quaking Aspen	55	Pole	8	48	Suga	ar Maple	High	10 - 20 feet	Sapling	as a mixed stand.
	Red Maple	15	Pole	8		White	e Spruce	Low	10 - 20 feet	Sapling	
	Paper Birch	20	Log/Pole	10							
13	4116 - Mixed N.	Hardwood -	Aspen I	Poletimb	er Well	1.8	54	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Maple	40	Pole	8	54						
	Quaking Aspen	20	Log	12							
	Yellow Birch	10	Pole/Log	8							
	Balsam Fir	15	Pole	8							
	Sugar Maple	15	Pole	8							
14	4134 - Aspe	en, Spruce/l	Fir Sa	awtimber	Medium	า 19.2	68	51-80	N/A		stand is on series of very steep, narrow ridges intermixed with small
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	areas of flat ground. larger w spruce has died due to past SBW. slight component of r maple poletimber. in very S of stand very scattered r
	White Spruce	25	Pole	7			sam Fir	Low	10 - 20 feet	Sapling	pine sawtimber size trees are present.
	Quaking Aspen	40	Log	12	68	White	e Spruce	Low	10 - 20 feet	Sapling	
	Paper Birch	35	Pole	8							1
15	500 -	- Water		Nonsto	cked	9.6	U	nspecified	No		old beaver pond



Stand	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age I	BA Range	Managed 9	Site	General Comments
16	4134 - Asp	en, Spruce	/Fir	Saplin	g Well	25.8	31	Immature	N/A		stand just moving into poletimber size class. individual spruce/fir
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	opy Species	Density	Avg. Height	Size	scattered throughout and in small pockets
	Quaking Aspen	70	Sapling/Pole	4	31	Hazelnı	ut (Beaked)	Low	5 - 10 feet	Tall Shrub	
	Tamarack	10	Sapling/Pole	4		Bal	sam Fir	Medium	10 - 20 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	5		White	e Spruce	Medium	10 - 20 feet	Sapling	
	White Spruce	10	Pole/Sapling	5							
17	4110 - Sugar N	/laple Asso	ciation F	Poletimb	er Well	12.3	72	51-80	N/A		slight w birch component - much of w birch has died out
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	opy Species	Density	Avg. Height	Size	
	Sugar Maple	75	Pole/Log	9	72	Iro	nwood	Low	10 - 20 feet	Sapling	
	Hemlock	10	XLog	18		Suga	ar Maple	Low	10 - 20 feet	Sapling	
18	4110 - Sugar N	/laple Asso	ciation F		er Well	25.1	72	81-110	N/A		fair to good form on h maple. w birch is mainly in transitional edges along N end of stand. very scattered fir. minor n hardwood species are
	Canopy Species	% Cover		DBH	I Age	Sub-Car	opy Species	Density	Avg. Height	Size	very scattered throughout. last thinned in 2004
	Sugar Maple	75	Log/Pole	10	72	Iro	nwood	Medium	5 - 10 feet	Sapling	,
	Red Maple	10	Pole/Log	9		Suga	ar Maple	Medium	>20 feet	Sapling	
19	4130	- Aspen	F	Poletimb	er Well	5.1	40 l	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	opy Species	Density	Avg. Height	Size	
	Quaking Aspen	70	Pole	6	40	Hazelnı	ut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
	Sugar Maple	30	Pole/Sapling	5		Bal	sam Fir	Low	10 - 20 feet	Sapling	
20	4130	- Aspen	F	Poletimb	er Well	37.9	44 l	Unspecified	N/A		E 3/4 of stand has high percentage of h maple small poletimber/saplings.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	opy Species	Density	Avg. Height	Size	component of 10-11"dbh aspen. larger w spruce 12-14" dbh is dead from past years SBW
	Quaking Aspen	70	Pole	8	44	Suga	ar Maple	High	10 - 20 feet	Sapling	, , , , , , , , , , , , , , , , , , , ,
	Sugar Maple	20	Pole/Sapling	6		Bal	sam Fir	Medium	10 - 20 feet	Sapling	
	Balsam Fir	10	Pole	7							
21	4130	- Aspen		Saplin	g Well	96.4	7	Immature	N/A		rolling hills
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	opy Species	Density	Avg. Height	Size	
	Quaking Aspen	90	Sapling	1	7	Blackber	ry/Raspberry	Medium	< 5 feet	Tall Shrub	
22	6120 - Lo	wland Ceda	ar F	Poletimb	er Well	24.8	102 l	Unspecified	N/A		small inclusions of tamarack along edges. heavy winter deer use
	Canopy Species	% Cover			I Age		opy Species	Density	Avg. Height	Size	
No	orthern White Cedar	80	Log/Pole	11	102	Bal	sam Fir	Medium	10 - 20 feet	Sapling	
	Tamarack	10	Log	12							
	Black Spruce	10	Pole	6							



Stan	d Level 4 C	over Type	;	Size De	ensity	Acres	Stand Age	BA Range	Managed 9	Site	General Comments
23	4130	- Aspen		Sapling	g Well	41.3	27	Immature	N/A		aspen just moving into poletimber size class. small lowland/vernal areas
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	in N and NE end of stand. small pockets of conifers throughout. steep ridge runs NE in NW end of stand. access would be through private
	Quaking Aspen	85	Sapling/Pole	4	27	Hazelr	nut (Beaked)	Medium	5 - 10 feet	Tall Shrub	nage rans (12 iii 1447 ond or stand. "doodd would be tinough phrate
	Balsam Fir	10	Pole/Sapling	6							
24	6120 - Lo	wland Ceda	ar S	Sawtimb	er Well	67.9	107	81-110	N/A		mainly cedar 8 - 18"dbh. w birch scattered throughout. pockets of heavy
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	tag alder with a component of tag alder through entire stand. multiple drainages/old beaver meadows feeding into Deer River. heavy winter
	Balsam Fir	20	Pole/Sapling	5		Ta	ag Alder	Medium	5 - 10 feet	Tall Shrub	
No	orthern White Cedar	70	Log	14	107	Ва	ılsam Fir	Medium	10 - 20 feet	Sapling	
	Paper Birch	10	Pole/Sapling	7							
25	4130	- Aspen		Sapling	g Well	9.9	26	Immature	N/A		aspen just starting to move into poletimber size class
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	70	Sapling/Pole	4	26	Re	ed Maple	Medium	5 - 10 feet	Sapling	
	Balsam Fir	15	Pole/Sapling	6						-	
26	4111 - S.Maple, H	ard Mast As	ssociation P	oletimb	er Well	47.6	65	81-110	N/A		big, steep ridges. higher stocking of oak in S 1/2. fir understory mainly in
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	S 1/2 of stand
	Sugar Maple	55	Pole/Log	9	65	Sug	gar Maple	Medium	10 - 20 feet	Sapling	
	Red Oak	20	Log	14		Ire	onwood	Medium	10 - 20 feet	Sapling	
	Basswood	10	Pole/Log	9		Lea	therwood	Low	5 - 10 feet	Tall Shrub	
		1		'		Ва	ılsam Fir	Low	10 - 20 feet	Sapling	
27	6122 - BI	lack Spruce	e Pol	letimbe	r Mediur	n 17.9	52	Unspecified	N/A		b spruce and tamarack. western section has small semi open bog area in
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	center. East area lies in a "bowl" among steep ridges
	Black Spruce	70	Pole/Sapling	6	52	Blad	ck Spruce	Low	10 - 20 feet	Sapling	
	Tamarack	30	Pole	7						-1	•
28	4130	- Aspen		Sapling	g Well	20.1	16	Immature	N/A		very scattered oak
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	85	Sapling	2	16	Sug	gar Maple	Medium	5 - 10 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	6						•	•
29	6229 - Mixed	d lowland sh	nrub	Nonsto	ocked	2.4	0	Unspecified	No		vernal pond ringed with aspen, spruce, fir

Report 7 - Stands



Stand	d Level 4 C	Size Density			Acres Stand Age BA Range			Managed S	Site	General Comments	
30	4191 - Mixed Upland Deciduc Conifer		ous with Poletimber Mediun		n 5.6	54	81-110	N/A		scattered oak.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	35	Pole	9	54	Ва	lsam Fir	Low	10 - 20 feet	Sapling	
	Balsam Fir	20	Pole	7		Whit	te Spruce	Low	10 - 20 feet	Sapling	
	Paper Birch	25	Pole	8							
	Red Maple	10	Pole	8							
	White Spruce	10	Pole	7							
31	6129 - Mixed Co Fo	oniferous Lo orest	owland Po	oletimbe	r Mediun	n 3.2	99	Unspecified	N/A		small creek flows through stand, very wet muck soils. widely scattered w birch and tamarack poletimber.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	winter deer use
No	orthern White Cedar	55	Log/Pole	12	99	Та	ıg Alder	High	5 - 10 feet	Tall Shrub	whitel deel dee
32	4119 - Mixed No	orthern Har	dwoods	Sapling	g Well	6.1	40	81-110	N/A		small vernal ponds. W end of stand has higher fir component. trace elm
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Cai	nopy Species	s Density	Avg. Height	Size	present.
	Sugar Maple	50	Sapling/Pole		40		ck Cherry	Medium	10 - 20 feet	Sapling	
	Red Maple	20	Sapling/Pole								
	Paper Birch	20	Pole/Sapling								
	4400	A		0 11	. 10/ - 11	0.0	00		N1/A		
33		- Aspen	0: 0:	Sapling		2.6	23	Immature	N/A		1
	Canopy Species	% Cover		2	Age 23		nopy Species Isam Fir	S Density Medium	Avg. Height 5 - 10 feet	Size	
	Quaking Aspen Balsam Fir	10	Sapling Pole/Sapling		23	Ба	ISAIII FII	Medium	5 - 10 leet	Sapling	
	Red Maple	10	Sapling	3							
	ined iviaple	10	Sapility	J							
34	6118 - Lowland D	eciduous w	ith Cedar F	Poletimb	er Poor	1.9	45	Unspecified	N/A		thick alder, scattered y birch. B ash swamp
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Balsam Fir	10	Pole	7		Ва	lsam Fir	Low	5 - 10 feet	Sapling	
	Yellow Birch	20	Pole	8		Та	ng Alder	Full	5 - 10 feet	Tall Shrub	
No	orthern White Cedar	20	Log/Pole	10	89						
	Black Ash	50	Pole	7	45						
35	6121 -	Tamarack	ı	Poletimb	er Well	8.2	58	Unspecified	N/A		winter deer use
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species		Avg. Height	Size	
	Tamarack	90	Pole	7	58	Та	ig Alder	Medium	5 - 10 feet	Tall Shrub	
	Black Spruce	10	Pole	7							-
36	6220 - <i>F</i>	Alder/willow		Nonst	ocked	17.9	0	Unspecified	No		tag alder flats adjacent to Deer River. scattered swamp grass old meadows
37	6223 - Inundat	ted Shrub S	wamp	Nonst	ocked	1.7	I	Unspecified	No		small open leatherleaf bog ringed with willow/alder. often holds standing water

Crystal Falls Mgt. Unit



Stand	d Level 4 C	vel 4 Cover Type Size Density Acres Stand Age BA Range Managed Site		Site	General Comments						
38	42330 -	Upland Fir	P	Poletimber Well		6.2	42	111-140	N/A		small component of aspen 12' dbh
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Balsam Fir	60	Pole/Sapling	6	42	Balsaı	m Fir	Medium	10 - 20 feet	Sapling	
	Red Maple	25	Pole	8							
39	42380 - Non Pir Mixed [Conifer, P	er, Poletimber Well		22.5 36		81-110	1-110 N/A		upland b spruce/tamarack. scattered open grown w pine with small groves of w pine. widely scattered low quality aspen 9 - 11" dbh. short	
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Canor	y Species	Density	Avg. Height	Size	rolling hills.
	Black Spruce	45	Pole	7	36	Black S	Spruce	High	10 - 20 feet	Sapling	
	Quaking Aspen	25	Pole/Sapling	6		White	Pine	Medium	10 - 20 feet	Sapling	
	Tamarack	10	Log/Pole	11		Balsaı	m Fir	High	10 - 20 feet	Sapling	
40	6128 - Lowland Dec	Coniferous,	Mixed S	Sawtimb	er Well	11.6	116 L	Jnspecified	N/A		Premo Creek runs through stand. areas more open and heaiver to tag alder. heavy winter deer use
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Canor	y Species	Density	Avg. Height	Size	
No	orthern White Cedar	40	Log	16	116	Tag A	Alder	High	5 - 10 feet	Tall Shrub	
	Black Ash	20	Pole/Sapling	5							
	Balsam Fir	20	Pole/Sapling	6							
	Black Spruce	20	Pole	7							
41	6121 -	Tamarack	P	Poletimb		3.9	54 L	Jnspecified	N/A		isolated w pine sawtimber sized trees. pockets of fairly open tag alder
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Tamarack	75	Pole	7	54	Tag A	Alder	Medium	5 - 10 feet	Tall Shrub	
	Black Spruce	25	Pole	6		Black S	Spruce	Medium	10 - 20 feet	Sapling	
42	6120 - Lo	wland Ceda	ır Sa	wtimbe	Medium	n 10.5	96	111-140	N/A		fairly heavy tag alder. b ash mainly in north arm of stand
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Canor	y Species	Density	Avg. Height	Size	wintering deer use
No	orthern White Cedar	80	Log	14	96	Balsaı	m Fir	Medium	5 - 10 feet	Sapling	Č
	Black Ash	10	Pole	7		Black	Ash	Medium	5 - 10 feet	Sapling	
						Tag A	Alder	High	5 - 10 feet	Tall Shrub	
43	42320 - U	pland Spruc	e P	Poletimb	er Well	2.4	59 L	Jnspecified	N/A		nice w spruce. small stand adjacent to Deer R. and logging dam. associated fir saplings/poletimber
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Canop	y Species	Density	Avg. Height	Size	associated in sapiritys/potentiabel
	Balsam Fir	40	Pole	8		Balsaı	m Fir	Medium	10 - 20 feet	Sapling	
	White Spruce	60	Log/Pole	12	59						
44	4130	- Aspen		Sapling		46.2	22 l	Jnspecified	N/A		Aspen 12 - 16' tall. scattered fir saplings
	Canopy Species	% Cover	Size Class	DBF	I Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Quaking Aspen	95	Sapling	2	22	Red M	laple	Low	5 - 10 feet	Sapling	
	Quaking Aspen	00	99							1 3	



Stand	and Level 4 Cover		r Type		Size Density		Stand Age	BA Range	Managed Site		General Comments
45	4110 - Sugar Maple Association			Poletimber Well		17.8	61	81-110	N/A		fair - poor form, high percent of defect on hardwood species, eutypella
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	canker. S end has rolling hills. pockets of heavy h maple and cherry saplings 10-20' tall. widely scattered upland cedar. moderate to heavy
	Sugar Maple	90	Log/Pole	10	61	Sug	gar Maple	Medium	5 - 10 feet	Sapling	raspberry in lower stocked areas.
				'	· · · · · · · · · · · · · · · · · · ·	Ва	alsam Fir	Low	5 - 10 feet	Sapling	
						Whi	ite Spruce	Medium	5 - 10 feet	Sapling	
						Iro	onwood	High	5 - 10 feet	Sapling	
46	6120 - Lov	wland Ceda	ır	Poletimb	er Poor	2.0	96	Unspecified	N/A		scattered large w. spruce, thick alder. pockets of nearly pure cedar with
	Canopy Species	% Cover	Size Class	B DBH Age		Sub-Ca	nopy Specie	es Density	Avg. Height	Size	individual cedar scattered throughout. trace amounts of y. birch and w
	Red Maple	10	Pole	8		Re	ed Maple	Low	5 - 10 feet	Sapling	pine
	Balsam Fir	10	Pole/Sapling	g 6		Ва	alsam Fir	Medium	5 - 10 feet	Sapling	
	Black Spruce	20	Pole	8	59	Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
Nor	rthern White Cedar	55	Log/Pole	10	96						1
47	4130	- Aspen		Saplin	g Well	3.3	16	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Quaking Aspen	75	Sapling	2	16		nut (Beaked)	Low	5 - 10 feet	Tall Shrub	
	Red Maple	20	Sapling	1							
48	42330 -	Upland Fir		Poletimber Well		11.4 57 Uı		Unspecified	N/A		fir/spruce 1-2 sticks high. left as a buffer strip along Deer R. fir/spruce 5 -
	Canopy Species	% Cover	Size Class	Size Class DBH Age		Sub-Ca	nopy Specie	es Density	Avg. Height	Size	6 sticks tall in mid -S. part of stand
	Balsam Fir	60	Pole	7	57	Ва	alsam Fir	Low	10 - 20 feet	Sapling	
	White Spruce	30	Pole/Log	9							
49	122 - Road	d/Parking L	ot	Nonst	ocked	4.9	0	Unspecified	No		Deer Lake Road
50	6129 - Mixed Co	oniferous Lo	owland P	oletimbe	r Medium	n 7.0	114	Unspecified	N/A		Q/L0 along Deer R. multiple springs/drainages feed into the river. heavy alder in areas. small inclusions of better to good quality b. spruce and
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	tamarack. areas of swamp grass flats immediately adjacent to river
	Balsam Fir	10	Pole/Log	8			ag Alder	High	5 - 10 feet	Tall Shrub	
	Black Spruce	25	Pole	8	59		-			1	
Nor	rthern White Cedar	40	Log	14							
51	6220 - A	lder/willow		Nonst	ocked	10.9	0	Unspecified	No		wet tag alder stand. scattered fir 3 - 6" dbh with w pine 24 - 28" dbh. also scattered w birch and b ashheavy winter deer use along edges
52	3102	- Grass		Nonst	ocked	1.5	0	Unspecified	No		areas of F3

Crystal Falls Mgt. Unit Report 7 – Stands



Stand	Level 4 Cover Type			Size Der	sity	Acres	Stand Age	BA Range	Managed Site		General Comments
53	4193 - Bi	4193 - Birch, Aspen			Poletimber Well		66	81-110	N/A		transitional stand between N hardwoods and aspen to west and south.
	Canopy Species	% Cover	Size Class	ass DBH Age		Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Aspen 9-14" dbh. areas with good h maple sapling establishment
	Quaking Aspen	10	Log/Pole	10		Sug	ar Maple	Medium	10 - 20 feet	Sapling	
	Red Maple	10	Pole	9		Hazeln	ut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
	Sugar Maple	20	Pole	9							_
	Paper Birch	55	Log/Pole	10	66						