

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12183
Entry Year 2021
Acreage: 1,665
County Iron

Management Area: Michigamme Reservoir

Revision Date: 2019-07-31 Stand Examiner: Ed Rice

Legal Description:

T45N R31W sections 1, 4, 10, 11, 12

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:

There are large expanses of fine sandy loams and sandy loams with cobble. The lowland areas are underlaid by muck soils. The topography ranges from fairly steep rolling to flat and low swamp land.

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

The compartment is basically separated into three blocks of state ownership with private lands between. A large block of industrial forestland is in section 11. Active forest management has occurred and will continue within and surrounding the compartment.

Unique Natural Features:

None identified

Archeological, Historical, and Cultural Features:

None identified

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

Smith Creek and its feeders are designated cold water streams. Any aspen management adjacent should apply the 300 foot minimum buffer.

This compartment contains Smith Creek and Mitchigan River, both cold streams and Type 1 trout streams less then 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.

Wildlife Habitat Considerations:

A small portion of the compartment in the SW is designated as deer wintering area. Creating age class diversity in the aspen while keeping a component of spruce and fir is crucial to sustain grouse and hare populations in this compartment. Much of the compartment is also comprised of state game fund purchased land.

Mineral Resource and Development Concerns and/or Restrictions

No known mineral test data is available to confirm the presence of iron ore or other metallic minerals. The state does not own all mineral rights within the compartment.

Vehicle Access:

Access is overall good. The Camp 1 Road is a DNR well maintained road. There are multiple unimproved woods roads running throughout the compartment.

Survey Needs:

Several survey corners will need to be set.

Recreational Facilities and Opportunities:

None

Fire Protection:

With this compartment dominate to aspen, the fuels are not receptive to problematic fires. Historically starts have been very low in this area. Equipment access is good.

Additional Compartment Information:

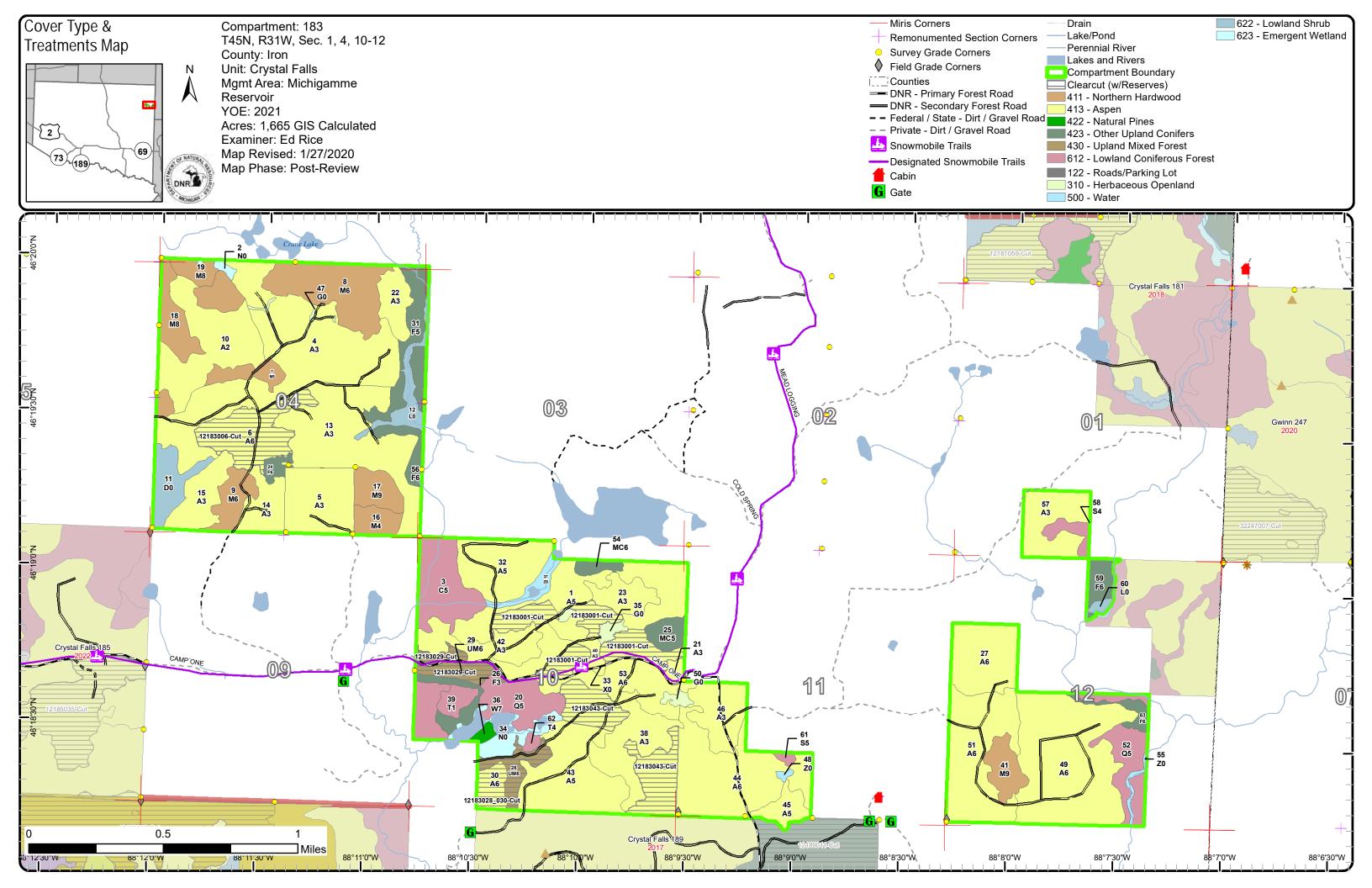
The following reports from the Inventory are attached:

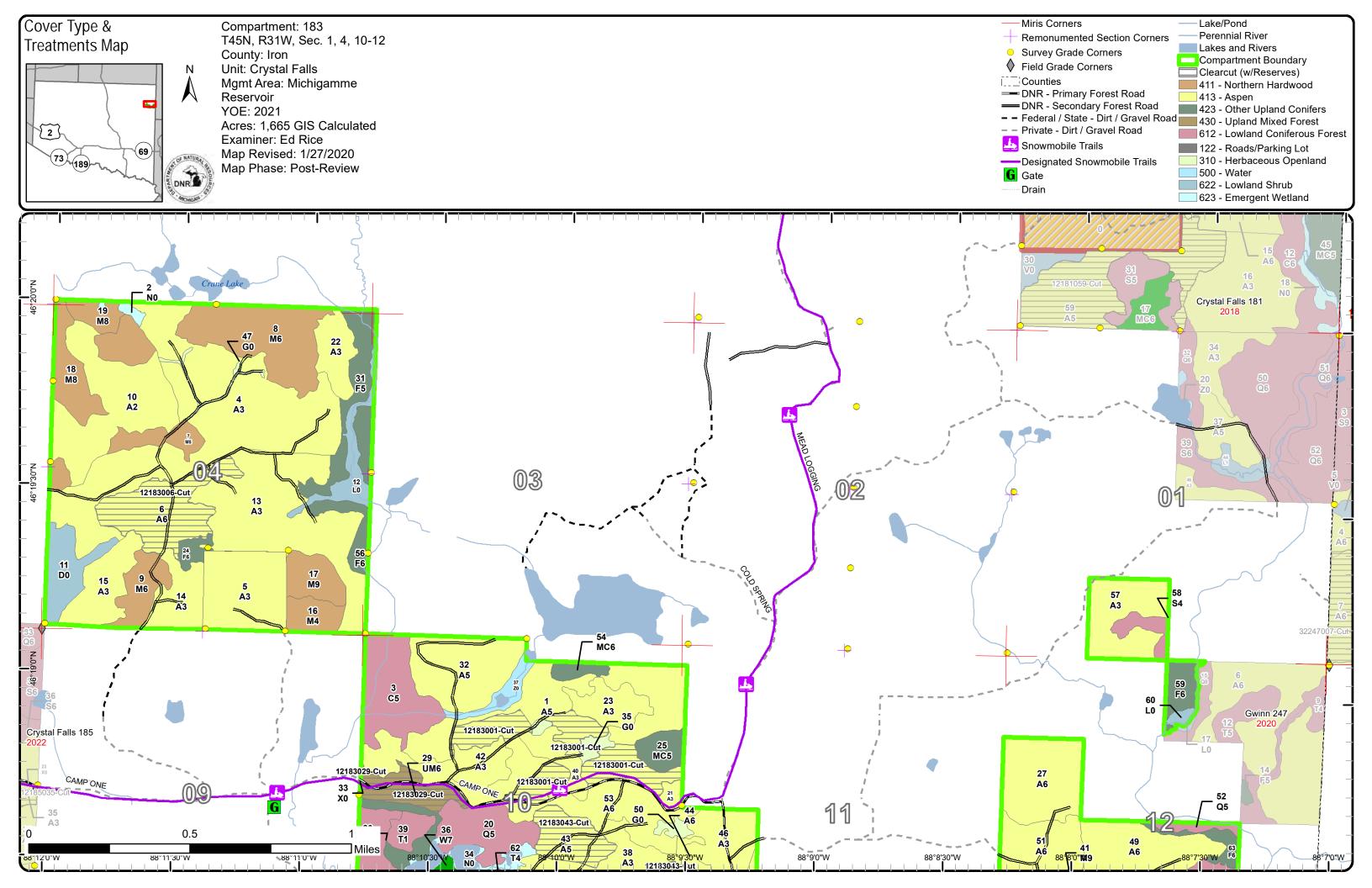
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

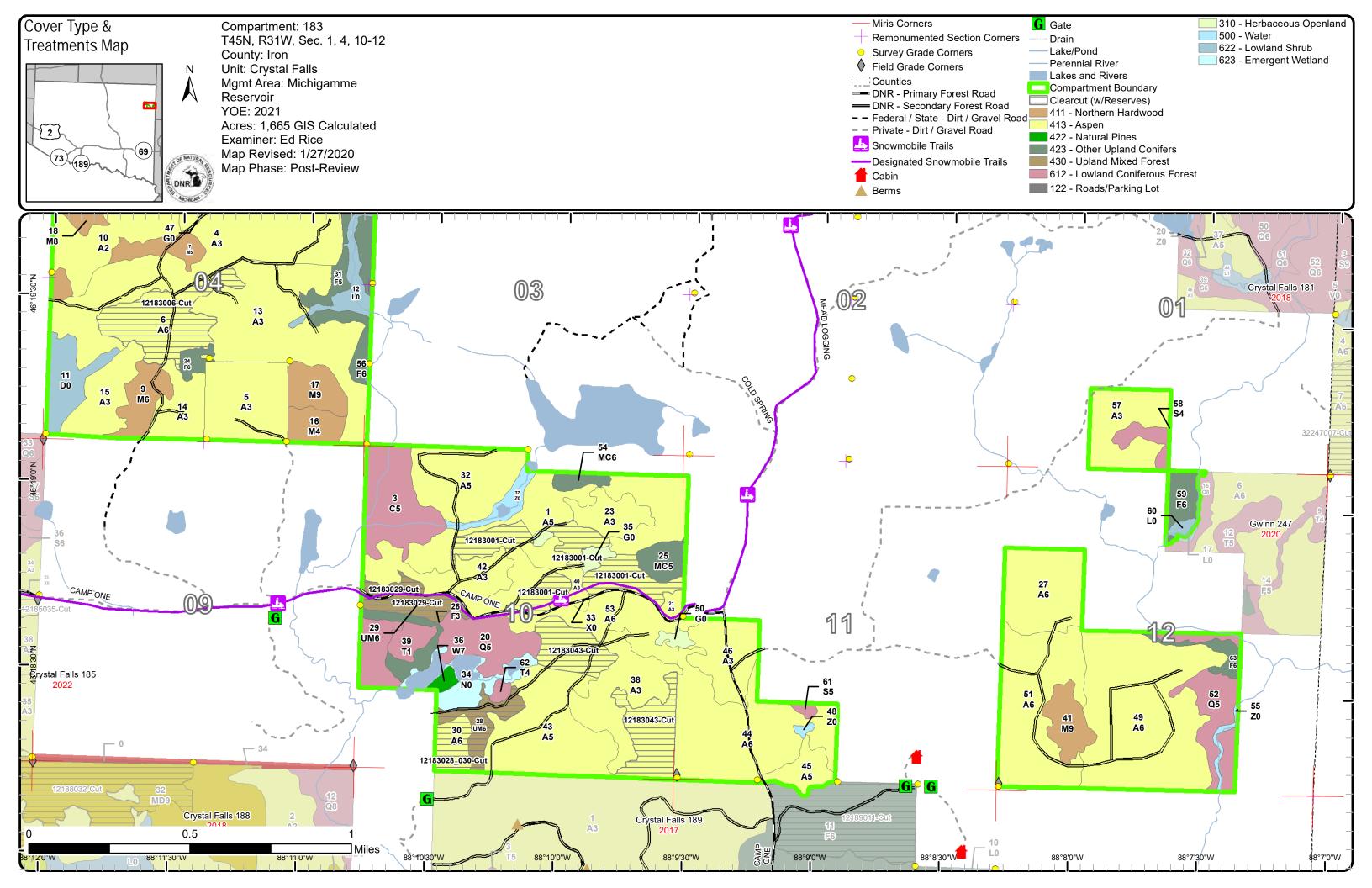
The following information is displayed, where pertinent, on the attached compartment maps:

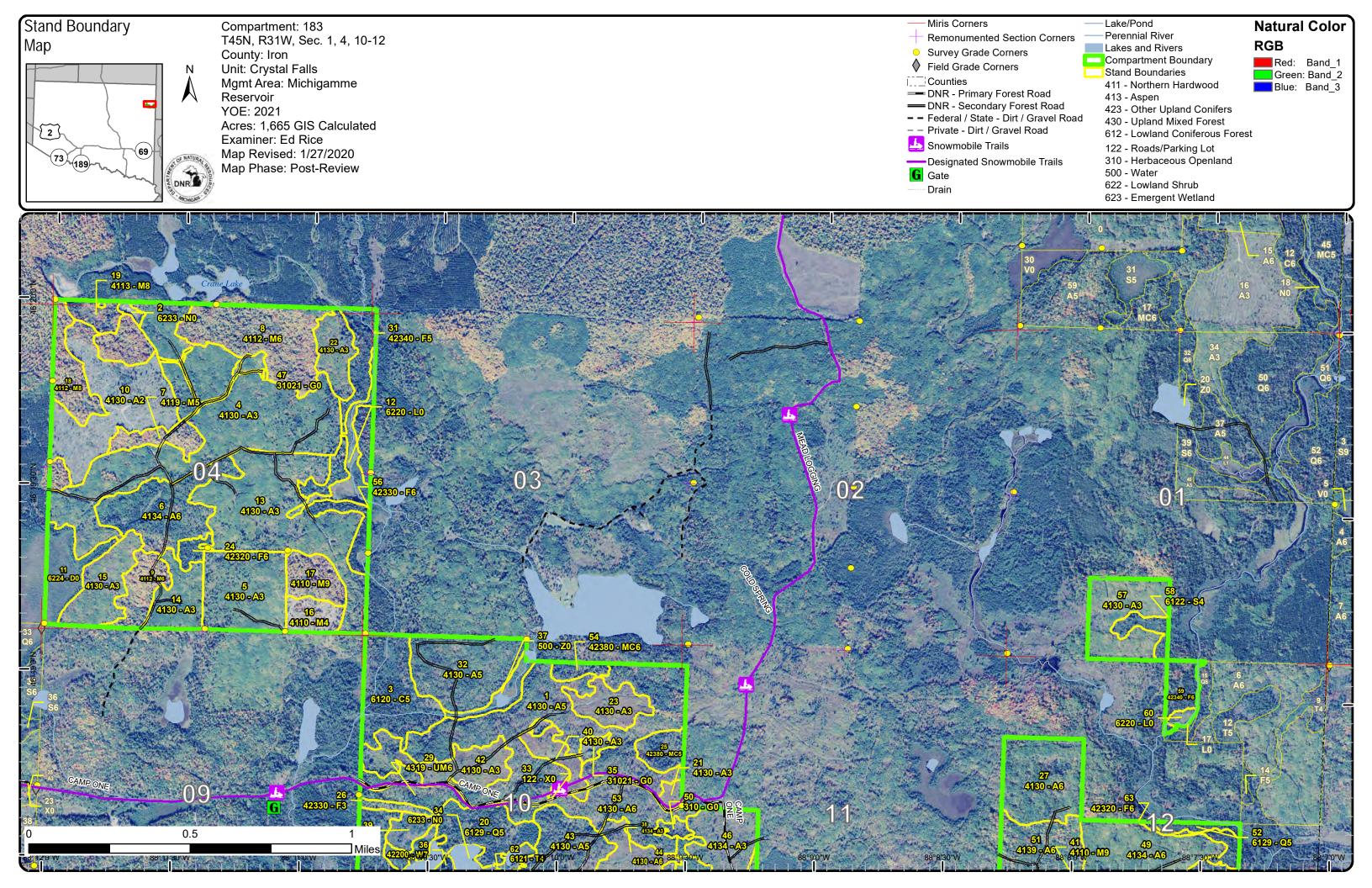
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries

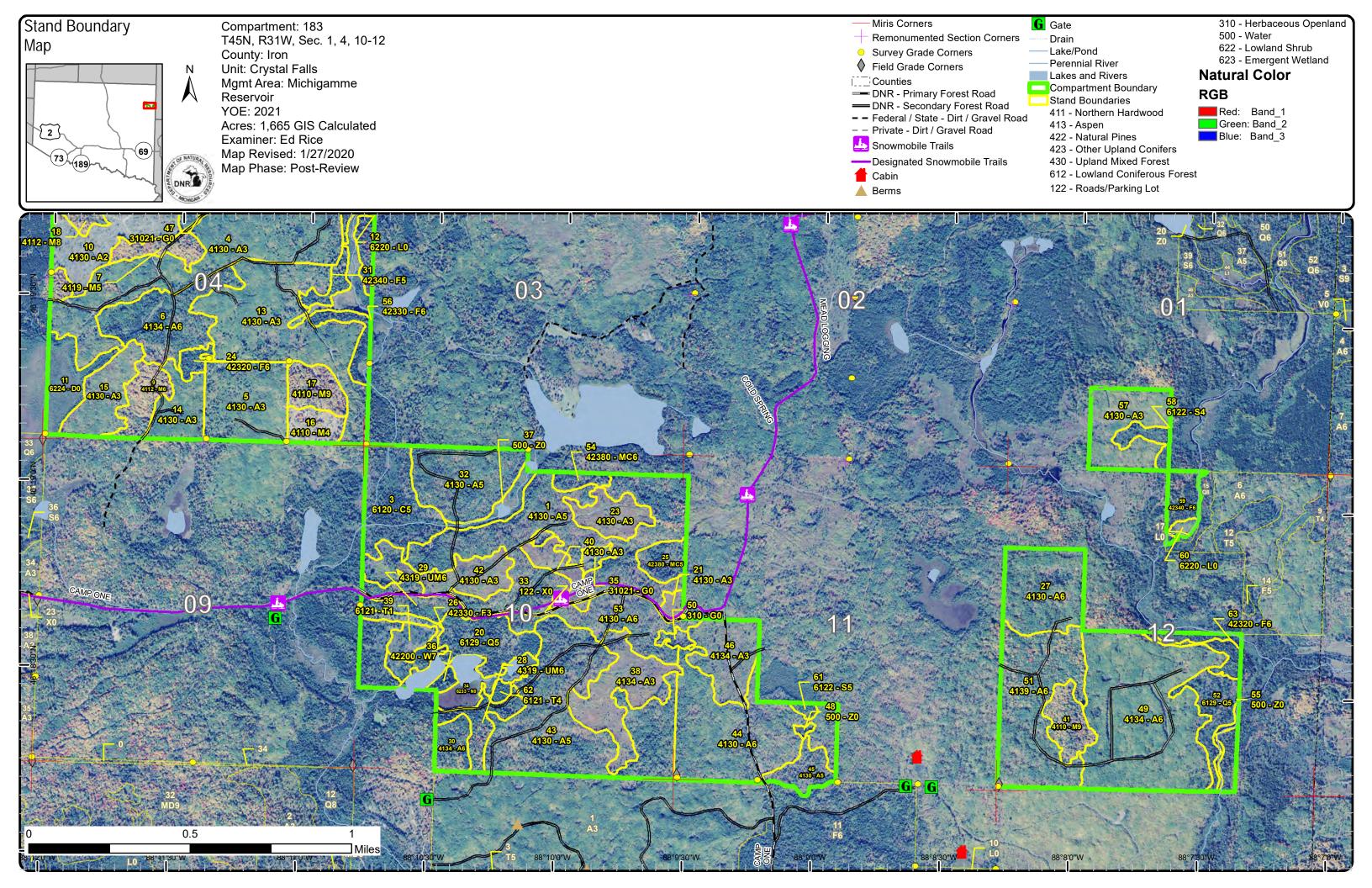
Details on the road access system

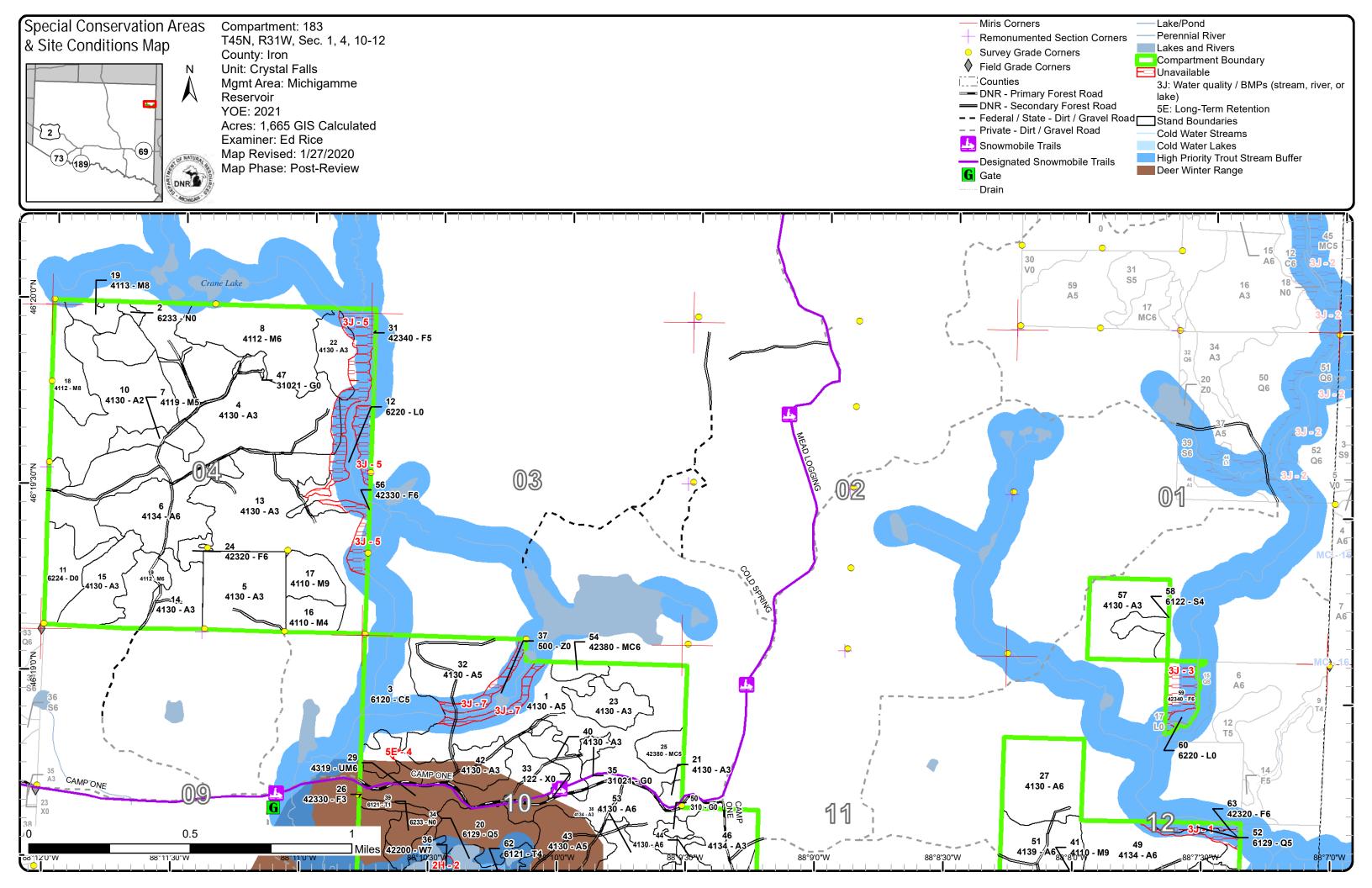


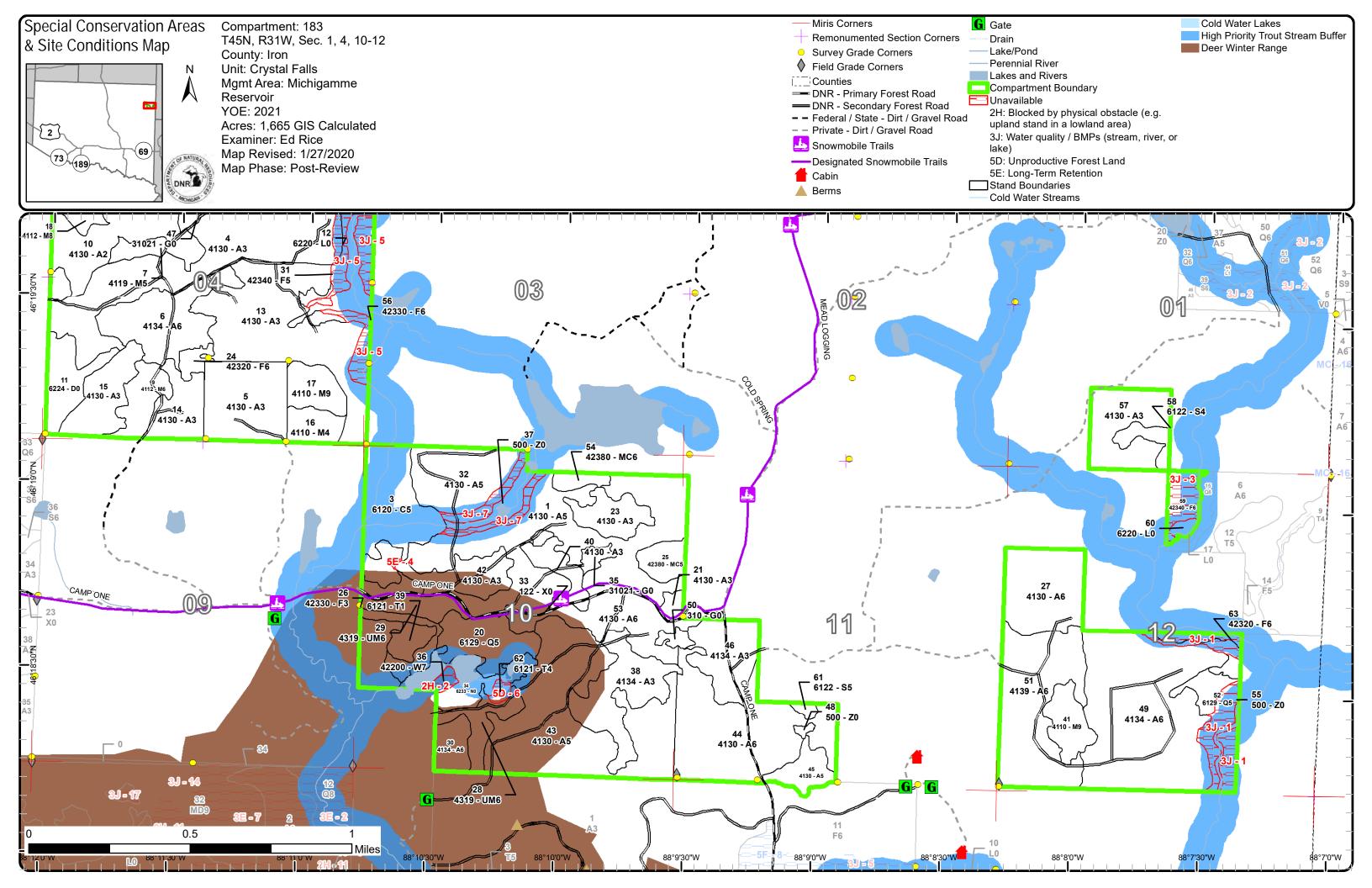












Report 1 – Total Acres by Cover Type and Age Class

Crystal Falls Mgt. Unit

Ed Rice : Examiner

Compartment 183 Year of Entry 2021



Age Class

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Aspen	0	58	195	281	295	313	40	0	0	0	0	0	0	0	0	0	0	0	1182
Cedar	0	0	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	37
Herbaceous Openland	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Lowland Conifers	0	0	0	0	0	0	67	0	0	0	0	0	0	0	0	0	0	0	67
Lowland Shrub	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Lowland Spruce/Fir	0	0	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0	0	9
Marsh	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Northern Hardwood	0	0	0	0	0	0	11	8	15	0	0	0	0	0	0	0	0	124	158
Tamarack	0	0	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	10
Treed Bog	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Upland Conifers	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	15
Upland Mixed Forest	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	31
Upland Spruce/Fir	0	0	10	0	27	21	11	0	0	0	0	0	0	0	0	0	0	0	69
Urban	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Water	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
White Pine	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
Total	85	58	213	281	324	365	131	8	37	3	0	37	0	0	0	0	0	124	1666



Report 2 – Treatment Summary

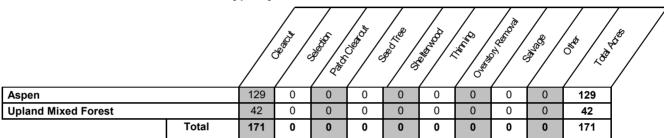
Crystal Falls Mgt. Unit Year of Entry: 2021

Acres of Harvest

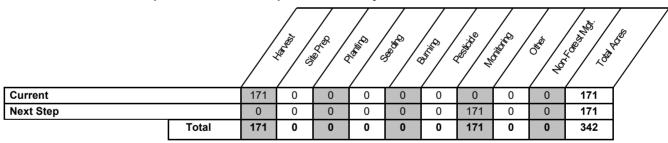
Compartment 183
Total Compartment Acres: 1,665

Commercial Harvest - 171 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



reatments Compartment: 183
Year of Entry: 2021

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Treatment Stand Size Stand ВА **Treatment Treatment** Cover Type Acres Age Habitat Method Objective Name CoverType Density Age Range Type Structure Cut

Proposed Treatments:

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n

d

1 12183001-Cut 44.6 4130 - Aspen Poletimber 47 Unspec Harvest Clearcut with 4134 - Aspen, Even-Aged No Medium ified Retention Spruce/Fir

Prescription cut merchantable (1 stick and larger) aspen, cherry, and maple. cut spruce fir 7" stump and larger (2 stick +). do not cut w pine, r pine, w

Specs: birch or oak

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, spruce, fir, pine

Other Comment:

Regen:

Site Condition

Proposed Start Date: 5 /30/2019

12183006-Cut 40.0 4134 - Aspen, Poletimber 50 Unspec Harvest Clearcut with 4136 - Aspen, Even-Aged Nο Spruce/Fir Well ified Retention Mixed Conifer

Prescription cut merchantable (1 stick and larger) aspen, spruce, fir, r maple, w birch and cherry. leave 1 w birch and cherry per cruise point where

Specs: available. do not cut w pine, r pine

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, spruce, fir

Regen: Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2020

12183028_030 25.2 4319 - Mixed Poletimber 43 51-80 Harvest Clearcut with 4134 - Aspen, Even-Aged No **Upland Forest** Well Retention Spruce/Fir -Cut

Prescription cut merchantable (1 stick and larger) aspen, spruce, fir, cherry, w birch, and r maple. leave at least 1 cherry and/or w birch per cruise plot

Specs: where available. do not cut w pine, r pine, oak.

Monitoring, Natural Regen (Re-Inventory)

Next Step Treatments:

Acceptable aspen, maple, spruce/fir

Regen:
Other
Comment:

Site Condition

Proposed Start Date: 10/1 /2020

29 12183029-Cut 16.4 4319 - Mixed Poletimber 47 81-110 Harvest Clearcut with 4136 - Aspen, Even-Aged No Upland Forest Well Retention Mixed Conifer

Prescription cut merchantable (1 stick and larger) aspen, spruce, fir, and r maple. leave birch, r pine, w pine.

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	C	rystal Falls	Mgt. Unit		Repo	rt 3 ⁻	Treatments		Compartmer Year of Entr		DNR DNR MICHIGAN
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
43	12183043-Cu	t 44.7	4130 - Aspen	Poletimbe Medium		Unspec ified	Harvest	Clearcut with Retention	4134 - Aspen, Spruce/Fir	Even-Aged	No
Spec Next	s: availa	ble. do not d	cut r pine, w pine	ór oak	nuce, III	, і шаріе,	w birch, and cr	nerry. leave 1 cheri	y and/or w diren p	zei Gruise poin	t where
Acce Rege		, spruce, fir									
Othe Com	<u>r</u> ment:										
Site (<u>Condition</u>										

Total Treatment Acreage Proposed: 170.9

Proposed Start Date: 10/1 /2020

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner





Availa	bility for	Managemen	nt					
Total	Acres	Acres Avail	Acres		Domina	nt Site	Cond	ditions
Acres	Available	With Condition	Not Available		2H	3J	5D	5E
1182	1166	0	16	Aspen		16		0
37	37	0	0	Cedar				
11	11	0	0	Herbaceous Openland				
67	47	0	21	Lowland Conifers		21		
16	16	0	0	Lowland Shrub				
9	9	0	0	Lowland Spruce/Fir				
23	23	0	0	Marsh				
158	158	0	0	Northern Hardwood				
10	8	0	2	Tamarack			2	
20	20	0	0	Treed Bog				
15	15	0	0	Upland Conifers				
31	31	0	0	Upland Mixed Forest				
69	21	0	48	Upland Spruce/Fir		48		
3	3	0	0	Urban				
12	12	0	0	Water		0		
3	0	0	3	White Pine	3			
1,665	1,576		89	Total Forested Acres	3	84	2	0
	95%		5%	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)	25	5E: Long-Term Retention	Unspecified	Unspecified	Unspecified
(Comments:						
2	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
(Comments:						

Report 4 – Site Conditions

Crystal Falls Mgt. Unit

Ed Rice : Examiner



3	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: after cold water stre	eam buffer, remaining area too	small				
4	Unavailable	5E: Long-Term Retention	0	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	37	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: BMP buffer						
6	Unavailable	5D: Unproductive Forest Land	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	5E: Long-Term Retention	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: 183





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 conditions stocked trout populations and those of other coldwater fish spectonditions 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	ies to persist from year to year. Suitable ey 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 and those of other coldwater fish specyear 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.	ies (e.g., slimy sculpin) to persist from ese conditions due to substantial
SCA	Habitat Area	An area that provide some specific need for the life cycle of wild and Waterfowl Production Areas, deer wintering complexes in lo 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 o covered by species recovery plans that are developed in cooper	wland conifer communities, grassland nabitat designated for recovery of piping plover areas) in that they are more r 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 communities are ecologically and socially significant in their effe as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian cts on water quality and quantity, as well



Stan	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
1	4130	- Aspen	Р	oletimber	Medium	111.5	47	Unspecified	N/A		fairly wide open aspen poletimber stand. scattered 10" apsen. slight
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	component of r pine/w pine 16 - 20" dbh. NE corner has higher stocking of maple and heavier spruce/fir understory.
	Quaking Aspen	80	Pole	8	47	Ва	Isam Fir	Medium	10 - 20 feet	Sapling	of maple and heavier spruce/iii understory.
					1	Whi	te Spruce	Medium	10 - 20 feet	Sapling	
						Wh	nite Pine	Medium	10 - 20 feet	Sapling	
						Hazeln	ut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
2	6233 - V	Vet Meadow	,	Nonsto	ocked	2.0		Unspecified	No		vernal area - swamp grass. seasonally ponded and during wet years. ringed by spruce/fir/w pine.
3	6120 - Lo	wland Ceda	ır P	oletimber	Medium	37.2	102	51-80	N/A		areas of dense, high quality cedar. in canopy openings and in areas of
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	low stocking tag alder is predominate with fir saplings. N end has lower tree stocking and is heavier to tag alder. Smith Creek feeder stream
No	orthern White Cedar	50	Log	14	102	Ta	ag Alder	High	5 - 10 feet	Tall Shrub	
	Black Spruce	30	Pole	7		Ва	Isam Fir	Medium	10 - 20 feet	Sapling	, and the second
	Tamarack	10	Pole	7							
4	4130	- Aspen		Sapling	ı Well	137.2	24	Immature	N/A		just moving into poletimber size class, scattered aspen 5 - 6" dbh.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	80	Sapling/Pol	e 4	24	Ва	Isam Fir	Medium	10 - 20 feet	Sapling	
				'		Whi	te Spruce	Medium	10 - 20 feet	Sapling	
5	4130	- Aspen		Sapling	y Well	40.3	24	Immature	N/A		small pockets of spruce/fir. slight component of cherry and r maple
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	85	Sapling	2	24	Hazeln	ut (Beaked)	Low	5 - 10 feet	Tall Shrub	
	White Pine	10	XLog	20							
6	4134 - Asp	en, Spruce/	Fir	Poletimb	er Well	40.0	50	Unspecified	N/A		scattered w pine 24" + dbh. sawtimber sized w spruce is dead from past
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	SBW, scattered cherry. small conifer inclusion in W center of stand - open grown spruce/fir. N end of stand has strip of windthrow from 2016.
	Quaking Aspen	70	Pole/Log	9	50	Ва	lsam Fir	Medium	10 - 20 feet	Sapling	open grown opracom. It one or stand has strip or windamow nom 2010.
	Balsam Fir	15	Pole	7		Whi	te Spruce	Medium	10 - 20 feet	Sapling	
7	4119 - Mixed N	orthern Hard	dwoods P	oletimber	Medium	14.7	73	51-80	N/A		very scattered b cherry component. occasional old windthrow patches
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	from 2016
	Sugar Maple	35	Log/Pole	12	73	Ва	Isam Fir	Low	10 - 20 feet	Sapling	
	Red Maple	35	Pole/Log	9		Iro	onwood	Low	10 - 20 feet	Sapling	
	Yellow Birch	10	Log/Pole	10		Whi	te Spruce	Low	10 - 20 feet	Sapling	
	White Spruce	10	Pole	8				-		,	•
	Balsam Fir			7							



Stand	Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
8	4112 - Maple, Asso	Beech, Ch	nerry	Poletimb	er Well	48.6	73	51-80	N/A		h maple sawtimber component 14 - 18" dbh unevenly throughout the stand. good h maple regeneration throughout. in NE to N central very
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	well stocked h maple saplings (M3). fairly dense aspen regeneration 8 - 10' tall along W side of stand
	Sugar Maple	70	Pole/Log	9	73	Sug	ar Maple	Full	10 - 20 feet	Sapling	To tall along wo side of stand
9	4112 - Maple, Asso	Beech, Ch	nerry	Poletimb	er Well	15.8	73	81-110	N/A		lower quality hardwoods - short heights. sawtimber is mainly "wolf" trees
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Sugar Maple	65	Pole	7	73	Iro	nwood	High	10 - 20 feet	Sapling	
	Red Maple	25	Pole	7		Whit	te Spruce	Medium	10 - 20 feet	Sapling	
10	4130	- Aspen	;	Sapling N	Medium	58.3	6	Immature	N/A		areas of low to no aspen regeneration - semi open with r maple stump sprouts. majority of aspen saplings has scars on entire length of the
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	boles - likely from sun scald. scattered small inclusions of 2" dbh aspen.
	Quaking Aspen	65	Sapling	1	6	Bal	lsam Fir	Low	5 - 10 feet	Sapling	
	Red Maple	30	Sapling	1							
11	6224 - 7	Treed Bog		Nonsto	ocked	19.9	l	Unspecified	No		leatherleaf bog with stunted b spruce/tamarack 2 - 4" dbh
12	6220 - A	.lder/willow		Nonsto	cked	13.7	0	Unspecified	No		Smith Creek and associated lowlands - old open beaver meadows, alder with scattered lowland conifers
13	4130	- Aspen		Sapling	Well	84.0	25	Immature	N/A		scattered aspen is just moving into poletimber size class 5 - 6"
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	85	Sapling/Pole	e 3	25	Wh	nite Pine	Low	10 - 20 feet	Sapling	
	White Spruce	10	Pole/Sapling	g 7		Whit	te Spruce	Medium	10 - 20 feet	Sapling	
14	4130	- Aspen		Sapling	y Well	19.1	26	Immature	N/A		aspen stems just moving into poletimber. scattered w spruce and r pine
	Canopy Species	% Cover	Size Class	DBH	Age						
	Quaking Aspen	90	Sapling/Pole		26						
	Red Maple	10	Sapling	2							
15	4130	- Aspen		Sapling	y Well	23.8	16	Immature	N/A		higher stocking of fir along W side - transition/buffer to bog. previous cut left residual maple, E end of stand has a h maple cull tree component 12-
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	20" dbh. scattered r pine 18 - 20" dbh.
	Quaking Aspen	80	Sapling	2	16	Hazeln	ut (Beaked)	High	5 - 10 feet	Tall Shrub	
	Balsam Fir	10	Sapling/Pole	e 3							
16	4110 - Sugar M	laple Asso	ciation I	Poletimb	er Poor	11.1	54	1-50	N/A		shelterwood cut in past. areas of semi open to open. steep hills
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Species	s Density	Avg. Height	Size	
	Sugar Maple	80	Pole	8	54	Quak	ing Aspen	Medium	10 - 20 feet	Sapling	
	Red Maple	10	Pole	6		Iro	nwood	Medium	10 - 20 feet	Sapling	
	Paper Birch	10	Pole	7							



Stand	d Level 4 C	over Type	:	Size De	ensity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments
17	4110 - Sugar N	•		Sawtimb			73	81-110	N/A		H maple fair to good quality. scattered r oak 16 - 18" dbh. slight cherry component
	Canopy Species		Size Class		l Age		nopy Species		Avg. Height	Size	'
	Red Maple	10	Log/Pole	10	73		onwood	Low	10 - 20 feet	Sapling	
	Sugar Maple	65	Log/Pole	12	73	Su	gar Maple	Low	10 - 20 feet	Sapling	
	Basswood	20	Log	12							
18	4112 - Maple Asso	, Beech, Ch ociation	nerry Sa	wtimbe	r Mediu	m 29.6	73	51-80	N/A		h maple sawtimber component ranges from 12 - 20", fair - good quality
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Sugar Maple	65	Log/Pole	10	73	Ва	alsam Fir	Medium	10 - 20 feet	Sapling	
	Red Maple	25	Log/Pole	10		Sug	gar Maple	Low	10 - 20 feet	Sapling	
			-			Ir	onwood	Medium	10 - 20 feet	Sapling	
19	4113 - R.N	/laple, Conit	fer Sa	wtimbe	r Mediu	m 8.2	65	51-80	N/A		small vernal area in center of stand
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Spruce	25	Log/Pole	10			ed Maple	Medium	10 - 20 feet	Sapling	
	Red Maple	50	Pole/Log	9	65		alsam Fir	High	10 - 20 feet	Sapling	
	White Pine	10	Log	14						1 0	
	Yellow Birch	10	Log/Pole	10							
20	6129 - Mixed Co Fo	orest		letimbe		m 39.0	56	1-50	N/A		very wet variable stand. Western most portion heavier to b spruce.
	Canopy Species	% Cover	Size Class	DBI	d Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Tamarack	45	Pole	8	56	T	ag Alder	High	5 - 10 feet	Tall Shrub	
	Black Spruce	30	Pole	7		Bla	ck Spruce	High	10 - 20 feet	Sapling	
No	orthern White Cedar	25	Log	12		Ва	alsam Fir	High	10 - 20 feet	Sapling	
21	4130	- Aspen		Saplin	g Well	3.5	13	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBI	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	85	Sapling	1	13	Hazelı	nut (Beaked)	High	5 - 10 feet	Tall Shrub	
22	4130	- Aspen		Saplin	g Well	15.6	16	Immature	N/A		
	Canopy Species	% Cover	Size Class		H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	85	Sapling	2	16		alsam Fir	Low	10 - 20 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	6		Wh	ite Spruce	Low	10 - 20 feet	Sapling	
						Hazelı	nut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
23	4130	- Aspen		Saplin	g Well	16.0	13	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	90	Sapling	1	13	Hazeli	nut (Beaked)	High	5 - 10 feet	Tall Shrub	

Crystal Falls Mgt. Unit



Stand	d Level 4 C	over Type	S	ize De	ensity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments
24	<u>'</u>	oland Sprud			er Wel	1 4.7	44 L	Jnspecified	N/A		very dense, conifer pocket. open grown trees - very limby
	Canopy Species		Size Class		I Age		mopy Species		Avg. Height	Size	
	White Spruce	70	Pole/Sapling	7	44		ite Spruce	High	10 - 20 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	6		W	hite Pine	High	10 - 20 feet	Sapling	
	White Pine	20	Log/Pole	10							
25	42380 - Non Pin Mixed D	ie Upland C Deciduous	onifer, Pole	etimbe	r Mediu	ım 10.0	72 L	Jnspecified	N/A		small inclusions of aspen regeneration 10 - 20' tall from 2006 windthrow. very scattered r pine component. small pothole b spruce/tamarack
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	swamp in N center of stand
	Quaking Aspen	35	Log	14	72	Bla	ck Spruce	Low	10 - 20 feet	Sapling	
	Black Spruce	25	Pole	7		Qua	king Aspen	Medium	10 - 20 feet	Sapling	
26	42330 -	Upland Fir	5	Saplino	g Well	9.9	13	Immature	N/A		extremely dense fir thicket with associated aspen. stand on small high
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	ground ridge
	Quaking Aspen	30	Sapling	2			alsam Fir	Full	5 - 10 feet	Sapling	
	Balsam Fir	65	Sapling/Pole	3	13	·					
27	4130	- Aspen	Po	oletimb	er Wel	I 40.1	36 L	Jnspecified	N/A		small opening inclusions created from windstorm over 10 years ago.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	small conifer/pothole inclusion in N central of stand
	Quaking Aspen	90	Pole/Sapling	5	36	Hazelı	nut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
28	4319 - Mixed	<u>'</u>			er Wel	l 14.2	43	51-80	N/A		rolling fairly steep hills
	Canopy Species		Size Class		I Age		nopy Species		Avg. Height	Size	
	Quaking Aspen	45	Pole	8	43	Ba	alsam Fir	High	10 - 20 feet	Sapling	
	Balsam Fir	35	Pole/Sapling	6							
	White Pine	10	XLog	22							
29	4319 - Mixed	'			er Wel	l 16.4	47	81-110	N/A		dense spruce/fir understory with areas low to zero conifer understory. steep hill along S boundary. rolling hills throughout.
	Canopy Species		Size Class		l Age		nopy Species		Avg. Height	Size	- stoop till dietig e zealtaally. Teilling tille alleagteall
	Quaking Aspen	50	Pole	9	47		alsam Fir	High	10 - 20 feet	Sapling	
	Balsam Fir	40	Pole/Sapling	6		Wh	ite Spruce	High	10 - 20 feet	Sapling	
						Hazelı	nut (Beaked)	Full	5 - 10 feet	Tall Shrub	
30	4134 - Aspe	en, Spruce/	Fir Po		er Wel	l 10.9	43	81-110	N/A		very SW corner has small M6 inclusion (mainly r maple with scattered h maple). very scattered w spruce 12 - 14" dbh throughout, much of it
	Canopy Species		Size Class		l Age		nopy Species		Avg. Height	Size	standing dead
	Quaking Aspen	60	Pole/Log	8	43		alsam Fir	High	>20 feet	Sapling	
	Balsam Fir	30	Pole	8			ck Cherry	Low	10 - 20 feet	Sapling	
	White Pine	10	XLog	22		Su	gar Maple	Low	10 - 20 feet	Sapling	
						Pa	per Birch	Low	10 - 20 feet	Sapling	

Crystal Falls Mgt. Unit



Stand	d Level 4 C	over Type	:	Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
31	42340 - Upla	and Spruce	/Fir Po	letimbe	r Medium	27.4	36	51-80	N/A		stand acting as BMP buffer adjacent to Smith Creek,
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Balsam Fir	20	Pole	6	36	Re	d Maple	High	10 - 20 feet	Sapling	
	White Pine	10	XLog	20		Ва	lsam Fir	High	10 - 20 feet	Sapling	
	Paper Birch	10	Sapling/Pole	4		Ta	ig Alder	Low	5 - 10 feet	Tall Shrub	
	Tamarack	10	XLog	18							
	White Spruce	50	Pole	7	36						
32	4130	- Aspen	Ро	letimbe	r Medium	41.8	44	1-50	N/A		small w pine/scattered j pine pine inclusion. rolling hills, access across
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	old beaver dam
	Quaking Aspen	85	Pole	7	44	Whi	te Spruce	High	10 - 20 feet	Sapling	
				,		Ва	lsam Fir	High	10 - 20 feet	Sapling	
33	122 - Road	d/Parking L	ot	Nonst	ocked	3.4	0 (Jnspecified	No		Camp 1 Rd
34	6233 - W	et Meadow	,	Nonst	ocked	21.1	ı	Jnspecified	No		chain of ponds with associated wet bog/meadow.
35	31021 - Cool	l Season G	rass	Nonst	ocked	5.0	0 (Jnspecified	No		semi open treed opening. spruce/fir, w pine, growing into opening. scattered cherry saplings.
36	42200 - Natu	ural White F	Pine S	Sawtimb	er Poor	2.7	81	1-50	N/A		large diameter w pine with very dense fir saplings/small poletimber
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	White Pine	90	XLog	24	81	Ва	Isam Fir	Full	>20 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	6							
37	500 -	- Water		Nonst	ocked	8.1		51-80	No		series of old beaver ponds/meadows. creek runs through stand
38	4134 - Aspe	en, Spruce/	Fir	Saplin	g Well	36.8	13	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	70	Sapling	1	13		ut (Beaked)	High	5 - 10 feet	Tall Shrub	
	Balsam Fir	10	Pole/Sapling	6			. ,			II.	
	White Spruce	10	Pole/Sapling	6							
39	6121 -	Tamarack		Sapling	g Poor	7.6	13	Immature	N/A		heavy tag alder with tamarack saplings. scattered slight cedar 10 - 12'
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	dbh component
	Tamarack	50	Sapling	1	13	Ta	ıg Alder	High	5 - 10 feet	Tall Shrub	
					1 1 1		9				



Level 4 Cover Type			Size Density		Acres	Stand Age	BA Range	Managed Site		General Comments
4130 - Asper			Sapling Well		11.9	13	Immature	N/A		scattered w pine
nopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	
aking Aspen	90	Sapling	2	13	Hazeln	ut (Beaked)	Medium	< 5 feet	Tall Shrub	
4110 - Sugar Maple Association			Sawtimb	er Well	15.3	76	81-110	N/A		decent - fair quality h maple. r maple shows defects - poor form. small
nopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	pockets of h maple saplings . trace component of w birch 8 - 12" dbh in W part of stand
ıgar Maple	80	Log/Pole	10	76	Sug	ar Maple	Medium	10 - 20 feet	Sapling	TV part of stand
Basswood	15	Log/Pole	10		Irc	nwood	Medium	10 - 20 feet	Sapling	
41:	30 - Aspen		Sapling	Well	26.9	13	Immature	N/A		scattered cherry saplings
nopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
aking Aspen	85	Sapling	2	13		nite Pine	Low	10 - 20 feet	Sapling	
4130 - Aspen P			oletimber	Mediur	n 104.5	44	Unspecified	N/A		aspen 7 - 11" dbh, scattered spruce 12" dbh. along S line exists a heavie spruce/fir component - spruce/fir 3 - 6" dbh. scattered cherry and r pine.
nopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	sprace/iii component - sprace/iii o - o abii. scattered cherry and i pine.
aking Aspen	80	Pole/Log	8	44	Ва	Isam Fir	Medium	5 - 10 feet	Sapling	
						nite Pine	Low	5 - 10 feet	Sapling	
					Haze	Inut (Spp.)	Trace	< 5 feet	Tall Shrub	
4130 - Aspen		I	Poletimb	er Well	76.4	36	Unspecified	N/A		scattered aspen 10 - 12" dbh. rolling hills
nopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
aking Aspen	90	Pole	6	36	Whit	te Spruce	Medium	10 - 20 feet	Sapling	
nite Spruce	10	Pole/Sapling	g 7		Wh	nite Pine	Medium	10 - 20 feet	Sapling	
					Hazeln	ut (Beaked)	High	5 - 10 feet	Tall Shrub	
4130 - Aspen F		Po	Poletimber Mediun		n 11.8	44	Unspecified	N/A		aspen 7 - 11" dbh, spruce 12" dbh. along S edge heavier spruce/fir component 3-6" scattered r pine
nopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	Component 3-0 Scattered i pine
aking Aspen	80	Pole/Log	8	44	Ва	lsam Fir	Medium	5 - 10 feet	Sapling	
					Wh	nite Pine	Low	5 - 10 feet	Sapling	
					Hazeln	ut (Beaked)	High	5 - 10 feet	Tall Shrub	
4134 - A	spen, Spruce/	/Fir	Sapling	Well	27.7	14	Immature	N/A		very scattered r pine16 - 18" dbh
nopy Species	% Cover	Size Class	DBH	Age	Sub-Car	nopy Specie	s Density	Avg. Height	Size	
aking Aspen	70	Sapling	2	14	Hazeln	ut (Beaked)	Medium	5 - 10 feet	Tall Shrub	
Vhite Pine	10	Pole/Log	8				'			•
nite Spruce	10	Pole/Sapling	g 6							
alsam Fir	10	Pole/Sapling	g 6							
alsam Fir		I	Pole/Sapling	Pole/Sapling 6						

Report 7 - Stands



Stand	d Level 4 C	Level 4 Cover Type Size Density Acr		Acres	Acres Stand Age BA Range Managed Site			Site	General Comments		
48	500 -	- Water		Nonst	ocked	1.1	0	Unspecified	No		small pond
49	4134 - Aspen, Spruce/Fir			Poletimber Well		l 111.3	111.3 30 lı		N/A		aspen just moving into poletimber size class. scattered patches of
	Canopy Species % Cover S		Size Class	DBH Age		Sub-Ca	anopy Speci	ies Density	Avg. Height	Size	spruce/fir
	Quaking Aspen	80	Sapling	4	30	Hazel	nut (Beaked)) Medium	5 - 10 feet	Tall Shrub	
	White Spruce	10	Pole/Sapling	6				-		-	
	Balsam Fir	10	Pole/Sapling	5							
50	310 - Herbac	eous Open	land	Nonsto	ocked	3.0	0	Unspecified	No		old wildlife opening. growing in to spruce, fir. last record of being maintained 1980
51	4139 - Aspen,	Mixed Deci	duous P	oletimb		l 67.2	36	81-110	N/A		aspen with maple component. areas are heavier stocked to aspen moving to sections of the stand well stocked with aspen/maple mix.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	anopy Speci	ies Density	Avg. Height	Size	maple sapling understory for most part is throughout the stand
	Quaking Aspen	40	Pole	6	36	Su	gar Maple	High	10 - 20 feet	Sapling	
	Sugar Maple	20	Pole/Log	8		Wh	ite Spruce	Low	5 - 10 feet	Sapling	
	Red Maple	30	Log/Pole	14							
52	Forest			Poletimber Medium							S end of stand is more a transitional type - balm, scattered w spruce components. As stand progresses north, tamarack, b spruce and cedar are predominate.
	Canopy Species		Size Class		I Age				Avg. Height	Size	'
	Tamarack	45	Pole	7		I	ag Alder	High	5 - 10 feet	Tall Shrub	
53	4130	- Aspen	Р	oletimb	er Wel	l 32.5	46	Unspecified	N/A		fairly open stand with spruce/fir pockets. short, steep ridges throughout.
	Canopy Species	% Cover	Size Class		I Age		anopy Speci	ies Density	Avg. Height	Size	
	Quaking Aspen	85	Pole	8	46	Wh	ite Spruce	Medium	10 - 20 feet	Sapling	
	White Spruce	10	Pole	6		Ва	alsam Fir	Medium	10 - 20 feet	Sapling	
						Hazel	nut (Beaked)) Medium	< 5 feet	Tall Shrub	
						Blackbe	erry/Raspber	rry Medium	< 5 feet	Tall Shrub	
54	42380 - Non Pin Mixed D	ie Upland C Deciduous	Conifer, P	oletimb	er Wel	l 5.2	72	81-110	N/A		scattered w pine, r pine 16 - 20" dbh. w spruce has mainly fallen out of stand
	Canopy Species	% Cover	Size Class	DBH	I Age						
	Tamarack	30	Log	12							
	Black Spruce	15	Pole	7							
	Quaking Aspen	35	Log	14	72						
	White Spruce	10	Log	12							
55	500 -	- Water		Nonst	ocked	2.5		Unspecified	No		Mitchigan River



Stand	d Level 4 Co		Size Density		Acres	Stand Age BA Range		Managed 9	Site	General Comments	
56	42330 - Upland Fir		ı	Poletimber W		9.3	44	111-140	N/A		scattered large w spruce 18 - 22" dbh. stand acting as BMP buffer to
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	Siliul Cleek.
	White Spruce	40	Pole	7		Whi	te Spruce	Medium	10 - 20 feet	Sapling	
	Balsam Fir	60	Pole	7	44	Ва	lsam Fir	Medium	10 - 20 feet	Sapling	
57	4130	- Aspen		Sapling	Well	32.7	18	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	90	Sapling	2	18	Hazelr	ut (Beaked)	Low	5 - 10 feet	Tall Shrub	
58	6122 - Black Spruce			Poletimber Poor		7.1 74 1-50		1-50	N/A		W end is higher stocked to tamarack/b spruce saplings resulted from windthrow from years past. As stand progresses E, heavy tag alder
	Canopy Species % Cover Size Clas		Size Class	s DBH Age		Sub-Ca	nopy Species	s Density	Avg. Height	Size	understory is predominate.
	Black Spruce	55	Pole	7	74	Ta	ıg Alder	High	5 - 10 feet	Tall Shrub	
	Tamarack	45	Pole/Log	9		Ta	marack	Medium	10 - 20 feet	Sapling	
		-				Blac	k Spruce	Medium	10 - 20 feet	Sapling	
59	42340 - Upland Spruce/Fir			Poletimber Well		10.6	56	81-110	N/A		widely scattered w pine 20 - 24" dbh. small inclusions of aspen regeneration from 2005 windthrow. NW corner and adjacent to Mitchigan
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	River is lower with tag alder understory
	Black Spruce	40	Pole	7	56	Quak	ing Aspen	Medium	10 - 20 feet	Sapling	,
	Quaking Aspen	15	Log	14		Ва	lsam Fir	High	10 - 20 feet	Sapling	
	White Spruce	15	Pole/Log	9							
	Balsam Fir	15	Pole	7							
60	6220 - A	lder/willow		Nonstoo	ked	2.2	0	Unspecified	No		Mitchigan River and adjacent riparian corridor. high occurrence of windthrow over river
61	6122 - Bl	ack Spruce	e Po	oletimber	Medium	n 1.9	31	51-80	N/A		inclusion of slightly higher ground ridge heavier to b spruce
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Black Spruce	55	Pole/Sapling	g 5	31	Blad	k Spruce	High	10 - 20 feet	Sapling	
	Tamarack	45	Pole	7							
62	6121 - Tamarack		F	Poletimber Poor		2.2	53	Unspecified	N/A		low site index, very wet - cattails/abrader tea. fairly poor tree form - low
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	innus, short boles
	Tamarack	100	Pole	6	53	Blac	k Spruce	High	10 - 20 feet	Sapling	
						Tag Alder		Medium	5 - 10 feet	Tall Shrub	
63	42320 - Up	oland Spruc	ce l	Poletimbe	r Well	6.6	45	111-140	N/A		scattered w spruce and tamarack 12 - 14" dbh.
	Canopy Species		Size Class	DBH			nopy Species	s Density	Avg. Height	Size	
	White Spruce	70	Pole/Log	9	45	Whi	te Spruce	High	10 - 20 feet	Sapling	
	Balsam Fir	10	Pole/Sapling	g 6							
	Quaking Aspen	10	Log/Pole	10							
	Tamarack	10	Log/Pole	10							