

Compartment Review Presentation

Crystal Falls Forest Management Unit

Compartment 12151 Entry Year 2023 Acreage: 879

County Iron

Management Area: Michigamme Reservoir

Revision Date: 2021-08-16

Stand Examiner: Legal Description:

Sections 7, 17-18, & 20, T43N-R31W and Section 12, T43N-R32W

Identified Planning Goals:

Our management goals in this compartment are to develop age class distribution in aspen types, maintain health of conifer types and increase acreage where possible, and to develop the quality while maintaining diversity in hardwood types.

Soil and topography:

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

Ownership consists of state lands, company lands and private parcels. State and company lands used mainly for forest products and hunting. Private parcels contain several full time residents and some camps.

Unique Natural Features:

Michigamme River is just to the north of the compartment. Kelso Creek runs through the NW corner of compartment.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations:

None.

Watershed and Fisheries Considerations:

Kelso Creek and Michigamme River are located within this compartment and should have 100 foot buffers.

Wildlife Habitat Considerations:

This compartment falls within the Mansfield Cutoff Deeryard. Maintaining and enhancing the upland and lowland component is necessary to perpetuate the value of this yarding complex. Lowland hardwood and conifer stands throughout this compartment provide excellent wildlife habitat and are particularly important to black bear and furbearers.

Mineral Resource and Development Concerns and/or Restrictions

No known potential exists for commercial oil & gas production in this part of the state. The nearest active sand/gravel pit is more than four miles to the west. The compartment is in an area where bedrock is at or near the surface. Where glacial drift is thicker, there is potential for sand & gravel. Part of the abandoned Mansfield Mine (iron ore) occurs within Secs 17 and 20 of the compartment. Other iron prospects were located around the compartment. There may be remaining iron ore resources in/beneath the compartment but there are unlikely to be economic commercial quantities. Potential for other metallic minerals is unknown but is considered low at this time. There is no current metallic mineral leasing activity in the area. The State does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Vehicle access is from Stream Road on the east and Kelso Road on the west.

Vehicle access to center of compartment is poor because of wet ground.

Survey Needs:

None.

Recreational Facilities and Opportunities:

Hunting.

Fire Protection:

12/28/2021 12:40:50 PM - Page 1 of 2

Additional Compartment Information:

None.

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

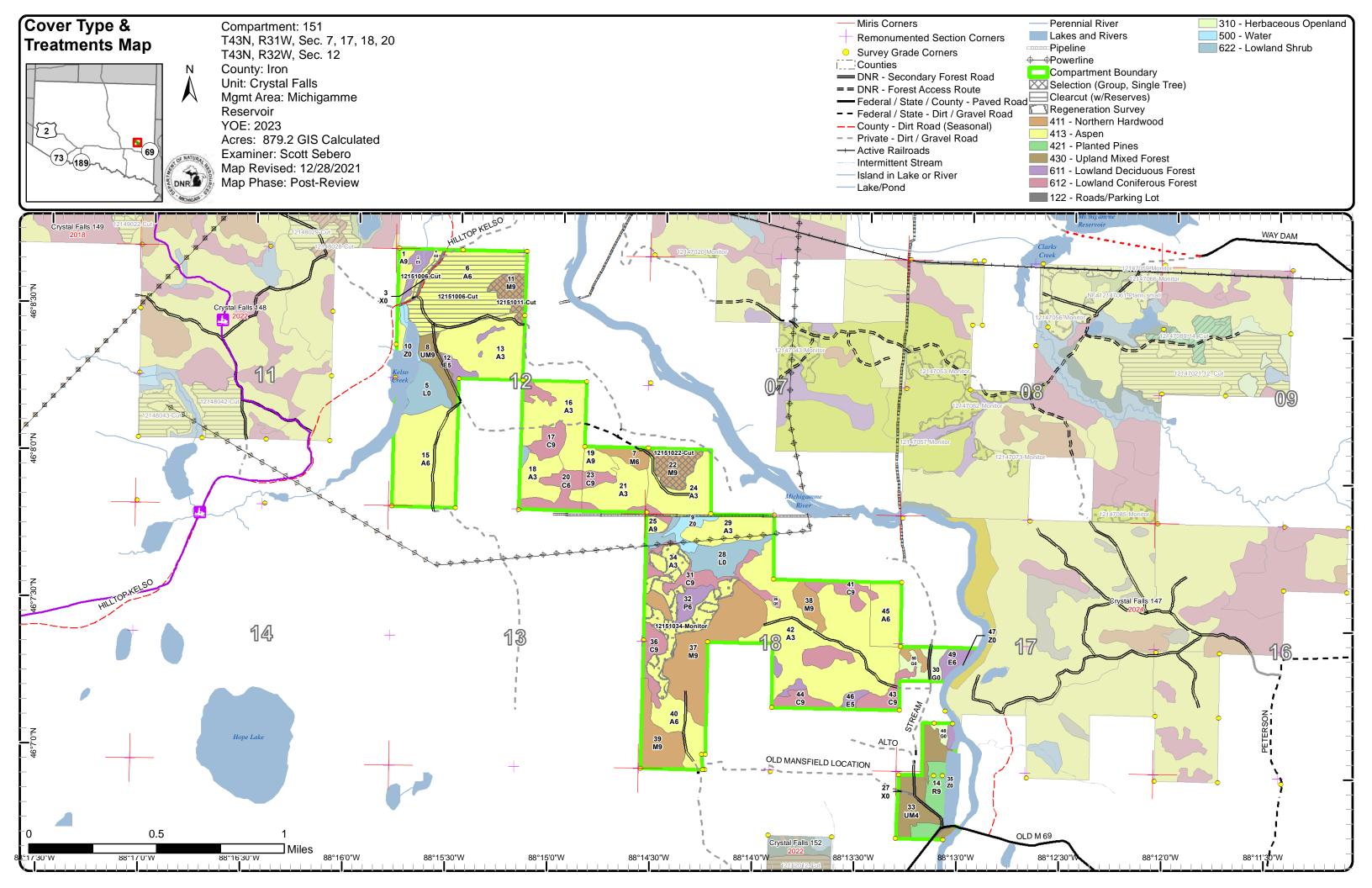
The following information is displayed, where pertinent, on the attached compartment maps:

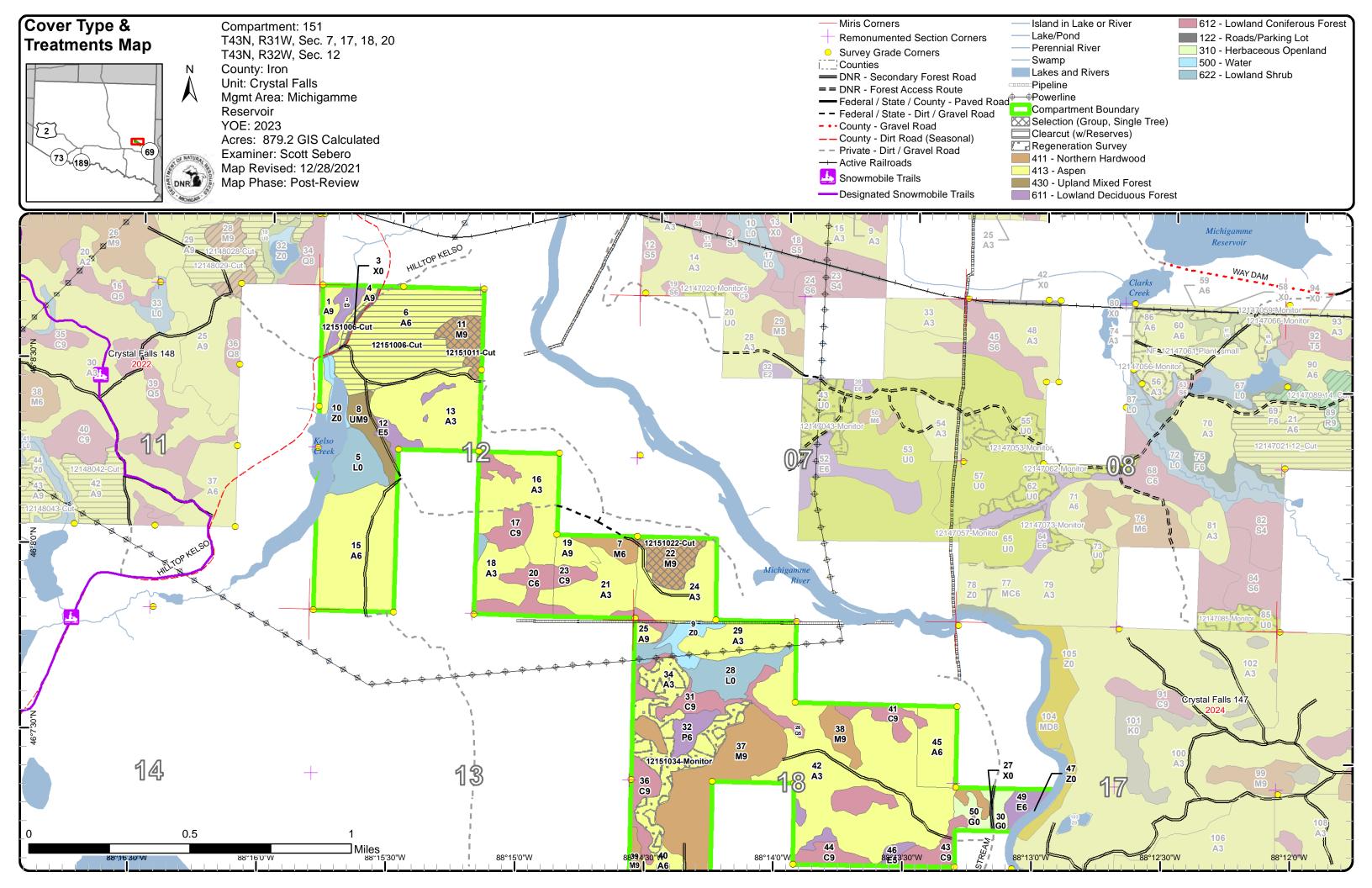
Base feature information, stand boundaries, cover types, and numbers

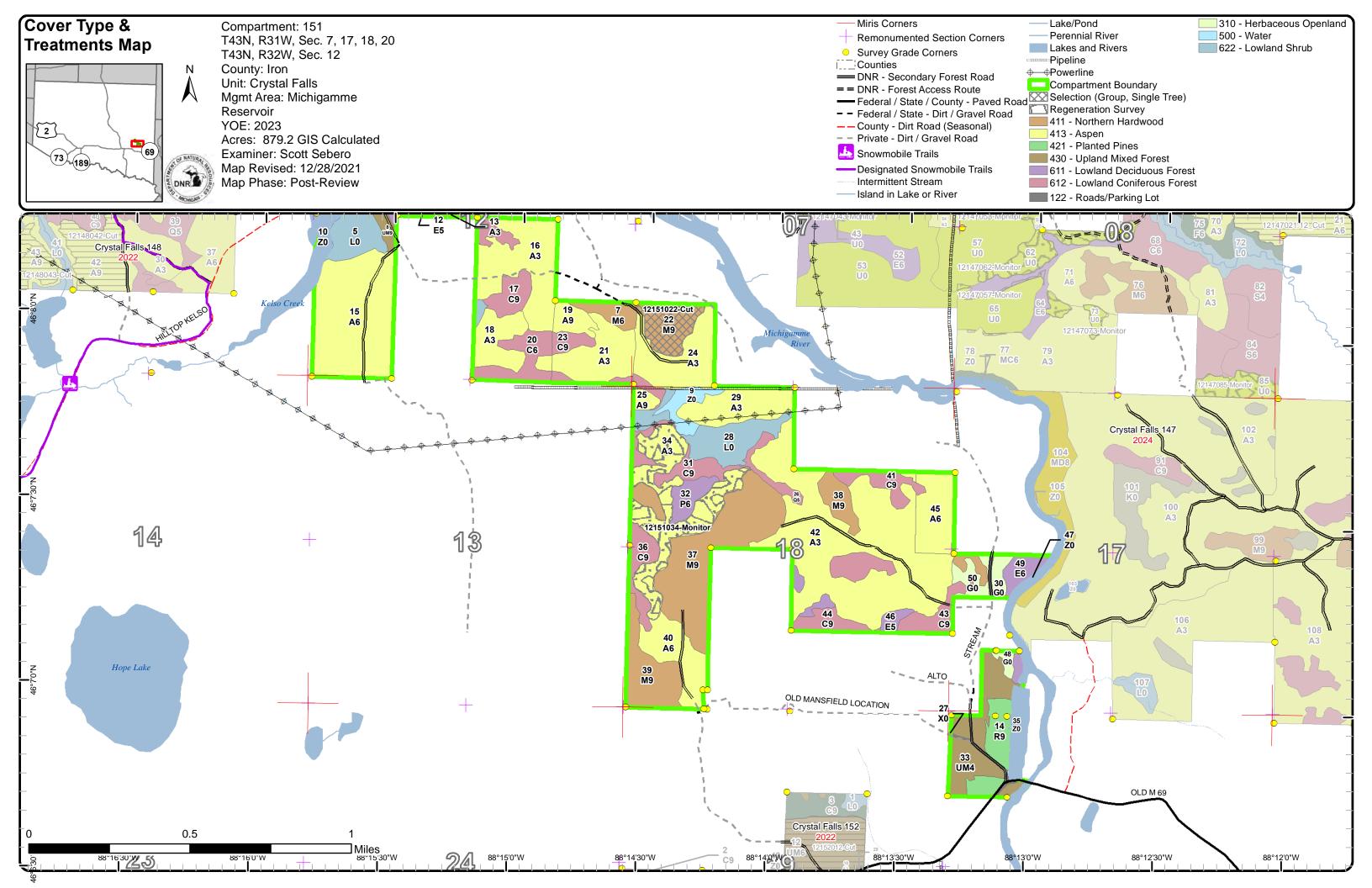
Proposed treatments

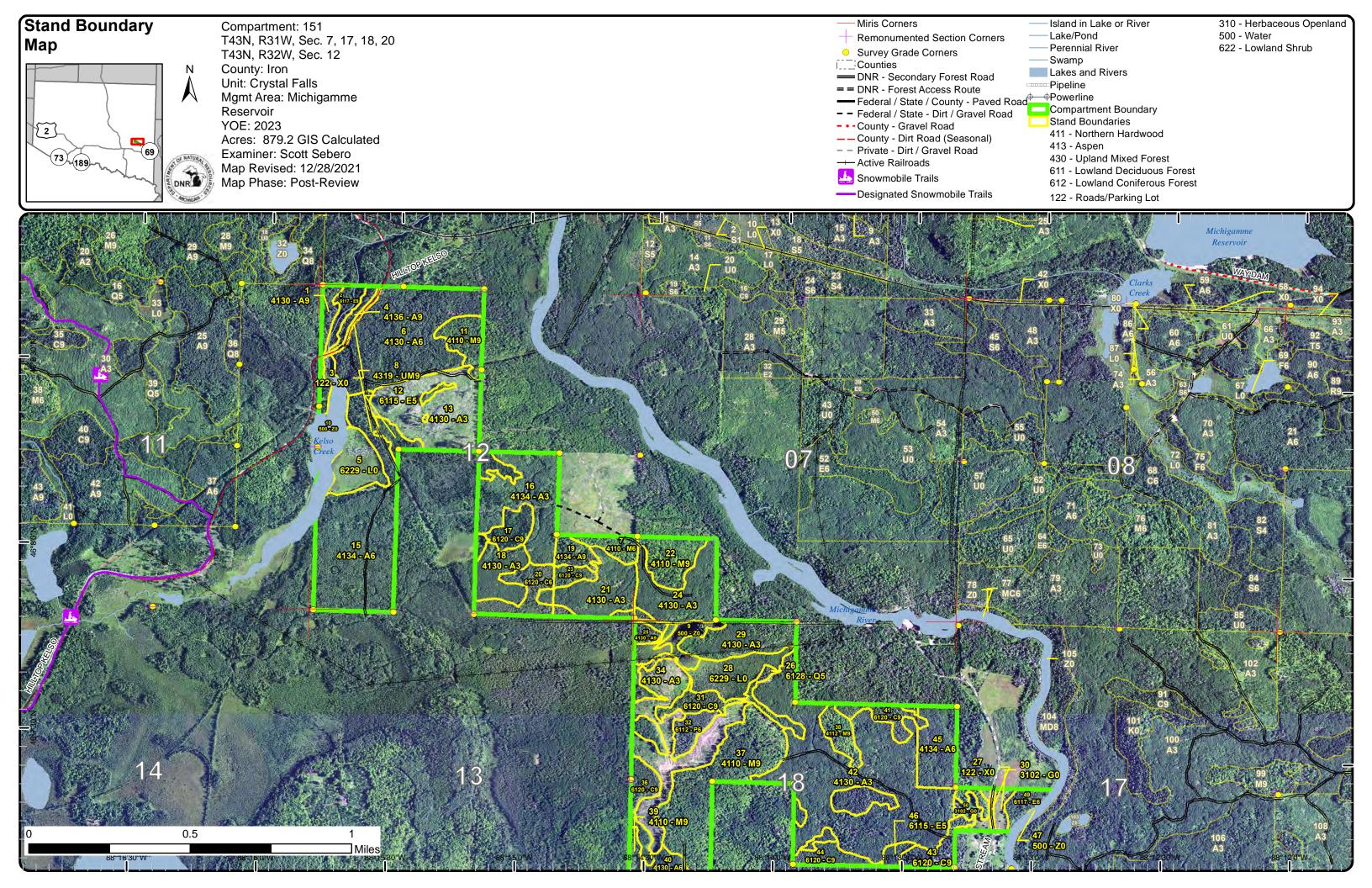
Site condition boundaries

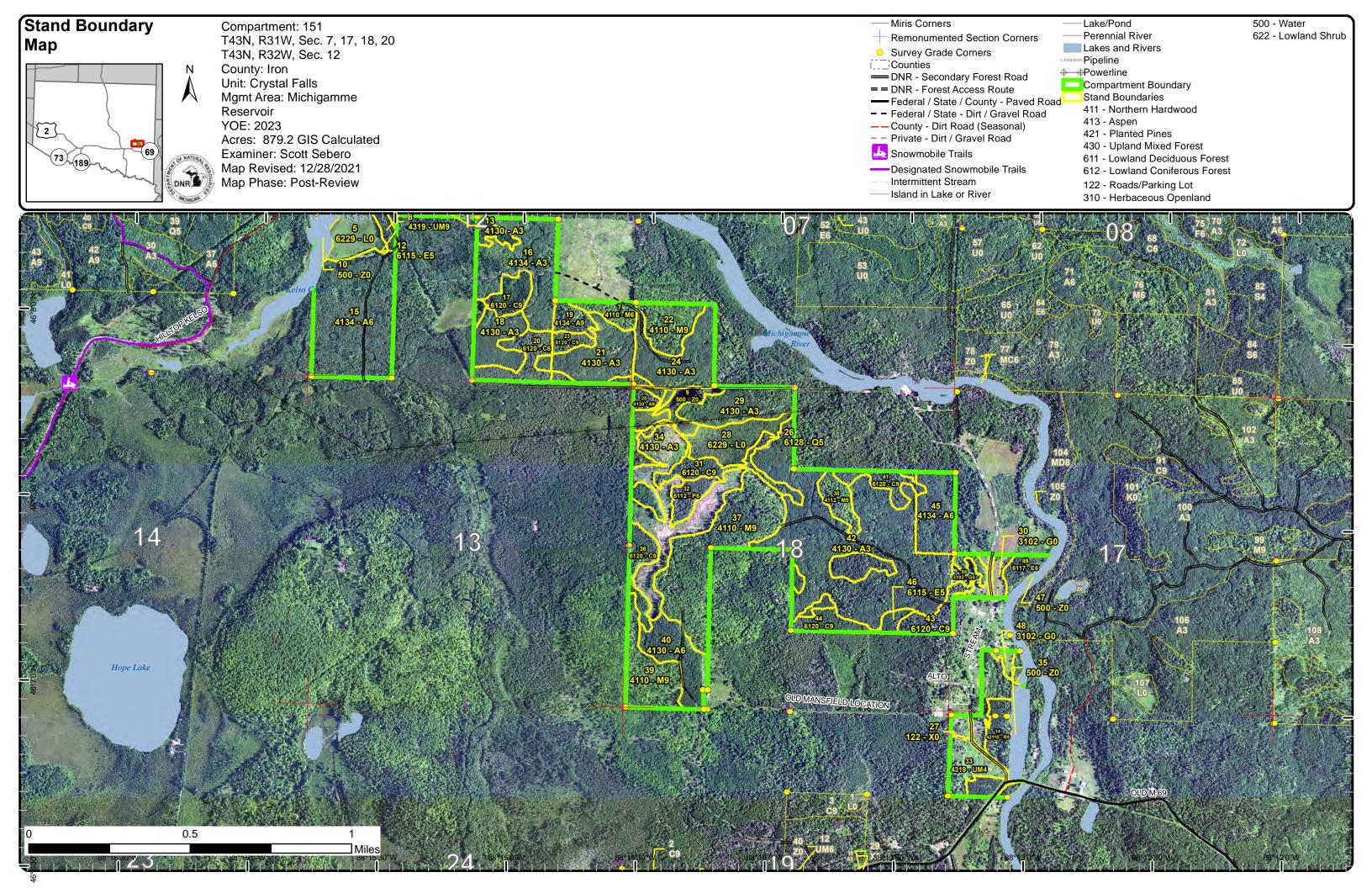
Details on the road access system

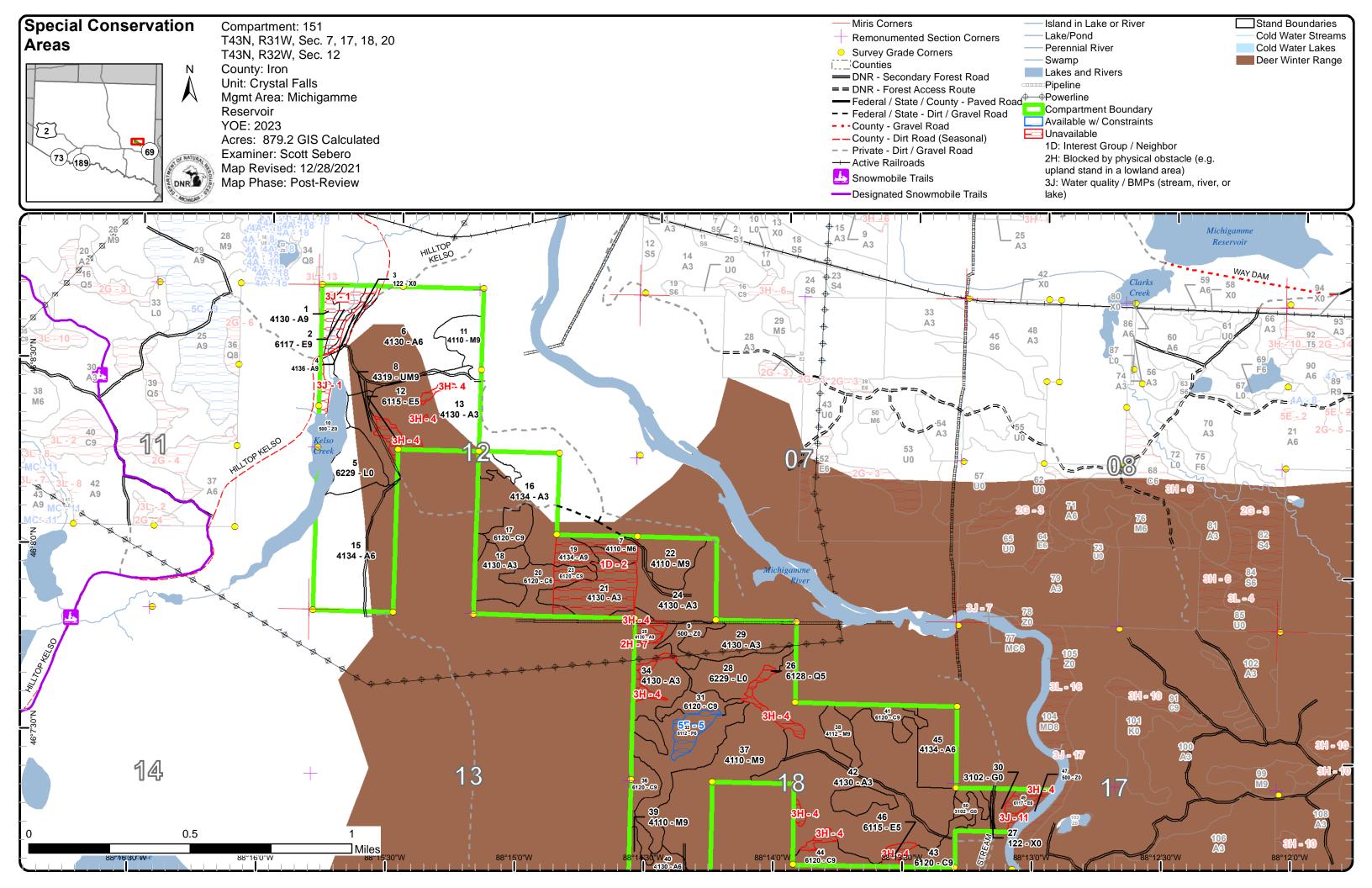


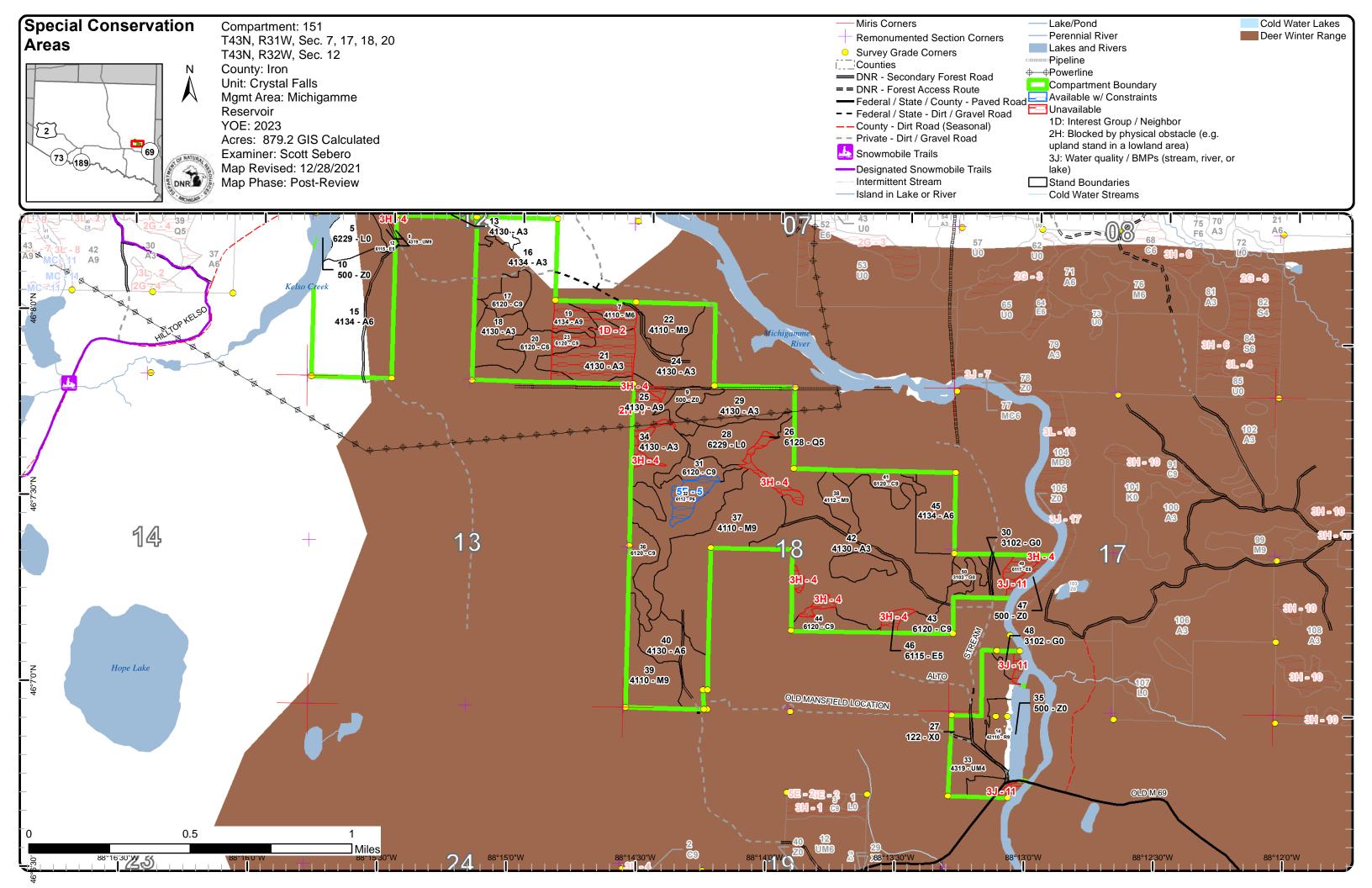












Compartment 151 Year of Entry 2023

Crystal Falls Mgt. Unit Scott Sebero : Examiner



Age Class

	, Age	KOE /	3 / 4	\$ 2		S K	\$ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	3/8		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			70,70	\$ \{\x_{i}\}				j Juli	AND LOS
Aspen	0	81	38	194	78	83	0	0	0	0	21	0	0	0	0	0	0	0	494
Cedar	0	0	0	0	0	0	0	0	0	0	84	0	0	0	0	0	0	0	84
Herbaceous Openland	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	7
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
Lowland Deciduous	0	0	0	0	0	0	0	0	21	0	6	0	0	0	0	0	0	0	27
Lowland Shrub	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39
Northern Hardwood	0	0	0	0	0	0	0	0	0	0	121	0	0	0	0	0	0	0	121
Red Pine	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	14
Upland Mixed Forest	0	0	0	0	0	26	0	0	0	10	0	0	0	0	0	0	0	0	36
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
Total	86	81	38	194	78	109	14	0	28	10	242	0	0	0	0	0	0	0	879



Report 2 – Treatment Summary

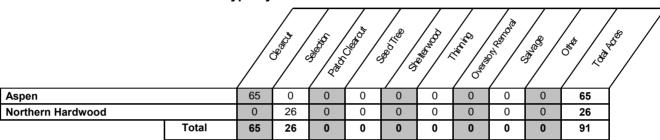
Crystal Falls Mgt. Unit Year of Entry: 2023

Acres of Harvest

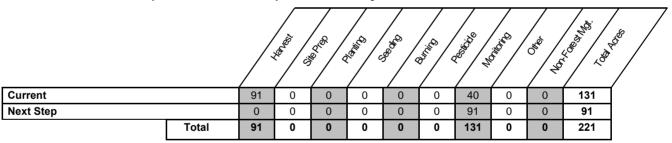
Compartment 151
Total Compartment Acres: 879

Commercial Harvest - 90 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: 151 Year of Entry: 2023 DNR DNR R

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Treatment Name Acres

Stand CoverType Size Sta Density Aç

Stand Age

BA Range Treatment Type Treatment Method Cover Type
Objective

Age Structure Habitat Cut

Approved Treatments:

6 12151006-Cut 65.0 4130 - Aspen Poletimber 45 81-110 Harvest Clearcut with 4134 - Aspen, Even-Aged No Well Retention Spruce/Fir

Prescription Cut all aspen and maple 2" DBH or greater. Cut all spruce and balsam with two or more pulpwood stick. No red or white pine, cedar, oak or

Specs: hemlock will be cut.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of aspen, fir and pine.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

11 12151011-Cut 11.0 4110 - Sugar Maple Sawtimber 90 111- Harvest Single Tree 411 - Northern Even-Aged No Association Well 140 Selection Hardwood

Prescription Mark to 80 BA.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of hardwood and softwood.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

2212151022-Cut14.5 4110 - Sugar MapleSawtimber90111-HarvestSingle Tree411 - NorthernEven-AgedNoAssociationWell140SelectionHardwood

Prescription Mark to 80 BA.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Mix of hardwood and softwood.

Regen: Other

Comment:
Site Condition

Proposed Start Date: 10/1 /2022

S t		Crystal Falls	Mgt. Unit		Repo	rt 3 T	Treatments		Compartmen Year of Entr		DNR
a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
34	12151034 Monitor	40.1	4130 - Aspen	Sapling Well	5	Immatu re	Monitoring	Natural Regen (Re-Inventory)	4134 - Aspen, Spruce/Fir	Even-Aged	No
Preso Specs											
	ments:										
Accer Rege		of aspen, hard	lwood and softwo	od.							
Other Comr		cent to Treat =	100%								
Site C	<u>Condition</u>										
Propo	sed Start D	ate: 12/8 /202	21								

Total Treatment Acreage Proposed: 130.6

Compartment: 151

Crystal Falls Mgt. Unit

Scott Sebero : Examiner Year of Entry: 2023

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres	D	omina	nt Site	e Con	dition	s
Acres	Available	With Condition	Not Available		5F	1D	2H	3Н	3J
495	454	0	41	Aspen		28	3		10
84	77	0	6	Cedar		6			
11	11	0	0	Herbaceous Openland					
7	0	7	0	Lowland Aspen/Balsam Poplar	7				
10	0	0	10	Lowland Conifers				10	
27	0	0	27	Lowland Deciduous				16	10
39	39	0	0	Lowland Shrub					
121	114	0	7	Northern Hardwood		7			
14	14	0	0	Red Pine					
36	35	0	1	Upland Mixed Forest					1
5	5	0	0	Urban					
31	31	0	0	Water					
880	781	7	91	Total Forested Acres	7	41	3	26	21
	89%	1%	10%	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.

1 Un	navailable	3J: Water quality / BMPs (stream, river, or lake)	16	Unspecified	Unspecified	Unspecified	Unspecified
Commo						·	,
Cold wa	nents: vater stream bu	uffer.					
2 Un	navailable	1D: Interest Group / Neighbor	41	Unspecified	Unspecified	Unspecified	Unspecified
Comm Undivid	nents: ded interest.						

Report 4 – Site Conditions

Compartment: 151

Crystal Falls Mgt. Unit

Scott Sebero : Examiner Year of Entry: 2023

4	Unavailable	3H: Deer Wintering Area - habitat is incompatible with harvest at this time	26	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
5	Available	5F: Evaluated for Forest Health Considerations	7	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
7	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	3	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
11	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	5	Unspecified	Unspecified	Unspecified	Unspecified
C	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: 151
Year of Entry 2023



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-reproduce stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist frequency year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action 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 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						



Stan	d Level 4 Co	over Type	s	ize D	ensity	Acres	Stand Age E	BA Range	Managed \$	Site	General Comments	MICHIGAN .
1	4130 -	- Aspen	Sa	awtimb	er Well	7.5	90	81-110	N/A			
	Canopy Species	% Cover		DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Maple	10	Log/Pole/Sap	12		Hazelnı	ut (American)	Medium	< 5 feet	Tall Shrub		
	Quaking Aspen	75	Log/Pole/Sap	12	90							
	Balsam Fir	10	Pole/Log/Sap	8								
	White Spruce	5	Log/Pole/Sap	10								
2	6117 - Lowland I Coni	Deciduous ferous	, Mixed Sa	awtimb	er Well	6.0	90	51-80	N/A			
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Maple	30	Log/Pole/Sap	10	90	Ва	ılsam Fir	Low	< 5 feet	Sapling		
	Quaking Aspen	15	Log/Pole/Sap	10			Alder	Medium	5 - 10 feet	Tall Shrub		
	Balsam Fir	5	Pole/Log/Sap	8		As	sh (spp.)	Medium	< 5 feet	Sapling		
	White Spruce	10	Log/Pole/Sap	10						,	-	
	Black Ash	30	Pole/Log/Sap	8								
N	orthern White Cedar	10	Log/Pole	10								
4	4136 - Aspen				oer Well	3.6	90	81-110	N/A		1	
	Canopy Species		Size Class		H Age		nopy Species		Avg. Height	Size	-	
	Red Maple	10	Log/Pole/Sap	10			Ilsam Fir	Low	Variable	Sapling		
	Quaking Aspen	70	Log/Pole/Sap	10	90	Hazelni	ut (American)	Medium	< 5 feet	Tall Shrub		
	Balsam Fir	10	Pole/Log/Sap	8								
	White Spruce	5	Log/Pole/Sap	10								
	Red Pine	5	Log/Pole/Sap	10								
5	6229 - Mixed	lowland s	hrub	Nonst	ocked	17.5	ι	Jnspecified	No			
6	4130 -	- Aspen			oer Well	63.5	45	81-110	N/A		1	
	Canopy Species		Size Class		H Age		nopy Species		Avg. Height	Size		
	Red Maple	10	Pole/Log/Sap	8			Isam Fir	Low	Variable	Sapling		
	Quaking Aspen	80	Pole/Log	8	45	Hazelni	ut (American)	Medium	< 5 feet	Tall Shrub		
	Balsam Fir	10	Pole/Log/Sap	6								
7	4110 - Sugar M	laple Asso	ciation Po	oletim	er Well	6.8	90	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Sugar Maple	70	Pole/Log/Sap	8	90	Ire	onwood	Medium	Variable	Sapling		
	Red Maple	10	Log/Pole/Sap	10		Lea	therwood	Low	< 5 feet	Tall Shrub		
	Basswood	20	Log/Pole	12		Qual	king Aspen	Low	10 - 20 feet	Sapling		



Stand	d Level 4 C	over Type	S	Size De	nsity	Acres Stand	Age B	A Range	Managed \$	Site	General Comments	MICHIGAN .
8	4319 - Mixed	d Upland Fo	orest Sa	awtimb	er Well	10.2 80		51-80	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy S	pecies	Density	Avg. Height	Size		
	Red Maple	10	Log/Pole/Sap	10		Red Maple	9	Low	Variable	Sapling		
	Quaking Aspen	40	Log/Pole	10	80	Balsam Fi	r	Medium	Variable	Sapling		
	Balsam Fir	40	Pole/Sapling	6		Hazelnut (Ame	rican)	Low	< 5 feet	Tall Shrub		
	White Spruce	10	Pole/Sap/Log	8								
9	500	- Water		Nonsto	cked	7.0	Uı	nspecified	No		beaver ponds.	
10	500	- Water		Nonsto	cked	15.3	Uı	nspecified	No		Kelso Creek.	
11	4110 - Sugar I	Maple Asso		awtimb		11.0 90		111-140	N/A			_
	Canopy Species	% Cover			Age	Sub-Canopy S	pecies	Density	Avg. Height	Size		
	Sugar Maple	60	Log/Pole/Sap	10	90	Ironwood		Medium	Variable	Sapling		
	Red Maple	10	Log/Pole/Sap	12		Leatherwoo		Medium	< 5 feet	Tall Shrub		
	Yellow Birch	10	Log/Pole	10		Hazelnut (Ame	rican)	Low	< 5 feet	Tall Shrub		
	Basswood	20	Log/Pole	12								
12	6115 - L	owland Ash	n Pole	etimber	Mediur	m 6.4 70		51-80	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy S	pecies	Density	Avg. Height	Size		
	Quaking Aspen	10	Log/Pole	10		Black Sprud	се	Low	Variable	Sapling		
	Black Spruce	10	Pole/Log/Sap	8		Alder		Medium	5 - 10 feet	Tall Shrub		
	Black Ash	70	Pole/Sap/Log	8	70	Ash (spp.))	Low	Variable	Sapling		
No	orthern White Cedar	10	Log/Pole	10				,		,	•	
13	4130	- Aspen	;	Sapling	Well	40.7 5	I	mmature	N/A		sale # 58-13	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy S _l	pecies	Density	Avg. Height	Size		
	Balsam Fir	5	Sapling/Pole	4		Hazelnut (Ame	rican)	Low	5 - 10 feet	Tall Shrub		
	Red Maple	5	Sapling	1								
	Balsam Poplar	10	Sapling	1								
	Quaking Aspen	80	Sapling	1	5							
14	42110 - Pla	inted Red F	Pine Sa	awtimb	er Well	13.7 55		111-140	N/A		Row thinning completed 2014. Red oak was retained.	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy S _l	pecies	Density	Avg. Height	Size		
	Red Oak	5	Log/Pole	10		Balsam Fi	r	Low	Variable	Sapling		
	Red Pine	95	Pole/Log	10	55	Hazelnut (Ame		Low	< 5 feet	Tall Shrub		
						Quaking Asp	en	Low	10 - 20 feet	Sapling		



Stand	Level 4 C	over Type	S	Size De	ensity	Acres	Stand Age I	BA Range	Managed \$	Site	General Comments
15	4134 - Aspe	en, Spruce/	Fir P	oletimb	er Well	59.4	33	51-80	N/A		sale # 19-83
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	80	Pole/Sapling	5	33	Bal	sam Fir	Low	Variable	Sapling	
	Balsam Fir	20	Pole/Sapling	5	33	Hazelnu	t (American)	Medium	< 5 feet	Tall Shrub	
16	4134 - Aspe	en, Spruce/	Fir	Saplin	g Well	36.3	26	Immature	N/A		sale # 20-93
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	80	Sapling/Pole	4	26	Bal	sam Fir	Low	Variable	Sapling	
	Balsam Fir	20	Sapling/Pole	4		Hazelnu	t (American)	Medium	< 5 feet	Tall Shrub	
17	6120 - Lo	wland Ceda	ır S	awtimb	er Well	12.8	90	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Black Spruce	20	Pole/Sap/Log	8		Bal	sam Fir	Low	Variable	Sapling	
No	rthern White Cedar	70	Log/Pole	10	90		Alder	Medium	5 - 10 feet	Tall Shrub	
	Tamarack	5	Pole/Sap/Log	8		As	h (spp.)	Low	Variable	Sapling	
	Black Ash	5	Pole/Sap/Log	8							
18	4130	- Aspen		Saplin	g Well	16.1	17	Immature	N/A		sale # 68-03
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	90	Sapling	3	17	Re	d Maple	Low	Variable	Sapling	
	Balsam Fir	10	Sapling/Pole	3		Bal	sam Fir	Low	Variable	Sapling	
						Hazelnu	t (American)	Medium	< 5 feet	Tall Shrub	
19	4134 - Aspe	en, Spruce/	Fir S	awtimb	er Well	6.6	90	81-110	N/A		Stand was not cut due to lack of permission from other landowner
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Car	nopy Species	Density	Avg. Height	Size	(undivided interest). Sale Number: 12-058-13-01, Payment Unit 3
	Quaking Aspen	60	Log/Pole	10	90		d Maple	Low	Variable	Sapling	
	Balsam Fir	10	Pole/Log/Sap	8		Bal	sam Fir	Low	Variable	Sapling	
	White Spruce	10	Pole/Log/Sap	8		Hazelnu	t (American)	Medium	< 5 feet	Tall Shrub	
	Red Maple	20	Log/Pole/Sap	10							
20	6120 - Lo	wland Ceda	ar P	oletimb	er Well	14.4	90	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	5	Pole/Log	10		Bal	sam Fir	Low	Variable	Sapling	
	Balsam Fir	5	Pole/Sap/Log	8		ı	Alder	High	5 - 10 feet	Tall Shrub	
	Black Spruce	25	Pole/Log/Sap	8							
No	rthern White Cedar	60	Log/Pole	10	90						



tan	d Level 4 C	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
21	4130	- Aspen		Saplin	g Well	21.5	17	Immature	N/A		sale # 68-03
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Quaking Aspen	90	Sapling	3	17	Ва	lsam Fir	Low	Variable	Sapling	
	Balsam Fir	10	Sapling/Pole	3		Hazelnı	ut (American)	Medium	< 5 feet	Tall Shrub	
22	4110 - Sugar N	•			er Wel	l 14.5	90	111-140	N/A		
	Canopy Species		Size Class		H Age		nopy Species		Avg. Height	Size	
	Sugar Maple	70	Pole/Log/Sap	10	90		onwood	Low	Variable	Sapling	
	Red Maple	10	Log/Pole/Sap			Lea	therwood	Low	< 5 feet	Tall Shrub	
	Basswood	20	Log/Pole	12							
23	6120 - Lo	wland Ceda	ar S	awtimb	er Wel	l 6.4	90	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Balsam Fir	5	Pole/Sap/Log	8		Ва	lsam Fir	Low	Variable	Sapling	
	Black Spruce	30	Pole/Log/Sap	8		Blac	ck Spruce	Low	Variable	Sapling	
No	orthern White Cedar	65	Log/Pole	10	90		Alder	Medium	5 - 10 feet	Tall Shrub	
24	4130	- Aspen		Saplin	g Well	25.8	25	Immature	N/A		sale # 11-93
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Quaking Aspen	90	Sapling/Pole	4	25	Ва	Isam Fir	Low	Variable	Sapling	
	Balsam Fir	10	Sapling/Pole	4		Hazelnı	ut (American)	Medium	< 5 feet	Tall Shrub	
25	4130	- Aspen	S	awtimb	er Wel	l 2.8	90	81-110	N/A		Stand was not cut due to lack of permission from other landowner
	Canopy Species	% Cover	Size Class	DBI	H Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	(undivided interest). Sale number: 12-058-13-01, Payment Unit: 4
	Quaking Aspen	65	Log/Pole	12	90	Ва	Isam Fir	Low	Variable	Sapling	
	Balsam Fir	5	Pole/Sap/Log	8		Whi	te Spruce	Low	Variable	Sapling	
	White Spruce	10	Log/Pole/Sap	10		Hazelnı	ut (American)	Low	< 5 feet	Tall Shrub	
	Red Maple	20	Log/Pole/Sap	12				'		1	
26	6128 - Lowland Dec	Coniferous,	, Mixed Pol	etimbe	r Mediu	ım 9.8	90	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Red Maple	10	Pole/Sap/Log	8			Alder	High	5 - 10 feet	Tall Shrub	
	Quaking Aspen	10	Pole/Log/Sap	8							-
	Balsam Fir	10	Pole/Sapling	6							
	Black Spruce	20	Pole/Sap/Log	8							
No	orthern White Cedar	30	Log/Pole	10	90						



Stand	Level 4 C	over Type	;	Size De	ensity	Acres	Stand Age	BA Range	Managed 9	Site	General Comments
28	6229 - Mixed	d lowland sh	nrub	Nonst	ocked	21.7		Unspecified	No		
29	4130	- Aspen		Saplin	g Well	20.9	24	Immature	N/A		sale # 10-93. Two acre pocket on rocks in NE corner of stand that wasn't
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	cut at time of harvest. Beaver cutting regen along stand 9.
	Quaking Aspen	85	Sapling	4	24	Ва	alsam Fir	Low	Variable	Sapling	
	Balsam Fir	10	Sapling/Pole	4		Hazeln	ut (American)	Low	< 5 feet	Tall Shrub	
	Red Maple	5	Sapling	4							-
30	3102	- Grass		Nonst	ocked	3.7		Unspecified	No		
31	6120 - Lo	wland Ceda	ar S	awtimb	er Well	7.6	90	81-110	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Spruce	10	Pole/Sap/Log	8			Alder	Low	5 - 10 feet	Tall Shrub	
Nor	thern White Cedar	90	Log/Pole	10	90						-
32	6112 - Lov	wland Aspe	n P	oletimb	er Well	7.4	70	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Balsam Poplar	20	Pole/Log/Sap	8			Alder	Medium	5 - 10 feet	Tall Shrub	
	Balsam Fir	5	Pole/Sapling	8							
	Black Spruce	30	Pole/Log/Sap	8							
	Black Ash	5	Pole/Log/Sap	8							
	Quaking Aspen	40	Pole/Log/Sap	8	70						
33	4319 - Mixed	l Upland Fo	rest P	oletimb	er Poor	26.1	40	1-50	N/A		Parts of stand were harvested 2014- Retained red and white pine, cedar,
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	hemlock and oak. Two acres of aspen poles in SW corner of stand.
	Red Maple	10	Pole/Sapling	6		Re	ed Maple	Low	Variable	Sapling	
	Quaking Aspen	20	Pole/Sapling	6		Ва	alsam Fir	Low	Variable	Sapling	
	Balsam Poplar	5	Sapling	2		Hazeln	ut (American)	Medium	< 5 feet	Tall Shrub	
	Balsam Fir	10	Sapling/Pole	4							-
	White Spruce	25	Pole/Sapling	5	40						
Nor	thern White Cedar	10	Log/Pole	10							
	Red Pine	10	Log/Pole/Sap	12							
	Black Cherry	10	Pole/Sapling	5							
34	4130	- Aspen		Sapling	g Well	40.0	5	Immature	N/A		sale # 64-13
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	
	Red Maple	5	Sapling	1		Hazeln	ut (American)	Low	5 - 10 feet	Tall Shrub	
	Balsam Fir	5	Sapling/Pole	2							<u>-</u>



Stand	Level 4 C	Size Density			Acres	Stand Age E	SA Kange	Managed S	Site	General Comments		CHIGA	
35	500 - Water		1	Nonstocked		5.1	ι	Inspecified	No		Mining cave in pond.		
36	6120 - Lov	wland Ceda	ar Sa	Sawtimber Well		9.8	90	81-110	N/A				
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Cai	nopy Species	Density	Avg. Height	Size			
	Red Maple	15	Log/Pole/Sap	10		Re	d Maple	Low	Variable	Sapling			
	Quaking Aspen	5	Log/Pole	10		Bal	Isam Fir	Low	Variable	Sapling			
	Balsam Fir	5	Pole/Sapling	6			Alder	Low	5 - 10 feet	Tall Shrub			
	Black Spruce	10	Pole/Log/Sap	8		As	sh (spp.)	Low	Variable	Sapling			
No	orthern White Cedar	55	Log/Pole	10	90								
	Black Ash	10	Pole/Log/Sap	8									
37	4110 - Sugar M	Maple Assoc	ciation Sa	wtimb	er Well	56.8	90	81-110	N/A				
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Species	Density	Avg. Height	Size			
	Sugar Maple	70	Log/Pole/Sap	10	90	Leat	therwood	Low	< 5 feet	Tall Shrub			
									- 101	Sapling			
	Red Maple	10	Log/Pole/Sap	10		Irc	onwood	Low	5 - 10 feet	Sapility			
	Red Maple Basswood	10 20	Log/Pole/Sap Log/Pole	10		Irc	onwood	Low	5 - 10 feet	Sapiling			
38	· · · · · · · · · · · · · · · · · · ·	20	Log/Pole	12	er Well		onwood 90	81-110	5 - 10 feet N/A	Saping			
38	Basswood	20 ch, Cherry A	Log/Pole	12 wtimb	er Well	11.0		81-110		Size			
38	Basswood 4112 - Maple, Beec	20 ch, Cherry A	Log/Pole	12 wtimb		11.0 Sub-Car	90	81-110	N/A				
38	Basswood 4112 - Maple, Beecc	20 ch, Cherry A % Cover	Log/Pole Association Sa	12 wtimb	l Age	11.0 Sub-Car	90 nopy Species	81-110 Density	N/A Avg. Height	Size			
38	Basswood 4112 - Maple, Beec Canopy Species Sugar Maple	20 ch, Cherry A % Cover	Log/Pole Association Sa Size Class Log/Pole	12 wtimb DBH	l Age	11.0 Sub-Car	90 nopy Species	81-110 Density Low	N/A Avg. Height Variable	Size Sapling			
	Basswood 4112 - Maple, Beec Canopy Species Sugar Maple Red Maple	20 ch, Cherry A % Cover 60 20	Log/Pole Association Sa Size Class Log/Pole Log/Pole/Sap	12 wtimb DBH 10 10	l Age	11.0 Sub-Car	90 nopy Species	81-110 Density Low	N/A Avg. Height Variable	Size Sapling			
	Basswood 4112 - Maple, Beec Canopy Species Sugar Maple Red Maple Basswood	20 Ch, Cherry A Cover 60 20 15 5	Log/Pole Association Sa Size Class Log/Pole Log/Pole/Sap Log/Pole Log/Pole	12 DBH 10 10 12 10	l Age	11.0 Sub-Car	90 nopy Species	81-110 Density Low	N/A Avg. Height Variable	Size Sapling			
No	Basswood 4112 - Maple, Beecce Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar	20 Ch, Cherry A Cover 60 20 15 5	Log/Pole Association Sa Size Class Log/Pole Log/Pole/Sap Log/Pole Log/Pole	12 DBH 10 10 12 10 10 wwtimb	90	11.0 Sub-Car Irc Leat	90 nopy Species onwood therwood	81-110 Density Low Low 81-110	N/A Avg. Height Variable < 5 feet	Size Sapling			
No	Basswood 4112 - Maple, Beecc Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M	20 Ch, Cherry A Cover 60 20 15 5	Log/Pole Association Sa Size Class Log/Pole Log/Pole/Sap Log/Pole Log/Pole Ciation Sa	12 DBH 10 10 12 10 10 wwtimb	90 90 eer Well	11.0 Sub-Car Iro Leat	90 nopy Species onwood therwood	81-110 Density Low Low 81-110	N/A Avg. Height Variable < 5 feet N/A	Size Sapling Tall Shrub			
No	Basswood 4112 - Maple, Beecc Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M Canopy Species	20 ch, Cherry A Cover 60 20 15 5	Log/Pole Association Sa Size Class Log/Pole Log/Pole/Sap Log/Pole Log/Pole Size Class	12 DBH 10 10 12 10 10 DBH DBH	90 90 eer Well	11.0 Sub-Car Irc Leaf	90 nopy Species onwood therwood 90 nopy Species	81-110 Density Low Low 81-110 Density	N/A Avg. Height Variable < 5 feet N/A Avg. Height	Size Sapling Tall Shrub			
No	Basswood 4112 - Maple, Beecce Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M Canopy Species Sugar Maple	20 ch, Cherry A Cover 60 20 15 5 Maple Assoc 70	Log/Pole Association Sa Size Class Log/Pole Log/Pole/Sap Log/Pole Log/Pole Size Class Log/Pole Ciation Sa Size Class	12 DBH 10 10 12 10 10 DBH 10 10 110 110 110 110 110 110 110 110	90 90 eer Well	11.0 Sub-Car Irc Leat	90 nopy Species onwood therwood 90 nopy Species onwood	81-110 Density Low Low 81-110 Density Low	N/A Avg. Height Variable < 5 feet N/A Avg. Height Variable	Size Sapling Tall Shrub Size Sapling			
No	Basswood 4112 - Maple, Beecce Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M Canopy Species Sugar Maple Red Maple Basswood	20 Ch, Cherry A Cover 60 20 15 5 Maple Assoc 70 10	Log/Pole Association Sa Size Class Log/Pole Log/Pole Log/Pole Log/Pole Ciation Sa Size Class Log/Pole/Sap Log/Pole/Sap Log/Pole/Sap Log/Pole/Sap Log/Pole	12 DBH 10 10 12 10 10 10 10 10 10 10 10 10 10 10 10 10	90 90 eer Well	20.9 Sub-Car Irc Leat 20.9 Sub-Car Irc Leat Hazelnu	90 nopy Species onwood therwood 90 nopy Species onwood therwood	81-110 Density Low Low 81-110 Density Low Low Low	N/A Avg. Height Variable < 5 feet N/A Avg. Height Variable < 5 feet	Size Sapling Tall Shrub Size Sapling Tall Shrub			
No 39	Basswood 4112 - Maple, Beecce Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M Canopy Species Sugar Maple Red Maple Basswood	20 Ch, Cherry A Cover 60 20 15 5 Maple Assoc 70 10 20	Log/Pole Association Sa Size Class Log/Pole Log/Pole Log/Pole Ciation Sa Size Class Log/Pole Ciation Sa Log/Pole/Sap Log/Pole/Sap Log/Pole/Sap Log/Pole	12 www.wtimbb 10 10 10 12 10 10 10 11 11	er Well	20.9 Sub-Car Irc Leat 20.9 Sub-Car Irc Leat Hazelnu	90 nopy Species onwood therwood 90 nopy Species onwood therwood ut (American)	81-110 Density Low Low 81-110 Density Low Low Low 81-110	N/A Avg. Height Variable < 5 feet N/A Avg. Height Variable < 5 feet < 5 feet	Size Sapling Tall Shrub Size Sapling Tall Shrub			
No 39	Basswood 4112 - Maple, Beecc Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M Canopy Species Sugar Maple Red Maple Basswood 4130	20 ch, Cherry A Cover 60 20 15 5	Log/Pole Association Sa Size Class Log/Pole Log/Pole Log/Pole Ciation Sa Size Class Log/Pole Ciation Sa Log/Pole/Sap Log/Pole/Sap Log/Pole/Sap Log/Pole	12 www.wtimbb 10 10 10 12 10 10 10 11 11	er Well Age 90 Age 90 Ber Well Ger Well	20.9 Sub-Car Irc Leat Irc Leat Irc Leat Irc Leat Irc Leat Irc Leat Hazelnu 19.8 Sub-Car	90 nopy Species onwood therwood 90 nopy Species onwood therwood ut (American)	81-110 Density Low Low 81-110 Density Low Low Low 81-110	N/A Avg. Height Variable < 5 feet N/A Avg. Height Variable < 5 feet < 5 feet N/A	Size Sapling Tall Shrub Size Sapling Tall Shrub Tall Shrub			
No 39	Basswood 4112 - Maple, Beecc Canopy Species Sugar Maple Red Maple Basswood orthern White Cedar 4110 - Sugar M Canopy Species Sugar Maple Red Maple Basswood 4130 Canopy Species	20 ch, Cherry A Cover 60 20 15 5	Log/Pole Association Sa Size Class Log/Pole Log/Pole Log/Pole Log/Pole Ciation Sa Size Class Log/Pole/Sap Log/Pole/Sap Log/Pole/Sap Log/Pole/Sap Log/Pole Size Class	12 wwtimbbing 10 10 10 10 10 10 10 10 10 10	er Well Age 90 Age 90 Ber Well Ger Well	20.9 Sub-Car Irc Leat Irc Leat Irc Sub-Car Hazelnu 19.8 Sub-Car Bat	90 nopy Species onwood therwood 90 nopy Species onwood therwood ut (American) 43 nopy Species	81-110 Density Low Low 81-110 Density Low Low Low Density Density	N/A Avg. Height Variable < 5 feet N/A Avg. Height Variable < 5 feet < 5 feet N/A Avg. Height	Size Sapling Tall Shrub Size Sapling Tall Shrub Tall Shrub	permit # 1-78		



Stand	and Level 4 Cover Type Size Density			Acres Stand Age BA Range Man				Site	General Comments	MICHIGAN .		
41	6120 - Lov	6120 - Lowland Cedar		awtimber Well		8.2	90	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Balsam Fir	5	Pole/Sapling	6		Ва	alsam Fir	Low	Variable	Sapling		
	Black Spruce	20	Pole/Log/Sap	8		Bla	ck Spruce	Low	Variable	Sapling		
Nort	thern White Cedar	70	Log/Pole	10	90		Alder	Medium	5 - 10 feet	Tall Shrub		
	Black Ash	5	Pole/Sapling	6		As	sh (spp.)	Low	< 5 feet	Sapling		
42	4130	- Aspen	en S		g Well	111.2 24		Immature	N/A		sale # 22-93	
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Balsam Fir	5	Sapling/Pole	4		Ва	alsam Fir	Low	Variable	Sapling		
(Quaking Aspen	85	Sapling/Pole	4	24	Hazeln	ut (American)	Low	5 - 10 feet	Tall Shrub		
	Red Maple	10	Sapling/Pole	4								
43	6120 - Lov	wland Ceda	ar Sa	awtimb	er Well	16.8	90	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Quaking Aspen	5	Pole/Log	10			am Poplar	Low	< 5 feet	Sapling		
	Balsam Fir	5	Pole/Sapling	6		Ва	alsam Fir	Low	Variable	Sapling		
	Black Spruce	20	Pole/Log/Sap	8		Bla	ck Spruce	Low	Variable	Sapling		
Nort	thern White Cedar	50	Log/Pole	10	90		Alder	Medium	5 - 10 feet	Tall Shrub		
	Tamarack	10	Pole/Sap/Log	8		As	sh (spp.)	Low	< 5 feet	Sapling		
	Black Ash	10	Pole/Sap/Log	8					I			
44	6120 - Lov	wland Ceda	ar Sa	awtimb	er Well	7.6	90	141-170	N/A			
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Black Spruce	10	Pole/Sap/Log	8		Bla	ck Spruce	Low	Variable	Sapling		
Nort	thern White Cedar	90	Log/Pole	10	90		Alder	Low	5 - 10 feet	Tall Shrub		
						As	sh (spp.)	Low	< 5 feet	Sapling		
45	4134 - Aspe	en, Spruce	/Fir Po	oletimb	er Wel	18.9	39	51-80	N/A		sale # 27-79 and 3-81.	
-	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
(Quaking Aspen	70	Pole/Sapling	5	39	Ва	alsam Fir	Low	Variable	Sapling		
	Balsam Fir	20	Pole/Sapling	5		Hazeln	ut (American)	Medium	< 5 feet	Tall Shrub		
Nort	thern White Cedar	10	Log/Pole	10				,				
46	6115 - Lo	owland Ash	Pole	etimbe	r Mediu	m 6.2	70	51-80	N/A			
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
E	Balsam Poplar	5	Pole/Log/Sap	8		Ва	alsam Fir	Low	Variable	Sapling		
	Black Spruce	20	Pole/Log/Sap	8		Bla	ck Spruce	Low	Variable	Sapling		
Nort	thern White Cedar	10	Log/Pole	10			Alder	Medium	5 - 10 feet	Tall Shrub		
	Black Ash	60	Pole/Sap/Log	6	70	As	sh (spp.)	Low	Variable	Sapling		
	Red Maple	5	Pole/Log/Sap	8								



Stand	Level 4 Co	•		Size Density Nonstocked		Acres	Stand Age	BA Range	Managed Site			General Comments	MICHIGAN
47	500 -					3.4		Unspecified	No		Michigamme River.		
48	3102	- Grass		Nonsto	cked	2.1		Unspecified	No				
49	6117 - Lowland I Coni	Deciduous, ferous	Mixed P	oletimb	er Well	7.9	70	51-80	N/A				
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size			
	Red Maple	10	Log/Pole/Sap	10		Blac	ck Spruce	Low	Variable	Sapling			
	Quaking Aspen	10	Pole/Log	8			Alder	Medium	5 - 10 feet	Tall Shrub			
	Balsam Poplar	5	Pole/Log/Sap	8		As	sh (spp.)	Medium	Variable	Sapling			
	Balsam Fir	5	Pole/Sapling	6									
	Black Spruce	5	Pole/Log/Sap	8									
Nor	rthern White Cedar	15	Log/Pole	10									
	Black Ash	50	Pole/Log/Sap	8	70								
50	3102	- Grass		Nonsto	cked	5.4		Unspecified	No				